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 the 1st July, 1924.

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

In the following tables, commencing with the year 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.

§ 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.

The average tonnage per vessel entered has risen 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, 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 the year 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

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.
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	557,091	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

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, whilst the percentage of vessels arriving with cargo increased by nearly 6 per cent.

Particulars of the nationality of oversea shipping for the last five years 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

The Australian tonnage which entered Australia from overseas during the year 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 the year 1938–39, together with similar information in regard to some of the ports of New Zealand and of the United Kingdom for the year 1938, will be found in the next 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	Middlesbrough ..	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.	
		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) Includes vessels with auxiliary motors.

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 the 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

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.
		'000.		'000.		'000.		
United Kingdom ..	6,722	17,891	287	93	7,009	17,984	22.5	25.9
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* the States of 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 *via* Fremantle	.. ..	.. .. Oversea *via* States
Clears Adelaide for Melbourne ..	.. ..	Interstate direct
Enters Melbourne from United Kingdom *via* Adelaide	.. ..	.. .. Oversea *via* States
Clears Melbourne for Sydney	.. ..	Interstate direct
Enters Sydney from United Kingdom *via* Melbourne	.. ..	.. .. Oversea *via* States
Outward Voyage—		
Clears Sydney for United Kingdom *via* Melbourne	.. ..	.. .. Oversea *via* States
Enters Melbourne from Sydney ..	.. ..	Interstate direct
Clears Melbourne for United Kingdom *via* Adelaide	.. ..	.. .. Oversea *via* States
Enters Adelaide from Melbourne ..	.. ..	Interstate direct
Clears Adelaide for United Kingdom *via* Fremantle..	.. ..	.. .. Oversea *via* 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 oversea 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 not included :—

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

3. **Oversea Vessels Moving Interstate.**—(*Oversea via States.*) To ascertain the aggregate movement of shipping between the States during the year 1938–39 including the total interstate movements of oversea 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

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 the year 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

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 subjoined 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
Number of steamships	155	156	160	162	167
Tonnage { Gross	302,897	324,891	352,661	353,280	366,182
Tonnage { 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 passengers for which licensed(a) { 1st class ..	3,914	4,311	4,450	4,410	3,909
Number of passengers for which licensed(a) { 2nd class and steerage	1,755	1,920	1,695	1,801	1,719
Complement of Crew { Masters and officers	505	513	547	545	557
Complement of Crew { Engineers ..	419	548	579	585	606
Complement of Crew { Crew	4,045	4,264	4,458	4,515	4,663

(a) Exclusive of 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.		Shipped.		Shipped.	
	Tons Weight.	Tons Meas.	Tons Weight.	Tons Meas.	Tons Weight.	Tons 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

(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
Wallaroo	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

2. **Nationality.**—The following table shows the total 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—					
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*) Includes Netherlands East Indies.

§ 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 30th June, 1940, show that the rate for general merchandise from Australia to United Kingdom and Continent was 94s. 6d. per ton weight or measurement, while the rates for wheat (parcels) and wool (greasy) were respectively 62s. 6d. per ton weight and 1½d. per lb.

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, 1940, is included in *Transport and Communication Bulletin* No. 30.

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 the year 1939 are shown in *Transport and Communication Bulletin* No. 30. 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 was published in Official Year Book No. 17 (pp. 1053–5).

(ii) *Recent legislation.* Under the provisions of the Navigation Act the coasting trade of the Commonwealth 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. Exemptions under the Act were placed on a statutory basis by the Navigation Act of 1935 which permits 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, transhipment, or second call at any port. On arriving at the port of destination the passenger may be taken on to the first port of call of the ship, which is either the first port of embarkation, or alternatively, a port connected with it by rail.

The Navigation Act 1935, provides that every foreign-going or Australian-trade ship and every sea-going ship registered in Australia or engaged in the coasting trade shall carry wireless equipment.

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.

In an effort to protect the interests of British shipping in the Pacific against subsidized foreign competition the New Zealand Government passed an Act in October, 1936, enabling it to exclude foreign vessels from embarking passengers or cargo in a New Zealand port for any destination in Australia. On 3rd December, 1936, the British Shipping Protection Bill, designed to implement the New Zealand legislation, was introduced into the Australian Senate. After the speech on the second reading, the debate was adjourned.

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 the 30th June, 1939, only 765 route miles of the 27,998 open for general traffic in Australia were privately owned. Those owned by the State Governments amounted to 25,032 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. 30, 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 Railway 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 railways statistics from and including the year 1935-36; consequently the figures for the last four 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, 1939.**—(i) *Lines under Construction.* In spite of the great extensions of State railways since the year 1875 and also the construction of various railways by the Commonwealth Government, there are still, in some of the 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 the year on the following railways: Sandy Hollow to Maryvale (approximately 147 miles), Sutherland to Cronulla (6.31 miles) and Bungendore to Captain's Flat (21.18 miles). Although work was delayed pending consideration of an amended design, work proceeded in other parts of the Circular Quay section of the underground railway of Sydney not affected by the amendments.

(*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 Kaorakee (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). On the 30th June, 1939, no railway construction work was in progress. The following lines are partially constructed, but work thereon is temporarily suspended:—Goondoon to Kalliwa Creek (18 miles); Yaraka to Powell's Creek (27 miles); Dajarra to Moonah Creek (41 miles); Rannes to Monto (63 miles); and Winton to 37-Mile (37 miles): a total of 186 miles.

(*d*) *Other.* At 30th June, 1939, 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 the 30th June, 1939, 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, 1939:—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 following line has been authorized for construction in New South Wales Territory:—Mildura to Gol Gol (22 miles).

(*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); Dobbyn to Myally Creek (50 miles); and Peeramon 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 the 30th June, 1939:—Yarramony to Merredin (85 miles); Brookton to Dale River (28 miles); Boyup Brook to Cranbook (95.23 miles); Manjimup to Mount Barker (107 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 Cranbook, 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, 1939.

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, 1939, the capital cost of construction and equipment was £4,362,500, the interest charge for the year 1938-39 being £218,125. During the same period, the working of the line, which is the responsibility of the New South Wales and Queensland Railways Commissioners, resulted in a loss of £37,802 being shown on the New South Wales section while a profit of £11,355 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 passengers 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 subjoined 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 1934-35 to 1938-39:—

GOVERNMENT AND PRIVATE RAILWAYS: MILEAGE OPEN.

State or Territory.	1934-35.	1935-36.	1936-37.	1937-38.	1938-39.
	Miles.	Miles.	Miles.	Miles.	Miles.
New South Wales ..	6,240.53	6,204.64	6,214.42	6,204.02	6,210.72
Victoria	4,745.71	4,745.71	4,745.71	4,745.71	4,783.91
Queensland	6,836.54	6,812.80	6,795.17	6,779.04	6,750.04
South Australia	3,775.90	3,775.90	3,776.29	3,860.67	3,860.67
Western Australia ..	5,089.50	5,089.33	5,088.04	5,106.82	5,108.73
Tasmania	776.46	776.46	782.57	782.55	789.55
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	27,965.31	27,899.51	27,896.87	27,973.48	27,998.29

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, 1938-39.

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	6,113.79	..	96.93	6,210.72
Victoria	4,758.97	..	24.94	4,783.91
Queensland	6,566.65	..	183.39	6,750.04
South Australia	2,557.38	1,252.39	50.90	3,860.67
Western Australia	4,377.74	453.99	277.00	5,108.73
Tasmania	658.00	..	131.55	789.55
Northern Territory	..	489.73	..	489.73
Aust. Cap. Territory ..	..	4.94	..	4.94
Australia	25,032.53	2,201.05	764.71	27,998.29

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 subjoined statement in relation to both population and area at the 30th June, 1939:—

GOVERNMENT AND PRIVATE RAILWAYS: COMPARISON OF FACILITIES, 1938-39.

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	2.26	2.54	6.64	6.48	10.98	3.34	79.13	0.41	4.02
Per 1,000 sq. miles of Territory ..	20.07	54.43	10.07	10.16	5.23	30.12	0.94	5.26	9.41

8. **Classification of Lines according to Gauge, 1938-39.**—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 the 30th June, 1939, and of private railways open for general traffic to the 31st December, 1939, as nearly as possible.

GOVERNMENT AND PRIVATE RAILWAYS: GAUGES, 1938-39.

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 ..	..	6,113.79	..	..	..	6,113.79
Victoria	4,637.20	..	..	121.77	..	4,758.97
Queensland ..	..	68.82	6,467.57	..	30.26	6,566.65
South Australia ..	1,480.49	..	1,076.89	..	..	2,557.38
Western Australia ..	..	..	4,377.74	..	..	4,377.74
Tasmania	..	..	646.67	..	11.33	658.00
Total ..	6,117.69	6,182.61	12,568.87	121.77	41.59	25,032.53
PRIVATE RAILWAYS OPEN FOR GENERAL TRAFFIC.						
New South Wales ..	..	60.20	36.73	..	..	96.93
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	..	..	125.05	..	6.50	131.55
Total ..	13.94	60.20	581.55	..	109.02	764.71
ALL RAILWAYS OPEN FOR GENERAL TRAFFIC.						
New South Wales ..	..	6,173.99	36.73	..	..	6,210.72
Victoria	4,651.14	..	(a) 11.00	121.77	..	4,783.91
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	4,654.74	..	..	5,108.73
Tasmania	..	..	771.72	..	17.83	789.55
Northern Territory ..	..	..	489.73	..	..	489.73
Aust. Cap. Territory	..	4.94	..	..	..	4.94
GRAND TOTAL	6,131.63	7,355.95	14,238.33	121.77	150.61	27,998.29

(a) 3 ft. 0 in. gauge.

9. **Summary of Operations, 1938-39.**—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, 1939:—

GOVERNMENT AND PRIVATE RAILWAYS: SUMMARY OF OPERATIONS, 1938-39.

Particulars.	Commonwealth Railways.	State Railways.	Private Railways. (a)	Total for Australia.
Mileage open (route) 30th June, 1939 .. .. miles	2,201.05	25,032.53	764.71	27,998.29
Capital cost .. .. £	17,032,884	300,220,948	4,749,212	322,003,044
Cost per mile .. .. £	7,739	11,993	6,210	11,501
Gross revenue .. .. £	546,487	44,233,257	765,791	45,545,535
Gross revenue per train mile d.	145.42	138.62	130.62	138.55
Working expenses .. £	641,749	35,316,114	489,022	36,446,885
Working expenses per train mile d.	170.77	110.68	83.41	110.88
Net revenue .. .. £	—95,262	8,917,143	276,769	9,098,650
Net revenue per train mile d.	—25.35	27.95	47.21	27.67
Train miles run .. miles	901,916	76,580,650	1,407,089	78,889,655
Passengers carried .. No.	117,139	384,723,883	1,309,350	386,150,372
Tons of goods, etc., carried tons	185,818	32,970,093	4,852,648	38,008,559
Average number of employees No.	(b) 1,943	(b) 102,836	(c) 1,147	105,926
Average wage .. .. £	255	261	262	261

(a) Approximate. Complete particulars not available for all items. (b) Exclusive of Construction Staff. (c) Employees at 31st December, 1939.

§ 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 (£317,253,832) 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, 1939.

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	6,113.79	8,161.00	147,617,530	24,145	53.74	2.23
Victoria (a) ..	4,758.97	6,136.64	52,448,789	11,021	27.88	2.53
Queensland (a) ..	6,566.65	7,418.00	37,897,129	5,771	37.28	6.46
South Australia ..	2,557.38	3,086.89	29,732,889	11,626	49.91	4.29
Western Australia	4,377.74	4,923.35	26,021,781	5,944	55.91	9.41
Tasmania (a) ..	658.00	(b)	2,140,330	3,253	9.04	2.78
Commonwealth ..	2,201.05	2,316.36	17,032,884	7,739	..	..
Australia (a) ..	27,233.58	c32,042.24	d317,253,832	11,649	45.58	3.91

(a) See below. (b) Not available. (c) Excluding Tasmania. (d) Includes 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, £24,248; Victoria, £16,418; Queensland, £10,141; South Australia, £11,626; Western Australia, £5,944; Tasmania, £9,906; Commonwealth, £7,739; and for all Government railways in Australia, £13,781. The lowest average cost is in Western Australia, while 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, £53.74; Victoria, £41.53; Queensland, £64.83; South Australia, £49.91; Western Australia, £55.91; Tasmania, £27.54; All Government railways in Australia, £53.92.

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, 1939.	Net Loan Expenditure.			
		1936–37.	1937–38.	1938–39.	Total to 30th June, 1939.
	£	£	£	£	£
New South Wales ..	666,864	1,864,088	2,343,455	2,002,287	151,076,256
Victoria	5,653,525	(a) 361,893	(a) 492,208	(a) 354,259	a 75,988,437
Queensland.. ..	..	505,216	630,053	489,603	65,096,856
South Australia ..	..	160,011	112,537	261,006	34,758,727
Western Australia ..	633,338	(b) 175,412	(b) 346,373	(b) 195,111	b 25,484,118
Tasmania	18,121	81,856	59,660	34,558	(c) 7,306,998
Commonwealth ..	2,328,048	358,241	*Cr.* 938	*Cr.* 339	11,433,205
Australia ..	9,299,896	3,506,717	3,983,348	3,336,485	d373,590,602

(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.
1934–35 ..	16,803	9,421	7,167	2,658	3,312	400	346	40,107
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

(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, 1934–35, £140,614; 1935–36, £163,859; 1936–37, £230,574 (includes £19,113 guarantees in respect of losses); and in 1937–38 and 1938–39, £10,000 guarantees in respect of losses on certain lines.

GOVERNMENT RAILWAYS: GROSS REVENUE—*continued.*

Year.	N.S.W.(a)	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
GROSS REVENUE PER AVERAGE MILE WORKED.								
	£	£	£	£	£	£	£	£
1934–35 ..	2,726	1,996	1,092	1,051	760	620	161	1,478
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
GROSS REVENUE PER TRAIN-MILE RUN.								
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1934–35 ..	153.48	145.54	132.73	125.59	135.44	78.00	154.75	142.63
1935–36 ..	153.82	141.88	129.78	126.46	135.70	(c)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

(*a*) Includes £800,000 per annum contribution from consolidated revenue towards losses on working of country development lines. (*b*) Includes contributions from consolidated revenue for losses on non-paying lines as follows:—1934–35, £140,614; 1935–36, £163,859; 1936–37, £230,574 (including £19,113 guarantees for losses); and £10,000 (guarantees for losses) in 1937–38 and 1938–39. (*c*) Includes steam and petrol rail car mileages excluded prior to 1935–36.

(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 subjoined table shows the gross revenue from 1934–35 to 1938–39, 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. £'000.	Victoria. £'000.	Q'land. £'000.	S. Aust. £'000.	W. Aust. £'000.	Tas. £'000.	C'wealth. £'000.	Australia. £'000.
COACHING TRAFFIC RECEIPTS.								
1934–35 ..	5,868	4,088	1,946	654	731	133	136	13,556
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
GOODS AND LIVE STOCK TRAFFIC RECEIPTS.								
1934–35 ..	8,583	4,556	4,987	1,853	2,405	255	135	22,774
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
MISCELLANEOUS RECEIPTS.								
	(*a*)	(*b*)						
1934–35 ..	2,352	778	233	152	175	12	75	3,777
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

(*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.	1937–38.			1938–39.		
	Coaching.	Goods and Live Stock.	Miscellaneous.	Coaching.	Goods and Live Stock.	Miscellaneous.
	%	%	%	%	%	%
New South Wales ..	33.74	53.39	12.87	34.48	51.92	13.60
Victoria	42.31	50.79	6.90	46.17	46.06	7.77
Queensland	27.02	69.36	3.62	26.38	70.20	3.42
South Australia ..	22.17	71.64	6.19	24.17	68.73	7.10
Western Australia ..	19.48	75.30	5.22	19.57	78.00	2.43
Tasmania	29.72	66.89	3.39	31.11	65.35	3.54
Commonwealth ..	37.73	42.95	19.32	35.43	40.90	23.67
Australia ..	32.48	58.58	8.94	33.55	57.17	9.28

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 1934–35 to 1938–39 :—

GOVERNMENT RAILWAYS : WORKING EXPENSES.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
TOTAL WORKING EXPENSES.								
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1934–35 ..	11,565	6,506	5,087	2,241	2,383	472	380	28,634
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
PERCENTAGE ON GROSS REVENUE.								
	%	%	%	%	%	%	%	%
1934–35 ..	68.83	69.06	70.98	84.31	71.95	118.06	109.83	71.40
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

GOVERNMENT RAILWAYS: WORKING EXPENSES—*continued.*

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
PER AVERAGE MILE WORKED.								
	£	£	£	£	£	£	£	£
1934–35 ..	1,876	1,378	775	886	547	732	177	1,055
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
PER TRAIN-MILE RUN.								
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1934–35 ..	105.64	100.50	94.21	105.89	97.44	92.08	169.96	101.83
1935–36 ..	102.65	100.39	101.01	106.06	97.97	(*a*)81.15	159.76	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

(*a*) See note (*c*), par. 3 (i) p. 118.

(ii) *Distribution.* The subjoined table shows the distribution of working expenses under four chief heads of expenditure for the years 1934–35 to 1938–39 :—

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES.

Year.	N.S.W. £'000.	Victoria. £'000.	Q'land. £'000.	S. Aust. £'000.	W. Aust. £'000.	Tasmania. £'000.	C'wealth. £'000.	Australia. £'000.
MAINTENANCE OF WAY AND WORKS.								
1934–35 ..	2,433	1,570	1,291	394	553	116	152	6,509
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
ROLLING STOCK.								
1934–35 ..	4,573	2,182	2,180	1,097	1,088	183	137	11,440
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
TRANSPORTATION AND TRAFFIC.								
1934–35 ..	2,726	1,714	1,320	485	621	99	56	7,021
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

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES —*continued.*

Year.	N.S.W. £'000.	Victoria. £'000.	Q'land £'000.	S. Aust. £'000.	W. Aust. £'000.	Tasmania. £'000.	C'wealth. £'000.	Australia. £'000.
				OTHER CHARGES.				
1934–35 ..	1,833	1,040	295	265	121	(a) 75	35	3,664
1935–36 ..	1,919	1,208	314	289	131	(a) 112	34	4,007
1936–37 ..	2,048	1,265	326	304	136	(a) 115	40	4,234
1937–38 ..	2,259	1,044	348	351	137	(a) 117	42	4,298
1938–39 ..	2,448	1,491	363	357	144	(a) 118	45	4,966

(a) Includes £54,000, 1935, and £94,000, 1936, 1937, 1938 and 1939, 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.
				NET REVENUE.				
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1934–35 ..	5,237	2,915	2,080	417	929	— 72	— 34	11,472
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
				NET REVENUE PER AVERAGE MILE WORKED.				
	£	£	£	£	£	£	£	£
1934–35 ..	850	618	317	165	213	— 112	— 16	423
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
				NET REVENUE PER TRAIN-MILE RUN.				
	d.	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*	*d.*
1934–35 ..	47.84	45.04	38.52	19.70	38.00	—14.08	—15.21	40.80
1935–36 ..	51.17	41.49	28.77	20.40	37.73	a—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

(a) See note (c), par. 3 (i) p. 118.

In the graphs accompanying this Chapter the gross and net revenue and working expenses are shown from 1870 to 1939.

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, 1939, was as follows :—

GOVERNMENT RAILWAYS : INTEREST ON RAILWAY LOAN EXPENDITURE.

AMOUNT OF INTEREST PAYABLE.

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.
1934–35 ..	5,678	3,057	1,577	1,056	1,029	248	438	13,184
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 ..	5,360	1,860	1,642	1,074	1,001	94	395	11,545

(a) Including interest charges on the Grafton–South Brisbane line, which for the year 1938–39 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. 113.

The interest payable on the cost of construction and equipment, after the expenditure from Consolidated Revenue (£9,299,896) for that purpose had been deducted, was at the rate of 3.75 per cent. in 1938–39.

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 1938–39 were :—New South Wales, £690,000; Victoria, £188,075; and South Australia, £119,302.

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

GOVERNMENT RAILWAYS : PROFIT OR LOSS.

PROFIT OR LOSS AFTER PAYMENT OF WORKING EXPENSES, INTEREST AND OTHER CHARGES.

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.
1934–35 ..	— 440	— 142	503	— 639	— 99	— 320	— 472	— 1,712
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

(a) See note (a), par. 6, above. (b) See par. 1 p. 116.

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 the competition from the air is an important factor.

The following table gives particulars for the years 1934–35 to 1938–39 :—

GOVERNMENT RAILWAYS : TRAFFIC.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	C'wealth.	Australia.
NUMBER OF PASSENGER JOURNEYS.								
	'000.	'000.	'000.	'000.	'000.	'000.	'000.	'000.
1934–35 ..	160,212	139,689	24,328	16,660	12,876	2,134	98	355,997
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
PER AVERAGE MILE OF LINE WORKED.								
	No.	No.	No.	No.	No.	No.	No.	No.
1934–35 ..	25,992	29,589	3,705	6,587	2,954	3,308	46	13,122
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
TONNAGE OF GOODS AND LIVE STOCK CARRIED.								
	'000.	'000.	'000.	'000.	'000.	'000.	'000.	'000.
1934–35 ..	13,019	6,010	4,879	2,333	2,903	678	87	29,909
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
PER AVERAGE MILE OF LINE WORKED.								
	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.	Tons.
1934–35 ..	2,112	1,273	743	922	666	1,052	41	1,102
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

(ii) *Metropolitan and Country Passenger Traffic and Revenue* 1938–39. 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, 1938-39.

System.	Passenger Journeys.			Revenue.		
	Metropolitan and Suburban.	Country.	Total.	Metropolitan and Suburban.	Country.	Total.
	No.	No.	No.	£	£	£
N.S.W. ..	174,611,297	12,108,667	186,719,964	3,002,810	3,021,286	6,024,096
Victoria ..	135,545,739	6,577,828	142,123,567	2,310,799	1,543,882	3,854,681
Queensland	19,829,108	4,810,271	24,639,379	308,337	1,261,505	1,569,842
S. Australia	16,265,199	1,263,452	17,528,651	229,445	370,938	600,383
W. Australia	10,186,155	1,229,460	11,415,615	126,116	387,717	513,833
Tasmania ..	(a)	(a)	2,296,707	(a)	(a)	129,020
Commonwealth ..	..	117,139	117,139	..	145,821	145,821
Australia	356,437,498 (b)	26,106,817 (b)	384,841,022	5,977,507 (b)	6,731,149 (b)	12,837,676

(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 the year 1938-39:—

GOVERNMENT RAILWAYS: CLASSIFICATION OF COMMODITIES CARRIED, 1938-39.

'000 TONS CARRIED.

System.	Coal and Coke.	Other Minerals.	Grain and Flour.	Hay, Straw and Chaff.	Wool.	Live Stock.	All other Commodities.	Total.
N.S.W. ..	7,633	1,464	2,072	28	165	739	3,316	15,417
Victoria ..	200	191	920	219	82	725	3,639	5,976
Q'land ..	735	521	333	(a)	85	527	3,033	5,234
S. Aust. ..	129	669	631	57	38	195	921	2,640
W. Aust.	299	280	914	45	28	116	1,177	2,859
Tas. ..	478	(b)	50	24	6	30	256	844
C'wealth ..	21	2	(a)	(a)	5	66	92	186
Australia	9,495	3,127	4,920	373	409	2,398	12,434	33,156

(a) Included with "Other." (b) Included with "Coal and Coke."

(b) *Revenue.* The following table shows the revenue derived from goods and live stock traffic during 1938-39:—

GOVERNMENT RAILWAYS: REVENUE FROM GOODS AND LIVE STOCK, 1938-39.

Class.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Australia.
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
General merchandise	6,552	3,386	3,563	1,364	2,317	190	127	17,499
Wool ..	673	164	434	79	74	6	12	1,442
Live stock	1,121	606	777	209	140	22	80	2,955
Minerals—								
Coal and coke	1,590	62	346	33	180	(a) 24	3	2,238
Other ..	420	58	354	459	96	(b) 76	2	1,465
Total ..	10,356	4,276	5,474	2,144	2,807	318	224	25,599

(a) Native coal. (b) Minerals other than native coal.

(iv) *Passenger-Mileage.* The subjoined table gives particulars of passenger-mileage in respect of the Government railways in Australia for the years 1936-37 to 1938-39.

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.									
1937	17,837	1,952,887	109	10.98	5,623	918	0.69	75.66	318,881
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
VICTORIA.									
1937	11,886	1,233,554	104	8.73	3,807	806	0.74	76.86	261,303
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
QUEENSLAND.(a)									
1937	5,504	(b)	(b)	(b)	1,447	223	(b)	63.09	(b)
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)
SOUTH AUSTRALIA.									
1937	3,504	205,329	59	10.55	592	234	0.69	40.56	81,179
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
WESTERN AUSTRALIA.									
1937	2,398	(b)	(b)	(b)	559	128	(b)	55.93	(b)
1938	2,544	(b)	(b)	(b)	533	122	(b)	50.25	(b)
1939	2,795	(b)	(b)	(b)	514	117	(b)	44.12	(b)
TASMANIA.									
1937	949	34,653	37	14.86	121	185	0.84	30.51	53,231
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
COMMONWEALTH.(c)									
1937	344	25,797	75	237.14	117	54	1.09	81.39	12,028
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

(a) Exclusive of Queensland portion of Grafton-South Brisbane (uniform gauge) line. (b) Not available. (c) Railways controlled by Commonwealth Government.

(v) *Ton-Mileage.* Particulars regarding total "ton-miles" are given in the following table for each of the years 1936-37 to 1938-39 :—

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.									
1937	10,711	1,731,904	162	120.80	9,661	1,577	1.34	216.48	282,797
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
VICTORIA.									
1937	5,325	838,002	157	123.00	5,029	1,065	1.44	226.65	177,514
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
QUEENSLAND.(*a*)									
1937	7,343	665,989	91	139.89	4,824	742	1.73	157.68	105,658
1938	7,847	715,917	91	146.98	5,056	770	1.69	154.63	109,023
1939	8,073	745,351	92	147.57	5,404	823	1.73	160.67	114,708
SOUTH AUSTRALIA.									
1937	2,102	314,462	150	131.97	2,099	830	1.60	239.58	124,325
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
WESTERN AUSTRALIA.									
1937	(*b*)3,677	346,777	94	123.92	2,541	583	1.76	165.85	79,588
1938	(*b*)3,828	390,913	102	127.67	2,769	633	1.70	173.62	89,372
1939	(*b*)3,779	378,089	100	132.24	2,807	641	1.78	178.26	86,393
TASMANIA.(*c*)									
1937	(*b*) 915	41,151	45	51.50	302	498	1.76	84.98	63,212
1938	(*b*) 887	37,916	43	45.76	289	443	1.83	78.07	58.243
1939	(*b*) 880	38,088	43	46.80	296	450	1.87	80.76	57,885
COMMONWEALTH.(*d*)									
1937	376	29,742	79	234.59	195	91	1.57	124.34	13,868
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

(*a*) Exclusive of Queensland portion of Grafton–South Brisbane (uniform gauge) line. (*b*) Estimated. (*c*) Exclusive of particulars of live stock carried. (*d*) Railways controlled by the Commonwealth Government.

9. **Rolling Stock.**—The following table shows the numbers of rolling stock in use at the 30th June for each of the years 1937 to 1939. Further details may be found in *Transport and Communication Bulletin* No. 30.

GOVERNMENT RAILWAYS: ROLLING STOCK.

System.	At 30th June—								
	1937.			1938.			1939.		
	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.	Locos.	Coaching Stock.	Other Stock.
New South Wales ..	1,346	2,725	23,293	1,310	2,790	23,704	1,284	2,808	24,257
Victoria	588	2,474	21,021	574	2,458	21,029	581	2,439	20,993
Queensland ..	753	1,397	18,744	748	1,398	18,704	752	1,413	18,733
South Australia ..	327	608	8,436	329	606	8,013	335	594	7,966
Western Australia ..	417	485	11,070	420	477	11,097	427	475	11,110
Tasmania	93	226	2,046	94	233	2,073	95	225	2,120
Commonwealth ..	105	89	1,384	113	89	1,383	113	89	1,359
Australia ..	3,629	8,004	85,994	3,588	8,051	86,003	3,587	8,043	86,538

10. **Accidents.**—The following table gives particulars of the numbers 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 1936–37, 1937–38 and 1938–39:—

GOVERNMENT RAILWAYS: ACCIDENTS.

System.	1936–37.		1937–38.		1938–39.	
	Killed.	Injured.	Killed.	Injured.	Killed.	Injured.
New South Wales	55	479	66	593	57	625
Victoria	55	144	48	442	48	466
Queensland	26	143	25	166	23	132
South Australia	14	172	21	182	9	187
Western Australia ..	18	703	14	190	14	142
Tasmania	3	46	6	66	7	62
Commonwealth	..	30	..	38	1	20
Australia	171	1,717	180	1,677	159	1,634

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. 30.

11. **Consumption of Oil and Fuel.**—The appended table shows the quantities and values of oil and fuel consumed by the various Government Railway Departments during the year 1938-39:—

GOVERNMENT RAILWAYS: CONSUMPTION AND VALUE OF OIL AND FUEL, 1938-39.

System.	Oil.				Coal.	
	Lubricating.		Fuel and Light, etc.			
	Gallons.	Value.	Gallons.	Value.	Tons.	Value.
New South Wales ..	401,260	45,027	1,481,449	50,204	1,476,074	1,100,277
Victoria	207,248	19,563	1,588,708	56,730	534,732	576,127
Queensland	214,185	23,430	501,789	31,873	430,709	407,614
South Australia ..	98,825	11,566	1,192,373	60,686	189,632	252,532
Western Australia ..	112,359	13,384	398,533	15,384	344,537	259,819
Tasmania	50,501	5,265	442,660	12,233	50,715	63,405
Commonwealth ..	28,961	3,569	154,929	6,378	31,774	49,053
Australia ..	1,113,339	121,804	5,760,441	233,488	3,058,173	2,708,827

12. **Staff Employed.**—The following table gives details of the average staff employed by the Government railways of Australia during 1938-39. Further details under this head may be found in *Transport and Communication Bulletin* No. 30.

GOVERNMENT RAILWAYS: AVERAGE STAFF EMPLOYED, 1938-39.

System.	Operating Staff.		Construction Staff.		All Employees—Staff.	
	Salaried.	Wages.	Salaried.	Wages.	Salaried.	Wages.
New South Wales ..	7,001	34,473	49	1,861	7,050	36,334
Victoria	3,452	20,749	(a)	(a)	3,452	20,749
Queensland ..	3,160	14,836	7	109	3,167	14,945
South Australia ..	1,374	7,099	1	1	1,375	7,100
Western Australia ..	1,307	7,401	4	308	1,311	7,709
Tasmania	202	1,782	(b)	(b)	202	1,782
Commonwealth ..	166	1,777	..	52	166	1,829
Australia ..	16,662	88,117	61	2,331	16,723	90,448

(a) In the State of Victoria, railway construction work is not under the control of the Railways Commissioners. (b) 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, 1938-39.**—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 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 the year 1938-39:—

PRIVATE RAILWAYS: SUMMARY OF OPERATIONS, 1938-39.

State.	Route-Miles Open.	Capital Cost.	Gross Revenue.	Working Expenses.	Train-Miles Run.	Passenger Journeys.	Goods, etc., Carried.	Employees
	Miles.	£'000.	£	£	'000.	'000.	'000. Tons.	No.
N.S.W.(a)	96.63	1,253	397,365	243,051	652	1,232	1,682	489
Vic. ..	24.94	82	6,813	7,435	18	8	25	18
Q'land(a)	183.39	247	31,520	26,785	104	4	263	48
S.A.(a) ..	50.90	(b)	(b)	(b)	115	..	2,521	39
W.A. ..	277.00	2,257	177,307	82,598	282	23	130	277
Tas.(a) ..	131.55	910	152,786	129,153	236	42	232	276
Australia(a)	764.71	4,749	765,791	489,022	1,407	1,309	4,853	1,147

(a) Incomplete. (b) Not available.

Some of the particulars given in the table are incomplete in respect of the States 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 figures relating to goods carried for the general public are not kept separate.

C. TRAMWAYS.

1. **Systems in Operation.**—(i) *General.* Tramway systems are in operation in all the States, and in recent years considerable extension has been made in the use of electrical traction, the benefit of which is now enjoyed in a number of the larger towns.

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 the year 1938-39, classified (*a*) according to the controlling authority, (*b*) according to the motive power used, and (*c*) according to gauge :—

TRAMWAYS : ROUTE MILEAGE OPEN, 1938-39.

Controlling Authority, Nature of Motive Power, and Gauge.	N.S. Wales.	Victoria.	Q'land.	South Australia.	Western Australia.	Tasmania.	Total Australia.
ACCORDING TO CONTROLLING AUTHORITY.							
	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.	Miles.
Government ..	181.97	173.55	..	..	58.84	..	414.36
Municipal ..	..	..	60.15	77.74	11.90	29.44	179.23
Private	3.50	..	..	..	9.40	..	12.90
Total ..	185.47	173.55	60.15	77.74	80.14	29.44	606.49
ACCORDING TO MOTIVE POWER.							
Electric	181.97	165.65	60.15	77.74	71.19	29.44	586.14
Steam or Petrol ..	3.50	..	..	..	8.95	..	12.45
Cable	..	7.90	..	..	..	..	7.90
Total ..	185.47	173.55	60.15	77.74	80.14	29.44	606.49
ACCORDING TO GAUGE.							
Gauge—							
5 ft. 3 in. ..	..	5.18	..	..	..	..	5.18
4 ft. 8½ in. ..	185.47	168.37	60.15	77.74	..	..	491.73
3 ft. 6 in. ..	..	..	..	..	80.14	29.44	109.58
Total ..	185.47	173.55	60.15	77.74	80.14	29.44	606.49

Further details on this subject may be obtained from page 28 of *Transport and Communication Bulletin* No. 30.

(iii) *Cost of Construction and Equipment.* The table hereunder shows the total cost of construction and equipment of all tramways to the 30th June, 1939, classified according to the nature of the motive power. Further details relating to controlling authorities are available on p. 28 of *Transport and Communication Bulletin* No. 30.

TRAMWAYS: COST OF CONSTRUCTION AND EQUIPMENT, 1938-39.

Nature of Motive Power.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Australia.
ACCORDING TO MOTIVE POWER.							
	£	£	£	£	£	£	£
Electric	8,943,941	8,086,454	2,390,649	4,438,525	1,751,790	663,757	26,275,116
Steam or Petrol	(a) 20,000	..	..	..	85,110	..	105,110
Cable ..	..	507,922	..	..	..	..	507,922
Total ..	8,963,941	8,594,376	2,390,649	4,438,525	1,836,900	663,757	26,888,148

(a) Estimated.

(iv) *Summary of Operations,* 1934–35 to 1938–39. The following table gives a summary of the working of all tramway systems in Australia for the years 1934–35 to 1938–39:—

TRAMWAYS: SUMMARY OF OPERATIONS.

Particulars.	1934–35.	1935–36.	1936–37.	1937–38.	1938–39.
Mileage open for traffic .. miles	619.07	611.90	613.02	607.66	606.49
Cost of Construction and Equipment £'000.	26,068	26,654	26,949	26,959	26,888
Cost per mile .. .. £	42,108	43,559	43,961	44,366	44,334
Gross Revenue .. .. £'000.	7,398	7,567	7,735	7,835	7,866
Working Expenses .. £'000.	5,419	5,464	5,609	5,975	6,264
Net Earnings .. .. £'000.	1,979	2,103	2,126	1,860	1,602
Interest .. .. .. £'000.	1,166	1,135	1,102	1,117	1,094
Percentage of Working Expenses on Gross Revenue .. .. %	73.24	72.20	72.51	76.26	79.63
Percentage of Net Earnings on Capital Cost .. .. .. %	7.59	7.89	7.89	6.90	5.96
Tram-miles run .. '000 miles	81,084	81,481	82,295	83,806	83,838
Gross revenue per tram mile *d.*	21.90	22.29	22.56	22.44	22.52
Working expenses per tram mile *d.*	16.04	16.09	16.36	17.11	17.93
Net earnings per tram mile .. *d.*	5.86	6.20	6.20	5.33	4.59
Passengers carried .. .. '000	672,523	688,123	701.941	754,957	716,351
Passengers carried per tram mile No.	8.29	8.45	8.53	8.49	8.54
Average revenue per passenger journey *d.*	2.64	2.64	2.64	2.64	2.64
Persons employed at end of year No.	17,572	17,712	17,864	18,073	17,695

2. **Electric Tramways.**—(i) *Financial Operations.* The following table gives the capital cost and the financial results of electric tramways for each State during 1938–39, 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, 1939.	Capital Cost.	Gross Revenue.	Working Expenses.	Net Revenue.	Interest.	Employees at 30th June, 1939.
STATES, 1938–39.							
	Miles.	£'000.	£'000.	£'000.	£'000.	£'000.	No.
New South Wales ..	181.97	8,944	3,449	3,080	369	391	8,062
Victoria	165.65	8,086	2,112	1,389	724	254	4,355
Queensland ..	60.15	2,391	831	632	199	120	1,911
South Australia ..	77.74	4,438	711	494	217	245	1,750
Western Australia ..	71.19	1,752	367	342	25	45	792
Tasmania ..	29.44	664	179	152	26	37	337
Australia ..	586.14	26,275	7,649	6,089	1,560	1,092	17,207
AUSTRALIA, 1934–35 TO 1938–39.							
	Miles.	£'000.	£'000.	£'000.	£'000.	£'000.	No.
1934–35	570.46	24,539	6,936	5,050	1,886	1,155	16,291
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

(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 1938–39, 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, 1938–39.							
	Miles.	Miles.	'000.	'000.	No.	No.	No.
New South Wales	181.97	333.10	34,941	322,238	9.22	32	1,508
Victoria.. ..	165.65	307.39	22,803	175,198	7.68	15	341
Queensland ..	60.10	106.55	8,100	91,444	11.29	5	505
South Australia ..	77.02	145.51	8,712	52,906	6.07	4	118
Western Australia	71.19	108.73	4,756	38,095	8.01	4	250
Tasmania ..	29.44	44.31	2,049	15,595	7.61	1	28
Australia ..	585.37	1,045.59	81,361	695,476	8.55	61	2,750
AUSTRALIA, 1934–35 TO 1938–39.							
	Miles.	Miles.	'000.	'000.	No.	No.	No.
1934–35 ..	570.12	1,009.00	75,203	626,901	8.34	65	1,882
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

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 of the evolution of the motor car is given.

(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 past four years :—

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

Although precise figures are not available, the value of motor tyres and tubes produced in Australia during 1938–39 was approximately £4,000,000, 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 were 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 to 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* 1938–39. Particulars of the registration of motor vehicles, licences issued and revenue received for the year 1938–39 are contained in the subjoined table :—

MOTOR VEHICLES : REGISTRATIONS AND REVENUE, 1938–39.

State or Territory.	Motor Vehicles Registered at 30th June, 1939. (*a*)					Drivers' and Riders' Licences in force at 30th June, 1939.	Gross Revenue derived from—			
	Motor Cars.(*b*)	Commercial Vehicles (*c*)	Motor Cycles.	Total.	Per 1,000 of Population at 30th June, 1939.		Vehicle Registrations and Motor Tax.	Drivers' and Riders', etc., Licences.	Other Sources.	Total.
	No.	No.	No.	No.	No.	No.	£	£	£	£
N. South Wales	217,361	77,503	24,151	319,015	116.14	460,371	2,450,301	238,704	94,662	2,783,667
Victoria ..	153,391	*d*81,766	26,698	261,855	139.18	358,417	1,796,039	89,718	41,530	1,927,287
Queensland ..	76,654	43,341	8,168	128,163	126.08	161,116	843,386	63,557	60,194	967,137
South Australia	56,983	24,554	9,219	90,756	152.33	138,089	647,298	72,110	10,990	730,398
Western Aust.	38,039	24,441	7,199	69,679	149.71	85,005	405,198	26,625	25,541	457,364
Tasmania ..	17,668	5,036	3,656	26,360	111.39	30,443	160,860	15,241	11,698	187,799
Northern Terr.	404	966	56	1,426	230.41	1,649	2,137	670	..	2,807
Aust. Cap. Terr.	1,771	418	90	2,279	189.07	3,407	13,216	1,762	107	15,085
Australia ..	562,271	258,025	79,237	899,533	129.23	1,238,497	6,318,435	508,387	244,722	7,071,544

(*a*) Exclusive of Trailers (18,464), Road Tractors, etc. (2,035), and Dealers' Plates (3,721). (*b*) Includes Taxis and Hire Cars. (*c*) Includes Lorries, Vans, Buses and Utility Trucks. (*d*) Includes 47,427 vehicles registered as Primary Producers'.

Particulars relating to the number of motor vehicles registered at 30th June, 1940, will be found in the Appendix to this volume.

(ii) *Quinquennium* 1934–35 *to* 1938–39. The following table shows the number of vehicles registered, licences issued, and revenue received therefrom during each of the years 1934–35 to 1938–39 :—

MOTOR VEHICLES : REGISTRATIONS AND REVENUE, AUSTRALIA.

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.	No.	No.	No.	No.	£	£	£	£
1934–35	457,684	155,721	75,045	688,450	102.38	910,218	4,507,034	363,194	153,586	5,023,814
1935–36	484,832	*a* 180,567	77,467	742,866	109.64	979,343	5,017,888	386,322	215,949	5,620,159
1936–37	499,289	*a* 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	*a* 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	*a* 258,025	79,237	899,533	129.23	1,238,497	6,318,435	508,387	244,722	7,071,544

(*a*) Includes 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 the 31st December, 1921, and at 30th June for each of the years 1935 to 1939 :—

MOTOR VEHICLES (EXCLUSIVE OF MOTOR CYCLES) REGISTERED PER 1,000 OF POPULATION.

Year.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia.
31st Dec. 1921 ..	15	16	8	24	12	13	(a)	..	15
30th June, 1935 ..	83	97	96	98	105	70	95	148	91
„ 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

(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 1934–35 to 1938–39. 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.	1934–35.	1935–36.	1936–37.	1937–38.	1938–39.
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
New South Wales ..	7 11 0	7 14 2	7 16 0	7 17 11	7 19 10
Victoria	7 3 5	7 5 11	7 5 10	7 7 8	7 7 9
Queensland ..	5 18 8	6 0 8	6 3 0	6 5 10	6 16 3
South Australia ..	8 11 11	8 8 6	a7 14 0	7 4 7	7 9 10
Western Australia ..	5 17 5	5 16 11	6 11 5	6 5 2	6 6 0
Tasmania	5 15 0	5 14 3	5 13 0	5 17 6	6 13 3
Northern Territory ..	b1 0 0	1 5 0	1 7 0	1 8 1	1 11 0
Aust. Cap. Territory	5 12 1	5 12 2	6 6 0	5 18 7	5 15 2
Australia ..	7 2 2	7 4 0	7 4 9	7 5 2	7 8 3

(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. (b) Estimated.

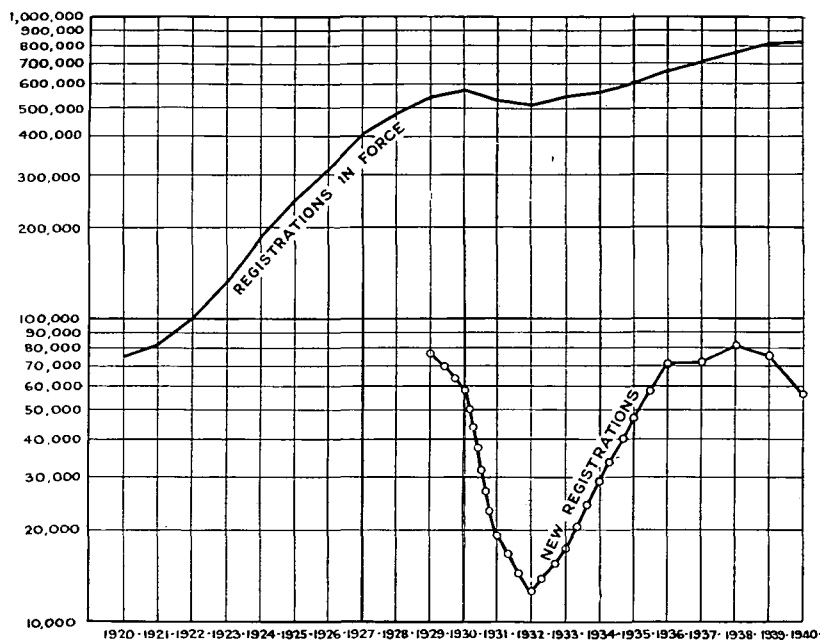
6. **New Vehicles Registered.**—(i) *Year* 1938–39. The following table gives the number of new vehicles registered in the various States during the year 1938–39 :—

NEW MOTOR VEHICLES REGISTERED, 1938–39.

State or Territory.	Motor Cars.	Commercial Vehicles, etc.	Motor Cycles.	Total.
New South Wales	20,493	7,845	2,196	30,534
Victoria	15,090	(a) 6,831	2,349	24,270
Queensland	7,604	5,330	1,090	14,024
South Australia(b)	5,152	2,222	769	8,143
Western Australia(c)	2,306	652	291	3,249
Tasmania	2,010	700	350	3,060
Australian Capital Territory	242	66	19	327
Total	52,897	23,646	7,064	83,607

(a) Includes vehicles registered as Primary Producers'. (b) Excludes Northern Territory. (c) Metropolitan Area only.

MOTOR VEHICLE REGISTRATION—AUSTRALIA, 1920 TO 1940.

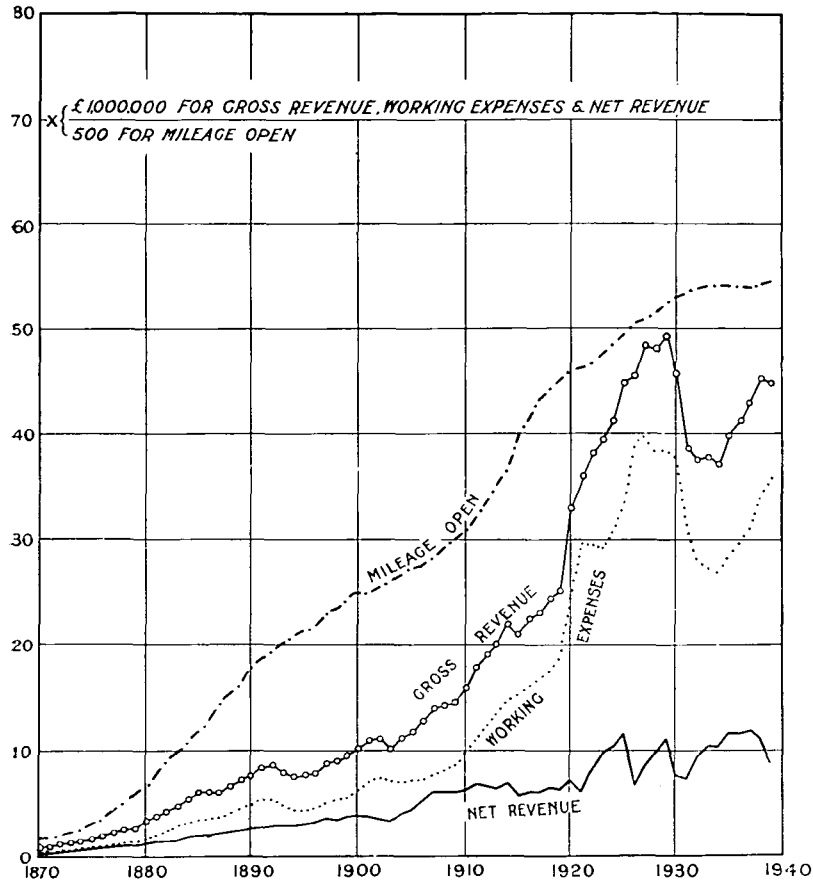


(See page 133.)

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.

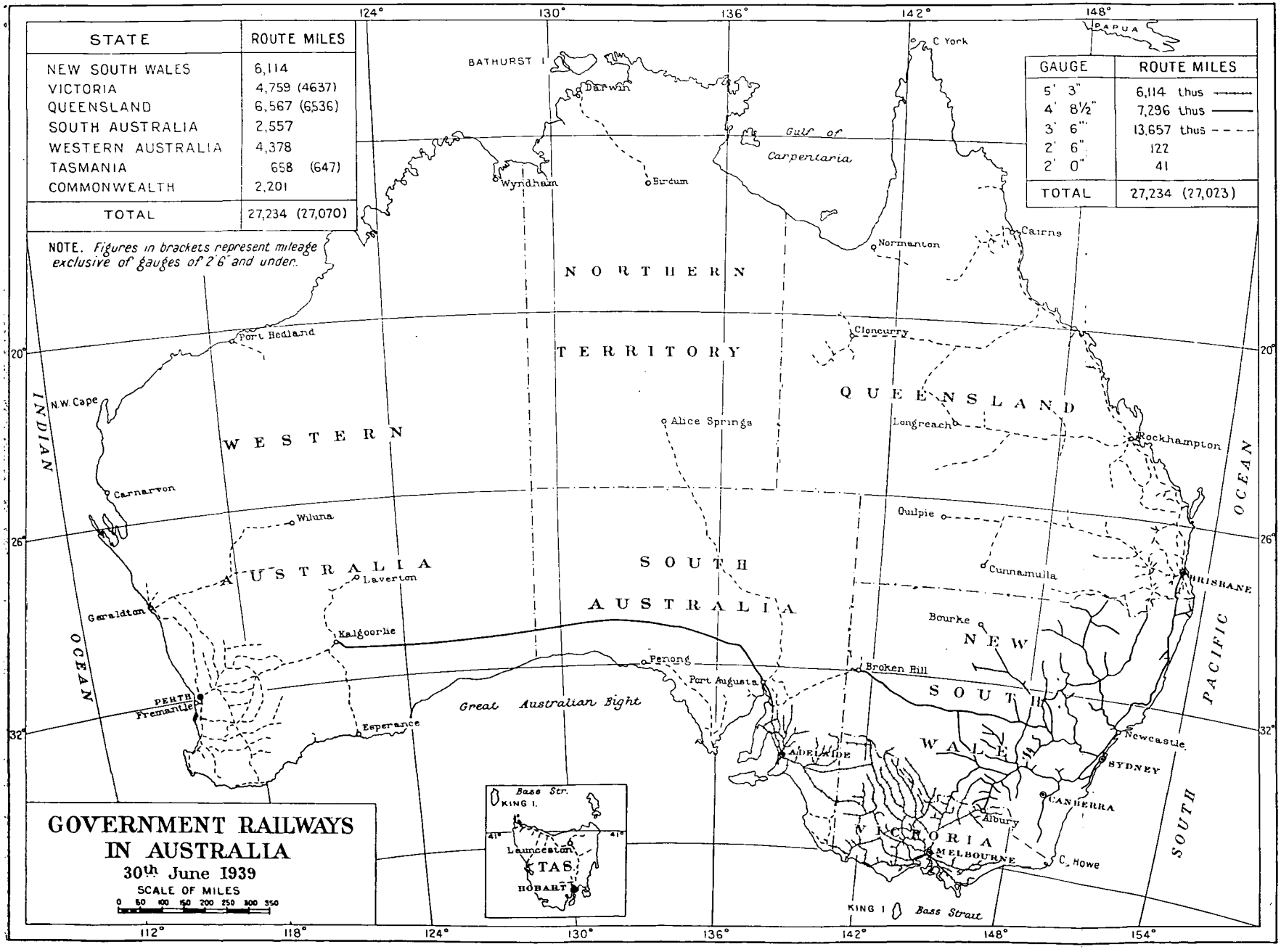
The graphs show for all motor vehicles other than motor cycles the registrations in force at 30th June each year and the number of new registrations during the year.

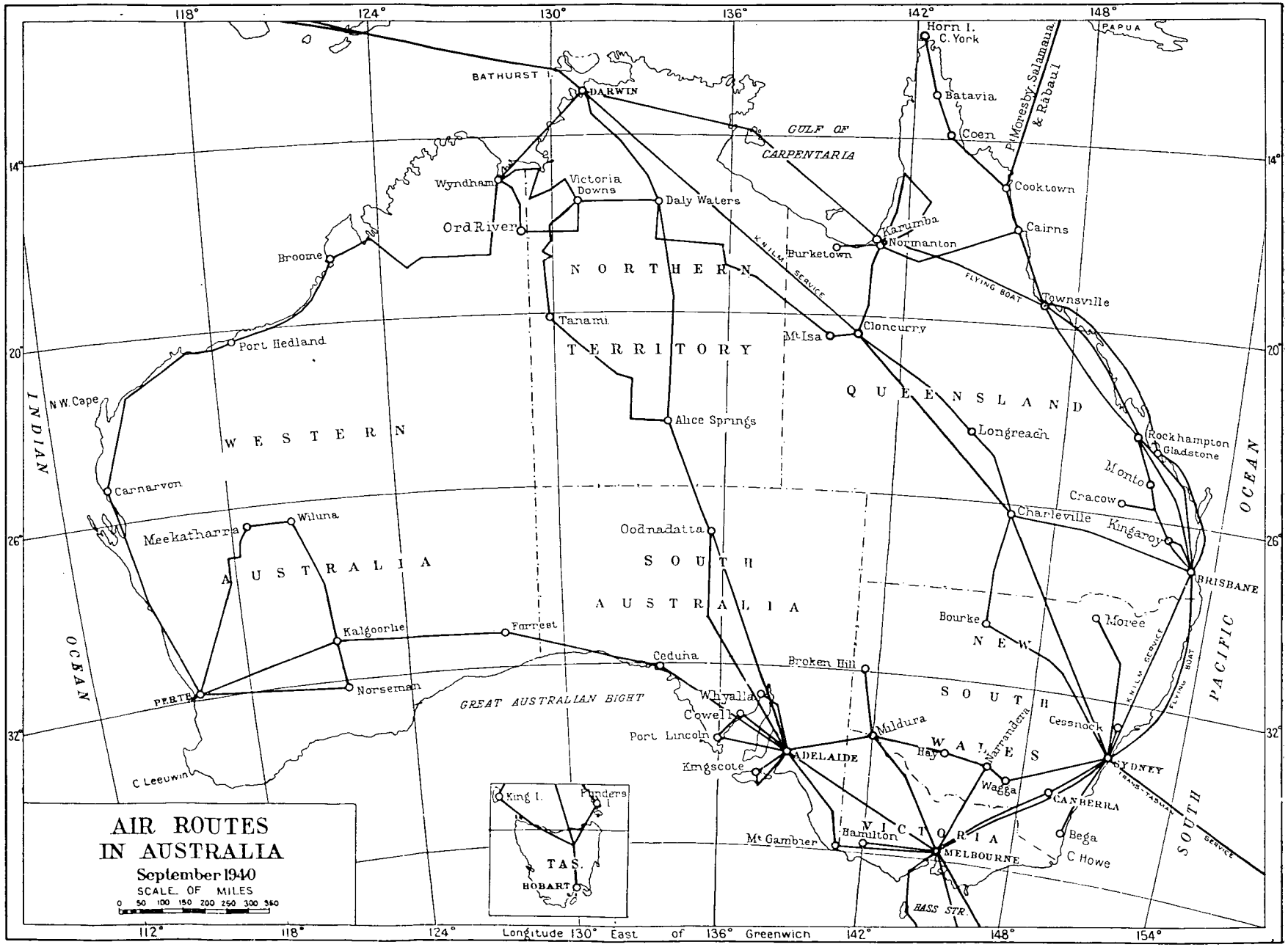
FINANCIAL POSITION OF THE GOVERNMENT RAILWAYS OF AUSTRALIA, 1870 TO 1939



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.


STATE
ROUTE MILES
NEW SOUTH WALES 6,114
VICTORIA 4,759 (4637)
QUEENSLAND 6,567 (6536)
SOUTH AUSTRALIA 2,557
WESTERN AUSTRALIA 4,378
TASMANIA 658 (647)
COMMONWEALTH 2,201
TOTAL 27,234 (27,070)
NOTE. Figures in brackets represent mileage exclusive of gauges of 2'6" and under.
GAUGE
ROUTE MILES
5' 3" 6,114 thus
4' 8½" 7,296 thus
3' 6" 13,657 thus
2' 6" 122
2' 0" 41
TOTAL 27,234 (27,023)
GOVERNMENT RAILWAYS IN AUSTRALIA
30th June 1939
SCALE OF MILES
0 50 100 150 200 250 300 350
124°
130°
136°
142°
148°
112°
118°
154°
20°
26°
32°
41°
BATHURST I.
Darwin
C. York
PAPUA
Gulf of Carpentaria
Wyndham
Birdum
Normanton
Cairns
Cloncurry
Port Hedland
N.W. Cape
Alice Springs
Longreach
Rockhampton
Carnarvon
Wiluna
Quilpie
Cunnamulla
BRISBANE
Laverton
Geraldton
Kalgoorlie
Bourke
Penong
Broken Hill
Port Augusta
PERTH
Fremantle
Great Australian Bight
Esperance
ADELAIDE
Newcastle
SYDNEY
CANBERRA
Albury
MELBOURNE
C. Howe
Base Str.
KING I.
Launceston
TAS.
HOBART
KING I.
Bass Strait
NORTHERN TERRITORY
QUEENSLAND
WESTERN AUSTRALIA
SOUTH AUSTRALIA
NEW SOUTH WALES
VICTORIA
INDIAN OCEAN
SOUTH PACIFIC OCEAN


AIR ROUTES
IN AUSTRALIA
September 1940
SCALE OF MILES
0 50 100 150 200 250 300 350
Longitude 130° East of 136° Greenwich
112° 118° 124° 130° 136° 142° 148° 154°
14° 20° 26° 32°
INDIAN OCEAN
PACIFIC OCEAN
SOUTH PACIFIC OCEAN
AUSTRALIA
WESTERN AUSTRALIA
NORTHERN TERRITORY
SOUTH AUSTRALIA
QUEENSLAND
NEW SOUTH WALES
VICTORIA
TAS.
GULF OF CARPENTARIA
GREAT AUSTRALIAN BIGHT
BASS STR.
BATHURST I.
King I.
Flinders I.
HOBART
DARWIN
Horn I.
C. York
Batavia
Coen
Cooktown
Cairns
Townsville
Karumba
Normanton
Burketown
Wyndham
Victoria Downs
Daly Waters
Ord River
Broome
Tanami
Port Hedland
NW. Cape
Carnarvon
Meekatharra
Wiluna
Alice Springs
Mt Isa
Cloncurry
Longreach
Charleville
Cracow
Monto
Rockhampton
Gladstone
Kingaroy
BRISBANE
Oodnadatta
Kalgoorlie
Forrest
Norseman
PERTH
Ceduna
Whyalla
Cowell
Port Lincoln
Kingscote
C Leeuwin
ADELAIDE
Broken Hill
Mildura
Hay
Wagga
Bourke
Moree
Cessnock
SYDNEY
CANBERRA
Bega
C Howe
Mt Gambier
Hamilton
MELBOURNE
Marrandera
KNILM SERVICE
FLYING BOAT
TRANS-TASMAN SERVICE
PAPUA
P. Moresby, Salamaua & Rabaul

Particulars of New Vehicles Registered during 1939–40 will be found in the Appendix to this volume.

(ii) *Quinquennium* 1934–35 *to* 1938–39. Particulars of new vehicles registered in Australia during the years 1934–35 to 1938–39 appear in the following table :—

NEW MOTOR VEHICLES REGISTERED : AUSTRALIA.(a)

Year.	Motor Cars.	Commercial Vehicles, etc.	Motor Cycles.	Total.
1934–35	32,985	14,146	5,249	52,380
1935–36	50,427	19,851	6,673	76,951
1936–37	48,587	24,191	7,479	80,257
1937–38	55,125	27,402	8,323	90,850
1938–39	52,897	23,646	7,064	83,607

(a) Excludes Northern Territory and extra-Metropolitan Area of Western Australia ; also Australian Capital Territory prior to 1935–36.

7. **World Motor Vehicle Statistics, 1940.**—The result of the 1940 World Motor Census, conducted by the *American Automobile*, from which the following particulars have been extracted, shows that there were 44,515,137 motor cars, trucks, and buses registered in various countries of the world at 1st January, 1940. This shows an increase of 3.9 per cent. on the figure for the previous year, 42,834,465, and is the highest figure yet attained.

The following table shows the number of motor vehicles registered in each continent at 1st January, 1940 :—

MOTOR VEHICLES : WORLD REGISTRATIONS AT 1st JANUARY, 1940.

Continent.	Total Automobiles.	Motor Cars.(a)	Motor Trucks and Buses.(a)	Motor Cycles.(a)
Africa	692,974	543,740	147,840	52,293
America (exclusive of U.S.A.)	2,309,100	1,785,842	523,258	27,488
United States of America ..	30,180,224	25,804,340	4,375,884	118,344
Asia	695,738	427,083	266,555	101,441
Europe	9,436,293	6,704,286	2,662,007	2,771,112
Oceania	1,200,808	887,409	312,799	95,234
Total	44,515,137	36,152,700	8,288,343	3,165,912

(a) Not complete for all territories.

The next table gives the numbers 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, 1940.

Country.	Approximate Population in Millions.	Motor Cars, Trucks and Buses.	Motor Cycles.
Australia	7	854,150	77,000
Argentine Republic	13	292,400	2,000
Canada	11	1,420,924	12,265
France	42	2,268,985	..
Germany	77	1,951,789	1,860,722
United Kingdom	47	2,608,501	411,593
India	362	185,000	11,417
Italy	43	475,000	200,000
Japan	103	140,000	60,000
New Zealand	2	278,214	17,749
Union of South Africa	2	368,000	25,000
United States of America	130	30,180,224	118,344

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 a public thoroughfare is not uniform throughout the Commonwealth. Some States, like New South Wales, have not enforced the reporting of minor accidents while others, like Victoria, require that all accidents be reported. Hence the figures for each State are not comparable 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* 1938–39. 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 the year 1938–39 :—

ACCIDENTS (KNOWN TO THE POLICE) WHICH OCCURRED IN PUBLIC THOROUGHFARES : PERSONS KILLED AND INJURED, 1938–39.

State or Territory.	Accidents.	Persons Killed.			Persons Injured.		
		Total.	Per 1,000 of Mean Population.	Per 100 Motor Vehicles Registered.	Total.	Per 1,000 of Mean Population.	Per 100 Motor Vehicles Registered.
New South Wales	11,906	545	0.20	0.17	8,388	3.07	2.63
Victoria ..	18,496	418	0.22	0.16	7,428	3.96	2.84
Queensland ..	10,297	173	0.17	0.14	4,026	4.00	3.14
South Australia ..	13,528	118	0.20	0.13	3,536	5.95	3.90
Western Australia	5,636	126	0.27	0.18	937	2.03	1.35
Tasmania ..	5,054	43	0.18	0.16	1,300	5.50	4.93
Aus. Cap. Territory	92	3	0.26	0.13	38	3.25	1.67
Total ..	65,009	1,426	0.21	0.16	25,653	3.70	2.85

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

AGES OF PERSONS KILLED OR INJURED, 1938–39.

State or Territory.	Under 10 years.		10 to 59 years.		60 years and over.		Age not known.		Total.	
	Persons Killed.	Persons Injured.	Persons Killed.	Persons Injured.	Persons Killed.	Persons Injured.	Persons Killed.	Persons Injured.	Persons Killed.	Persons Injured.
N.South Wales	38	575	417	7,141	90	672	..	..	545	8,388
Victoria ..	24	558	304	6,011	90	655	..	204	418	7,428
Queensland ..	(a) 17	(a) 582	(b) 135	b 3,065	21	340	..	39	173	4,026
South Aust. ..	9	197	89	3,108	20	231	..	..	118	3,536
Western Aust.	(c) 19	(c) 103	(d) 84	(d) 790	23	44	..	..	126	937
Tasmania ..	4	106	28	1,126	11	68	..	..	43	1,300
Aus. Cap. Terr.	..	1	2	33	1	1	..	3	3	38
Total ..	(e) 111	(e) 2,122	(e) 1,059	(e) 21,274	256	2,011	..	246	1,426	25,653

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

(ii) *Years* 1930–31 *to* 1938–39. Approximate figures relating to the persons killed and injured in traffic accidents in Australia during the years 1930–31 to 1938–39 are given hereunder :—

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

Particulars.	1930–31.	1931–32.	1932–33.	1933–34.	1934–35.	1935–36.	1936–37.	1937–38.	1938–39.
Persons killed ..	916	818	914	952	1,100	1,350	1,387	1,483	1,426
Persons injured ..	14,297	13,728	15,073	18,039	19,189	22,131	22,940	25,097	25,653

(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.—The following table gives, for accidents in which persons were killed or injured, the causes of the accidents under forty-eight different headings. The table does not include particulars of South Australia or Extra-Metropolitan Western Australia. For 1937–38, 25 accidents, 77 deaths and 143 injuries occurring in New South Wales are duplicated in the table, accidents being included under two or more headings where the sole or main cause could not be determined :—

ACCIDENTS INVOLVING CASUALTIES CLASSIFIED ACCORDING TO DETAILED CAUSES : AUSTRALIA(a) 1937–38 AND 1938–39.

Cause of Accident.	1937–38.			1938–39.		
	Accidents.	Persons Killed.	Persons Injured.	Accidents.	Persons Killed.	Persons Injured.
Driver or rider—						
Skidding on roadway	770	59	1,075	705	59	934
Cutting in	160	7	179	34	..	48
Failure to exercise care at intersection	1,500	61	1,799	1,097	34	1,267
Excessive speed	1,065	205	1,541	891	153	1,347
Not keeping to left	844	91	1,140	923	89	1,283
Swerving to avoid vehicle or animal or other object or person	504	21	630	390	13	515
Overtaking on near side or without sufficient clearance	397	22	510	357	14	702
Stopping or turning in front of other vehicle or leaving kerb without warning	566	16	637	546	18	600

(a) See letterpress above.

ACCIDENTS INVOLVING CASUALTIES CLASSIFIED ACCORDING TO DETAILED CAUSES: AUSTRALIA(a) 1937–38 AND 1938–39—*continued.*

Cause of Accident.	1937–38.			1938–39.		
	Accidents.	Persons Killed.	Persons Injured.	Accidents.	Persons Killed.	Persons Injured.
Driver or rider—*continued.*						
Level crossing	66	24	79	44	26	57
Vehicle overloaded (passengers)	24	1	40	3	2	8
Rounding corner carelessly or on wrong side	290	17	351	404	8	471
Reversing without due care	76	4	77	82	3	86
Obscured vision (except by rain)	178	16	191	111	1	134
Failing to give right of way	527	9	685	784	15	1,041
Breaking traffic regulations or failing to obey traffic officer's signal	205	10	246	169	8	210
Careless, negligent or inefficient driving	2,230	161	2,635	2,548	168	3,021
Insufficient clearance to avoid halting vehicle	112	..	128	69	..	76
Failing to see signal given by car ahead or misinterpreting signal	129	2	150	161	..	181
Dazzled by sun or light	255	14	324	269	21	339
Vision obscured by rain	229	22	264	110	11	139
Driver or rider drunk	243	22	325	215	11	278
Hit and run motorist	175	11	193	131	5	139
Infirmity of driver or rider	98	10	126	37	4	48
Other	815	43	1,013	947	76	1,107
Total Driver or rider	11,458	848	14,338	11,027	739	14,031
Vehicle—						
Defective mechanism and tyres	776	62	1,145	759	60	1,100
No lights	267	33	352	172	15	206
Unattended, out of control	28	4	33	38	2	47
Vehicle overloaded (not passengers)	40	5	42	31	9	48
Other	3	1	2	19	1	24
Total Vehicle	1,114	105	1,574	1,019	87	1,425
Pedestrian—						
Crossing without due care	1,648	118	1,596	1,528	95	1,517
Walking in roadway	236	38	227	139	19	145
Running across roadway	728	35	713	684	30	671
Passing from behind or in front of stationary vehicle	340	17	337	411	25	400
Hesitating and/or faltering in crossing	262	21	263	257	21	254
Playing in roadway	186	10	180	374	29	357
Alighting from or boarding vehicle in motion	342	28	321	305	16	295
Alighting from moving vehicle on wrong side	33	3	34	36	1	36
Slipping or falling in crossing	45	5	40	28	2	26
Stepping from kerb or refuges without care	216	11	212	326	22	312
Standing in roadway	66	3	70	37	1	39
Pedestrian drunk	352	29	341	281	19	273
Infirmity of pedestrian	103	10	94	77	5	77
Other	30	2	31	95	18	80
Total Pedestrian	4,587	330	4,459	4,578	303	4,482

(a) See letterpress on page 141.

ACCIDENTS INVOLVING CASUALTIES CLASSIFIED ACCORDING TO DETAILED CAUSES: AUSTRALIA(a) 1937-38 AND 1938-39—*continued.*

Cause of Accident.	1937-38.			1938-39.		
	Accidents.	Persons Killed.	Persons Injured.	Accidents.	Persons Killed.	Persons Injured.
Other—						
Falling from moving vehicle ..	147	18	135	166	20	152
Horses shying, bolting or stumbling	152	27	144	169	18	177
Road faults including bad lighting	392	51	533	212	14	316
Animals obstructing roadway ..	108	2	129	111	7	144
Other	293	24	307	718	59	799
Total Other	1,092	122	1,248	1,376	118	1,588
GRAND TOTAL (a) ..	18,251	1,405	21,619	18,000	1,247	21,526

(a) See letterpress on page 141.

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 was given 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 the year 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. A notable development during the year was the inauguration of the Trans-Tasman Service (Sydney-Auckland, N.Z.) on 30th April, 1940. This Service, operating over the Tasman Sea, 1,348 miles, extends the air link from the United Kingdom to Australia on to New Zealand. It is operated on a weekly basis by two flying boats of the type known as the " Short S.30 Class ".

The short-term contracts entered into for a period of six months as from 3rd July, 1939, between the Commonwealth and Airline Companies for the operation of air services in Australia referred to in last year's issue of the Official Year Book, were extended for one month and terminated on the 28th January, 1940. The Government, after consideration of a comprehensive report of a Committee of Departmental officers, constituted to investigate and report on many important aspects of civil air transport in Australia, approved of short-term contracts for air services providing for the carriage of mails, passengers and freight, being entered into for periods of six and twelve months respectively. These contracts date generally from the 29th January, 1940, and details of the Services operated are included in the statements hereunder.

The following is a list of Airline Companies operating services as at 30th June, 1940:—

SUBSIDIZED AIR SERVICES AS AT 30th JUNE, 1940.

Service.	Route Mileage.	Frequency.	Operating Company and Type of Aircraft Used.	Miles Flown per week.	Miles Flown per year.
Sydney–Darwin–Singapore ..	4,669	1 RPW. ..	Qantas Empire Airways Ltd., Short Empire Boat S–23	9,338	485,576
Brisbane–Cloncurry ..	977	2 RPW. ..	Qantas Empire Airways Ltd., D.H.86	3,908	203,216
Cloncurry–Mount Isa ..	65	2 RPW. ..	Qantas Empire Airways Ltd., D.H.90	260	13.520
Mount Isa–Daly Waters ..	547	1 RPW. ..	Qantas Empire Airways Ltd., D.H.90	1,094	56,888
Cloncurry–Normanton (*a*) ..	215	1 RPW. ..	Qantas Empire Airways Ltd., D.H.83	430	22,360
Trans-Tasman	1,348	1 RPW. ..	Tasman Airways Ltd., Short Empire Boat S–30	2,696	140,192
Melbourne–Sydney (direct) ..	440	7 RPW. ..	Australian National Airways Pty. Ltd., Douglas DC.2; DC.3	6,160	321,200
Melbourne–Sydney (Via Canberra)		6 RPW. ..	Australian National Airways Pty. Ltd., Douglas DC.2; DC.3	5,280	275,440
Melbourne–Hobart	383	7 RPW. ..	Australian National Airways Pty. Ltd., Douglas DC.2; DC.3	5,362	279,590
Melbourne–Adelaide ..	457	6 RPW. ..	Australian National Airways Pty. Ltd., Douglas DC.2; DC.3	5,484	286,082
Melbourne–King Island–Launceston–Flinders Island–Melbourne	722	6 round trips per week	Australian National Airways Pty. Ltd., D.H.89	4,332	225,986
Melbourne–Perth	1,809	3 RPW. ..	Australian National Airways Pty. Ltd., Douglas DC.2	10,854	564,408
Sydney–Brisbane	450	13 RPW.	Airlines of Australia Ltd., Douglas DC.2	11,700	610,200
Brisbane–Townsville	722	7 RPW. ..	Airlines of Australia Ltd., D.H.86; Stinson Model A	10,108	527,060
Townsville–Cairns	175	14 RPW.	Airlines of Australia Ltd., D.H.86; D.H.89	4,900	255,500
Cairns–Cooktown	102	3 RPW. ..	Airlines of Australia Ltd., D.H.89	612	31,824
Cooktown–Wenlock ..	234	1 RPF. ..	Airlines of Australia Ltd., D.H.84	234	12,168
Cairns–Burketown	436	1 RPW. ..	Airlines of Australia Ltd., D.H. 84	872	45,344
Adelaide–Darwin	1,665	2 RPW. ..	Guinea Airways Ltd., Lockheed Electra 10-A; Lockheed 14-W	6,660	346,320
Adelaide–Kingscote ..	92	6 RPW. ..	Guinea Airways Ltd., D.H.89	1,104	57,592
Adelaide – Cowell – Cleve – Port Lincoln–Adelaide	386	3 round trips per week	Guinea Airways Ltd., D.H.89	1,158	60,216
Adelaide–Whyalla	147	6 RPW. ..	Guinea Airways Ltd., D.H.89	1,764	92,022
Whyalla–Iron Knob ..	31	1 RPW. ..	Guinea Airways Ltd., D.H.89	62	3,224
Perth–Darwin	2,193	2 RPW. ..	MacRobertson-Miller Aviation Co. Ltd., D.H.86; Lockheed 10-A	8,772	456,144
Wyndham–Daly Waters (*a*) ..	524	1 RPW. ..	MacRobertson-Miller Aviation Co. Ltd., D.H.83; D.H.84	1,048	54,496
Sydney–Rabaul	2,522	1 RPW. ..	W. R. Carpenter & Co. Ltd., D.H.86-B	5,044	262,288
Sydney–Charleville	727	2 RPW. ..	Butler Air Transport Co., D.H.84	2,908	151,216
Perth–Wiluna–Kalgoorlie ..	813	1 RPW. ..	Airlines (W.A.) Ltd., D.H.84; Stinson Reliant SR.7B	1,626	84,552
Sydney–Bega	208	6 RPW. (*b*)	Adastra Airways Ltd., D.H.90	2,496	130,208
Brisbane–Rockhampton ..	381	1 SPW. ..	Aircrafts Pty. Ltd., D.H.84 ..	381	19,812
Brisbane–Maryborough–Bundaberg	193	1 RPW. ..	Aircrafts Pty. Ltd., D.H.84 ..	386	20,072
Brisbane–Monto	270	1 RPW. ..	Aircrafts Pty. Ltd., D.H.84 ..	540	28,080
Brisbane–Kingaroy	103	4 RPW. ..	Aircrafts Pty. Ltd., D.H.84 ..	824	42,848
Melbourne–Deniliquin–Hay ..	225	6 RPW. ..	Victorian and Interstate Airways Ltd., Miles Merlin; De Soutter	2,700	140,850
Sydney–Adelaide	741	6 RPW. ..	Ansett Airways Ltd., Lockheed Electra 10-B	8,892	463,866
Melbourne–Broken Hill ..	449	6 RPW. ..	Ansett Airways Ltd., Lockheed Electra 10-B	5,388	281,074
Sydney–Moree	328	3 RPW. ..	North Western Airlines Ltd., D.H.90	1,968	102,336
Alice Springs–Wyndham ..	952	1 RPF. ..	E. J. Connellan, Percival Gull 6	952	49,504
Total	26,701			138,297	7,203,274

(*a*) Aircraft specially fitted as an Ambulance Carrier.
(*b*) 2 RPW. in addition to contract frequency.
NOTE.—"RPW." signifies Return trip per week; "SPW." signifies Single trip per week; "RPF." signifies Return trip per fortnight.

UNSUBSIDIZED AIR SERVICES AS AT 30th JUNE, 1940.

Service.	Route Mileage.	Frequency.	Operating Company and Type of Aircraft Used.	Miles Flown per week.	Miles Flown per year.
Melbourne–Sydney (Sundays only)	511	1 RPW. ..	Ansett Airways Ltd., Lockheed Electra 10-B	1,022	53,144
Melbourne–Hamilton ..	160	6 RPW. ..	Ansett Airways Ltd., Airspeed Envoy	1,920	100,160
Normanton–Koolatah ..	379	Round trip fortnightly	Airlines of Australia Ltd., D.H. 89	189	9,854
Total	1,050			3,131	163,158

NOTE.—"RPW." signifies Return trip per week.

AIR TRANSPORT SERVICES IN AUSTRALIA AS AT 30th JUNE, 1940 : SUMMARY.

	Aggregate Route Mileage of Operating Companies.	Miles Flown per week.	Miles Flown per year.
Subsidized Services	26,701	138,297	7,203,274
Unsubsidized Services	1,050	3,131	163,158
Total	27,751	141,428	7,366,432
K.N.I.L.M. Service (Darwin–Sydney)	2,225	4,450	231,400
Grand Total	29,976	145,878	7,597,832

4. **Air Ambulance Services.**—Air ambulance services were first established in Australia in 1928, when an agreement was entered into between the Queensland and Northern Territory Aerial Services Ltd. (now Qantas Empire Airways) and the Australian Inland Mission. The company provided the aircraft and pilot and the mission authorities the doctor. The base of the operations at that time was Cloncurry, and flights were made to outback centres in Western and Northern Queensland.

The value of the scheme was readily apparent and has resulted in the establishment of other such centres to serve the sparsely populated parts of the Commonwealth not readily accessible by other means of transport. Considerable impetus to the efficiency of the air ambulance service in ameliorating the hardships of settlers in the "outback" was given by the introduction of a system of wireless communication by means of pedal transceivers. The simplicity of these small wireless units contributes largely to their value, power being supplied by a dynamo operated by bicycle pedals and morse messages may be transmitted by manipulating an automatic keyboard transmitter similar to a typewriter.

At the present time air ambulance services, popularly known as the "Flying Doctor" services, are established at the following centres:—Cloncurry, Port Hedland, Wyndham, Kalgoorlie, Broken Hill and Alice Springs. These services are operated by the Australian Aerial Medical Services. A flying doctor service operates from Katherine and is controlled by the Department of the Interior.

The Government recognizes the national importance of the scheme in making medical aid accessible to outback settlers, and an annual grant of £7,500 is provided for maintenance and extension of air ambulance services. This grant is administered by the Health, Postmaster-General's and Civil Aviation Departments.

5. **Training of Air Pilots.**—(i) *Subsidized Aero Clubs.* The Agreements under which approved aero clubs were subsidized expired on 31st December, 1939, and all approved clubs with the exception of the Tasmanian Aero Club, Broken Hill Aero Club and Whyalla Aero Club, were requested by the Department of Air to quote for elementary flying training for Air Force personnel. The three clubs named above, which were not included in the Air Force scheme owing to their small size and comparative isolation from large centres of population, were granted departmental assistance from 1st January, 1940, on the same basis as previously. During the year ended 30th June,

1940, 317 pupils qualified for private (" A ") pilot's licences. Many graduates completed advanced training courses and others also qualified for their commercial pilot's and flying instructor's licences. One pilot also qualified for issue of a navigator's licence.

(ii) *Unsubsidized Training Organizations.* Flying training is also carried out by a number of private companies, clubs and private owners at various centres throughout the Commonwealth. These organizations do not receive financial assistance from the Government. During the year ended 30th June, 1940, 255 pupils graduated for private (" A ") pilot's licences making a total of 572 pilots from all flying training organizations.

6. **Gliding.**—Government subsidies to approved clubs at the rate of £5 per primary glider, £7 10s. per secondary glider and £10 per sailplane ceased as from 31st December, 1939, owing to the heavy expenditure to which the Commonwealth Government is committed for aviation training and other war requirements.

7. **Meteorological Aids to Aviation.**—At the request of the Department of Civil Aviation, the Commonwealth Meteorological Bureau has arranged a comprehensive network of aviation meteorological facilities for the use of air services. The organization is gradually being expanded to meet the needs of new air services and meteorological personnel have been and are being trained in the special application of the science of meteorology to aviation requirements.

Full forecasting aviation meteorological stations are now established at the following aerodromes.—Darwin, Broome, Perth, Adelaide, Melbourne, Sydney, Brisbane, Townsville, Port Moresby, Launceston, Canberra and Hobart. Secondary aviation meteorological stations are in operation at the following aerodromes and flying boat bases :— Onslow, Kalgoorlie, Ceduna, Rockhampton, Cloncurry, Cooktown, Salamaua, Karumba, Groote Eylandt, Daly Waters and Oodnadatta. A secondary aviation station will be opened at Alice Springs at an early date. Rabaul, Willis Island and Hotham Heights also act as secondary aviation stations. Provision has also been made for the formation of reporting stations at Nhill, Holbrook and Kempsey, when night flying is introduced between the capital cities. For the Tasman Air Service upper air and observing stations have been established at Lord Howe and Norfolk Islands, and during the early part of the year an observer was stationed on one of the boats which regularly crosses the Tasman Sea, but on the outbreak of war, it was found necessary to recall this officer.

Forecasts over the whole of each air route section are given by meteorological officers when required This information is compiled from observations taken throughout the Commonwealth, with the addition of other information received from specially selected stations on or in the vicinity of the various air routes. Pilots on regular air services are required to report to the meteorological officer prior to each flight, and also on arriving at an aerodrome where a meteorological station is established. In this way the meteorologist receives further first-hand information of the meteorological conditions of the particular route. Operation of aeradio stations over the whole of the routes of regular air services provides means for the rapid transmission of meteorological observations necessary for aircraft operation.

8. **Aerodromes and Landing Grounds.**—(i) *Australia and New Guinea.* To serve the numerous air routes in the Commonwealth and New Guinea extending over 20,000 miles there were 497 recognized landing grounds, located at intervals along the routes, on 30th June, 1940. Of this total 257 are directly controlled and maintained by the Commonwealth Government for civil aviation purposes. The balance of 240 have been established and are maintained by local authorities and private individuals.

(ii) *Empire Air Service (Flying Boat).* The necessary ground organization, including the provision of buildings, marine equipment, mooring facilities, etc., have been provided by the Commonwealth on the Australian sections—Sydney–Singapore and Sydney–Auckland (trans-Tasman)—of the Empire Air Service.

9. **Radio.**—(i) *General.* The policy of the Department of Civil Aviation in regard to the provision of radio aids for air navigation is that facilities shall be provided at all normal stopping places on the various air routes as well as at certain intermediate points in order that each air route shall be covered by radio aids.

These radio facilities comprise two main types—

1. Communication equipment. This is of modern type and provides for two-way communication with aircraft as well as point-to-point contact with ground stations. The equipment provides for communication on both medium and high frequencies.
2. Navigation equipment. Two types of navigation aids are being installed, namely—
   (*a*) Ultra high frequency radio range beacons.
   (*b*) Direction-finding receivers of two types operating on medium frequencies and high frequencies.

The aeradio organization is based principally on the use of high frequencies in view of the fact that Australia is situated in one of the worst areas in the world with respect to atmospheric interference. High frequencies are, however, not so susceptible to this interference, and a superior service is obtained by the use of such frequencies when compared with the results obtained on medium frequencies.

(ii) *Australia and New Guinea Air Services.* On the 30th June, 1940, there were 28 aeradio communication stations in operation in Australia and New Guinea. At 24 of these stations aeradio navigational facilities (radio range stations or Bellini-Tosi direction-finding receivers) have been provided. Certain coastal stations are also utilized for aeradio communication purposes. Additional high frequency direction-finding stations are in various stages of completion in Queensland and the Northern Territory.

(iii) *Empire Air Service.* For the Sydney–Darwin and the Sydney–Auckland (Trans-Tasman) sections of the Empire Air Service, four aeradio communication stations are in operation whilst navigational facilities (high frequency or medium frequency direction-finding receivers) have also been provided for these services at four stations.

10. **Night Flying Facilities.**—On 30th April, 1940, night flying facilities were available at the following aerodromes: Archerfield (Brisbane), Evans Head, Coff's Harbour, Kempsey, Kingsford Smith (Sydney), Goulburn, Holbrook, Cootamundra, Canberra, Benalla, Essendon (Melbourne), Nhill, Parafield (Adelaide), Cambridge (Hobart), Western Junction (Launceston), Maylands (Perth), and Darwin. The Cloncurry–Longreach section of the Brisbane–Darwin route and the Kalgoorlie–Cook section of the Perth–Adelaide route are also equipped for night flying. Airways rotating beacons have been installed at the following intermediate points along the main air routes: Bowral, Adelong (New South Wales), Chiltern, Yea (Victoria), Bordertown, Tailem Bend, Mount Lofty, Oodnadatta (South Australia), and Wiluna (Western Australia). Installation of a rotating beacon at Townsville, Queensland, is in progress. These lights are visible up to 80 miles under conditions of good visibility and are a useful aid to air navigation.

11. **Materials and Parts for use in Civil Aircraft.**—The range of approved and certified aircraft parts and materials offered to aircraft operators and owners by reliable manufacturing and distributing organizations has continued to expand during the twelve months under review. The Department of Civil Aviation has now extended approval to 100 firms to supply goods under cover of official release notes certifying compliance with approved material specifications or drawings. Of these firms, 69 are manufacturers and 49 are distributors of local or imported aircraft supplies.

An important development has been the action taken by the Standards Association of Australia to investigate the whole question of the co-ordination of Australian and oversea standards for aircraft materials. An Aircraft Materials Executive Committee has been formed comprising representatives of State Government Departments and manufacturers, and sub-committees have already made considerable investigations into aircraft specifications for steels, light alloys and Australian timbers. Where possible, British specifications are endorsed, but quite a number of specifications are being drafted to cover Australian materials to which no British specifications apply.

12. **Aircraft Maintenance.**—Facilities available in Australia for the repair and overhaul of aircraft, aircraft engines, instruments and component parts have been greatly extended in the period under review. Adequate equipment has been set up

and suitable technical staffs have been engaged by firms to cater for the many phases of overhaul and repair work involved in the maintenance of aircraft and accessories. Thirty-eight firms authorized by the Department of Civil Aviation to issue certificates of repair may now certify that such repair work has been executed in accordance with approved practices. The recent successful execution of extensive repairs to large transport aircraft is an example of the advances made in capacity to perform major overhaul work on all-metal aircraft in this country. Three particular cases have involved extensive re-building of modern all-metal, stressed skin aircraft.

Under the terms of their contract for the operation of the Empire Air Route, Qantas Empire Airways Ltd. have undertaken the overhaul of Bristol Pegasus XC engines as fitted to Short "C" Class Flying Boats to be performed in Sydney. This work, the performance of which requires expert workmanship and special equipment, was previously performed overseas.

13. **Statistical Summary.**—The collection and compilation of aircraft statistics were undertaken by this Bureau on the 1st July, 1922. The subjoined table gives a summary of operations for the five years ended 30th June, 1939 :—

CIVIL AVIATION IN AUSTRALIA : SUMMARY.

Particulars.		1934–35.	1935–36.	1936–37.	1937–38.	1938–39.
Registered Aircraft Owners (a)	No.	123	124	102	139	149
Registered Aircraft(a)	No.	208	228	214	286	296
Licensed Pilots—(a)						
Private	No.	569	714	744	937	1,096
Commercial	No.	210	236	265	323	346
Licensed Navigators(a)	No.	13	22	29	47	59
Licensed Aircraft Radio Telegraph Operators (a)	No.	7	8	9	23	75
Licensed Ground Engineers (a)	No.	297	295	346	437	525
Aerodromes—(a)						
Government	No.	65	63	72	74	71
Public	No.	146	171	183	197	213
Government Emergency Grounds	No.	138	148	151	153	147
Hours flown	No.	45,693	62,479	84,010	113,647	121,935
Approx. Mileage	Miles	3,854,424	5,819,751	8,731,612	12,291,570	14,098,615
Passengers carried—						
Paying	No.	45,540	60,476	85,574	133,408	123,566
Non-paying	No.	11,743	14,643	16,590	25,495	24,353
Total	No.	57,283	75,119	102,164	158,903	147,919
Goods, weight carried	lb.	249,415	442,407	822,724	1,169,207	1,734,644
Mails, weight carried	lb.	67,908	121,187	167,601	228,581	(b)740,375
Accidents—						
Persons killed	No.	28	20	19	10	38
Persons injured	No.	10	6	14	4	15

(a) At 30th June. (b) Includes gross weight of oversea mail.

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

Particulars.		1934–35. (a)	1935–36.	1936–37.	1937–38.	1938–39.
Hours flown	No.	1,186	2,159	3,767	3,788	4,903
Miles flown	No.	140,706	290,542	494,105	488,417	718,288
Passengers carried	No.	49	177	351	522	1,112
Goods, weight carried	lb.	1,019	8,564	17,582	28,080	103,948
Mails, weight carried	lb.	24,828	69,436	89,647	113,117	(b) 576,188

(a) December, 1934 to June, 1935. (b) Gross weight.

Preliminary figures relating to the Operations of Civil Aircraft in Australia during the year 1939-40 will be found in the Appendix to this volume.

14. 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 the country. 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.

The European population of the gold-fields is over 1,200 and indentured native labourers number over 14,000. Every requirement for this number of people, including all types of mining and dredging machinery, motor cars, trucks, horses, cattle, building and other heavy materials, 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 the year 1938-39 the average weight of cargo and mails carried per day was 33 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 subjoined table gives a summary of operations for the five years ended 30th June, 1939.

CIVIL AVIATION IN TERRITORY OF NEW GUINEA: SUMMARY.

Particulars.		1934-35.	1935-36.	1936-37.	1937-38.	1938-39.
Registered Aircraft Owners (a)	No.	9	12	9	10	10
Registered Aircraft(a)	No.	25	38	34	40	47
Licensed Pilots—(a)						
Private	No.	3	5	4	12	13
Commercial	No.	27	27	22	24	23
Licensed Navigators(a)	No.	1	1	..	2	3
Licensed Ground Engineers (a)	No.	42	41	36	37	46
Aerodromes—(a)						
Government	No.	3	15	18	21	24
Public	No.	5	15	19	19	19
Government Emergency Landing Grounds	No.	3	6	8	6	11
Hours flown	No.	13,022	18,114	16,371	15,445	15,626
Approximate mileage	Miles	1,094,308	1,486,983	1,466,355	1,560,179	1,456,154
Passengers carried—						
Paying	No.	14,200	15,943	11,718	12,247	12,909
Non-paying	No.	203	616	1,382	1,017	1,569
Total	No.	14,403	16,559	13,100	13,264	14,478
Goods, weight carried	lb.	17,447,746	21,883,413	24,441,860	25,574,028	27,063,912
Mails, weight carried	lb.	97,889	128,982	122,063	166,643	162,608
Accidents—						
Persons killed	No.	2	1	..	1	..
Persons injured	No.	3	..	..	1	1

(a) At 30th June.

Preliminary figures relating to the Operations of Civil Aircraft in New Guinea during the year 1939-40 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 was given of the procedure in connexion with the transfer to the Commonwealth Government of the postal, telegraphic and telephonic 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 a Postmaster-General, being a responsible Minister with Cabinet rank. 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, Posts and Telegraphs.

2. **Postal Facilities.**—(i) *Relation to Area and Population.* The subjoined 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 the 30th June, 1939. 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, while 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, 1939.

State.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Australia.
Number of post offices(a) ..	2,521	2,572	1,237	792	615	510	8,247
Number of square miles of territory to each office in State	123	34	542	1,141	1,587	51	361
Number of inhabitants to each office	1,094	732	822	760	757	464	844
Number of inhabitants per 100 square miles	889	2,141	152	67	48	903	234

(a) Includes "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 1909, 1919, 1929 and 1939:—

NUMBER OF POST OFFICES.

State.	At 31st December—	At 30th June—					
	1909.	1919.		1929.		1939.	
	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 ..	2,397	466	2,133	448	2,250	433	2,088
Victoria	2,370	272	2,297	283	2,455	268	2,304
Queensland ..	1,378	202	1,081	211	1,070	190	1,047
South Australia ..	723	136	655	148	660	142	650
Western Australia ..	413	124	479	128	547	126	489
Tasmania ..	417	46	443	44	473	43	467
Australia ..	7,698	1,246	7,088	1,262	7,455	1,202	7,045

(a) Includes 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 appended table:—

POSTAL EMPLOYEES AND MAIL CONTRACTORS.

State.	At 31st December—	At 30th June—					
	1909.	1919.		1929.		1939.	
	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.	Employees.	Mail Contractors.
Central Office ..	(a)	..	84	..	195	..	340	..
New South Wales ..	7,469	1,553	11,732	1,964	15,267	1,952	16,281	2,651
Victoria	6,285	804	8,499	1,112	11,067	1,180	12,893	1,659
Queensland ..	3,146	589	4,289	787	5,437	786	6,212	1,569
South Australia ..	1,896	259	2,768	350	4,117	421	3,955	310
Western Australia ..	1,736	234	2,258	264	2,929	365	3,341	394
Tasmania ..	874	186	1,173	227	1,533	276	1,670	242
Australia ..	21,406	3,625	30,803	4,704	40,545	4,980	44,692	6,825

(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.
Postal—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1934–35 ..	2,557	1,765	917	469	433	177	6,318
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
Telegraph—							
1934–35 ..	433	302	222	119	140	44	1,260
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
Wireless—							
1934–35 ..	133	110	30	37	19	10	339
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
Telephone—							
1934–35 ..	2,361	1,750	884	563	328	142	6,028
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
All Branches—							
1934–35 ..	5,484	3,927	2,053	1,187	922	372	13,945
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
Total revenue per capita—	£	£	£	£	£	£	£
1934–35 ..	2.07	2.14	2.14	2.01	2.08	1.62	2.08
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

Compared with the corresponding figures for the previous year, an increase of 3.7 per cent. is shown in the gross revenue earned. Increases in the several branches were as follows:—Postal 1.8 per cent., Wireless 4.7 per cent., and Telephone 6.2 per cent. A decrease of 0.4 per cent. was recorded for the Telegraph Branch.

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, 1939. 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, 1938-39.

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 ..	64,139	2,198,409	1,535,967	803,051	527,210	408,017	201,078	5,737,871
General expenses ..	15,395	190,699	128,875	49,486	36,201	26,844	10,812	458,312
Stores and material	3,923	114,583	124,363	70,219	13,733	21,223	8,445	356,489
Mail services ..	*a* 309,570	448,086	287,392	224,898	77,781	83,962	38,177	1,469,866
Engineering services (other than New Works) ..	74,082	1,397,180	885,459	417,818	310,735	256,999	141,413	3,483,686
Other services ..	57,286	..	..	..	..	..	..	57,286
Total ..	524,395	4,348,957	2,962,056	1,565,472	965,660	797,045	399,925	11,563,510
Pensions and retiring allowances ..	..	24,343	26,127	..	..	23,968	..	74,438
Rent, repairs, maintenance, fittings, etc.	..	40,182	35,204	19,412	8,993	7,309	3,083	114,183
Proportion of audit expenses ..	..	4,625	3,150	1,692	1,015	782	396	11,660
New Works—								
Telegraph, telephone and wireless ..	6,873	1,319,790	1,011,128	424,599	205,640	175,038	86,525	3,229,593
New buildings, etc.	..	373,648	108,579	28,191	14,081	12,622	3,986	541,107
Other expenditure not allocated to States	3,339,443 (*b*)	..	..	..	..	..	..	3,339,443
Grand Total ..	3,870,711 (*c*)	6,111,545	4,146,244	2,039,366	1,195,389	1,016,764	493,915	18,873,934

(*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, 1934-35 to 1938-39.* The next table gives the actual payments made, as shown by records kept for Treasury purposes in respect of the Postal Department, for each of the last five years:—

POSTMASTER-GENERAL'S DEPARTMENT: EXPENDITURE 1934-35 TO 1938-39.

Expenditure.	1934-35.	1935-36.	1936-37.	1937-38.	1938-39.
	£	£	£	£	£
Total	13,458,581	14,424,388	15,622,255	17,135,560	18,873,934

The total expenditure increased by 10.1 per cent. during 1938-39.

5. **Profit or Loss, Postmaster-General's Department.**—(i) *States*, 1938-39. The foregoing statements 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, 1938-39.

Branch.	Profit or Loss.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
		£	£	£	£	£	£	£
Postal ..	Profit	879,037	652,370	314,577	133,987	102,876	22,361	2,105,208
	Loss	..	..	..	..	..	..	..
Telegraph ..	Profit	3,697	43,837	7,296	..	..	..	51,617
	Loss	..	..	..	313	2,144	756	..
Wireless ..	Profit	54,023	33,666	..	18,256	..	..	76,054
	Loss	..	..	4,927	..	15,175	9,789	..
Telephone ..	Profit	685,177	500,486	241,454	12,311	..	..	1,392,492
	Loss	..	..	..	..	7,278	39,658	..
All Branches ..	Profit	1,621,934	1,230,359	558,400	164,241	78,279	..	3,625,371
	Loss	..	..	..	..	..	27,842	..

After providing for depreciation, pensions and retiring allowances and interest on capital, the year 1938-39 closed with a surplus of £3,625,371. For the preceding year a surplus of £3,533,476 was shown.

(ii) *Branches*, 1934-35 *to* 1938-39. The following statement gives particulars of the operating results of each branch for the period 1934-35 to 1938-39 :—

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

Year—	Branch Profits.				
	Postal.	Telegraph.	Wireless.	Telephone.	All Branches.
	£	£	£	£	£
1934-35	1,828,279	15,019	162,343	402,332	2,407,973
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	2,094,561	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

6. **Capital Account.**—The appended statement shows particulars of the fixed assets of the Postmaster-General's Department at 30th June, 1939 :—

POSTMASTER-GENERAL'S DEPARTMENT: FIXED ASSETS, 30th JUNE, 1939.

Particulars.	Net Value, 1st July, 1938.	Capital Expenditure, 1938-39.	Gross Value, 30th June, 1939.	Less Depreciation, &c., 1938-39. (a)	Net Value, 30th June, 1939.
	£	£	£	£	£
Telephone service plant (exclusive of trunk lines) ..	38,278,015	3,448,378	41,726,393	807,421	40,918,972
Trunk and telegraph service plant (aerial wires) ..	10,718,192	277,023	10,995,215	86,581	10,908,634
Telegraph service plant ..	682,004	59,938	741,942	4,739	737,203
Postal service plant ..	426,142	13,250	439,392	2,397	436,995
Wireless plant	463,878	105,359	569,237	5,453	563,784
Sites, buildings, furniture and office equipment ..	10,046,390	617,240	10,663,630	50,053	10,613,577
Miscellaneous plant ..	918,521	114,346	1,032,867	76,543	956,324
Total	61,533,142	4,635,534	66,168,676	1,033,187	65,135,489

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

During the past quinquennium the value of the fixed assets has increased by 21.7 per cent., the net value at 30th June, 1934, being £53,539,642.

§ 2. Posts.

1. **Postal Matter Dealt With.**—(i) *Australia.* The following table gives a summary of the postal matter dealt with in Australia during the five years 1934-35 to 1938-39. Although mail matter posted in Australia for delivery therein is necessarily handled at least twice, only the numbers 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 Population.	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population.
POSTED WITHIN AUSTRALIA FOR DELIVERY THEREIN.								
1934-35 ..	752,112	112,215	125,088	18,663	8,456	1,262	6,576	981
1935-36 ..	775,469	114,869	129,290	19,152	8,606	1,275	6,814	1,009
1936-37 ..	792,869	116,519	133,034	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 ..	836,243	120,717	139,635	20,157	9,056	1,307	7,474	1,079
TOTAL POSTAL MATTER DEALT WITH.								
1934-35 ..	809,729	120,812	147,662	22,031	8,876	1,324	7,273	1,085
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

(ii) *States.* The next table shows the postal matter dealt with in each State during the year 1938-39.

POSTAL MATTER DEALT WITH : STATES 1938-39.(a)

State.	Letters, Postcards, Letter Cards and Packets.		Newspapers.		Parcels.		Registered Articles other than Parcels.	
	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population.	Number ('000 omitted).	Per 1,000 of Population.
POSTED FOR DELIVERY WITHIN AUSTRALIA.								
New South Wales	333,132	121,331	68,130	24,814	3,811	1,388	2,795	1,018
Victoria ..	241,551	128,829	28,278	15,082	1,760	939	2,068	1,103
Queensland ..	107,821	107,089	23,192	23,035	1,896	1,883	1,136	1,128
South Australia ..	63,155	105,215	7,877	13,123	772	1,286	607	1,011
Western Australia	56,611	122,357	6,635	14,341	691	1,494	576	1,245
Tasmania ..	33,973	143,391	5,523	23,311	126	532	292	1,232
Australia ..	836,243	120,717	139,635	20,157	9,056	1,307	7,474	1,079
OVERSEA DISPATCHED.								
New South Wales	11,919	4,341	2,632	959	115	42	207	75
Victoria ..	8,840	4,715	3,644	1,944	53	28	104	55
Queensland ..	3,104	3,083	851	845	14	14	50	50
South Australia ..	2,630	4,382	393	655	8	13	16	27
Western Australia	4,103	8,868	623	1,347	16	35	40	86
Tasmania ..	2,381	10,050	191	806	3	13	4	17
Australia ..	32,977	4,760	8,334	1,203	209	30	421	61
OVERSEA RECEIVED.								
New South Wales	15,240	5,551	9,562	3,483	155	56	246	90
Victoria ..	9,982	5,324	3,155	1,683	89	47	132	70
Queensland ..	2,649	2,631	1,521	1,511	28	28	36	36
South Australia ..	1,679	2,797	989	1,648	16	27	17	28
Western Australia	3,194	6,903	1,758	3,800	26	56	39	84
Tasmania ..	1,126	4,753	407	1,718	6	25	5	21
Australia ..	33,870	4,889	17,392	2,511	320	46	475	69

(a) See explanation in paragraph (1).

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 1934–35 to 1938–39 :—

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.
1934–35	309,024	36,959	200,358	19,940	76,174	1,720	644,175
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
VALUE COLLECTED.							
	£	£	£	£	£	£	£
1934–35	364,750	50,469	244,829	19,965	83,364	1,936	765,313
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
REVENUE INCLUDING POSTAGE, COMMISSION ON VALUE, REGISTRATION AND MONEY ORDER COMMISSION.							
	£	£	£	£	£	£	£
1934–35	39,653	5,012	24,623	2,307	8,912	215	80,722
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

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 were included, but owing to the restrictions of space the insertion of this information terminated with Official Year Book No. 22.

(ii) *Amount of Subsidies Paid.* The following table shows the amounts of subsidies paid by the Commonwealth Postal Department for ocean and coastal mail services during the year ended 30th June, 1939 :—

MAIL SUBSIDIES : OCEAN AND COASTAL SERVICES, 1938–39.

Service.	Orient S.N. Co.	Queensland Ports.	South Australian Ports.	Western Australian Ports.	Tasmanian Ports.
	£ Stg.	£	£	£	£
Annual subsidy	137,913	975	3,800	5,500	55,379

4. **Total Cost of Carriage of Mails.**—During the year 1938–39 the total amount paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, was £1,446,423. Details appear hereunder :—

CARRIAGE OF MAILS : TOTAL COST, 1938–39.

Inland Mails.		Non-Contract Vessels.	Overland and Sea Transit.	Coastwise Mails.	Mails to Europe. (a)	Air Mails.	Tasmanian Subsidy.	Total.
By Road.	By Railway.							
£	£	£	£	£	£	£	£	£
547,539	462,441	43,349	6,362	10,911	137,921	207,900	30,000	1,446,423

(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 1938–39, and the methods adopted in the disposal thereof :—

DEAD LETTER OFFICES : TRANSACTIONS, 1938–39.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
LETTERS, POSTCARDS AND LETTER-CARDS.							
Returned to writers or delivered ..	529,148	244,591	183,661	86,963	113,412	60,834	1,218,609
Destroyed in accordance with Act ..	82,394	31,599	14,933	9,058	4,709	3,378	146,071
Returned to other Countries as unclaimed ..	49,735	16,619	8,690	3,668	6,700	1,794	87,206
Total ..	661,277	292,809	207,284	99,689	124,821	66,006	1,451,886
PACKETS AND CIRCULARS.							
Returned to writers or delivered ..	212,676	148,289	249,656	12,645	58,754	35,970	717,990
Destroyed in accordance with Act ..	38,582	16,033	14,176	552	8,720	1,395	79,458
Returned to other Countries as unclaimed ..	4,665	5,611	3,125	2,064	240	599	16,304
Total ..	255,923	169,933	266,957	15,261	67,714	37,964	813,752
Grand Total (letters, packets, etc.) ..	917,200	462,742	474,241	114,950	192,535	103,970	2,265,638

During the year 1938–39 money and valuables to the amount of £77,894 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*, 1938–39. Particulars regarding the business transacted in each State for the year 1938–39 are given hereunder :—

MONEY ORDERS AND POSTAL NOTES : TRANSACTIONS, 1938–39.

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 ..	8,734,097	8,933,351	49,456	3,491,630	80,384
Victoria	3,496,136	3,817,482	20,898	2,241,741	55,007
Queensland ..	2,824,023	2,652,523	17,835	932,549	20,730
South Australia ..	1,068,466	1,051,721	6,676	544,316	13,115
Western Australia ..	1,545,136	1,437,783	9,681	503,594	11,194
Tasmania	681,525	655,407	3,487	212,259	5,370
Australia ..	18,349,383	18,548,267	108,033	7,926,089	185,800

(iii) *Australia*, 1934–35 *to* 1938–39. The next table shows the total number and value of money orders and postal notes issued and paid in Australia from 1934–35 to 1938–39 :—

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.
1934–35 ..	2,859	15,185	2,847	15,169	19,557	6,650	19,489	6,631
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

(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 the year 1938–39, classified according to the country where payable :—

MONEY ORDERS ISSUED : COUNTRY WHERE PAYABLE, 1938–39.

Where Issued.	Where Payable.				Total.
	In Australia.	In New Zealand.	In United Kingdom.	In Other Countries.	
	NUMBER.				
Australia	3,067,534	21,342	103,634	46,050	3,238,560
	VALUE.				
	£	£	£	£	£
Australia	17,926,229	60,589	215,739	146,826	18,349,383

(b) *Money Orders Paid.* The number and value of money orders paid during the year 1938–39, classified according to the country where issued, are given hereunder :—

MONEY ORDERS PAID : COUNTRY OF ISSUE, 1938–39.

Where Paid.	Where Issued.				Total.
	In Australia.	In New Zealand.	In United Kingdom.	In Other Countries.	
NUMBER.					
Australia	3,071,963	103,692	47,867	30,678	3,254,200
VALUE.					
	£	£	£	£	£
Australia	17,928,546	342,139	183,389	94,193	18,548,267

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 subjoined table shows the number and value of postal notes paid in each State during the year 1938–39. Particulars regarding the total 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, 1938–39.

Issued in—	Postal Notes Paid in—						
	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
NUMBER.							
	'000.	'000.	'000.	'000.	'000.	'000.	'000.
Same State ..	7,967	3,854	2,014	884	1,080	444	16,243
Other States ..	824	563	881	111	101	3,243	5,723
Total ..	8,791	4,417	2,895	995	1,181	3,687	21,966
VALUE.							
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Same State ..	2,971	1,440	753	335	412	155	6,066
Other States ..	306	228	307	46	26	955	1,868
Total ..	3,277	1,668	1,060	381	438	1,110	7,934

The number and value of postal notes paid in Australia during the year showed increases of 2.8 per cent. and 3.1 per cent. respectively on the corresponding figures for the year 1937–38.

§ 3. Telegraphs.

1. **General.**—(i) *Development of System.* A review of the development of the Telegraph Services in Australia was given in a previous issue of this work (see 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 five repeating centres, eighteen centres having been abolished.

(iii) *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 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 first 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 and Perth–Kalgoorlie. 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 ; 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 twelve months ended 30th June, 1939, was 3,164,872 or 18.3 per cent. of the total lodgments, and the popularity of this facility 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 the Commonwealth 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 pedal wireless transceiver stations have been established at various centres throughout the Commonwealth, enabling telegrams to be exchanged with departmental telegraph offices. These pedal 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 pedal station telegrams.

(x) *Picturegram Service.* During the year ended 30th June, 1939, 323 picturegrams were transmitted between Sydney and Melbourne, the revenue being £798. Any kind of picture or document may be accepted for transmission, the charges varying from 3os. 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 charges are calculated at the rate of three shillings and three pence per square centimetre with a minimum charge of £16 5s. as for 100 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 1939, 346,922 Greeting Telegrams were sent, an increase of 140.7 per cent. on the number (144,102) sent in 1929, the year of inception of the service.

During the year 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 66,678 in 1940. 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 14,907 in 1940. 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.

Seventy private wire services employing 180 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 each of 26 printer units installed in the offices of city stock-brokers.

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 the 30th June, 1939:—

TELEGRAPH OFFICES AND LINES: STATES, 30th JUNE, 1939.

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number of offices ..	3,061	2,453	1,579	831	928	537	9,389
Length of wire (miles)—							
Telegraph purposes only	12,494	7,632	14,742	6,513	8,533	644	50,558
Telegraph and telephone purposes	61,440	19,121	36,872	13,069	9,410	1,448	141,360
Length of line (miles)—							
Conductors in Morse cable	2,715	1,405	491	..	181	24	4,816
Conductors in submarine cable (statute miles) ..	4,106	419	326	226	193	477	5,747
Pole routes (miles) ..	33,059	19,124	14,771	14,793	12,071	3,493	97,311

A total length of 191,918 miles of wire is available for telegraph purposes, of which 141,360 miles are also used for telephone purposes. Compared with those for the previous year, the figures show an increase of 5,917 miles (3.2 per cent.) in the total length and an increase of 6,386 miles (4.7 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 1935 to 1939:—

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

Particulars.	1935.	1936.	1937.	1938.	1939.
Number of offices	9,255	9,252	9,320	9,359	9,389
Length of wire (miles)—					
Telegraph purposes only	54,806	56,292	55,196	51,027	50,558
Telegraph and telephone purposes ..	104,203	113,277	121,788	134,974	141,360
Length of line (miles)—					
Conductors in Morse cable ..	4,694	4,815	4,863	4,813	4,816
Conductors in submarine cable (statute miles)	4,883	5,193	5,421	5,693	5,747
Pole routes (miles)	97,694	97,850	96,917	97,120	97,311

3. **Number of Telegrams Dispatched.**—(i) *States.* The following table shows the total number of telegrams dispatched in each State during 1938–39 according to the class of message transmitted :—

TELEGRAMS DISPATCHED(*a*) : STATES, 1938–39.

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 ..	5,254,839	3,415,307	2,713,563	1,056,211	1,629,617	302,262	14,371,799
Urgent ..	202,423	60,299	70,880	33,718	44,172	8,764	420,262
Press ..	203,354	107,489	78,467	37,562	44,433	38,546	509,851
Lettergram ..	68,680	33,796	49,033	27,903	84,849	17,951	282,212
Radiogram ..	34,178	3,055	9,533	7,824	3,628	3,020	61,238
Total ..	5,763,474	3,619,946	2,921,482	1,163,218	1,806,699	370,543	15,645,362
Unpaid—							
Service ..	172,183	66,301	78,700	41,907	55,117	20,960	435,168
Shipping ..	21,851	94,289	15,867	3,739	13,579	5,037	154,362
Meteorological ..	284,986	138,805	196,831	191,804	151,313	53,128	1,016,867
Total ..	479,020	299,395	291,398	237,450	220,009	79,125	1,606,397
Grand Total ..	6,242,494	3,919,341	3,212,880	1,400,668	2,026,708	449,668	17,251,759

(*a*) Including radiogram traffic with islands adjacent to the Commonwealth 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, 1934–35 TO 1938–39.

Telegrams.	1934–35.	1935–36.	1936–37.	1937–38.	1938–39.
Number(*a*) ..	14,617,871	15,508,843	16,268,416	16,965,336	17,251,759

(*a*) See Note (*a*) above.

The increase in the volume of telegraph business has averaged 771,626 messages during 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. **Revenue and Expenditure.**—Particulars of the revenue and net operating results of the telegraph systems for the years 1934–35 to 1938–39 are given in earlier pages.

6. **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 2.5 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 1.2 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 Communication per Head of Population.
Australia	**2.9**	**2.5**
Belgium	1.8	0.7
Canada	0.5	1.1
Denmark	0.2	0.4
Finland	0.3	0.2
France	2.8	0.7
Germany	0.6	0.2
United Kingdom	2.6	1.2
Hungary	1.2	0.2
Japan	1.3	0.9
Netherlands	0.8	0.4
Norway	1.1	1.2
Poland	0.7	0.1
Sweden	0.4	0.7
Switzerland	0.6	0.4
Union of South Africa	2.3	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 the year 1938–39 is given hereunder :—

INTERNATIONAL TELEGRAMS : STATES, 1938-39.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Number received	391,250	220,538	27,848	35,383	31,225	9,763	716,007
Number dispatched	375,198	245,479	33,701	35,820	45,127	10,429	745,754
Total	766,448	466,017	61,549	71,203	76,352	20,192	1,461,761

(ii) *Australia.* The subjoined table shows the number of international telegrams received from and dispatched overseas in Australia during 1937–38 and 1938–39 :—

INTERNATIONAL TELEGRAMS.—AUSTRALIA.

Messages.	Number Received.		Number Dispatched.		Total Number Received and Dispatched.	
	1937–38.	1938–39.	1937–38.	1938–39.	1937–38.	1938–39.
Number	705,349	716,007	744,834	745,754	1,450,183	1,461,761

5. **Cable and Beam Wireless Rates.**—(i) *Ordinary Messages.* As from the 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 texts 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 1936 to 1939 :—

TELEPHONE LINES : AUSTRALIA.

Particulars.	At 30th June—			
	1936.	1937.	1938.	1939.
Ordinary Lines—				
Conduits .. .. duct miles	7,771	8,546	9,664	10.817
,, ... route miles	5,094	5,869	6,942	8,082
Conductors in aerial and underground cables .. .. .. miles	861,437	892,795	941,816	983,756
Working conductors in cables for junction circuits, not included above loop mileage	75,094	77,889	84,437	102,649
Open conductors single wire mileage	421,075	425,857	428,106	434,932
Trunk Lines—				
Telephone trunk lines only .. miles	230,684	224,447	218,146	220,687
Telegraph and telephone purposes ,,	113,277	121,788	134,974	141,360

(ii) *Comparison with Other Countries.* The increase in telephones throughout the Commonwealth during 1938–39 was 31,821 compared with 35,320 in 1937–38. The lower figures for 1938–39 are attributed mainly to adverse seasonal conditions and disastrous bush fires which affected development considerably in a number of States. Australia with an average of 95 telephones per 1,000 of population occupies seventh place among the countries of the world having the greatest density of telephones. The average length of wire per instrument in Australia is 4.5 miles.

(iii) *Trunk Line System.* The special underground trunk line cable between Melbourne and Geelong, to which reference was made in the previous issue of the Official Year Book, has been laid. The installation of a similar cable from Sydney to Newcastle and Maitland, a distance of 124 miles, is proceeding. A further substantial amount has been expended during the current year in providing trunk line circuits and long line equipment. Twenty-four carrier-wave systems were installed and there are now 134 in operation, yielding 248 channels of an aggregate length of 64,101 miles. A notable feature in the progress of carrier-wave telephony in Australia is the introduction of a special 12-channel system between Sydney and Melbourne, thus increasing the channels of communication between those cities from 18 to 30. This system is of the very latest design and among the first of its kind to be installed in any country.

The new semi-auto positions at the Main Trunk Exchange, Melbourne, are now being installed and it is expected that the Interstate positions will be brought into operation during the next financial year. This exchange incorporates many automatic features designed to facilitate the handling of long distance calls and when the whole of the positions are installed and working it will be the most up-to-date trunk exchange in the world. The Sydney Trunk Exchange which has also been modernized now provides many additional operating aids. Moreover, a number of trunk lines have been equipped with " Voice Frequency " apparatus which will permit dialling direct into the main automatic network from distant centres where previously this method of operation was impracticable.

(iv) *Automatic Exchanges.* During 1938–39, 34 new automatic exchanges were established bringing the total automatic exchanges in operation in Australia to 164. At the 30th June, 1939, there were 337,740 automatic telephones in service, representing 51 per cent. of the total in use.

(v) *Rural Automatic Exchanges.* The work of establishing rural automatic exchanges is being pushed on as rapidly as possible. Thirty exchanges were provided during the

year and at the 30th June, 1939, 80 installations had been completed. The experience with this type of apparatus, which confers such benefits on the users concerned, has been eminently satisfactory.

(vi) *Summary for States.* Particulars relating to the telephone service in each State for the years ended 30th June, 1937 to 1939, 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.	Aus. tralia.
Exchanges ..	1937	1,985	1,663	1,012	570	652	354	6,236
	1938	2,004	1,682	1,029	569	652	355	6,291
	1939	2,010	1,680	1,053	579	653	358	6,333
Telephone Offices (including Exchanges)	1937	2,986	2,354	1,497	816	926	509	9,088
	1938	3,036	2,356	1,519	820	903	510	9,144
	1939	3,040	2,358	1,517	829	907	509	9,160
Lines connected ..	1937	170,724	135,751	55,796	41,467	23,838	12,895	440,471
	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
Instruments connected	1937	229,727	187,753	73,793	55,019	32,346	16,217	594,855
	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
(*a*) Subscribers' instruments	1937	223,712	183,613	71,092	53,319	30,976	15,349	578,061
	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
(*b*) Public telephones	1937	3,758	2,465	1,672	875	900	551	10,221
	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
(*c*) Other local instruments	1937	2,257	1,675	1,029	825	470	317	6,573
	1938	2,366	1,804	1,081	850	499	336	6,936
	1939	2,512	1,989	1,158	922	524	353	7,458
Instruments per 100 of population	1937	8.50	10.12	7.44	8.98	7.12	6.98	8.71
	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
		£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Earnings	1937	2,903	2,116	1,002	640	397	178	7,236
	1938	3,194	2,250	1,063	685	425	194	7,811
	1939	3,371	2,409	1,136	709	450	209	8,284
Working expenses ..	1937	1,753	1,280	603	470	292	176	4,574
	1938	1,936	1,361	652	516	326	192	4,983
	1939	2,119	1,488	691	543	365	204	5,410
		%	%	%	%	%	%	%
Percentage of working expenses on earnings	1937	60.41	60.46	60.14	73.42	73.55	99.11	63.21
	1938	60.63	60.47	61.36	75.31	76.57	99.01	63.78
	1939	62.87	61.75	60.80	76.58	81.13	97.94	65.31

At the 30th June, 1939, there were 661,996 telephones in service throughout the Commonwealth, and of this total 253,844 or 38 per cent. were connected to exchanges in country districts. The net additions during 1938–39 totalled 31,821 telephones, a gain of 5.05 per cent. The number of instruments per 100 of population increased from 9.14 to 9.51.

The year 1938–39 was a record one for handset telephone installations, 68,036 being provided for subscribers as compared with 61,050 during 1937–38. At the 30th June, 1939, there were 259,131 instruments of this pattern in use, representing 39.14 per cent. of the total in service.

(vii) *Systems in Use.* Of the total lines in service in Australia, 51 per cent. are connected to automatic exchanges, 42 per cent. to magneto exchanges and 7 per cent. to common battery exchanges. Details for each State are shown in *Transport and Communication Bulletin* No. 30 issued by this Bureau.

(viii) *Subscribers' Lines and Calling Rates.* The next table gives the number of subscribers' lines and the daily calling rate at central, suburban and rural telephone exchanges in the several States for the year 1938–39 :—

TELEPHONES : SUBSCRIBERS' LINES AND DAILY CALLING RATE, 1938–39.

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 ..	20,794	12.63	94,387	4.17	67,046	2.45	182,227	4.50
Victoria	11,912	10.11	82,715	4.24	51,280	1.97	145,907	3.92
Queensland ..	8,527	10.53	17,655	3.54	33,525	2.70	59,707	4.07
South Australia ..	6,289	10.06	18,890	3.45	19,150	1.71	44,329	3.64
Western Australia..	7,875	7.05	7,053	4.11	10,187	1.94	25,115	4.15
Tasmania ..	3,401	4.79	1,706	2.64	8,377	2.23	13,484	2.93
Australia ..	58,798	10.34	222,406	4.07	189,565	2.25	470,769	4.12

There was little change in the average daily calling rates for each class of exchange when compared with those shown in the previous issue of the Official Year Book. New South Wales registered the greater number per line at Central, Queensland at rural exchanges and Victoria at suburban exchanges.

For Australia as a whole 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, 1938 and 1939 appear hereunder :—

TELEPHONES : NUMBER OF EFFECTIVE PAID LOCAL CALLS.

State.	Subscribers' Calls.		Calls from Public Telephones.		Total Calls.	
	1937–38.	1938–39.	1937–38.	1938–39.	1937–38.	1938–39.
	'000.	'000.	'000.	'000.	'000.	'000.
New South Wales ..	224,794	236,372	21,021	22,768	245,815	259,140
Victoria	152,305	166,529	10,078	10,857	162,383	177,386
Queensland ..	61,371	65,654	4,638	5,002	66,009	70,656
South Australia ..	41,028	43,232	3,511	3,676	44,539	46,908
Western Australia ..	27,507	28,821	1,432	1,533	28,939	30,354
Tasmania	10,159	10,903	799	847	10,958	11,750
Australia ..	517,164	551,511	41,479	44,683	558,643	596,194

(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 1936–37 to 1938–39 :—

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.
1936–37 ..	13,245	10,322	6,541	3,942	2,118	1,573	37,741
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
Total Revenue—	£	£	£	£	£	£	£
1936–37 ..	644,434	470,541	368,171	178,043	113,219	61,185	1,835,593
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
Average Revenue per Call—	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.	Pence.
1936–37 ..	11.68	10.93	13.51	10.84	12.83	9.33	11.67
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

The number of trunk line calls during 1938–39 increased by nearly a million or 2.28 per cent., compared with the figures for the previous year, while the average revenue per call rose by 0.17d.

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 was given 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 1935 require that all ships registered in Australia and engaged in 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 issued in each State or Territory during the year 1938-39 :—

WIRELESS LICENCES, 1938-39.

Station Licence.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Coast ..	2	1	6	1	5	3	1	..	19
Ship ..	93	96	16	10	5	1	1	..	222
Aircraft ..	14	13	7	4	3	2	1	..	44
Land(*a*) ..	14	3	52	27	72	9	43	..	220
Broadcasting(*b*)	35	18	19	8	8	8	..	1	97
Broadcast Listeners' ..	431,159	327,579	133,217	117,091	79,262	39,392	216	1,870	1,129,786
Experimental..	774	580	260	212	142	68	1	10	2,047
Portable ..	11	4	5	4	5	1	8	..	38
Special ..	74	24	18	1	8	..	..	..	125
Total Issued	432,176	328,318	133,600	117,358	79,510	39,484	271	1,881	1,132,598

(*a*) In addition to the licensed stations there were two operated by the Postmaster-General's Department, viz., Wave Hill (N.T.) and Camooweal (Q.). (*b*) There were also twenty-six stations operated by the National Broadcasting Service, including a short-wave station (*VLR*, Lyndhurst, Victoria).

Similar particulars to the above in relation to the year 1939-40 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 the 30th June for each year from 1925 to 1939 :—

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
1926 ..	36,292	63,494	8,100	12,105	3,866	1,170	125,047
1927 ..	56,908	113,612	22,226	15,904	3,616	1,142	213,408
1928 ..	79,931	137,503	25,211	20,247	3,727	3,141	269,760
1929 ..	100,798	142,534	24,660	23,944	3,841	4,751	300,528
1930 ..	111,080	139,887	23,263	25,671	5,715	6,032	311,648
1931 ..	122,470	137,005	24,108	30,238	9,075	8,232	331,128
1932 ..	141,450	139,323	28,958	37,142	12,679	9,540	369,092
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

(*a*) Includes Australian Capital Territory. (*b*) Includes Papua. (*c*) Includes 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 programmes 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 21s. per annum for a receiver situated approximately within 250 miles from a station of the National Service, and 15s. per annum in the territory beyond. Licences are issued free to blind persons. The Commission receives 12s. from each fee, the Department retaining the balance.

There is a total of 28 transmitting stations in the National Broadcasting System of the Commonwealth; these comprise 26 medium wave stations and two short wave stations. Details are as follows:—

Medium Wave Stations—

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

Short Wave Stations—

VLR Lyndhurst, Victoria. *VLW* Perth, Western Australia.

A contract has been let for a third short wave station, to be located in Brisbane. The stations, for a large portion of the transmission time, are linked together in two groups of networks, namely, the Australian National Network and the State Networks. A large number of stations are linked together by land line to radiate the same programme, forming the Australian National Network, which comprises one transmitter in each of the capital cities and one or more country regional stations in each State. The individual State networks consist of the second capital city transmitter and regional stations not included in the Australian Network.

On special occasions the whole of the national and commercial stations are linked together in nation-wide broadcasts, involving 126 stations and 16,000 miles of high quality programme transmission lines. There has been increasing use made of short wave programmes received from overseas, especially since the outbreak of war, and the News Services from the British Broadcasting Corporation are re-broadcast several times each day, after having been picked up at the receiving centre at Mont Park. Oversea programmes now form an important feature in the National Broadcasting Service.

(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 April, 1940, was 100, 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 7,051 complaints of interfering noises, which, in all but a few instances, were satisfactorily disposed of.

(iv) *Prosecutions Under the Wireless Telegraphy Act.* During the year 2,995 persons were convicted for using unlicensed broadcasting receiving equipment. The total fines amounted to £6,237.

(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 LICENCE DISTRIBUTION, 31st DECEMBER, 1938.

Country.	Listeners' Licences.	
	Total.	Per 100 of Population.
United States of America	28,000,000(*a*)	21.50
Denmark	762,711	20.58
New Zealand	313,826	19.59
Sweden	1,226,858	19.47
United Kingdom	8,908,366	19.28
Australia	**1,102,315**	**15.99**
Belgium	1,126,218	13.42
Germany	11,503,019	13.34
Netherlands	1,108,625(*a*)	13.27
Switzerland	548,533	13.12
Norway	364,548	12.58
France	4,705,859	11.22
Canada	1,213,723(*b*)	10.88
South Africa	212,914	10.23
Argentine Republic	1,100,000	9.14
Finland	293,790	7.80
Japan	3,983,399	5.75
Eire	148,811	5.01
Estonia	66,268	4.96
Mexico	875,000(*a*)	4.89
Hungary	419,215	4.66
Poland	1,016,473	2.94
Italy	995,500	2.30
Union of Soviet Socialist Republics	3,760,400(*c*)	2.21

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

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

4. **Oversea 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 inter-communication. 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), while Wellington (New Zealand) is linked with Sydney by wireless telephone. 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, 1939 :—

RADIO TRAFFIC : INTERNATIONAL, 1938-39.

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*)	1,215,838	687,489	1,903,327	1,088,091	226,056	1,314,147
Deferred (Ordinary) ..	1,176,634	649,102	1,825,736	1,133,969	200,372	1,334,341
Government(*a*) ..	83,794	11,696	95,490	63,173	7,974	71,147
Press (including deferred press) ..	173,151	35,080	208,231	2,164,137	138,639	2,302,776
Daily letter and greeting telegrams	1,378,870	929,436	2,308,306	1,118,740	434,825	1,553,565
Total ..	4,028,287	2,312,803	6,341,090	5,568,110	1,007,866	6,575,976

(*a*) Includes Code telegrams.

(*b*) *Coast Stations.* Particulars of the traffic handled by the several coast stations during the year 1938-39 are as follows :—

RADIO TRAFFIC : COAST STATIONS, 1938-39.

State or Territory.	Particulars.				
	Total Paying Words.	Messages.			
		Paying.	Service.	Weather.	Total.
	No.	No.	No.	No.	No.
New South Wales ..	1,374,170	89,541	14,425	14,014	117,980
Victoria	128,979	12,360	..	1,936	14,296
Queensland	264,424	21,137	4,529	16,726	42,392
South Australia	75,052	6,796	839	1,001	8,636
Western Australia ..	157,728	11,366	3,317	4,717	19,400
Tasmania	110,705	6,604	978	4,003	11,585
Northern Territory ..	67,026	3,326	1,452	4,476	9,254
Australia	2,178,084	151,130	25,540	46,873	223,543
Papua	609,977	33,984	2,417	6,414	42,815
Grand Total ..	2,788,061	185,114	27,957	53,287	266,358

(c) *Island Stations.* Particulars of the island radio traffic dealt with during the year 1938-39 are given in the following table :—

RADIO TRAFFIC : ISLAND STATIONS, 1938-1939.

Particulars.	To Australia.	From Australia.	Inter-Island.	Ship.	Total.
	No.	No.	No.	No.	No.
Messages	19,594	16,388	30,415	1,899	68,296
Words	351,741	225,356	411,692	24,800	1,013,589

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, 1940, 441 Operators' Certificates of Proficiency were awarded. The number of each class were :—Commercial—First Class, 106 ; Second Class, 53 ; Third Class, 18 ; Aircraft—First Class, 1 ; Second Class, 12 ; Third Class, 48 ; Broadcast Station, 67 ; and Amateur, 136.