

NEW ZEALAND SEAPORTS

P.J. Rimmer

Volume II



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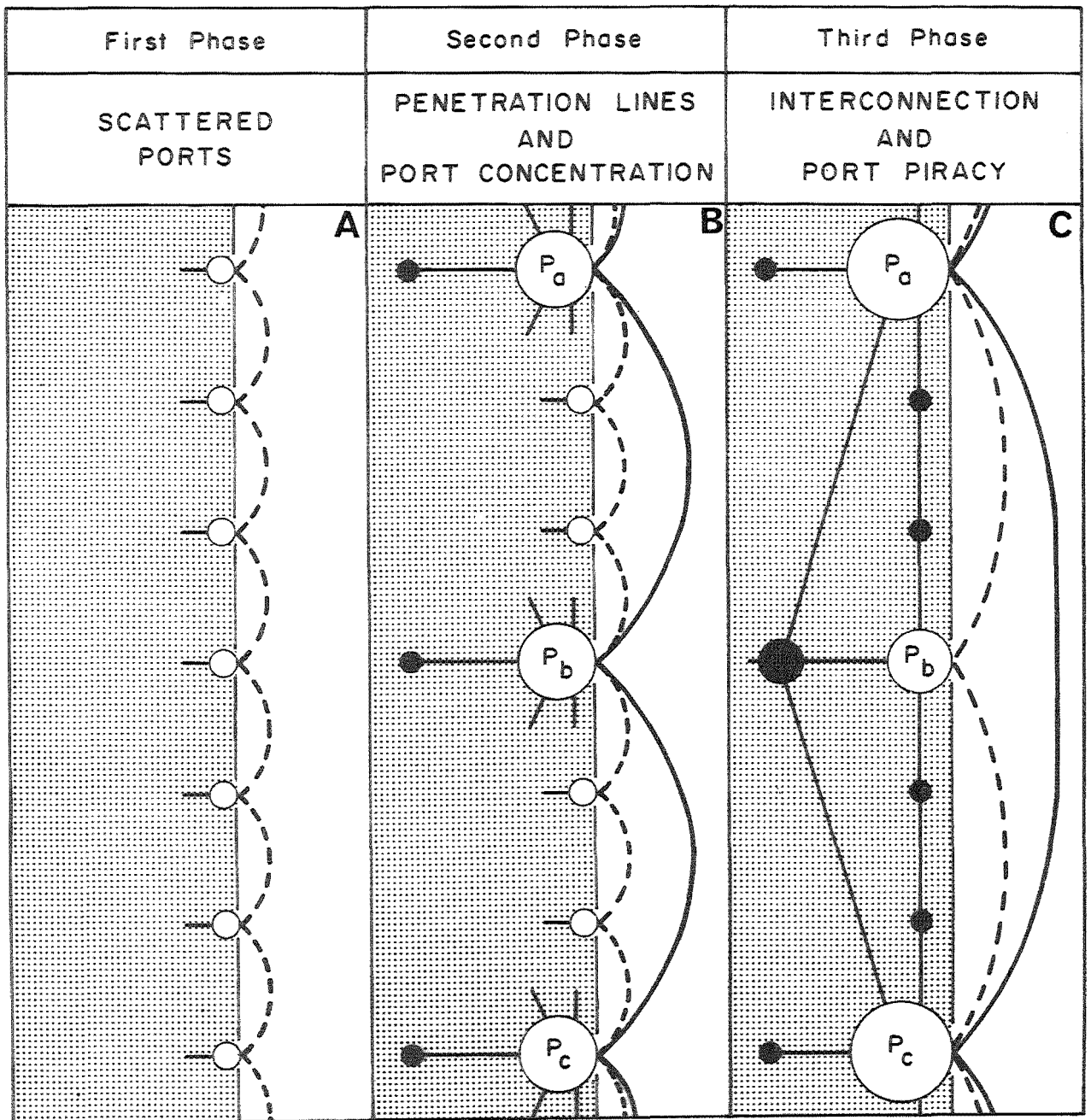
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○ Ports ● Interior Centres — Inland Routes
 --- Irregular Shipping Services — Regular Shipping Services

Fig. 2. Idealised-type Sequence of Port Development.

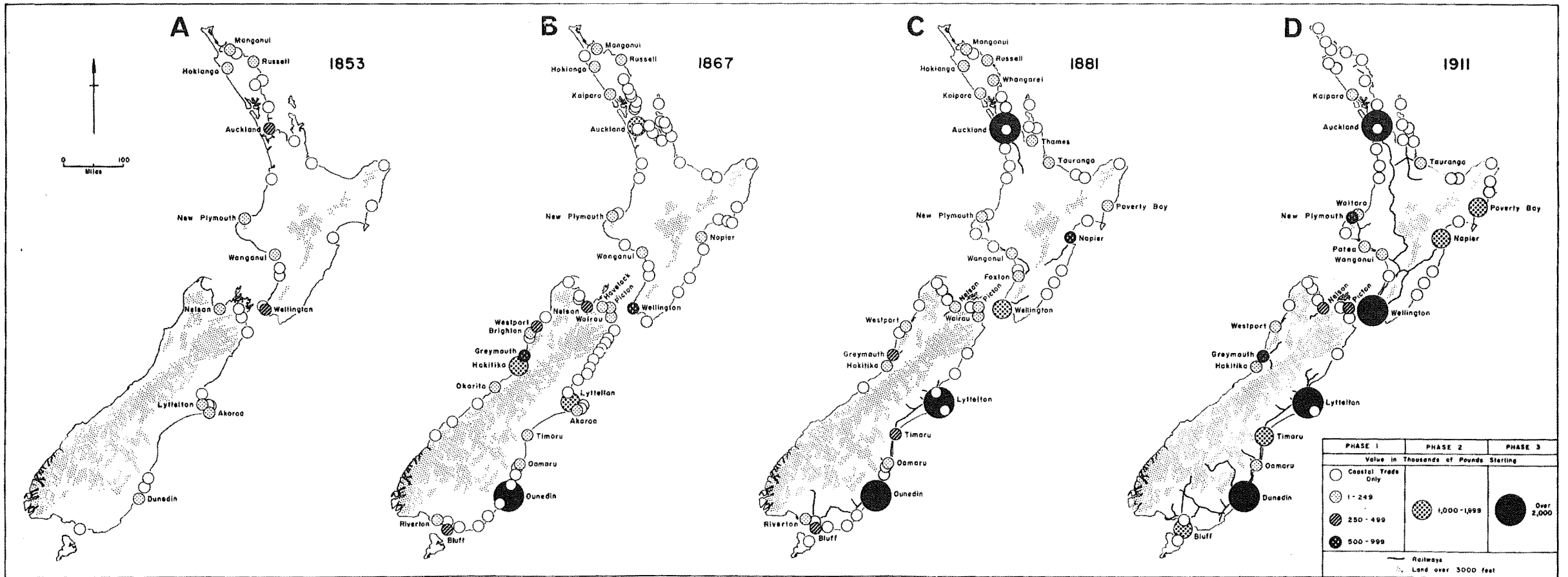


Fig. 3. Port Development 1840-1911.
 Source: Statistics of New Zealand from 1853.



Plate I. Cobb's Coach Fording the Flooded Waimakariri River.
The ferryman with the lifebelt is showing the way as the
fords shift in every flood.
Photo: Turnbull Library.



Plate II. Teams of Bullocks Hauling Wool Wagons at Kurow, North Otago.
Teams of bullocks drew these heavy loads at an average speed
of two miles per hour.
Photo: Turnbull Library.



Plate III. Hokitika River. A Sketch of River and Shipping 1960's.
Note the stranded vessel which was a typical feature of the port. Photo: Turnbull Library.



Plate IV. Greymouth : Wreck of S.S. 'Star of the South', 1884.
Thirtyone other vessels shared the same fate of the S.S. 'Star of the South' in crossing the treacherous Grey River bar between 1863-1950. However, in the case of the S.S. 'Star of the South' the Court of Inquiry found that the loss was caused by the culpable rashness of the master in entering the Grey River in reckless disregard of the harbour signals.

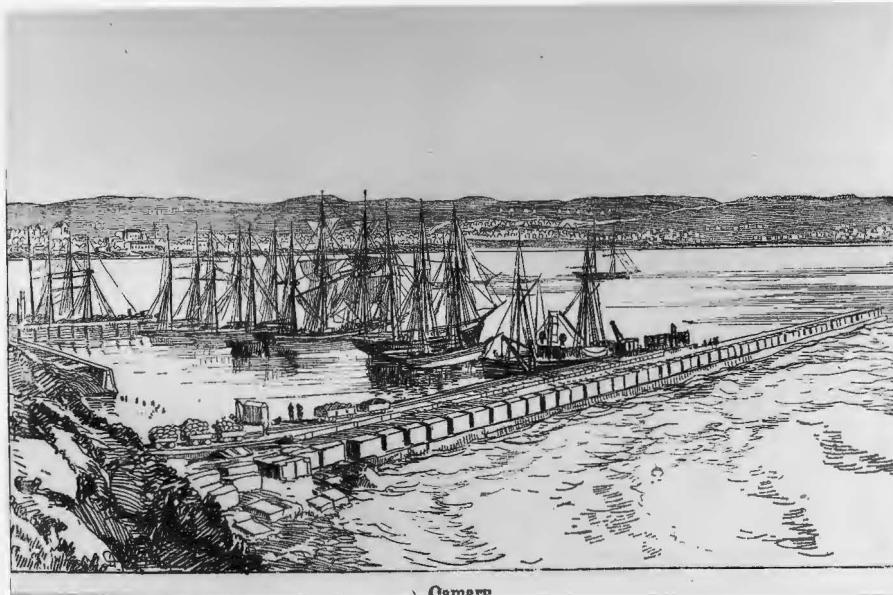


Plate V. Oamaru Harbour : Sketch of Shipping, 1880.

The construction of the breakwater harbour was begun in 1871 after the unprotected jetty had been washed away. It was completed in 1884. The travelling crane used in constructing the breakwater was claimed to be the largest in the world at the time, except for one in Madras. Photo: Turnbull Library.



Plate VI. The Pigroot Road, near Dunkirk, Central Otago.

Covered wagons faced rough surfaces on this road. The photograph was taken in the nineties.

Photo: Turnbull Library.



Plate VII. Loading Wool on the East Coast.

The lightering of wool by surf boats to ships anchored in the roadstead persisted until the late 1930's on the East Coast of the North Island.

Photo: Turnbull Library.



Plate VIII. Wool Being Brought from a Back Country Station, East Coast.

Pack horses bringing wool to Waipiro Bay to be loaded into surf boats. The photograph was taken in 1900.

Photo: Turnbull Library.



Plate IX. Taranaki Railway : A Steep Incline in a Taranaki Gorge. Dense bush added to the difficulties of constructing railways in New Zealand.

Photo: Turnbull Library.



Plate X. A Rough Track Through the King Country (in the interior of the North Island). This photograph was taken in 1912 when a party made the first through trip by motor car from Wellington to Auckland; the journey took eight and a quarter days.

Photo: Turnbull Library.

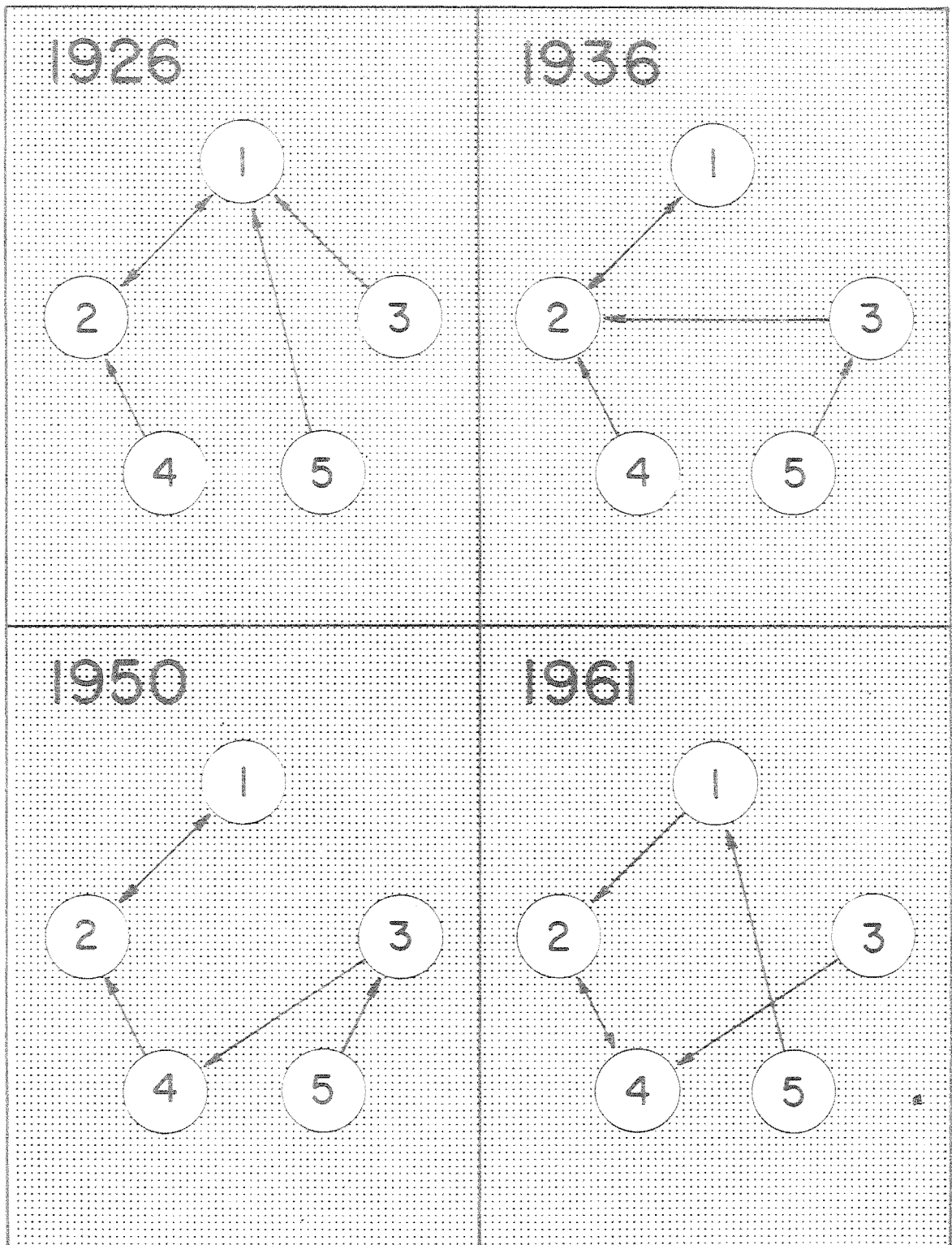


Plate XI. A Lorry Rounds a Corner of a Road Perched on Coastal Cliffs.
The rugged nature of the country made it difficult to form
roads in many parts of New Zealand.
Photo: Turnbull Library.

TABLE I
MATRIX OF INTERCORRELATIONS OF GROSS VARIABLES

Variable	1926					1936					1950					1961				
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)
(a) net registered tonnage	-	.94	.81	.83	.75	-	.94	.78	.79	.73	-	.90	.78	.81	.71	-	.93	.77	.82	.73
(b) cargo tonnage		-	.80	.90	.70		-	.80	.92	.69		-	.81	.93	.65		-	.80	.94	.64
(c) number of commodities			-	.77	.74			-	.76	.73			-	.84	.75			-	.80	.70
(d) number of ships				-	.65				-	.66				-	.65				-	.68
(e) maximum draught					-					-					-					-
	N = 75 per cent					N = 75 per cent					N = 83 per cent					N = 83 per cent				

HIGHEST INTER-CORRELATIONS OF GROSS MEASUREMENTS



1. Net registered tonnage
2. Cargo tonnage

3. Different commodities
4. Number of ships

Fig. 4. Highest Inter-correlations for the Gross Measurements.

TABLE II
MATRIX OF INTERCORRELATIONS OF OVERSEAS VARIABLES

Variable	1926						1936						1950						1961					
	(a)	(b)	(c)	(d)	(e)	(f)	(a)	(b)	(c)	(d)	(e)	(f)	(a)	(b)	(c)	(d)	(e)	(f)	(a)	(b)	(c)	(d)	(e)	(f)
(a) net registered tonnage	-	.97	.90	.98	.79	.98	-	.99	.87	.99	.76	.99	-	.94	.92	.99	.78	.98	-	.96	.92	.99	.76	.97
(b) cargo tonnage		-	.84	.97	.74	.99		-	.81	.97	.71	.99		-	.84	.97	.68	.94		-	.83	.96	.66	.97
(c) number of commodities			-	.86	.82	.87			-	.84	.85	.83			-	.92	.84	.94			-	.94	.83	.85
(d) number of ships				-	.76	.97				-	.76	.98				-	.75	.97				-	.77	.95
(e) maximum draught					-	.75					-	.72					-	.71					-	.69
(f) value of cargo						-						-						-						-

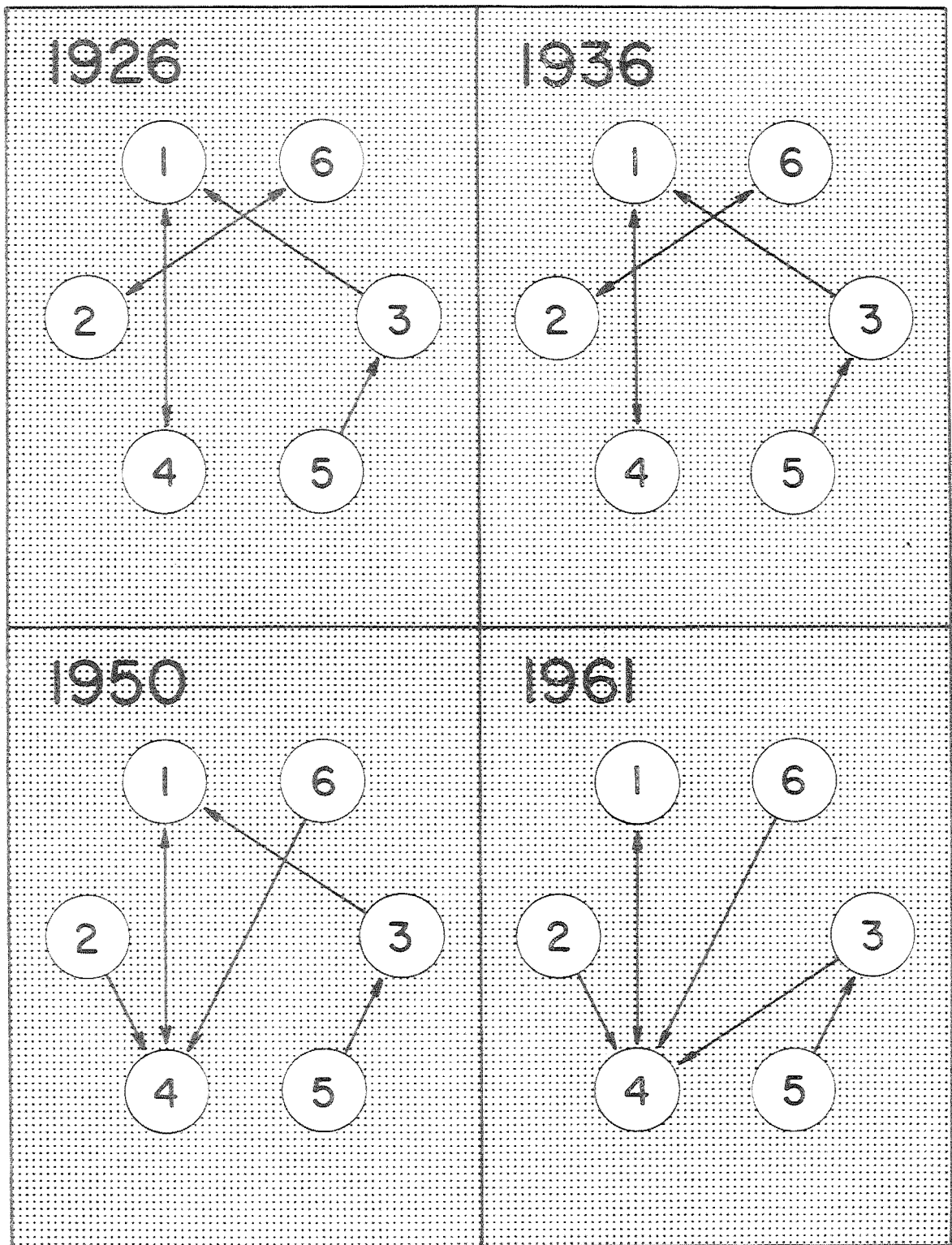
N = 89 per cent

N = 89 per cent

N = 94 per cent

N = 94 per cent

HIGHEST INTER-CORRELATIONS OF OVERSEAS COMPONENT



- 1. Net registered tonnage
- 2. Cargo tonnage
- 3. Different commodities

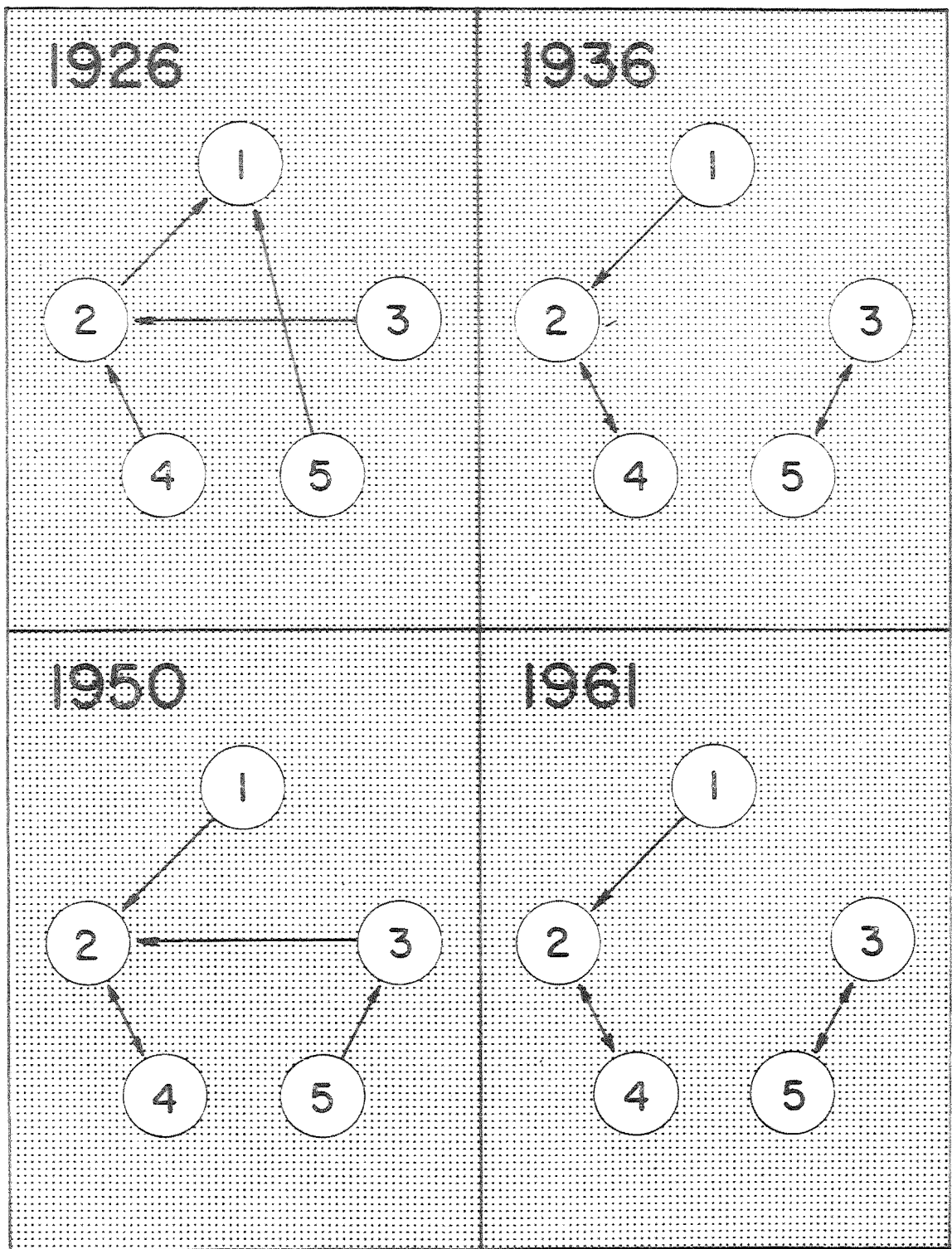
- 4. Number of ships
- 5. Maximum depth
- 6. Value

Fig. 5. Highest Inter-correlations in the Overseas Component.

TABLE III
MATRIX OF INTERCORRELATIONS OF COASTAL VARIABLES

Variable	1926					1936					1950					1961				
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)
(a) net registered tonnage	-	.89	.64	.61	.68	-	.83	.70	.54	.67	-	.78	.57	.50	.63	-	.83	.56	.55	.60
(b) cargo tonnage		-	.66	.77	.64		-	.71	.84	.67		-	.75	.86	.63		-	.70	.90	.60
(c) number of commodities			-	.61	.62			-	.63	.77			-	.72	.66			-	.63	.71
(d) number of ships				-	.52				-	.53				-	.50				-	.58
(e) maximum draught					-					-					-					-
	N = 75 per cent					N = 75 per cent					N = 83 per cent					N = 83 per cent				

HIGHEST INTER-CORRELATIONS OF COASTAL COMPONENT



1. Net registered tonnage

2. Cargo tonnage

3. Different commodities

4. Number of ships

5. Maximum depth

Fig. 6. Highest Inter-correlations in the Coastal Component.

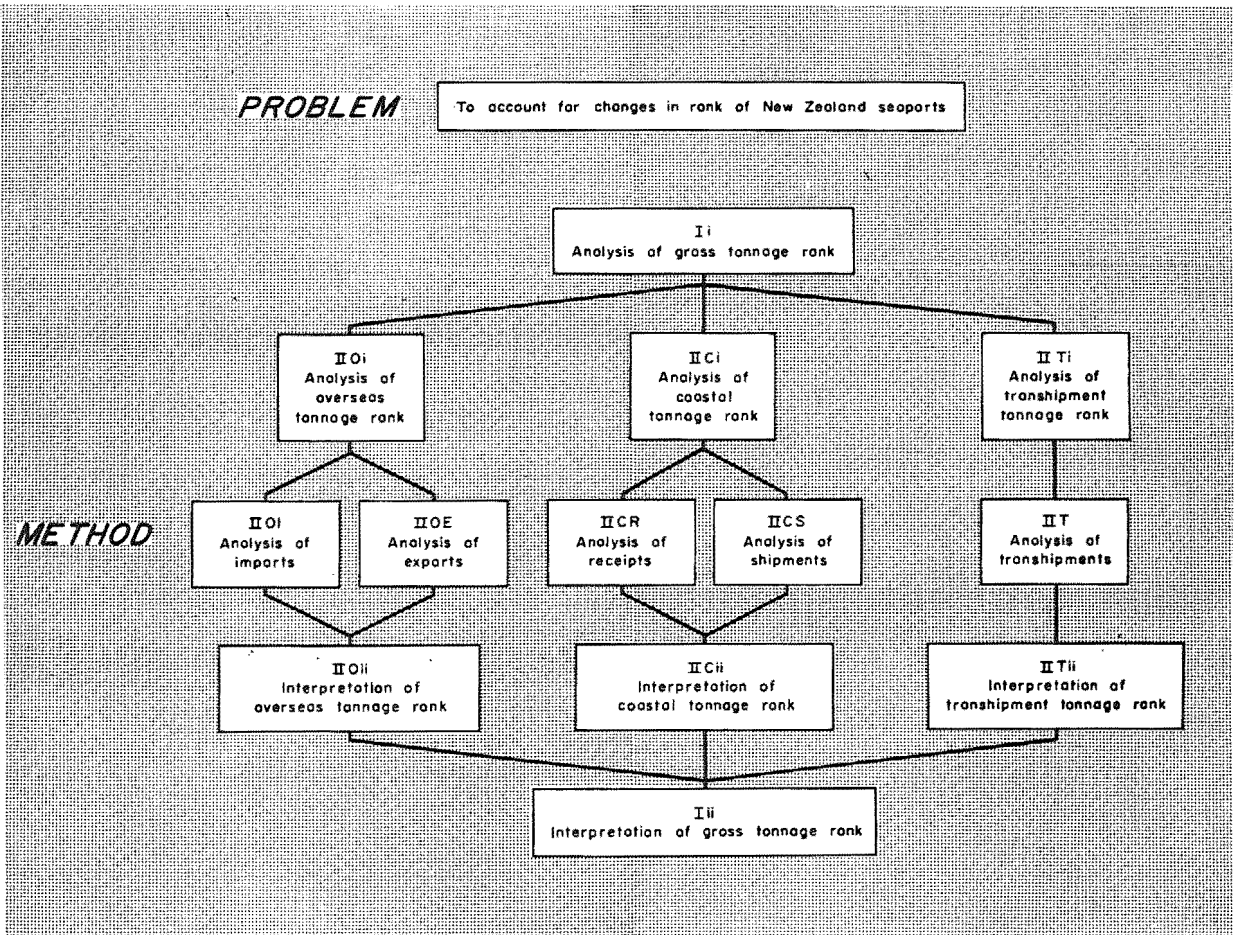


Fig. 7. An Analytical Model for the Interpretation of Changes in the Status of New Zealand Seaports.

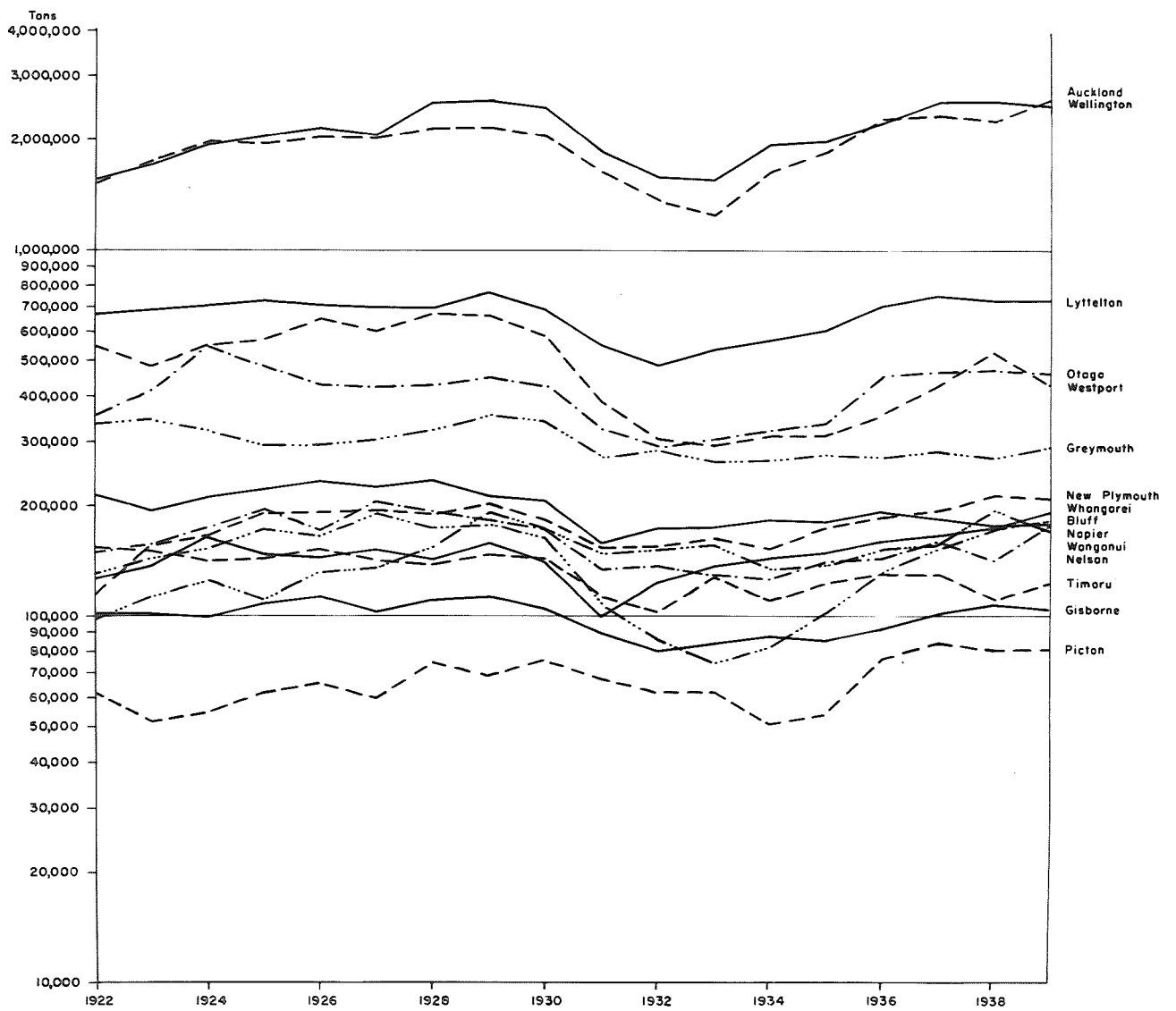


Fig. 8. Gross Tonnage Handled by Leading New Zealand Seaports 1922-1939.
 Source:- Statistical Report on Trade and Shipping, Part II,
Wellington, 1922-39.

TABLE IV
GROSS TONNAGE (a)
1922 - 1939

Year	Tonnage
1922	6,555,146
1923	7,693,341
1924	7,869,710
1925	7,869,812
1926	8,061,812
1927	7,919,199
1928	8,156,786
1929	8,354,553
1930	7,928,275
1931	6,040,650
1932	5,708,364
1933	5,672,971
1934	6,190,773
1935	6,569,794
1936	7,538,532
1937	8,220,712
1938	8,161,194
1939	8,317,233

(a) Transhipments included twice.

Source:- Statistical Report on Trade and Shipping
Part II, Wellington, 1922-39.

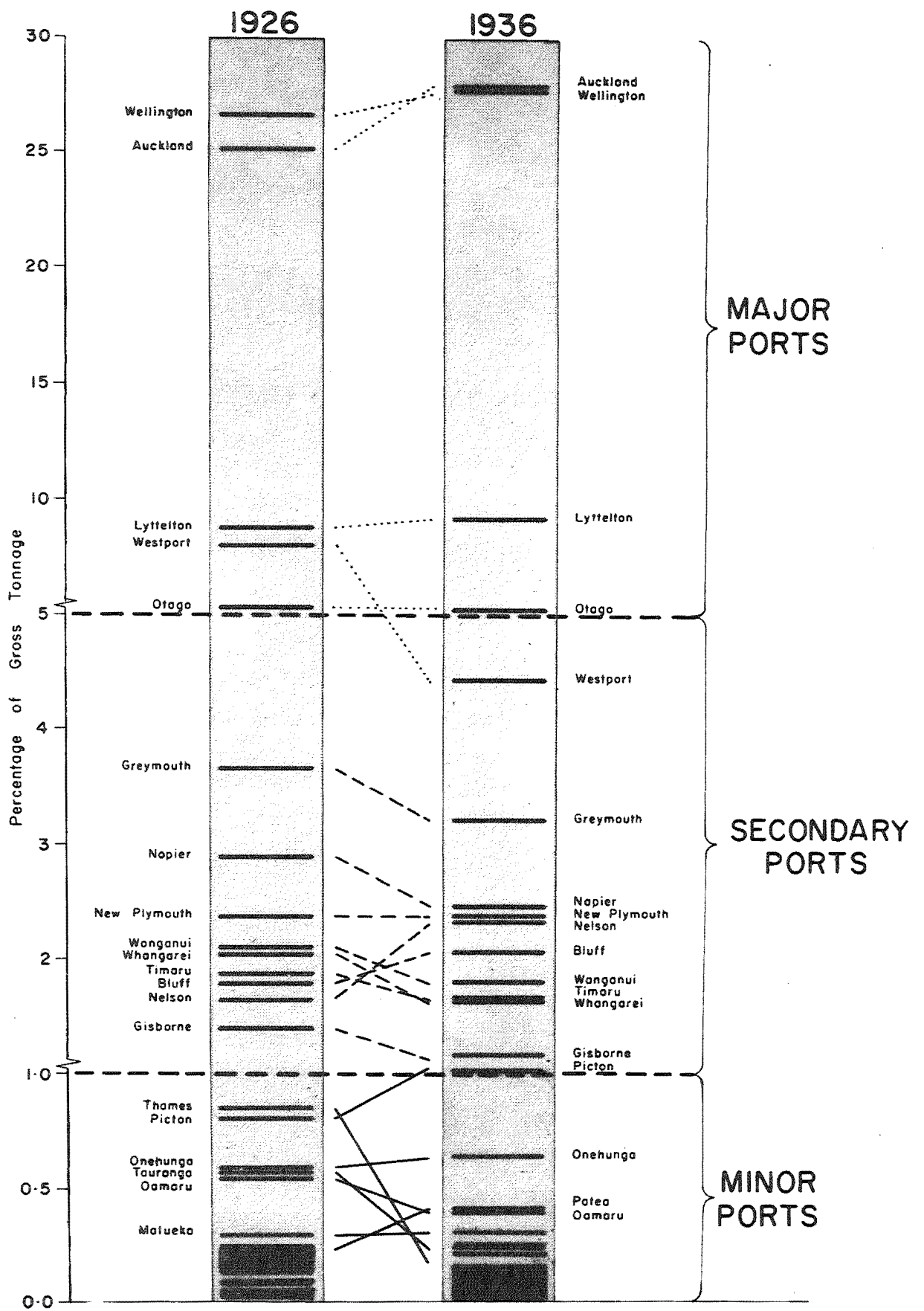


Fig. 9. Changes in the Ranking of Ports on the Gross Tonnage Scale 1926-1936.
 Source:- Statistical Report on Trade and Shipping, Part II,
 1926, p.90 and 1936, p.94.

TABLE V
CHANGES IN GROSS TONNAGE
1926 - 1936

Port	ACTUAL				HYPOTHETICAL			
	1926		1936		Change 1926-36		Estimate 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Awanui	6,241	0.08	8,907	0.12	+ 2,666	+ 0.04	6,031	+ 2,876
Mangonui	2,959	0.04	2,743	0.04	- 216	-	3,015	- 272
Russell	16,181	0.20	19,211	0.25	+ 3,030	+ 0.05	15,077	+ 4,134
Hokianga	17,374	0.22	5,846	0.08	- 11,528	- 0.14	16,585	- 10,739
Whangarei	166,249	2.06	131,210	1.74	- 35,039	- 0.32	155,294	- 24,084
Kaipara	7,161	0.09	2,926	0.04	- 4,235	- 0.05	6,785	- 3,859
Mangawai	1,409	0.02	887	0.01	- 522	- 0.01	1,508	- 621
Auckland	2,018,323	25.04	2,106,954	27.95	+ 25,631	+ 2.91	1,887,648	+219,306
Onehunga	47,915	0.59	50,125	0.66	+ 2,210	+ 0.07	49,754	- 371
Great Barrier	1,270	0.02	986	0.01	- 284	- 0.01	1,508	- 522
Port Waikato	-	-	9,052	0.12	- 9,052	+ 0.12	-	+ 9,052
Raglan	3,177	0.04	4,291	0.06	+ 1,114	+ 0.02	3,015	+ 1,276
Kawhia	3,231	0.04	1,998	0.03	- 1,233	- 0.01	3,015	- 1,017
Thames	68,918	0.84	10,973	0.16	- 57,945	- 0.68	63,324	- 52,351
Coromandel	2,691	0.03	1,511	0.02	- 1,180	- 0.01	2,262	- 751
Whitianga	1,813	0.02	-	-	- 1,813	- 0.02	1,508	- 1,508
Tauranga	46,312	0.58	18,099	0.24	- 28,213	- 0.34	43,723	- 25,624
Whakatane	16,172	0.20	29,664	0.39	+ 13,492	+ 0.19	15,077	+ 14,587
Opotiki	12,594	0.16	15,761	0.21	+ 3,167	+ 0.05	12,062	+ 3,699
Tokomaru Bay	14,161	0.18	16,000	0.21	+ 1,839	+ 0.03	13,569	+ 2,431
Tologa Bay	2,818	0.03	4,875	0.06	+ 2,057	+ 0.03	2,262	+ 2,613
Gisborne	113,757	1.41	92,061	1.22	- 21,696	- 0.19	106,293	- 14,232
Waikokopu	14,941	0.18	7,688	0.10	- 7,253	- 0.08	13,569	- 5,881
Wairoa	11,052	0.14	5,041	0.07	- 6,011	- 0.07	10,554	- 5,513
Napier	233,458	2.90	187,404	2.49	- 46,054	- 0.41	218,617	- 31,213
Mokau	2,235	0.03	211	0.00	- 2,024	- 0.03	2,262	- 2,051
Waitara	3,621	0.04	225	0.00	- 3,411	- 0.04	3,015	- 2,790
New Plymouth	191,608	2.38	186,901	2.48	- 4,707	+ 0.10	179,417	+ 7,484
Patea	22,501	0.28	32,084	0.43	+ 9,583	+ 0.15	21,108	+ 10,976

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Wanganui	170,988	2.12	141,769	1.88	- 29,219	- 0.24	159,817	- 18,048
Foxton	10,862	0.14	11,216	0.14	+ 354	-	10,553	+ 663
Wellington	2,146,402	26.63	2,094,107	27.78	+ 52,294	+ 1.15	2,007,511	+ 86,596
NORTH ISLAND	5,378,394	66.73	5,200,726	68.99	-177,668	+ 2.26	5,030,462	+170,264
Picton	65,654	0.81	77,271	1.02	+ 11,617	- 0.21	61,062	+ 16,209
Wairau	18,874	0.24	10,006	0.13	- 8,868	- 0.11	18,092	- 8,086
Kaikoura	4,062	0.05	-	-	- 4,062	- 0.05	3,769	- 3,769
Nelson	132,771	1.65	165,449	2.19	+ 32,678	+ 0.54	124,386	+ 41,063
Waitapu	3,745	0.05	5,070	0.07	+ 1,325	+ 0.02	3,769	+ 1,301
Motueka	24,365	0.30	23,659	0.31	- 706	+ 0.01	22,616	+ 1,043
Westport	645,948	8.01	351,309	4.66	-294,639	- 3.35	603,836	-252,527
Greymouth	295,999	3.67	250,799	3.33	- 45,200	- 0.34	274,664	- 23,865
Hokitika	467	0.01	9,461	0.13	+ 8,994	- 0.12	754	+ 8,707
Lyttelton	700,767	8.69	711,261	9.44	+ 10,494	- 0.75	655,098	+ 56,163
Akaroa	1,218	0.01	664	0.01	- 554	-	754	- 90
Timaru	152,730	1.89	131,336	1.74	- 21,394	- 0.15	142,478	- 11,142
Oamaru	44,694	0.55	32,025	0.42	- 12,669	- 0.13	41,462	- 9,437
Otago	434,308	5.39	406,217	5.39	- 28,091	-	406,327	- 110
Invercargill	11,500	0.14	19	0.01	- 11,481	- 0.13	10,554	- 10,535
Bluff	145,087	1.80	162,197	2.15	+ 17,110	+ 0.35	135,694	+ 26,503
Half Moon Bay	1,229	0.01	1,063	0.01	- 166	-	754	+ 309
SOUTH ISLAND	2,683,418	33.27	2,337,806	31.01	-345,612	- 2.26	2,508,070	-170,264
NEW ZEALAND	8,061,812	100.00	7,538,532	100.00	-523,280	-	7,538,532	-

- (a) Number of tons required to retain 1926 share of the gross tonnage.
(b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the gross tonnage.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

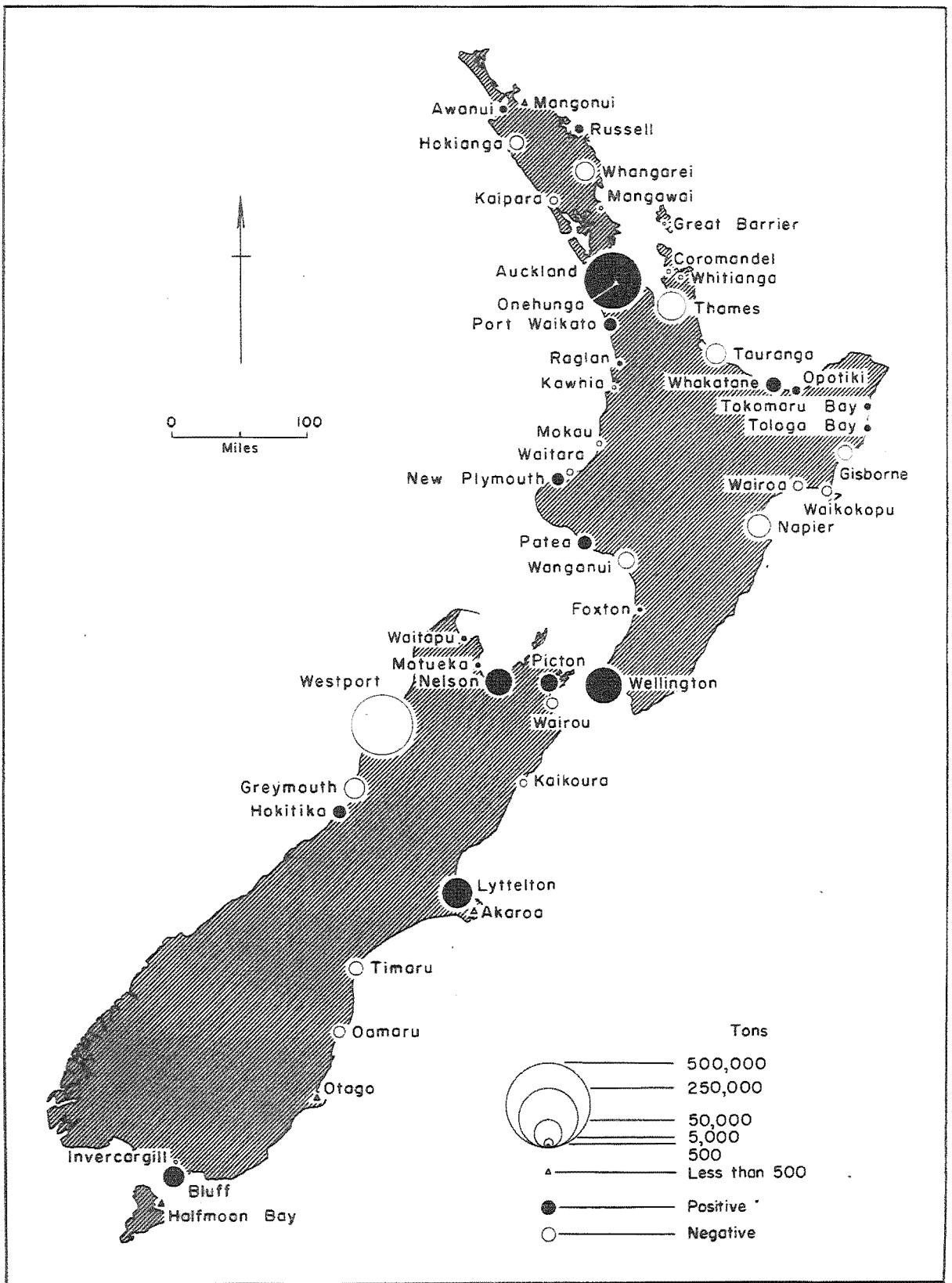


Fig.10. Changes in the Concentration of the Gross Tonnage 1926-1936.
 Difference between a port's gross tonnage in 1936 and tonnage required to retain 1926 share of New Zealand's gross tonnage.
 Source:- Statistical Report on Trade and Shipping Part II,
 1926, p.90 and 1936, p.94.

TABLE VI
OVERSEAS TONNAGE (a)
1926 - 1936

Year	IMPORTS	EXPORTS	TOTAL
	Tonnage	Tonnage	Tonnage
1926	2,309,069	752,326	3,061,395
1927	2,107,026	804,619	2,911,645
1928	2,147,133	818,402	2,965,535
1929	2,319,501	873,591	3,193,092
1930	2,106,789	818,725	2,925,514
1931	1,556,275	723,023	2,279,298
1932	1,489,347	829,916	2,319,263
1933	1,374,774	995,650	2,370,424
1934	1,655,838	953,528	2,609,366
1935	1,886,316	936,337	2,822,653
1936	2,304,836	1,000,327	3,305,163

(a) Transshipments excluded.

Source:- Statistical Report on Trade and Shipping, Part II, 1926-36.

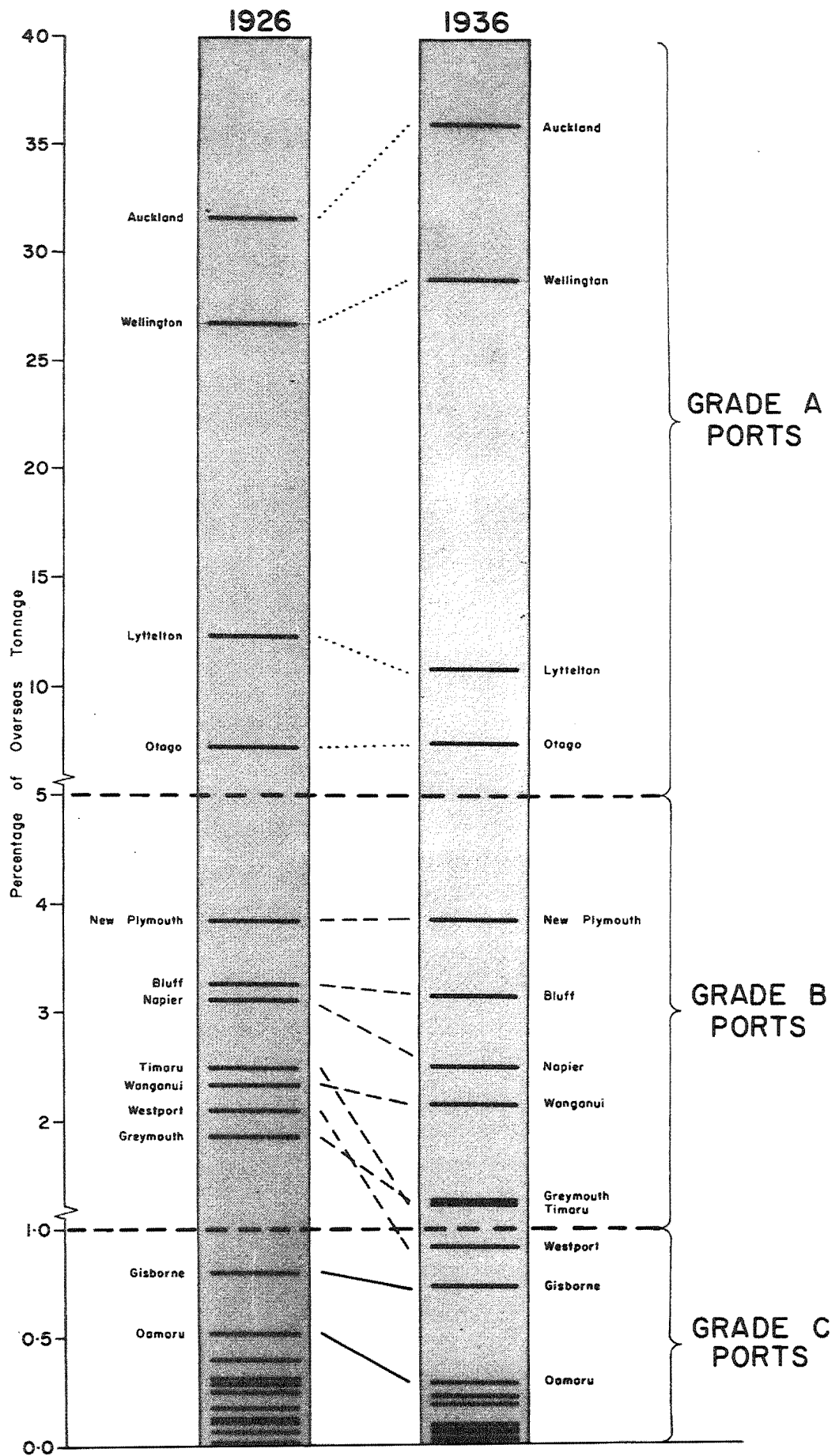


Fig.11. Changes in the Ranking of Ports on the Overseas Tonnage Scale 1926-1936.

Source:- Statistical Report on Trade and Shipping Part II, 1926, p.90 and 1936, p.94.

TABLE VII
CHANGES IN OVERSEAS TONNAGE
1926 - 1936

Port	ACTUAL				HYPOTHETICAL			
	1926		1936		Change 1926-36		Estimate 1936(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Russell	7,511	0.25	7,221	0.22	- 290	-0.03	8,263	- 1,042
Whangarei	-	-	2,800	0.09	+ 2,800	+0.09	-	+ 2,800
Hokianga	9,421	0.31	-	-	- 9,421	-0.31	10,246	- 10,246
Kaipara	5,289	0.17	1,031	0.03	- 4,258	-0.14	5,619	- 4,588
Auckland	968,662	31.64	1,186,526	35.88	+217,864	+4.24	1,045,754	+140,772
Thames	361	0.01	-	-	- 361	-0.01	331	- 331
Tauranga	1,825	0.06	-	-	- 1,825	-0.06	1,983	- 1,983
Tokomaru Bay	3,386	0.11	3,410	0.10	+ 24	-0.01	3,636	- 226
Tologa Bay	-	-	641	0.02	+ 641	-0.02	-	+ 641
Gisborne	24,607	0.80	24,322	0.74	- 285	-0.06	26,441	- 2,119
Waikokopu	4,104	0.13	1,757	0.06	- 2,347	-0.07	4,297	- 2,540
Napier	95,461	3.12	82,464	2.50	- 12,997	-0.62	103,121	- 20,657
New Plymouth	117,799	3.85	127,093	3.85	+ 9,294	-	127,249	- 156
Wanganui	70,084	2.30	70,921	2.15	+ 837	-0.15	76,019	- 5,098
Wellington	825,354	26.95	954,265	28.86	+128,911	+1.91	890,740	+ 63,525
NORTH ISLAND	2,133,864	69.70	2,462,451	74.50	+328,587	+4.80	2,303,699	+158,752
Picton	3,998	0.13	5,892	0.18	+ 1,894	+0.05	4,297	+ 1,595
Nelson	8,204	0.27	7,524	0.23	- 680	-0.04	8,924	- 1,400
Westport	64,259	2.10	30,317	0.92	- 33,942	-1.18	69,408	- 39,091
Greymouth	57,211	1.87	41,373	1.25	- 15,838	-0.62	61,807	- 20,434
Lyttelton	380,114	12.42	359,239	10.87	- 20,875	-1.55	410,500	- 51,261
Timaru	76,517	2.50	40,307	1.22	- 36,210	-1.28	82,629	- 42,322
Oamaru	15,984	0.52	9,221	0.28	- 6,763	-0.24	17,188	- 7,967
Otago	221,090	7.22	244,693	7.40	+ 23,603	+0.18	238,633	+ 6,060
Bluff	100,154	3.27	104,146	3.15	+ 3,992	-0.12	108,078	- 3,932
SOUTH ISLAND	927,531	30.30	842,712	25.50	84,819	-4.80	1,001,464	-158,752
NEW ZEALAND	3,061,395	100.00	3,305,163	100.00	243,768	-	3,305,163	-

- (a) Number of tons required to retain 1926 share of the total overseas tonnage.
- (b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total overseas tonnage.
- Source: - Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.40.

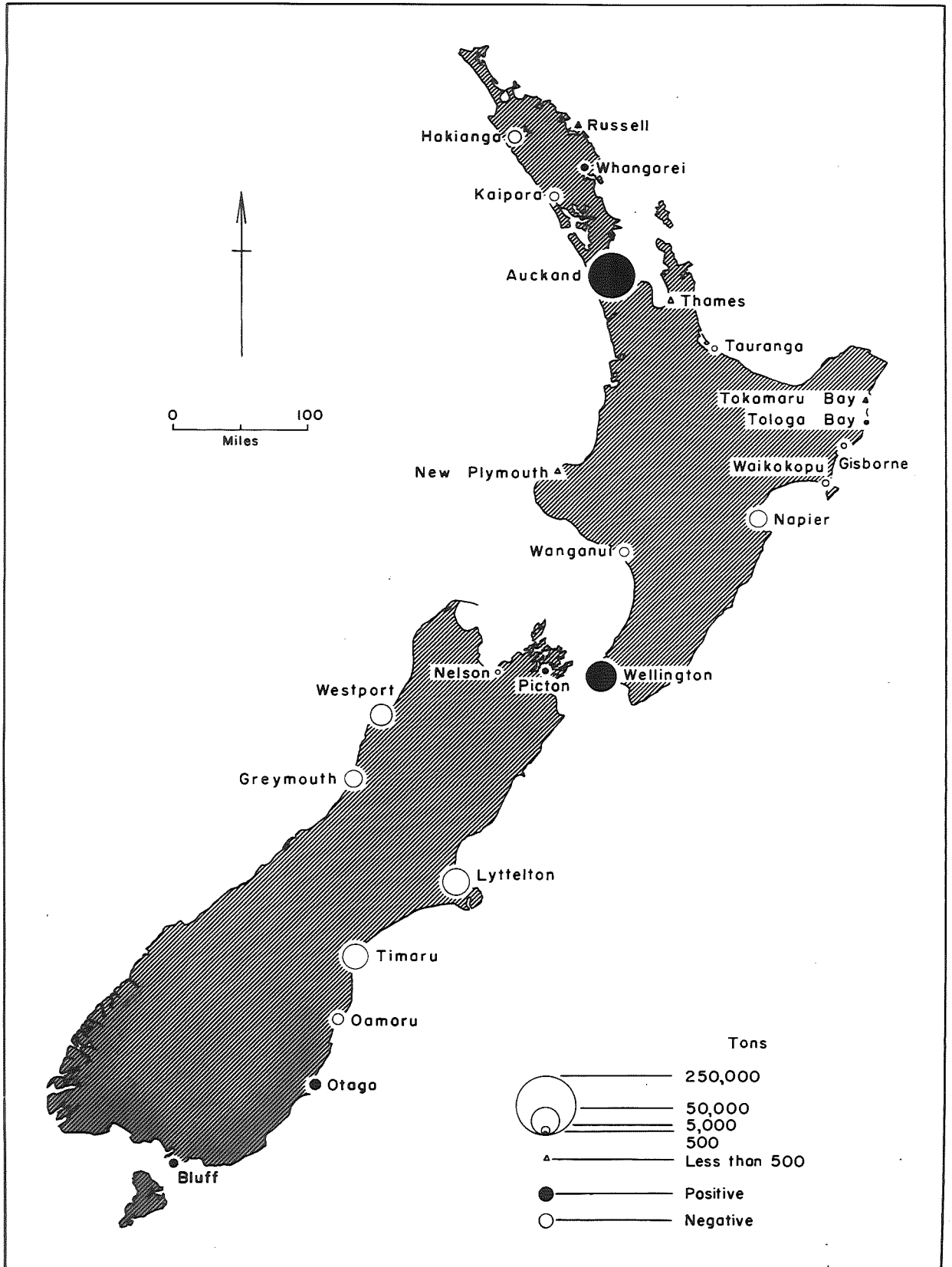


Fig.12. Changes in the Concentration of the Overseas Tonnage 1926-1936.
 Difference between a port's overseas tonnage in 1936 and tonnage required to retain 1926 share of New Zealand's overseas tonnage.
 Source:- Statistical Report on Trade and Shipping Part II,
 1926, p.90 and 1936, p.94.

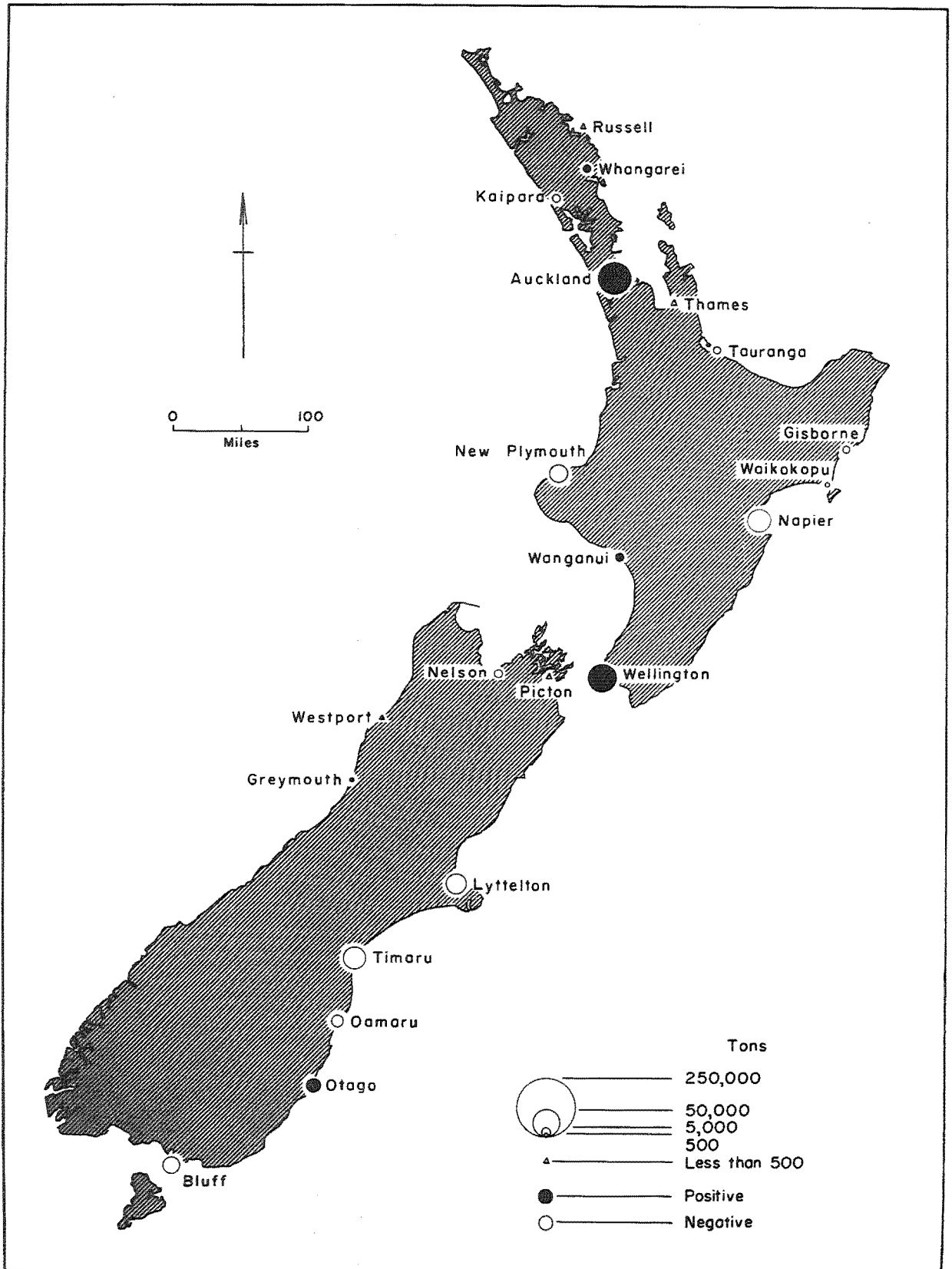


Fig.13. Changes in the Concentration of Imports 1926-1936.
 Difference between a port's imports in 1936 and tonnage required to retain 1926 share of New Zealand's imports.
 Source:- Statistical Report on Trade and Shipping Part II, 1926, p.90 and 1936, p.94.

TABLE VIII
CHANGES IN IMPORTS
1926 - 1936

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Russell	82	0.01	-	-	82	-0.01	230	230
Whangarei	-	-	2,800	0.12	+ 2,800	+0.12	-	+ 2,800
Hokianga	-	-	-	-	-	-	-	-
Kaipara	4,389	0.19	739	0.03	- 3,650	-0.16	4,379	- 3,640
Auckland	846,446	36.65	918,052	39.83	+ 71,606	-3.18	844,723	+ 73,329
Thames	361	0.02	-	-	- 361	-0.02	460	- 460
Tauranga	1,825	0.08	-	-	- 1,825	-0.08	1,844	- 1,844
Tokomaru Bay	-	-	-	-	-	-	-	-
Tologa Bay	-	-	-	-	-	-	-	-
Gisborne	9,763	0.43	6,813	0.30	- 2,950	-0.13	9,911	- 3,098
Waikokopu	670	0.03	-	-	- 670	-0.03	691	- 691
Napier	60,027	2.60	27,691	1.20	- 32,336	-1.40	59,926	- 32,235
New Plymouth	88,164	3.82	69,340	3.02	- 18,824	-0.80	88,045	- 18,705
Wanganui	37,754	1.64	41,769	1.81	+ 4,019	+0.17	37,799	+ 3,970
Wellington	644,790	27.92	695,868	30.19	+ 51,078	+2.27	643,511	+ 52,357
NORTH ISLAND	1,694,271	73.39	1,763,072	76.50	+ 68,801	+3.11	1,691,519	+ 71,553
Picton	270	0.01	-	-	- 270	-0.01	230	- 230
Nelson	6,118	0.27	1,812	0.08	- 4,306	-0.19	6,223	- 4,411
Westport	-	-	195	0.01	+ 195	+0.01	-	+ 195
Greymouth	514	0.02	1,611	0.07	+ 1,097	+0.05	461	+ 1,150
Lyttelton	303,938	13.15	276,596	12.00	- 27,342	-1.15	303,086	- 26,490
Timaru	44,814	1.94	14,465	0.63	- 30,349	-1.31	44,714	- 30,249
Oamaru	11,034	0.48	3,065	0.13	- 7,969	-0.35	11,063	- 7,998
Otago	185,603	8.04	198,766	8.62	+ 13,163	+0.58	185,309	+ 13,457
Bluff	62,507	2.70	45,254	1.96	- 17,253	-0.74	62,231	- 16,977
SOUTH ISLAND	614,798	26.61	541,764	23.50	- 73,034	-3.11	613,317	- 71,553
NEW ZEALAND	2,309,069	100.00	2,304,836	100.00	- 4,233	-	2,304,836	-

- (a) Number of tons required to retain 1926 share of the total import tonnage.
(b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total import tonnage.
Source: - Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

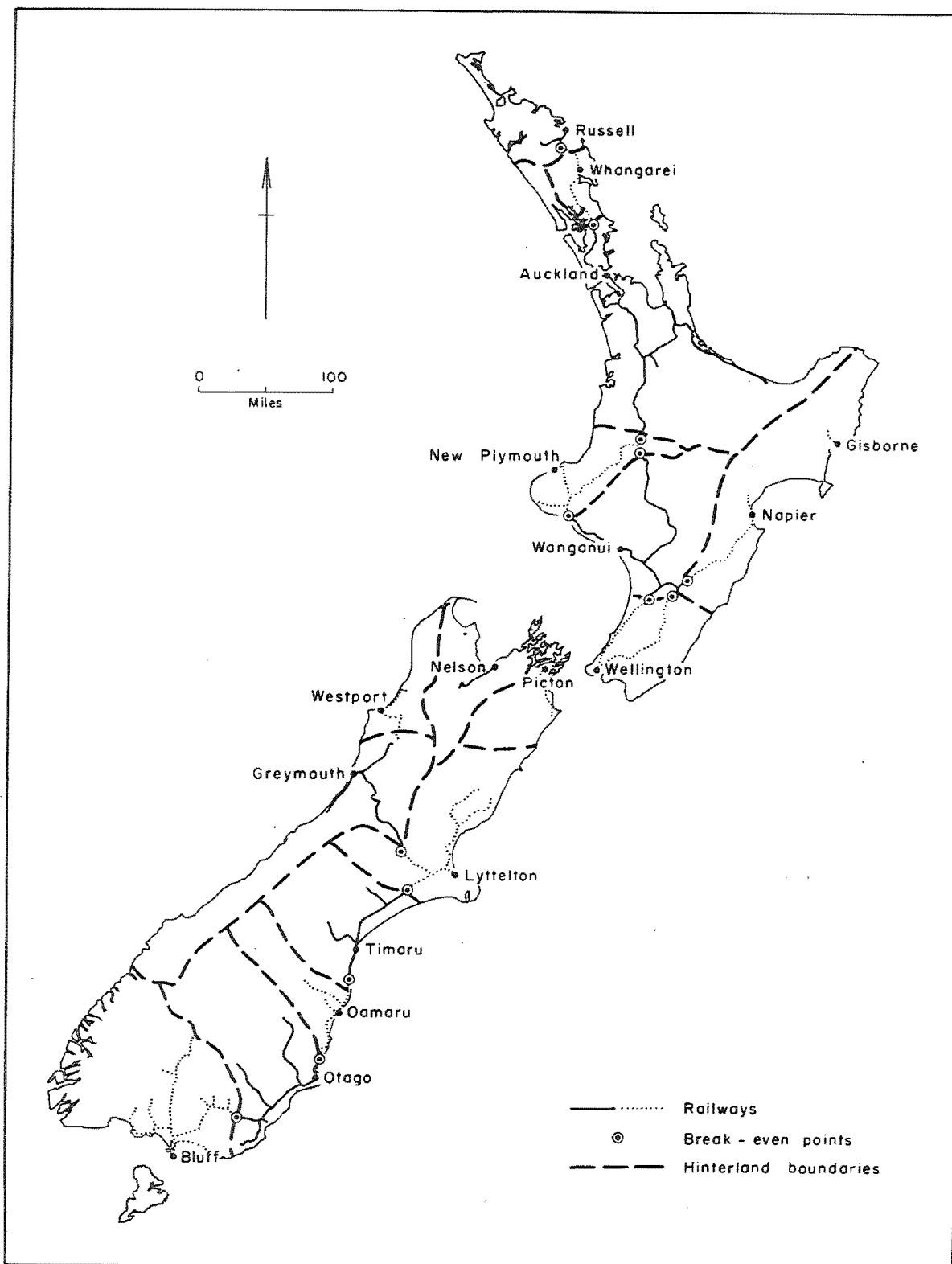


Fig.14. Overseas Hinterlands.

Hinterlands defined on the basis that a given port attracted to itself all imports consumed with an area it enjoyed a railway freight advantage in Class C. commodities (general goods) over other ports in 1936. As the difference between the hinterland boundaries based on Class C goods and export commodities was small (on 1936 rates) it is assumed that each port attracted all cargo destined for export from the same area as imports.

Source:- New Zealand Railway Rate Books for 1936.

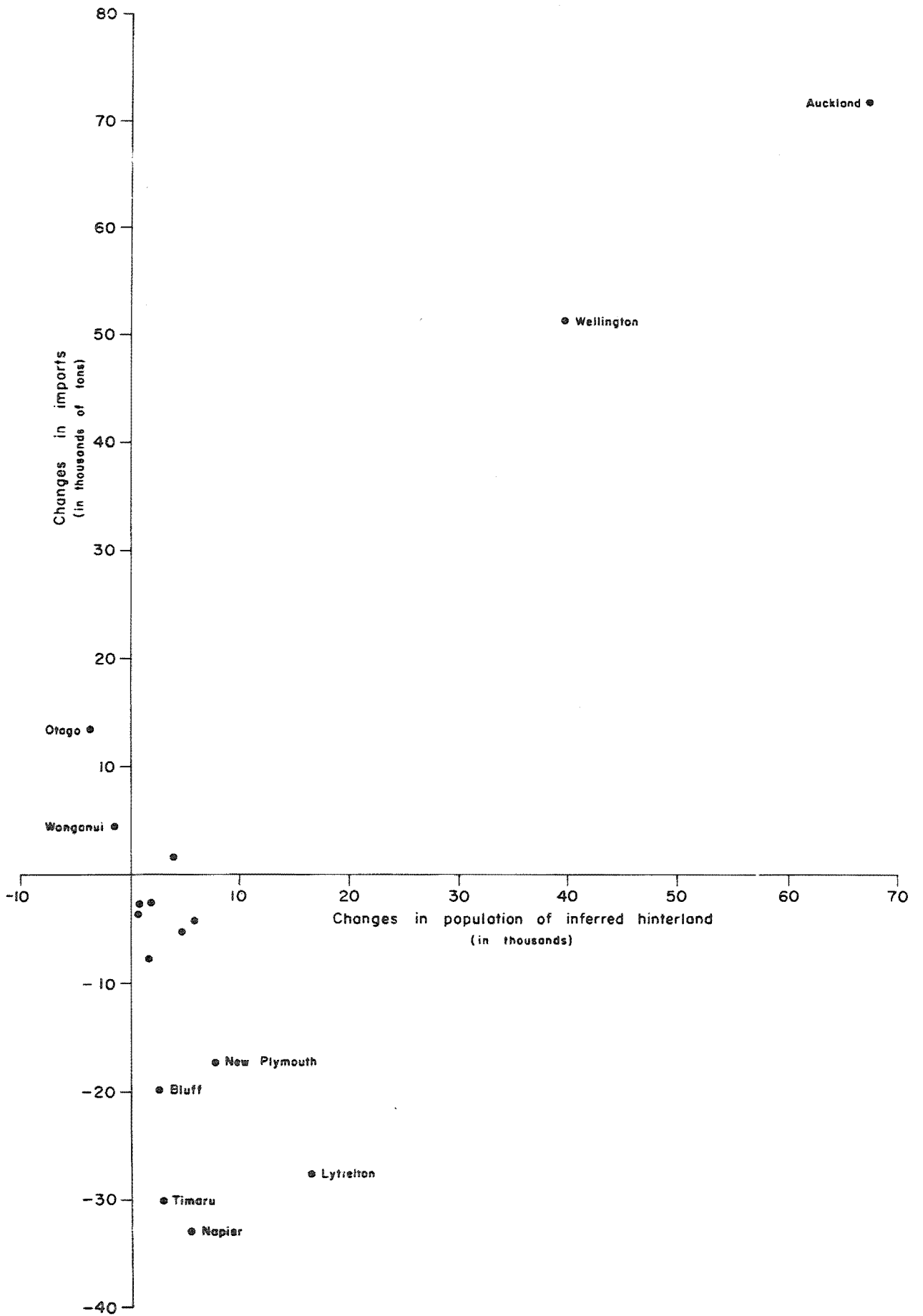


Fig.15. Relationship of Imports and Population 1926-1936.

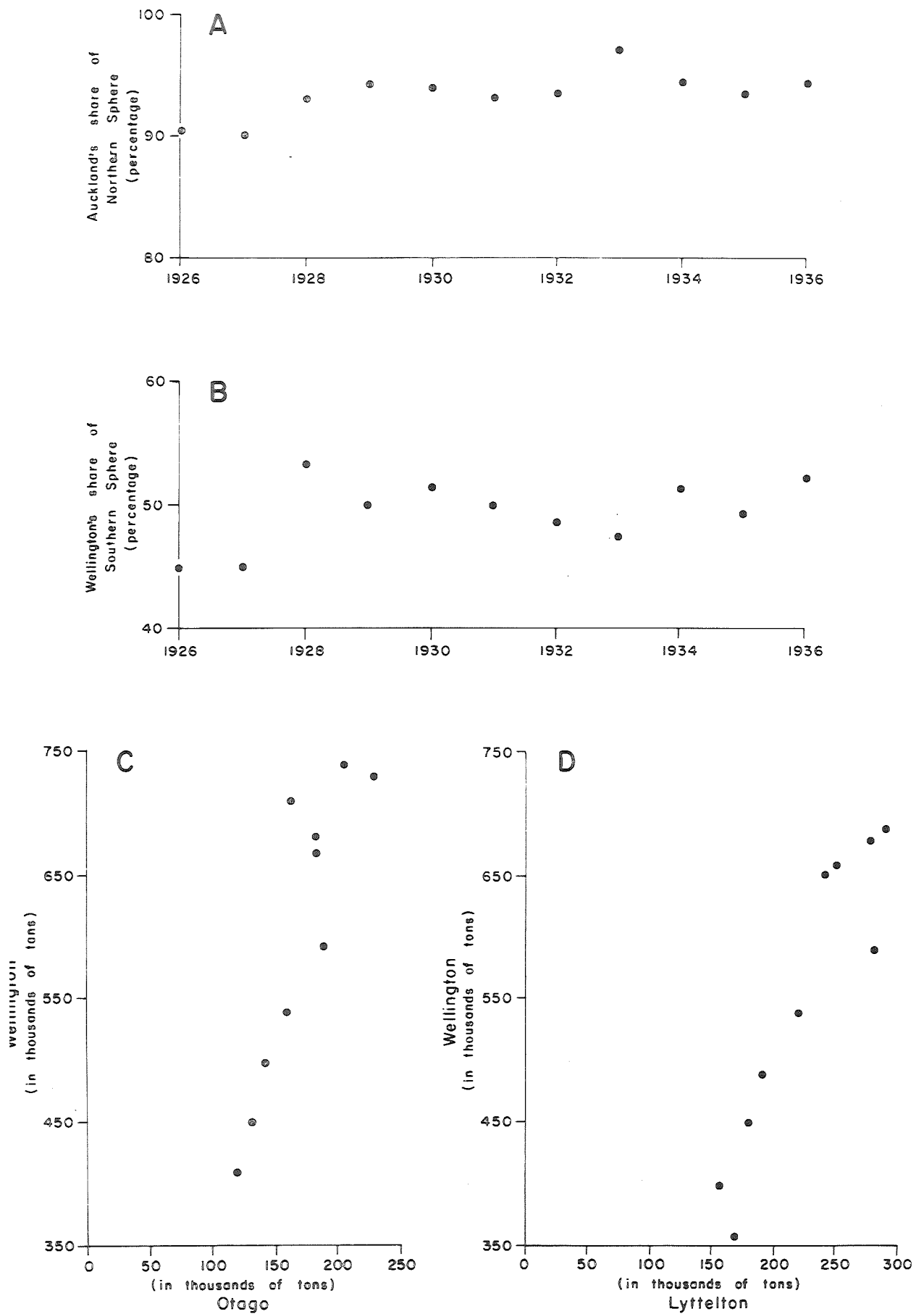


Fig.16. Changes in the Influence of Wellington and Auckland 1926-1936.
 A. Auckland's share of the imports handled in the Northern Sphere.
 B. Wellington's share of the imports handled in the Southern Sphere.
 C. Wellington's imports plotted against Otago's imports.
 D. Wellington's imports plotted against Lyttelton's imports.

TABLE IX
LEADING IMPORT COMMODITIES
1926 - 1936

Commodities	ACTUAL				Change 1926-36	
	1926		1936		Tonnage	Per cent
	Tonnage	Per cent	Tonnage	Per cent		
Coal	428,398	18.54	107,977	4.69	-320,421	-13.85
Petroleum products	375,466	16.26	548,848	23.82	+173,392	+ 7.56
Artificial manures	238,422	10.33	358,643	15.56	+120,221	+ 5.23
Hardwoods	82,987	3.60	67,259	2.92	- 15,728	- 0.68
General cargo	903,498	39.13	1,011,025	43.87	+107,527	+ 4.74
Softwoods	62,190	2.70	23,935	1.04	- 38,255	- 1.66
Sugar	78,526	3.40	82,099	3.56	+ 3,573	+ 0.16
Other classified goods	139,582	6.04	105,040	4.54	- 34,542	- 1.50
Total	2,309,069	100.00	2,304,836	100.00	- 4,233	-

Source:- Statistical Report on Trade and Shipping Part II 1926,
pp.90-102 and 1936, 94-101.

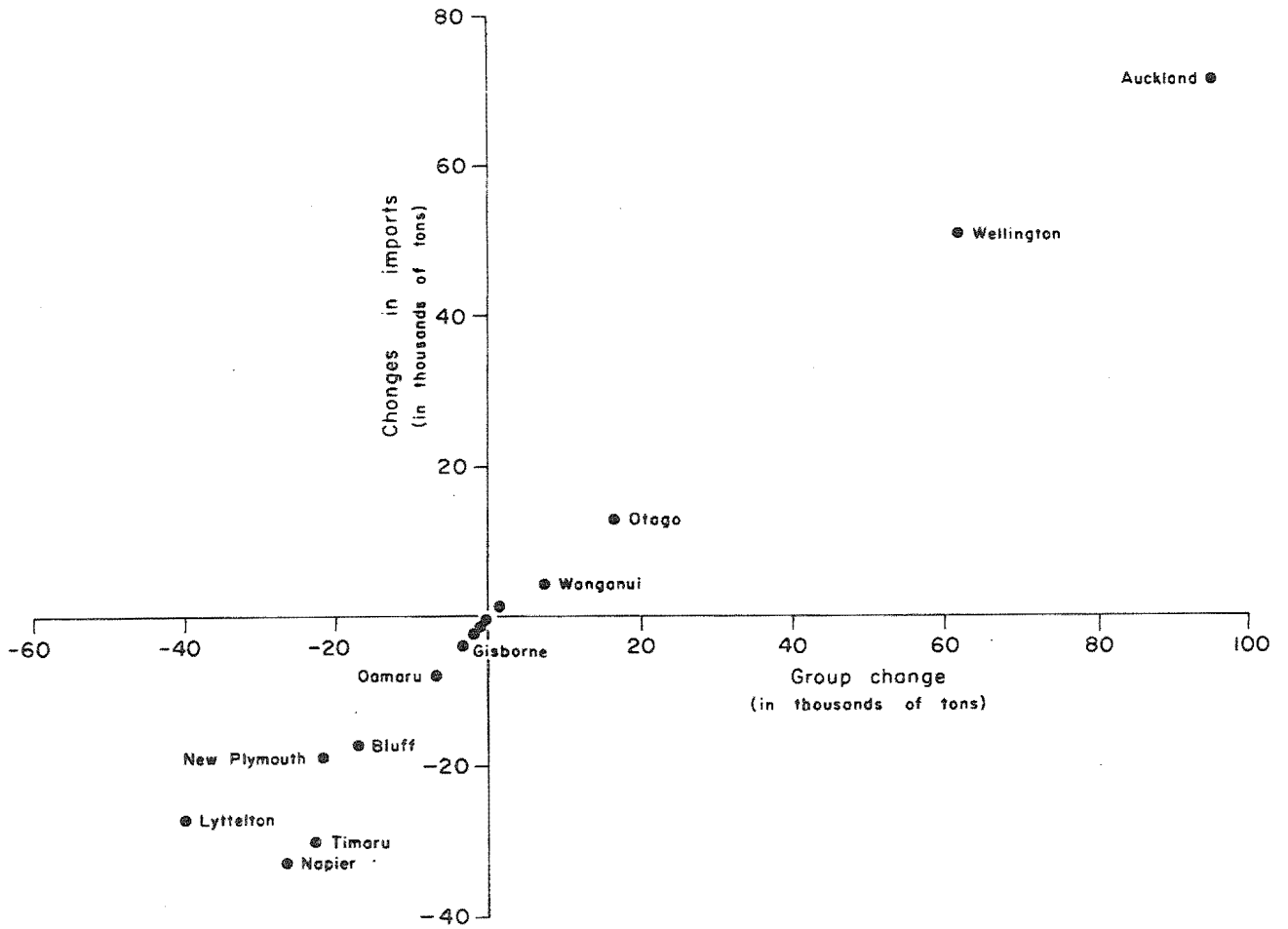


Fig.17. Relationship of Changes in Imports to Variations in a Select Group of Commodities 1926-1936.

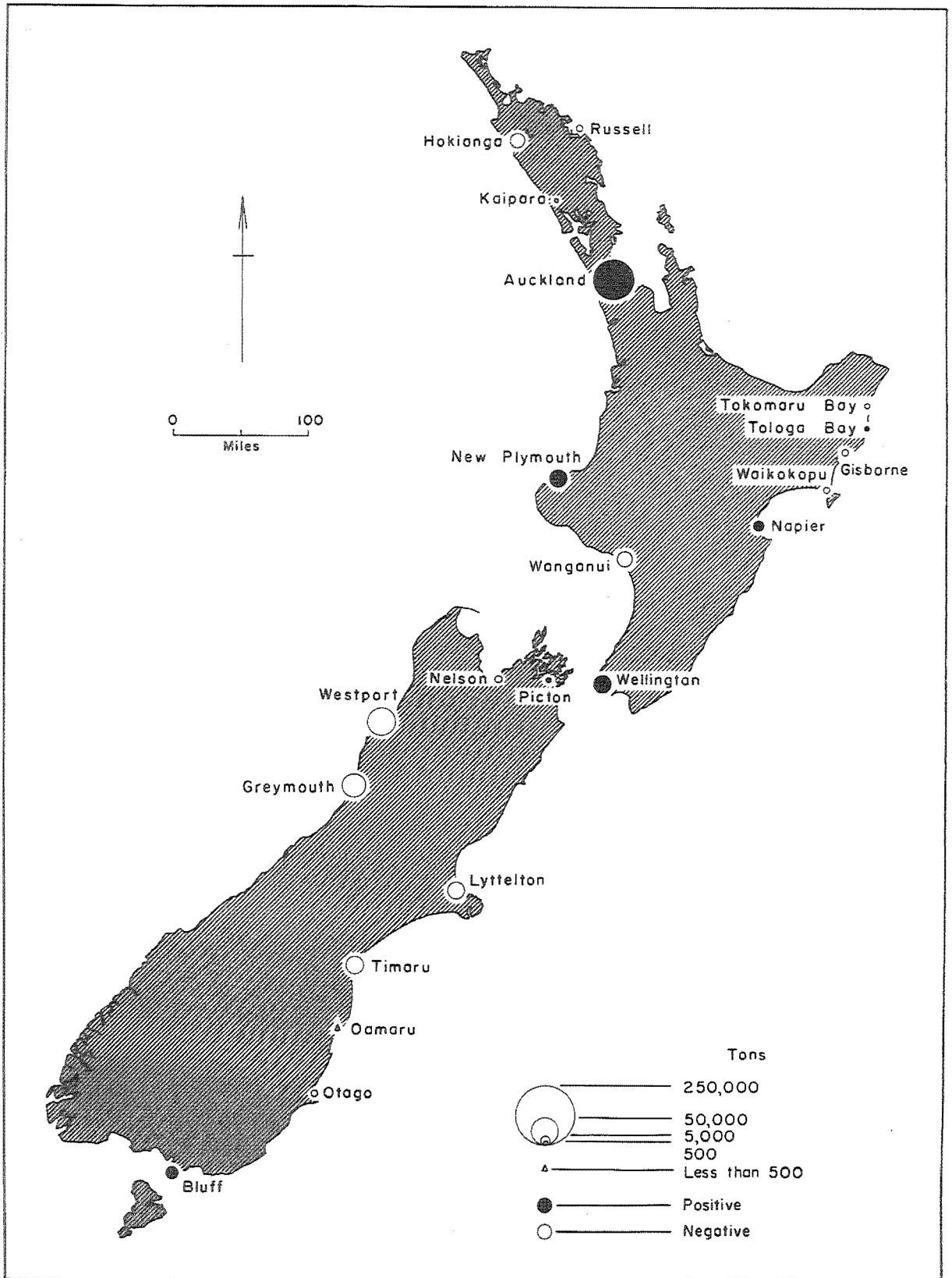


Fig.18. Changes in the Concentration of Exports 1926-1936.
 Difference between a port's exports in 1936 and tonnage required to retain 1926 share of New Zealand's exports.
 Source:- Statistical Report on Trade and Shipping Part II, 1926, p.90 and 1936, p.94.

TABLE X
CHANGES IN EXPORTS
1926 - 1936

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Russell	7,429	0.99	7,221	0.72	- 208	- 0.27	9,903	- 2,682
Whangarei	-	-	-	-	-	-	-	-
Hokianga	9,421	1.25	-	-	- 9,421	- 1.25	12,504	- 12,504
Kaipara	900	0.12	292	0.03	- 608	- 0.09	1,200	- 908
Auckland	122,216	16.24	268,474	26.84	+146,258	+10.60	162,455	+106,019
Thames	-	-	-	-	-	-	-	-
Tauranga	-	-	-	-	-	-	-	-
Tokomaru Bay	3,386	0.45	3,410	0.34	+ 24	- 0.11	4,501	- 1,091
Tologa Bay	-	-	641	0.06	+ 641	+ 0.06	-	+ 641
Gisborne	14,844	1.97	17,509	1.75	+ 2,665	+ 0.22	19,706	- 2,197
Waikokopu	3,434	0.46	1,757	0.18	- 1,677	- 0.28	4,602	- 2,845
Napier	35,434	4.71	54,773	5.48	+ 19,339	+ 0.77	47,115	+ 7,658
New Plymouth	29,635	3.94	57,753	5.77	+ 28,118	+ 1.83	39,413	+ 18,340
Wanganui	32,330	4.30	29,152	2.92	- 3,178	- 1.38	43,014	- 13,862
Wellington	180,564	24.0	258,397	25.83	+ 77,833	+ 1.83	240,078	+ 18,319
NORTH ISLAND	439,593	58.43	699,379	69.92	+259,786	+11.49	584,491	+114,888
Picton	3,728	0.50	5,892	0.59	+ 2,164	+ 0.09	5,002	+ 890
Nelson	2,086	0.28	5,712	0.57	+ 3,626	+ 0.29	2,801	+ 2,911
Westport	64,259	8.54	30,122	3.01	- 34,137	- 5.53	85,428	- 55,306
Greymouth	56,697	7.54	39,762	3.97	- 16,935	- 3.57	75,425	- 35,663
Lyttelton	76,176	10.13	82,643	8.26	+ 6,467	- 1.87	101,333	- 18,690
Timaru	31,703	4.21	25,842	2.58	- 5,861	- 1.63	42,114	- 16,272
Oamaru	4,950	0.65	6,156	0.62	+ 1,206	- 0.03	6,502	- 346
Otago	35,487	4.72	45,927	4.59	+ 10,440	- 0.13	47,215	- 1,288
Bluff	37,647	5.00	58,892	5.89	+ 21,245	+ 0.89	50,016	+ 8,876
SOUTH ISLAND	312,733	41.57	300,948	30.08	- 11,785	-11.49	415,836	-114,888
NEW ZEALAND	752,326	100.00	1,000,327	100.00	+248,001	-	1,000,327	-

(a) Number of tons required to retain 1926 share of the total export tonnage.
 (b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total export tonnage.
 Source: - Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

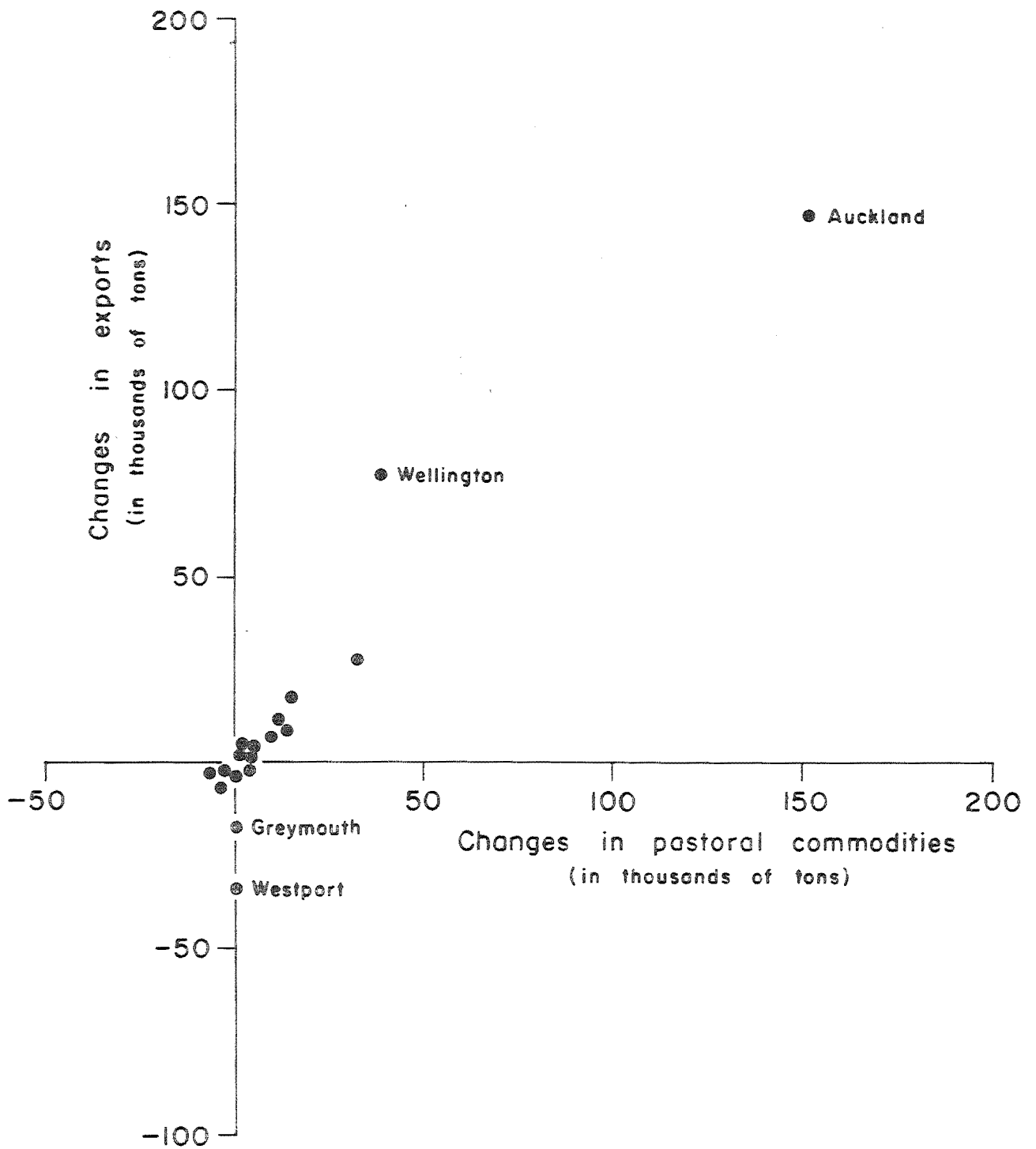


Fig.19. Relationship of Changes in Exports to Variations in Pastoral Commodities 1926-1936.

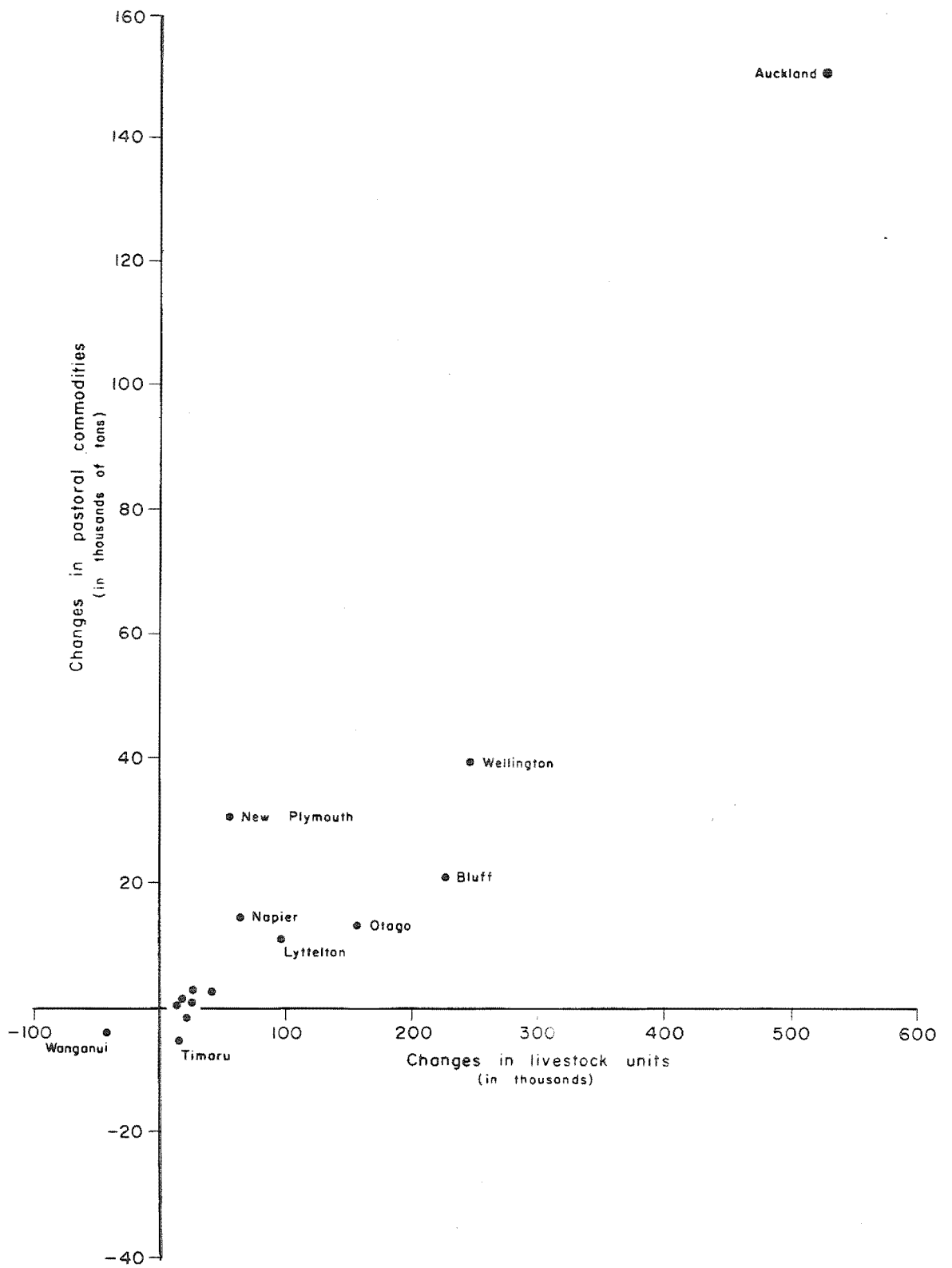


Fig. 20. Relationship in Pastoral Commodities to Variations in Livestock Units 1926-1936.

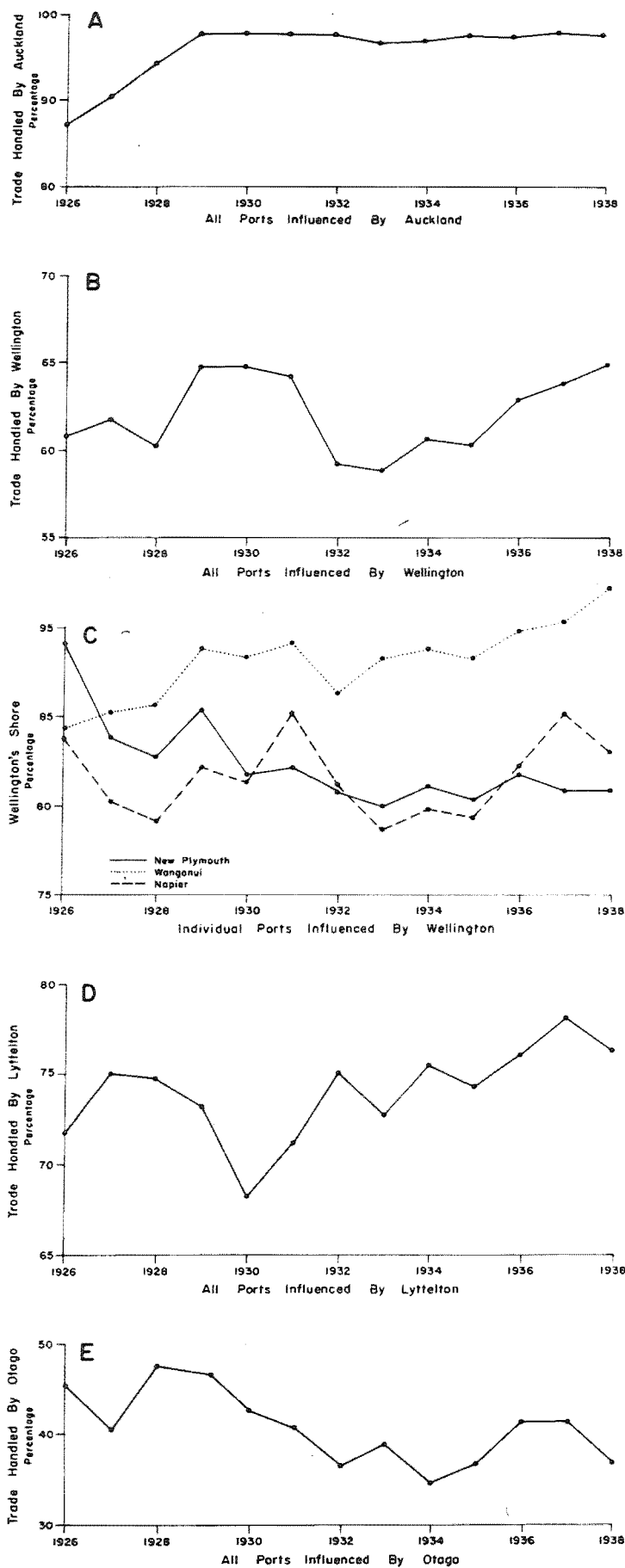


Fig.21. Changes in the Influence of the Main Ports 1926-1938.

- A. Auckland's share of the exports handled by the port and "influenced ports".
- B. Wellington's share of the exports handled by the port and "influenced ports".
- C. Wellington's share of the exports handled by the port and one other selected port.
- D. Lyttelton's share of the exports handled by the port and "influenced ports".
- E. Otago's share of the exports handled by the port and "influenced ports".

TABLE XI
BALANCE OF FLOW IN OVERSEAS TRADE
1926 - 36

Port	1926		1936 ^(a)	
	Imports	Exports	Imports	Exports
	Per cent	Per cent	Per cent	Per cent
Russell		98.90		100.00
Whangarei	-	-	100.00	
Hokianga		100.00	-	-
Kaipara	83.00		71.67	
Auckland	87.36		77.37	
Thames	100.00		-	-
Tauranga	100.00		-	-
Tokomaru Bay		100.00		100.00
Tologa Bay	-	-		100.00
Gisborne		60.32		71.98
Waikokopu		83.60		100.00
Napier	62.88			<u>66.42</u>
New Plymouth	74.84		54.56	
Wanganui	53.86		58.90	
Wellington	78.10		72.90	
Picton		93.24		100.00
Nelson	74.57			<u>85.91</u>
Westport		100.00		99.35
Greymouth		99.10		100.00
Lyttelton	79.95		76.99	
Timaru	58.56			<u>64.11</u>
Oamaru		69.30		<u>66.76</u>
Otago	83.94		81.23	
Bluff	62.41			<u>56.54</u>

(a) Figure underlined indicates a reversal in net flow.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

TABLE XII
COASTAL TONNAGE (a)
1926 - 1936

Year	RECEIPTS	SHIPMENTS	TOTAL
	Tonnage	Tonnage	Tonnage
1926	1,979,885	2,075,250	4,055,135
1927	2,048,027	2,103,274	4,151,301
1928	2,112,319	2,211,294	4,323,613
1929	2,163,306	2,180,947	4,344,253
1930	2,081,678	2,118,693	4,200,371
1931	1,565,795	1,637,703	3,203,498
1932	1,403,977	1,488,052	2,892,029
1933	1,383,845	1,477,258	2,861,103
1934	1,493,269	1,540,510	3,033,779
1935	1,603,825	1,626,784	3,230,609
1936	1,833,991	1,835,244	3,669,235

(a) Transshipments excluded.

Source:- Statistical Report on Trade and Shipping, Part II, 1926-36.

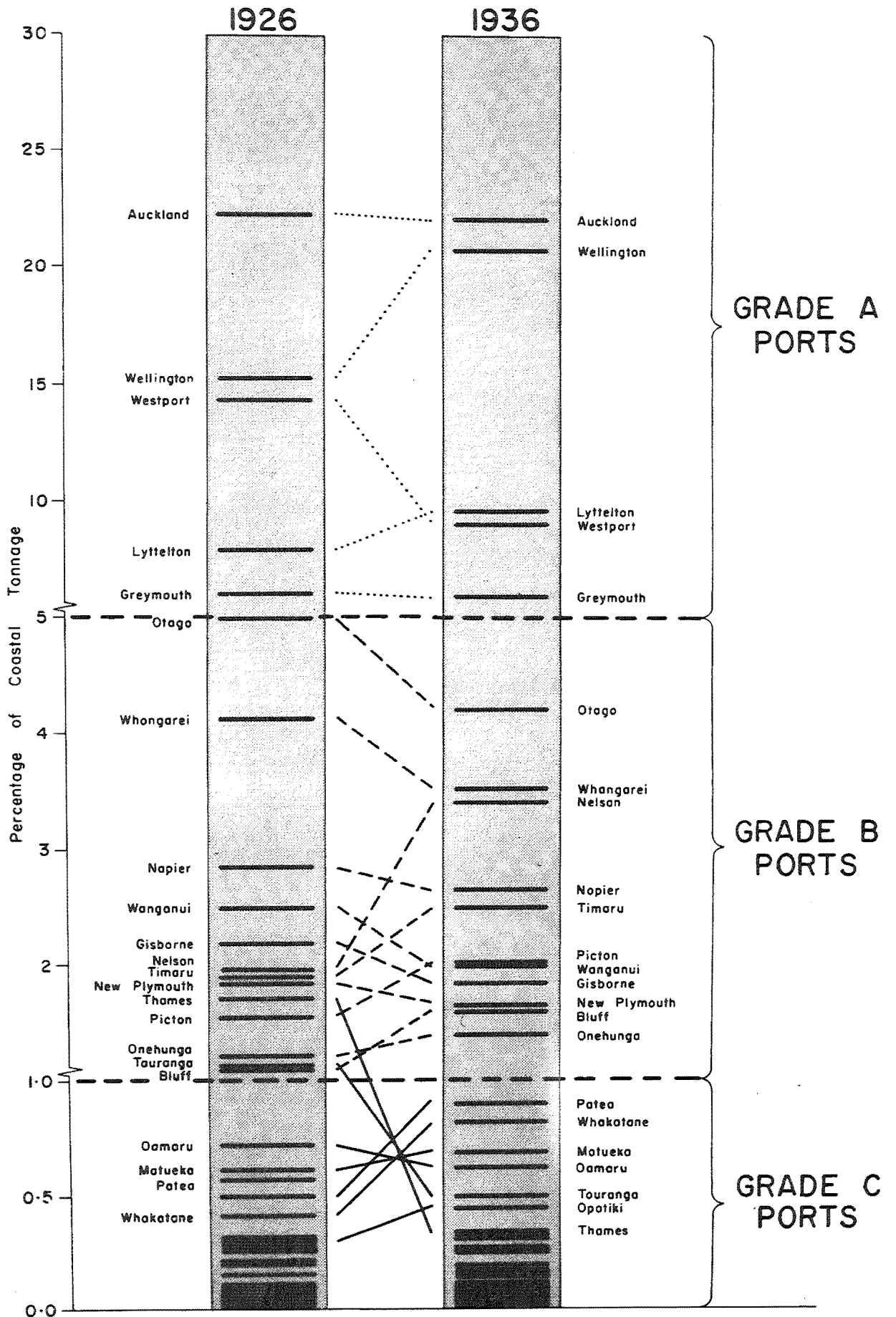


Fig.22. Changes in the Ranking of Ports on the Coastal Tonnage Scale 1926-1936.
 Source:- Statistical Report on Trade and Shipping Part II, 1926, p.90 and 1936, p.94.

TABLE XIII
CHANGES IN COASTAL TONNAGE
1926 - 1936

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Awanui	6,241	0.15	8,907	0.25	+ 2,666	+ 0.10	5,504	+ 3,403
Mangonui	2,959	0.07	2,743	0.08	- 216	+ 0.01	2,568	+ 175
Russell	8,630	0.21	11,990	0.34	+ 3,360	+ 0.13	7,705	+ 4,285
Hokianga	7,953	0.20	5,846	0.17	- 2,107	- 0.03	7,338	- 1,492
Whangarei	166,249	4.10	128,410	3.51	- 37,839	- 0.59	150,439	- 22,029
Kaipara	1,872	0.05	1,895	0.05	+ 23	-	1,835	+ 60
Mangawai	1,409	0.04	887	0.02	- 522	- 0.02	1,468	- 581
Auckland	909,325	22.42	802,972	21.90	-106,353	- 1.52	822,462	- 19,490
Onehunga	47,921	1.18	50,083	1.38	+ 2,162	+ 0.20	43,297	+ 6,786
Great Barrier	1,270	0.03	986	0.03	- 284	-	1,101	- 115
Port Waikato	-	-	9,052	0.12	+ 9,052	+ 0.12	-	+ 9,052
Raglan	3,267	0.08	4,291	0.13	+ 1,024	+ 0.05	2,935	+ 1,356
Kawhia	3,231	0.08	1,998	0.06	- 1,233	- 0.02	2,935	- 937
Thames	68,557	1.69	10,973	0.31	- 57,584	- 1.38	62,010	- 51,037
Coromandel	2,691	0.07	1,511	0.04	- 1,180	- 0.03	2,568	- 1,057
Whitianga	1,813	0.05	-	-	- 1,813	- 0.05	1,835	- 1,835
Tauranga	44,487	1.10	18,099	0.50	- 26,388	- 0.60	40,362	- 22,263
Whakatane	16,160	0.40	29,664	0.82	+ 13,504	+ 0.42	14,677	+ 14,987
Opotiki	12,590	0.30	15,761	0.44	+ 3,171	+ 0.14	11,008	+ 4,753
Tokomaru Bay	10,179	0.25	11,924	0.33	+ 1,745	+ 0.08	9,173	+ 2,751
Tologa Bay	2,818	0.07	3,998	0.11	+ 1,180	+ 0.04	2,568	+ 1,430
Gisborne	87,774	2.17	66,491	1.81	- 21,283	- 0.36	79,622	- 13,131
Waikokopu	10,837	0.27	5,931	0.16	- 4,906	- 0.11	9,907	- 3,976
Wairoa	11,052	0.27	5,041	0.14	- 6,011	- 0.13	9,907	- 4,866
Napier	114,387	2.82	94,228	2.56	- 20,159	- 0.26	103,472	- 9,244
Mokau	2,235	0.06	211	0.01	- 2,024	- 0.05	2,202	- 1,991
Waitara	3,621	0.09	225	0.01	- 3,396	- 0.08	3,302	- 3,077
New Plymouth	73,523	1.81	59,808	1.63	- 13,713	- 0.18	66,413	- 6,605
Patea	22,501	0.56	32,084	0.88	+ 9,583	+ 0.32	20,548	+ 11,536

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Wanganui	100,904	2.47	70,866	1.93	- 30,038	- 0.54	90,630	- 19,764
Foxton	10,862	0.27	11,216	0.31	+ 354	- 0.04	9,907	+ 1,309
Wellington	610,206	15.05	753,870	20.53	+143,664	+ 5.48	552,220	+201,650
NORTH ISLAND	2,367,266	58.38	2,221,923	60.56	-145,343	+ 2.18	2,142,099	+ 79,824
Picton	61,656	1.52	71,379	1.95	+ 9,723	+ 0.43	55,772	+ 15,607
Wairau	18,874	0.47	10,006	0.27	- 8,868	- 0.20	17,245	- 7,239
Kaikoura	4,062	0.10	-	-	- 4,062	- 0.10	3,669	- 3,669
Nelson	79,133	1.95	123,271	3.36	+ 44,138	+ 1.41	71,551	+ 51,720
Waitapu	3,745	0.09	5,070	0.14	+ 1,325	+ 0.05	3,302	+ 1,768
Motueka	24,443	0.60	23,621	0.64	- 822	+ 0.04	22,015	+ 1,606
Westport	581,475	14.34	320,922	8.74	-260,553	- 5.60	526,158	-205,246
Greymouth	238,788	5.89	209,426	5.71	- 29,362	- 0.18	216,117	- 6,691
Hokitika	467	0.01	9,456	0.26	+ 8,989	+ 0.25	367	- 9,089
Lyttelton	314,701	7.76	347,174	9.46	+ 32,473	+ 1.70	284,733	+ 62,441
Akaroa	1,206	0.03	664	0.02	- 542	- 0.01	1,101	- 437
Timaru	76,173	1.88	91,029	2.48	+ 15,036	+ 0.60	68,982	+ 22,047
Oamaru	28,710	0.71	22,804	0.62	- 5,906	- 0.09	26,052	- 3,248
Otago	197,706	4.88	153,432	4.18	- 44,272	- 0.70	179,059	- 25,627
Invercargill	11,500	0.28	19	0.00	- 11,481	- 0.28	10,274	- 10,255
Bluff	43,741	1.08	58,051	1.58	+ 14,310	+ 0.50	39,628	+ 18,423
Half Moon Bay	1,229	0.03	1,063	0.03	- 166	-	1,101	- 38
SOUTH ISLAND	1,687,869	41.62	1,447,312	39.44	-240,557	- 2.18	1,527,135	- 79,823
NEW ZEALAND	4,055,135	100.00	3,669,235	100.00	-385,900	-	3,669,235	-

(a) Number of tons required to retain 1926 share of the total coastal tonnage.

(b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total coastal tonnage.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

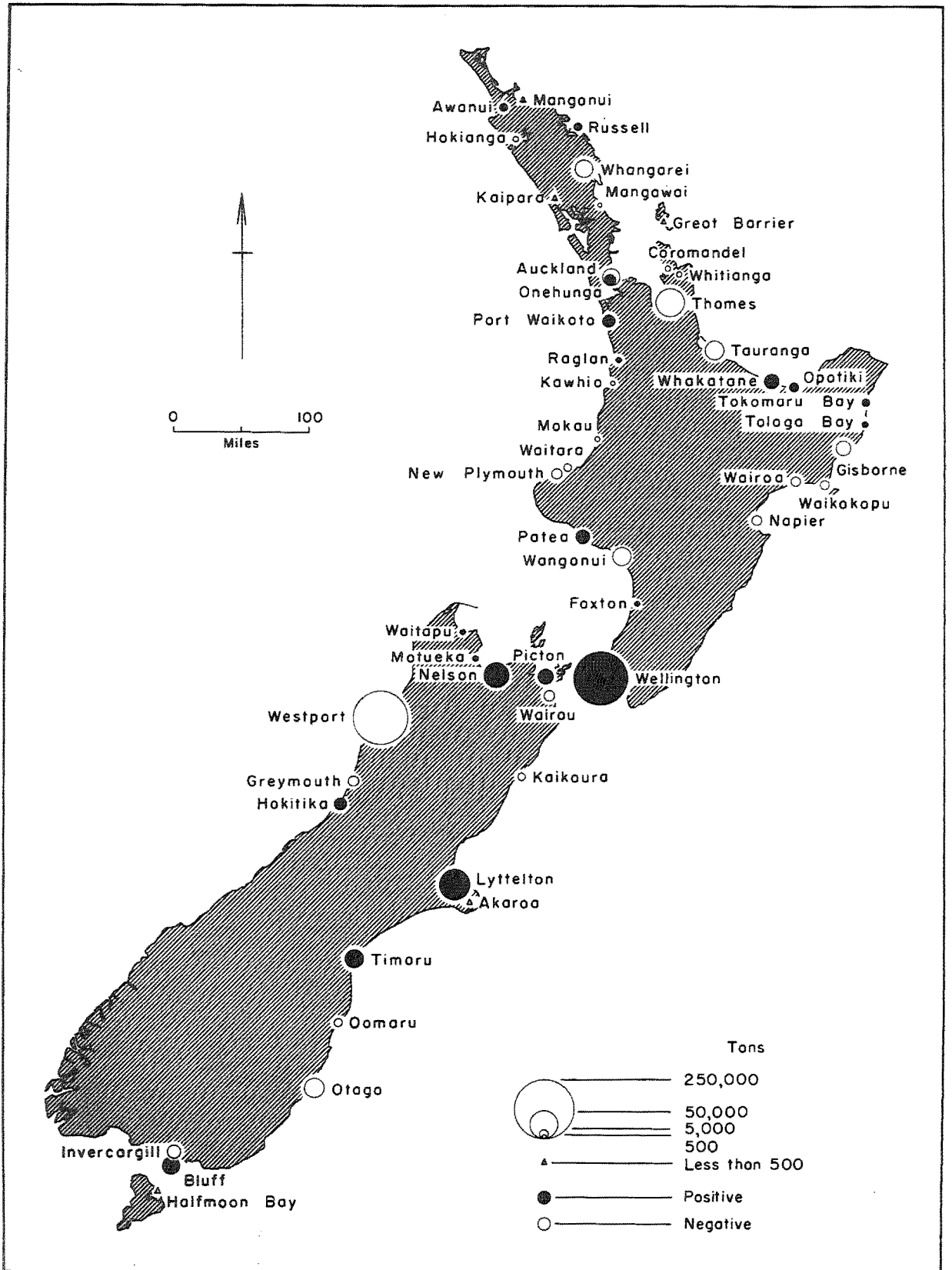


Fig.23. Changes in the Concentration of Coastal Tonnage 1926-1936.
 Difference between a port's coastal tonnage in 1936 and tonnage required to retain 1926 share of New Zealand's coastal tonnage.
 Source:- Statistical Report on Trade and Shipping, Part II,
 1926, p.90 and 1936, p.94.

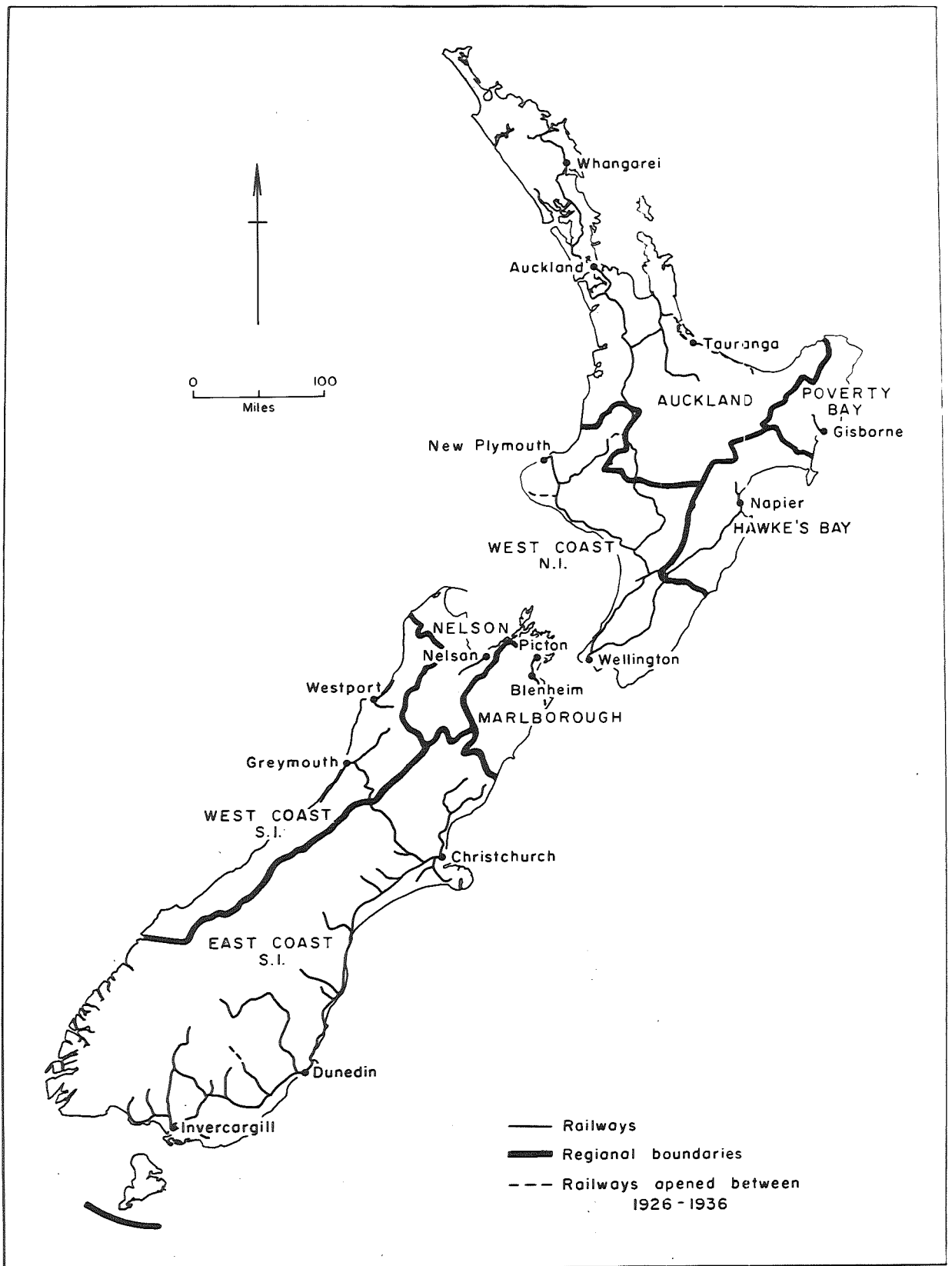


Fig.24. Regional Boundaries 1926-1936.
 The regions based on the location of economic activities, the railway network and the patterns of circulation between 1926 and 1936.

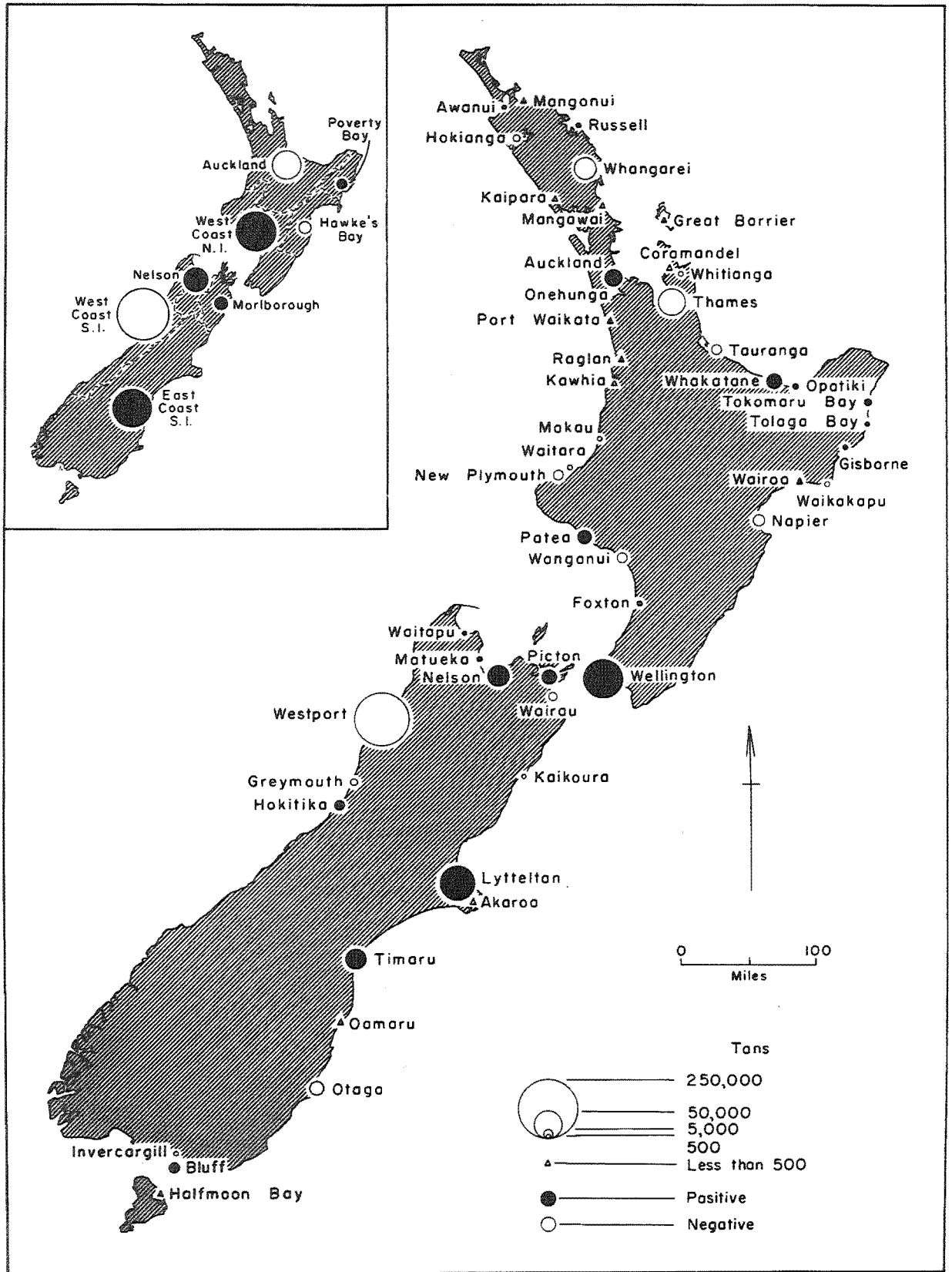


Fig.25. Changes in the Concentration of Shipments 1926-1936.
 Difference between a port's shipments in 1936 and tonnage required to retain 1926 share of New Zealand's shipments.
 Source:- Statistical Report on Trade and Shipping Part II,
 1926, p.90 and 1936, p.94.

TABLE XIV
CHANGES IN SHIPMENTS
1926 - 1936

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimated 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Awanui	2,320	0.11	2,685	0.15	+ 365	+ 0.04	2,019	+ 666
Mangonui	720	0.03	899	0.05	+ 179	+ 0.02	551	+ 348
Russell	4,155	0.20	4,999	0.27	+ 844	+ 0.07	3,670	+ 1,329
Hokianga	4,634	0.22	1,503	0.08	- 3,131	- 0.14	4,038	- 2,525
Whangarei	144,740	6.98	94,345	5.14	- 50,125	- 1.84	128,100	- 33,755
Kaipara	354	0.02	-	-	- 354	- 0.02	367	- 367
Mangawai	335	0.02	103	0.01	- 232	- 0.01	367	- 264
Auckland	267,571	12.91	254,408	13.86	- 13,163	+ 0.95	236,693	+ 17,715
Onehunga	35,714	1.72	33,612	1.83	- 2,102	+ 0.11	31,556	+ 2,056
Great Barrier	526	0.02	365	0.02	- 161	-	367	+ 2
Port Waikato	-	-	426	0.02	+ 426	+ 0.02	-	+ 426
Raglan	720	0.03	1,120	0.06	+ 400	+ 0.03	551	+ 569
Kawhia	717	0.03	495	0.03	- 222	-	551	- 56
Thames	55,460	2.67	2,070	0.11	- 53,390	- 2.56	49,001	- 46,931
Coromandel	916	0.04	415	0.02	- 501	- 0.02	734	- 319
Whitianga	1,081	0.05	-	-	- 1,081	- 0.05	918	- 918
Tauranga	11,786	0.57	2,690	0.15	- 9,096	- 0.42	10,461	- 7,771
Whakatane	5,054	0.25	15,167	0.83	+ 10,113	- 0.58	4,588	+ 10,579
Opotiki	3,011	0.14	5,337	0.29	+ 2,326	+ 0.15	2,569	+ 2,768
Tokomaru Bay	1,617	0.08	4,392	0.24	+ 2,775	+ 0.20	1,468	+ 2,924
Tologa Bay	753	0.03	1,369	0.07	+ 616	+ 0.04	551	+ 818
Gisborne	20,351	0.98	19,094	1.04	- 957	+ 0.06	17,985	+ 1,109
Waikokopu	2,831	0.13	573	0.03	- 2,258	- 0.10	2,386	- 1,813
Wairoa	1,595	0.08	1,909	0.10	+ 314	+ 0.02	1,468	+ 441
Napier	33,809	1.63	21,896	1.20	- 11,913	- 0.43	29,914	- 8,018
Mokau	1,123	0.05	163	0.01	- 960	- 0.04	918	- 755
Waitara	1,449	0.07	65	0.00	- 1,384	- 0.07	1,287	- 1,222
New Plymouth	14,295	0.69	5,467	0.30	- 8,828	- 0.39	12,663	- 7,196
Patea	18,040	0.87	28,129	1.53	+ 10,089	+ 0.66	15,967	+ 12,162

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimated 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Wanganui	27,094	1.31	18,519	1.01	- 8,565	- 0.30	24,042	- 5,523
Foxton	3,347	0.16	399	0.02	- 2,948	- 0.14	2,936	+ 2,537
Wellington	207,153	9.98	293,756	16.01	+ 86,603	+ 6.02	183,157	+110,599
NORTH ISLAND	873,271	42.07	816,370	44.49	- 56,901	+ 2.42	772,087	+ 44,283
Picton	27,750	1.34	38,342	2.09	+ 10,592	+ 0.75	24,592	+ 13,750
Wairau	8,955	0.43	4,385	0.24	- 4,570	- 0.19	7,892	- 3,507
Kaikoura	771	0.04	-	-	- 771	- 0.04	734	- 734
Nelson	26,473	1.28	51,981	2.84	+ 25,508	+ 1.56	23,491	+ 28,490
Waitapu	1,276	0.06	1,920	0.10	+ 644	+ 0.04	1,101	+ 819
Motueka	15,079	0.73	16,158	0.88	+ 1,079	+ 0.15	13,397	+ 2,761
Westport	565,533	27.26	311,287	16.97	-254,246	-10.29	500,288	-189,001
Greymouth	221,947	10.69	193,856	10.56	- 28,091	- 0.13	196,188	- 2,332
Hokitika	213	0.01	6,085	0.33	+ 5,872	+ 0.32	184	+ 5,901
Lyttelton	153,408	7.39	217,692	11.86	+ 64,284	+ 4.47	135,625	+ 82,067
Akaroa	221	0.01	45	0.00	- 176	- 0.01	184	- 139
Timaru	47,046	2.26	65,866	3.59	+ 18,820	+ 1.33	41,477	+ 24,389
Oamaru	19,926	0.96	17,435	0.95	- 2,491	- 0.01	17,618	+ 183
Otago	90,695	4.37	69,407	3.78	- 21,288	- 0.59	80,200	- 10,793
Invercargill	1,368	0.07	5	0.00	- 1,363	- 0.07	1,285	- 1,280
Bluff	20,944	1.01	24,034	1.31	+ 3,090	+ 0.30	18,536	+ 5,498
Half Moon Bay	374	0.02	376	0.02	+ 2	-	367	+ 9
SOUTH ISLAND	1,201,979	57.93	1,018,874	55.51	-180,745	- 2.42	1,063,157	- 44,283
NEW ZEALAND	2,075,250	100.00	1,835,244	100.00	-240,006	-	1,835,244	-

- (a) Number of tons required to retain 1926 share of total shipments.
(b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total shipments.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

TABLE XV
REGIONAL CHANGES IN SHIPMENTS
1926 - 1936

Region	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimated 1936(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Auckland	539,814	26.01	420,639	22.93	- 119,175	- 3.08	477,347	- 56,708
Poverty Bay	22,721	1.09	24,855	1.34	+ 2,134	+ 0.25	20,004	+ 4,851
Hawke's Bay	38,235	1.84	24,378	1.33	- 13,857	- 0.51	33,768	- 9,390
West Coast	272,503	13.13	346,498	18.89	+ 73,997	+ 5.76	240,968	+105,530
NORTH ISLAND	873,271	42.07	816,730	44.49	- 56,901	+ 2.42	772,087	+ 44,283
Marlborough	37,476	1.81	42,727	2.33	+ 5,251	+ 0.52	33,218	+ 9,509
Nelson	42,828	2.06	70,059	3.82	+ 27,231	+ 1.76	37,806	+ 32,253
West Coast	787,693	37.96	511,228	27.85	- 276,465	-10.11	696,659	-185,431
East Coast	333,982	16.10	394,860	21.85	+ 60,878	+ 5.41	295,474	+103,332
SOUTH ISLAND	1,201,979	57.93	1,018,874	55.51	- 183,105	- 2.42	1,063,157	- 44,283
NEW ZEALAND	2,075,250	100.00	1,835,244	100.00	- 240,006	-	1,835,244	-

- (a) Number of tons required to retain 1926 share of total shipments.
(b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total shipments.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

TABLE XVI
CHANGES IN RECEIPTS
1926 - 1936

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Awanui	3,921	0.20	6,222	0.34	+ 2,301	+ 0.14	3,668	+ 2,554
Mangonui	2,239	0.11	1,844	0.10	- 395	- 0.01	2,017	- 173
Russell	4,475	0.23	6,991	0.38	+ 2,516	+ 0.15	4,218	+ 2,773
Hokianga	3,319	0.17	4,343	0.23	+ 1,024	+ 0.06	3,118	- 1,225
Whangarei	21,509	1.09	34,065	1.86	+ 12,556	+ 0.77	19,991	+ 14,074
Kaipara	1,518	0.08	1,895	0.10	+ 377	+ 0.02	1,467	+ 428
Mangawai	1,074	0.06	784	0.04	- 290	- 0.02	1,100	- 316
Auckland	641,592	32.40	548,564	29.93	- 93,028	- 2.47	594,213	- 45,649
Onehunga	12,201	0.62	16,471	0.90	+ 4,270	+ 0.28	11,371	+ 5,100
Great Barrier	744	0.04	621	0.03	- 123	- 0.01	734	- 113
Port Waikato	-	-	8,626	0.47	+ 8,626	+ 0.47	-	+ 8,626
Raglan	2,457	0.13	3,171	0.17	+ 714	+ 0.04	2,384	+ 787
Kawhia	2,514	0.13	1,503	0.08	- 1,011	- 0.05	2,384	- 881
Thames	13,097	0.66	8,903	0.49	- 4,194	- 0.17	12,104	- 3,201
Coromandel	1,775	0.09	1,096	0.06	- 679	- 0.03	1,651	- 555
Whitianga	732	0.04	-	-	- 732	- 0.04	734	- 734
Tauranga	32,701	1.64	15,409	0.84	- 679	- 0.80	30,077	- 14,668
Whakatane	11,106	0.56	14,497	0.79	+ 3,391	+ 0.23	10,270	+ 4,227
Opotiki	9,579	0.49	10,424	0.57	+ 845	+ 0.08	8,987	+ 1,437
Tokomaru Bay	8,562	0.44	7,532	0.41	- 1,030	- 0.03	8,070	- 538
Tologa Bay	2,065	0.11	2,629	0.14	+ 564	+ 0.03	2,017	+ 612
Gisborne	67,423	3.41	47,397	2.58	- 20,030	- 0.83	62,539	- 15,142
Waikokopu	8,006	0.41	5,358	0.29	- 2,648	- 0.12	7,519	- 2,161
Wairoa	9,457	0.48	3,132	0.17	- 6,325	- 0.31	8,803	- 5,671
Napier	80,578	4.07	72,332	3.94	- 8,246	- 0.13	74,643	- 2,311
Mokau	1,112	0.06	48	0.00	- 1,064	- 0.06	1,100	- 1,052
Waitara	2,172	0.11	160	0.01	- 2,012	- 0.10	2,017	- 1,857
New Plymouth	59,228	2.99	54,341	2.96	- 4,887	- 0.03	54,836	- 495
Patea	4,461	0.23	3,955	0.22	- 506	- 0.01	4,218	- 263
Wanganui	73,810	3.73	52,329	2.85	- 21,481	- 0.88	68,408	- 16,079

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Foxton	7,515	0.38	10,817	0.59	+ 3,302	- 0.21	6,969	+ 3,848
Wellington	403,053	20.34	460,094	25.10	+ 57,041	+ 4.76	373,034	+ 87,060
NORTH ISLAND	1,493,995	75.46	1,405,553	76.64	- 88,442	+ 1.18	1,383,930	+ 21,623
Picton	33,906	1.71	33,037	1.80	- 869	+ 0.09	31,361	+ 1,676
Wairau	9,919	0.50	5,621	0.31	- 4,298	- 0.19	9,170	- 3,549
Kaikoura	3,291	0.17	-	-	- 3,291	- 0.17	3,118	- 3,118
Nelson	52,660	2.66	71,290	3.88	+ 18,630	+ 1.22	48,784	+ 22,506
Waitapu	2,469	0.13	3,150	0.17	+ 681	+ 0.04	2,384	+ 766
Motueka	9,264	0.47	7,463	0.41	- 1,801	- 0.06	8,620	- 1,157
Westport	15,942	0.80	9,635	0.53	- 6,307	- 0.27	14,672	- 5,037
Greymouth	16,841	0.85	15,570	0.85	- 1,271	-	15,589	+ 19
Hokitika	254	0.02	3,376	0.18	+ 3,122	+ 0.16	367	+ 3,009
Lyttelton	161,653	8.16	129,402	7.07	- 32,251	- 1.09	149,653	- 20,251
Akaroa	985	0.05	619	0.03	- 366	- 0.02	917	- 298
Timaru	29,127	1.46	25,163	1.37	- 3,964	- 0.09	26,776	- 1,613
Oamaru	8,784	0.45	5,369	0.29	- 3,415	- 0.16	8,253	- 2,884
Otago	107,011	5.40	84,025	4.58	22,986	- 0.82	99,036	- 15,011
Invercargill	10,132	0.51	14	0.00	10,118	- 0.51	9,353	- 9,339
Bluff	22,797	1.15	34,017	1.85	11,220	+ 0.70	21,091	+ 12,926
Half Moon Bay	855	0.05	687	0.04	168	- 0.01	917	- 230
SOUTH ISLAND	485,890	24.54	428,438	23.36	- 57,452	- 1.18	450,061	- 21,623
NEW ZEALAND	1,975,885	100.00	1,833,991	100.00	-145,894	-	1,833,991	

- (a) Number of tons required to retain 1926 share of the total receipts.
(b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total receipts.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Foxton	7,515	0.38	10,817	0.59	+ 3,302	- 0.21	6,969	+ 3,848
Wellington	403,053	20.34	460,094	25.10	+ 57,041	+ 4.76	373,034	+ 87,060
NORTH ISLAND	1,493,995	75.46	1,405,553	76.64	- 88,442	+ 1.18	1,383,930	+ 21,623
Picton	33,906	1.71	33,037	1.80	- 869	+ 0.09	31,361	+ 1,676
Wairau	9,919	0.50	5,621	0.31	- 4,298	- 0.19	9,170	- 3,549
Kaikoura	3,291	0.17	-	-	- 3,291	- 0.17	3,118	- 3,118
Nelson	52,660	2.66	71,290	3.88	+ 18,630	+ 1.22	48,784	+ 22,506
Waitapu	2,469	0.13	3,150	0.17	+ 681	+ 0.04	2,384	+ 766
Motueka	9,264	0.47	7,463	0.41	- 1,801	- 0.06	8,620	- 1,157
Westport	15,942	0.80	9,635	0.53	- 6,307	- 0.27	14,672	- 5,037
Greymouth	16,841	0.85	15,570	0.85	- 1,271	-	15,589	+ 19
Hokitika	254	0.02	3,376	0.18	+ 3,122	+ 0.16	367	+ 3,009
Lyttelton	161,653	8.16	129,402	7.07	- 32,251	- 1.09	149,653	- 20,251
Akaroa	985	0.05	619	0.03	- 366	- 0.02	917	- 298
Timaru	29,127	1.46	25,163	1.37	- 3,964	- 0.09	26,776	- 1,613
Oamaru	8,784	0.45	5,369	0.29	- 3,415	- 0.16	8,253	- 2,884
Otago	107,011	5.40	84,025	4.58	22,986	- 0.82	99,036	- 15,011
Invercargill	10,132	0.51	14	0.00	10,118	- 0.51	9,353	- 9,339
Bluff	22,797	1.15	34,017	1.85	11,220	+ 0.70	21,091	+ 12,926
Half Moon Bay	855	0.05	687	0.04	168	- 0.01	917	- 230
SOUTH ISLAND	485,890	24.54	420,438	23.36	- 57,452	- 1.18	450,061	- 21,623
NEW ZEALAND	1,975,885	100.00	1,833,991	100.00	-145,894	-	1,833,991	

(a) Number of tons required to retain 1926 share of the total receipts.

(b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total receipts.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

TABLE XVII
REGIONAL CHANGES IN RECEIPTS
1926 - 1936

Region	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Auckland	766,553	38.72	685,429	37.37	- 81,124	- 0.83	710,121	- 24,692
Poverty Bay	78,050	3.95	57,558	3.14	- 20,492	- 0.81	72,443	- 14,885
Hawke's Bay	98,041	4.95	80,822	4.41	- 17,219	- 0.54	90,783	- 9,961
West Coast	551,731	27.84	581,744	31.71	+ 30,393	+ 3.83	510,583	+ 71,161
NORTH ISLAND	1,493,995	75.46	1,405,553	76.64	- 88,332	+ 1.18	1,383,930	+ 21,623
Marlborough	47,116	2.38	38,658	2.11	- 8,458	- 0.27	43,649	- 4,991
Nelson	64,393	3.25	81,903	4.47	+ 17,510	+ 1.21	59,605	+ 22,298
West Coast	33,037	1.67	28,581	1.56	- 4,456	- 0.11	30,628	- 2,047
East Coast	341,344	17.24	279,296	15.23	- 62,048	- 2.03	316,180	- 36,884
SOUTH ISLAND	485,890	24.54	428,438	23.36	- 57,452	- 1.18	450,061	- 21,624
NEW ZEALAND	1,979,855	100.00	1,833,991	100.00	- 145,894	-	1,833,991	

- (a) Number of tons required to retain 1926 share of the total receipts.
(b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total receipts.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90
and 1936, p.94.

TABLE XVIII
CHANGES IN POPULATION
1926 - 1936

Region	1926		1936		Change 1926-36		
	Number	Per Cent	Number	Per Cent	Number	Per Cent	Per-centage Increase
Northland	54,449	3.86	64,625	4.11	+ 10,176	+0.25	18.7
Central Auckland	236,274	16.78	265,996	16.90	+ 29,722	+0.12	12.6
South Auckland/ Bay of Plenty	145,108	10.31	179,260	11.39	+ 34,152	+1.08	23.5
AUCKLAND	435,831	30.95	509,881	32.40	+ 74,050	+1.45	17.00
POVERTY BAY	33,627	2.39	37,089	2.36	+ 3,462	-0.03	10.3
HAWKE'S BAY	70,353	5.00	76,768	4.88	+ 6,615	-0.02	9.4
Taranaki	71,848	5.10	77,652	4.94	+ 5,804	-0.16	8.1
Wellington	281,020	19.96	316,446	20.11	+ 35,426	+0.15	12.6
WEST COAST	352,896	25.06	394,098	25.04	+ 41,202	-0.02	11.7
NORTH ISLAND	892,679	63.40	1,018,036	64.69	+125,357	+1.29	14.0
MARLBOROUGH	18,793	1.33	19,149	1.21	+ 356	-0.11	1.9
NELSON	27,501	1.95	33,868	2.16	+ 6,367	+0.21	23.15
WEST COAST	35,155	2.50	40,256	2.56	+ 5,101	+0.06	14.51
Canterbury	218,561	15.53	238,432	15.15	+ 19,871	-0.38	9.1
Otago	149,921	10.65	151,213	9.61	+ 1,298	-1.04	0.9
Southland	65,529	4.65	72,856	4.63	+ 7,327	-0.02	11.2
EAST COAST	434,011	30.82	462,501	29.39	+ 28,490	-1.81	6.56
SOUTH ISLAND	515,460	36.60	555,774	35.31	+ 40,314	-1.29	7.8
NEW ZEALAND	1,408,139	100.00	1,573,810	100.00	+165,671	-	11.8

Source: New Zealand Population Census, 1936.

TABLE XIX
COMMODITY ANALYSIS OF SHIPMENTS
1926 - 1936

Commodity	ACTUAL					
	1926		1936		Change 1926-36	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
AGRICULTURAL						
Flour	41,032	2.07	48,559	2.65	+ 7,527	+0.58
Beans and peas	2,391	0.12	4,981	0.27	+ 2,590	+0.15
Potatoes	36,471	1.84	45,338	2.47	+ 8,867	+0.63
Oats	19,705	0.99	12,501	0.68	- 7,204	-0.31
Oatmeal	3,156	0.16	5,981	0.33	+ 2,825	+0.17
Seeds	8,295	0.42	6,072	0.33	- 2,223	-0.09
Chaff	25,643	1.29	17,724	0.97	- 7,919	-0.32
Pollard and Bran	15,940	0.80	17,910	0.98	+ 1,970	+0.18
Wheat	23,063	1.17	65,713	3.58	+ 42,650	+2.41
Barley	3,880	0.20	2,414	0.13	- 1,466	-0.07
Sub-total	179,576	9.06	227,193	12.39	47,617	+3.33
PASTORAL						
Butter and Cheese	7,428	0.37	4,476	0.25	- 2,952	-0.12
Wool	15,736	0.79	29,927	1.63	+ 14,191	+0.84
Hides	2,359	0.12	2,320	0.13	- 39	+0.01
Pelts	2,990	0.15	2,948	0.16	- 42	+0.01
Sheepskins	3,237	0.16	2,128	0.12	- 1,109	-0.04
Tallow	976	0.05	4,341	0.24	+ 3,365	+0.19
Milk Products	2,341	0.11	6,489	0.36	+ 4,148	+0.25
Frozen Meat	2,058	0.10	569	0.03	- 1,489	-0.07
Livestock	19,718	0.49	5,900	0.32	- 13,818	-0.17
Sub-total	56,843	2.34	59,098	3.24	+ 2,255	+0.90
OTHER CATEGORIES						
Cement	123,902	6.26	78,718	4.29	- 45,184	-1.97
Coal	765,407	38.67	470,674	25.64	-294,733	-13.03
Artificial manures	29,104	1.47	27,486	1.49	- 1,618	+0.02
Sugar	46,007	2.32	51,804	2.82	+ 5,797	+0.50
Petroleum products	99,902	5.05	116,923	6.36	+ 17,021	+1.31
Softwoods	45,049	2.28	45,898	2.50	+ 849	+0.22
Fresh fruit	32,198	1.64	47,002	2.56	+ 14,804	+0.92
Other goods	611,717	30.91	710,448	38.71	+ 98,731	+7.80
Sub-total	1,753,286	88.60	1,548,953	84.37	-204,333	-4.23
Total	1,979,885	100.00	1,835,244	100.00	-144,641	-

Source:- Statistical Report on Trade and Shipping,
Part II, 1926, pp.90-102 and 1936, pp.94-101

TABLE XX
REGIONAL PER CAPITA TRADE
1926 - 1936

Region	Receipts per capita			Shipments per capita			Total per capita		
	1926	1936	Change 1926-36	1926	1936	Change 1926-36	1926	1936	Change 1926-36
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Auckland	1.76	1.34	-0.42	1.24	0.83	-0.41	3.00	2.17	-0.83
Poverty Bay	2.32	1.55	-0.77	0.68	0.67	-0.01	3.00	2.22	-0.78
Hawke's Bay	1.39	1.05	-0.34	0.55	0.32	-0.23	1.94	1.37	-0.57
West Coast	1.56	1.48	-0.08	0.77	0.88	+0.11	2.33	2.36	+0.03
NORTH ISLAND	1.67	1.38	-0.29	0.98	0.80	-0.18	2.65	2.18	-0.47
Marlborough	2.51	2.02	-0.49	1.99	2.23	+0.24	4.50	4.25	-0.25
Nelson	2.34	2.42	+0.08	1.56	2.07	+0.51	3.90	4.49	+0.59
West Coast	0.94	0.71	-0.23	22.41	12.47	-9.94	23.35	13.18	-10.17
East Coast	0.79	0.64	-0.15	0.77	0.82	+0.05	1.56	1.46	-0.10
SOUTH ISLAND	0.94	0.77	-0.17	2.34	1.40	-0.94	3.28	2.17	-1.11
NEW ZEALAND	1.41	1.17	-0.24	1.49	1.16	-0.33	2.90	2.33	-0.57

Source:- N.Z. Population Census, 1936 : Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

TABLE XXI
ESTIMATED VOLUME OF
INTRA REGIONAL, INTRA ISLAND AND
INTER ISLAND ELEMENTS IN THE COASTAL TRADE
1926 - 1936

Port	RECEIPTS (in tons)						SHIPMENTS (in tons)					
	1926			1936			1926			1936		
	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island
Awanui	3,900	-	-	6,200	-	-	4,200	-	-	2,700	-	-
Mangonui	2,200	-	-	1,800	-	-	700	-	-	900	-	-
Russell	4,200	-	-	7,000	-	-	5,000	-	-	5,000	-	-
Hokianga	3,300	-	-	4,300	-	-	4,600	-	-	1,500	-	-
Whangarei	17,200	-	4,300	22,000	-	12,400	109,700	35,000	-	76,300	18,000	-
Kaipara	1,500	-	-	1,900	-	-	400	-	-	-	-	-
Mangawai	1,100	-	-	800	-	-	300	-	-	100	-	-
Auckland	306,000	40,000	295,600	248,700	18,000	281,900	133,200	80,500	53,900	156,400	48,000	50,000
Onehunga	7,200	2,400	2,600	10,500	1,000	5,000	13,200	8,200	14,300	10,700	15,700	7,200
Great Barrier	700	-	-	600	-	-	500	-	-	400	-	-
Port Waikato	-	-	-	8,600	-	-	-	-	-	400	-	-
Raglan	2,500	-	-	3,000	-	-	700	-	-	1,100	-	-
Kawhia	2,500	-	-	1,500	-	-	700	-	-	500	-	-
Thames	13,100	-	-	8,900	-	-	55,400	-	-	2,000	-	-
Coromandel	1,800	-	-	1,100	-	-	900	-	-	400	-	-
Whitianga	700	-	-	-	-	-	1,100	-	-	-	-	-
Tauranga	32,700	-	-	15,400	-	-	11,800	-	-	2,700	-	-
Whakatane	11,100	-	-	14,500	-	-	5,100	-	-	15,100	-	-
Opotiki	9,600	-	-	10,400	-	-	3,000	-	-	5,300	-	-
AUCKLAND	421,300	42,400	302,500	367,200	19,000	299,300	350,500	123,700	68,200	281,500	81,700	57,200
Tokomaru Bay	3,000	2,000	3,500	2,200	2,200	3,100	2,500	-	-	4,300	-	-
Tologa Bay	1,200	300	500	2,600	-	-	800	-	-	1,400	-	-
Gisborne	4,500	20,200	42,700	3,800	14,200	28,400	10,000	8,300	2,000	5,600	12,000	1,400
POVERTY BAY	8,700	22,500	46,700	8,600	16,400	59,500	13,300	8,300	2,000	11,300	12,000	1,400
Waikokopu	2,700	3,200	2,100	5,400	-	-	2,800	-	-	2,400	-	-
Wairoa	9,400	-	-	3,100	-	-	1,500	-	-	1,900	-	-

Port	RECEIPTS (in tons)						SHIPMENTS (in tons)					
	1926			1936			1926			1936		
	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island
Napier	15,900	24,700	39,900	5,700	33,000	33,400	21,500	9,000	3,300	8,000	12,000	1,900
HAWKE'S BAY	28,000	27,900	42,000	14,200	33,000	33,400	25,800	9,000	3,300	12,300	12,000	1,900
Mokau	1,100	-	-	-	-	-	1,100	-	-	200	-	-
Waitara	2,100	-	-	200	-	-	1,400	-	-	-	-	-
New Plymouth	4,500	14,100	40,600	3,000	12,500	38,800	12,600	500	1,100	3,900	500	1,000
Patea	4,500	-	-	3,000	-	800	18,000	-	-	28,700	-	-
Wanganui	15,700	4,900	53,200	7,700	3,600	40,000	21,300	4,000	3,000	15,500	-	3,000
Foxton	7,500	-	-	10,800	-	-	3,300	-	-	400	-	-
Wellington	17,700	28,300	357,000	10,000	35,000	415,000	35,100	28,000	144,000	55,000	33,000	205,000
WEST COAST	53,100	47,300	450,800	34,700	51,100	494,600	92,800	32,500	148,100	103,700	33,500	209,000
NORTH ISLAND	511,100	140,100	842,000	424,700	119,500	886,800	482,400	173,500	221,600	408,800	139,200	269,500
Picton	-	16,000	17,900	-	11,300	21,700	-	-	27,800	-	1,800	37,500
Wairau	-	-	9,900	-	-	5,600	-	-	9,000	-	-	4,400
Kaikoura	-	1,000	2,000	-	-	-	-	-	800	-	-	-
MARLBOROUGH	-	17,000	29,800	-	11,300	27,300	-	-	37,600	-	1,800	41,900
Nelson	2,200	25,900	24,500	3,200	26,000	42,000	7,300	4,000	15,000	7,000	5,500	39,400
Waitapu	1,400	-	1,000	2,100	-	1,000	800	-	400	1,000	-	600
Motueka	400	4,200	4,200	800	2,800	3,800	2,000	100	13,000	2,000	-	14,100
NELSON	4,000	30,100	29,700	6,100	28,800	46,800	10,100	4,100	28,400	10,000	5,500	54,100
Westport	-	6,000	10,000	-	1,000	8,500	-	69,000	496,500	-	30,000	281,200
Greymouth	-	1,800	15,000	-	-	16,000	-	68,000	154,000	-	12,500	183,300
Hokitika	-	-	200	-	-	3,300	-	-	200	-	-	6,000
WEST COAST	-	7,800	25,200	-	1,000	27,800	-	137,000	650,700	-	42,500	470,500
Lyttelton	20,600	68,000	73,000	16,400	24,200	89,200	13,400	14,700	133,500	10,500	11,600	195,600
Akaroa	300	-	-	600	-	-	200	-	-	-	-	-
Timaru	4,500	12,100	12,500	-	11,400	13,700	1,600	-	45,300	1,400	-	64,400

Port	RECEIPTS (in tons)						SHIPMENTS (in tons)					
	1926			1936			1926			1936		
	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island
Oamaru	900	4,100	3,800	-	1,300	4,100	400	-	19,500	300	-	17,100
Otago	15,500	33,900	57,600	600	7,900	74,600	14,600	800	75,500	11,100	-	58,000
Invercargill	10,100	-	-	-	-	-	1,400	-	-	-	-	-
Bluff	8,500	4,000	10,200	6,800	3,200	24,000	5,500	-	15,400	5,400	-	18,600
Half Moon Bay	900	-	-	700	-	-	300	-	-	400	-	-
EAST COAST	61,300	122,100	157,100	25,100	48,000	205,600	37,400	15,500	289,200	29,100	11,600	353,700
SOUTH ISLAND	65,300	177,000	241,800	31,200	89,100	307,500	47,500	156,600	1,005,900	39,100	61,400	920,200
NEW ZEALAND	576,400	317,100	1,083,800	455,900	208,600	1,194,300	529,900	330,100	1,227,500	447,900	200,600	1,189,700

Source:- Statistical Report on Trade and Shipping, Part II, 1926, pp.90-102 and 1936, pp.94-101 and shipping intelligence in contemporary newspapers.

TABLE XXII
REGIONAL CHANGES IN COASTAL TONNAGE
1926 - 1936

Region	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimate 1936(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Auckland	1,306,367	32.22	1,106,068	30.15	-200,299	-2.07	1,182,228	- 76,160
Poverty Bay	100,771	2.49	82,413	2.25	- 18,358	-0.24	91,364	- 8,951
Hawke's Bay	136,276	3.36	105,200	2.86	- 31,076	-0.50	123,286	- 18,086
West Coast	823,852	20.32	928,242	25.30	+104,390	+4.98	745,589	+182,653
NORTH ISLAND	2,367,266	58.38	2,221,923	60.56	-145,343	+2.18	2,142,099	+ 79,824
Marlborough	84,592	2.09	81,385	2.22	- 3,207	+0.13	76,687	+ 4,698
Nelson	107,221	2.64	151,962	4.14	+ 44,741	+1.50	96,868	+ 55,094
West Coast	820,730	20.24	539,809	14.71	-280,921	-5.53	742,653	-202,844
East Coast	675,326	16.65	674,156	18.37	- 1,170	+1.72	610,928	+ 63,228
SOUTH ISLAND	1,687,869	41.62	1,447,312	39.44	-240,557	-2.18	1,527,135	- 79,823
NEW ZEALAND	4,055,135	100.00	3,669,235	100.00	-385,900	-	3,669,235	-

- (a) Number of tons required to retain 1926 share of total coastal tonnage.
(b) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of the total coastal tonnage.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

TABLE XXIII
 CHANGES IN THE PERCENTAGE OF RECEIPTS
 SHIPMENTS AND TOTAL COASTAL TRADE HANDLED
 BY THE LEADING PORTS IN EACH REGION

Region	Receipts				Shipments				Total			
	1926		1936		1926		1936		1926		1936	
	Per cent	Port	Per cent	Port	Per cent	Port	Per cent	Port	Per cent	Port	Per cent	Port
Auckland	83.70	Auckland	80.03	Auckland	49.57	Auckland	60.48	Auckland	69.61	Auckland	61.47	Auckland
Poverty Bay	86.38	Gisborne	82.35	Gisborne	89.57	Gisborne	79.98	Gisborne	87.07	Gisborne	80.62	Gisborne
Hawke's Bay	82.19	Napier	89.50	Napier	88.42	Napier	89.82	Napier	83.94	Napier	87.57	Napier
West Coast	73.10	Wellington	79.09	Wellington	76.02	Wellington	84.78	Wellington	74.07	Wellington	81.21	Wellington
Marlborough	71.96	Picton	85.46	Picton	74.04	Picton	89.74	Picton	72.89	Picton	93.08	Picton
Nelson	81.78	Nelson	87.04	Nelson	61.81	Nelson	74.20	Nelson	73.80	Nelson	61.12	Nelson
West Coast	50.98	Greymouth	54.48	Greymouth	72.80	Westport	60.89	Westport	70.60	Westport	59.46	Westport
East Coast	47.36	Lyttelton	46.33	Lyttelton	48.40	Lyttelton	55.13	Lyttelton	46.60	Lyttelton	51.50	Lyttelton

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

TABLE XXIV
BALANCE OF FLOW IN THE COASTAL TRADE
1926 - 1936

Port	1926		1936(a)	
	Receipts	Shipments	Receipts	Shipments
	Per cent	Per cent	Per cent	Per cent
Awanui	62.80		69.85	
Mangonui	75.66		67.22	
Russell	51.90		58.30	
Hokianga		58.26	<u>74.29</u>	
Whangarei		87.06		73.47
Kaipara	81.08		100.00	
Mangawai	76.22		88.34	
Auckland	70.55		68.32	
Onehunga		74.33		67.07
Great Barrier	58.58		62.98	
Port Waikato	-	-	95.20	
Raglan	80.16		73.89	
Kawhia	77.80		75.22	
Thames		80.89	<u>81.13</u>	
Coromandel	67.77		<u>72.53</u>	
Whitianga		59.62	-	-
Tauranga			85.13	
Whakatane	68.89			<u>51.12</u>
Opotiki		76.08		<u>66.13</u>
AUCKLAND	59.44		61.94	
Tokomaru Bay	81.84		61.51	
Tologa Bay	73.27		63.87	
Gisborne	76.28		70.87	
POVERTY BAY	77.45		69.84	
Waikokopu	73.87		90.33	
Wairoa	85.56		62.13	
Napier	70.44		76.76	
HAWKE'S BAY	71.94		76.83	
Mokau		50.24		77.20
Waitara	59.98		71.12	
New Plymouth	80.55		91.16	
Patea		80.17		87.67
Wanganui	73.74		73.86	
Foxton	69.18		96.50	
Wellington	66.05		61.03	
WEST COAST	66.95		62.67	
NORTH ISLAND	63.11		63.26	
Picton	54.99			<u>53.70</u>
Wairau	52.55		56.17	
Kaikoura	81.01		-	-
MARLBOROUGH	55.70			<u>52.50</u>
Nelson	66.55		57.62	
Motueka		61.63		68.29
Waitapu	65.92		62.13	
NELSON	78.45		53.90	
Westport		97.22		96.99
Greymouth		92.94		92.56
Hokitika	54.38			<u>64.31</u>
WEST COAST		95.97		94.71

Port	1926		1936 (a)	
	Receipts	Shipments	Receipts	Shipments
	Per cent	Per cent	Per cent	Per cent
Lyttelton	51.32			<u>62.61</u>
Akaroa	81.60		93.22	
Timaru		61.72		72.35
Oamaru		69.40		76.45
Otago		54.13	<u>54.76</u>	
Invercargill	88.10		73.68	
Bluff	51.47		58.59	
Half Moon Bay	69.56			<u>64.62</u>
EAST COAST	50.55			<u>58.54</u>
SOUTH ISLAND		71.21		70.40
NEW ZEALAND		51.18		50.49

(a) Figure underlined indicates a reversal in net flow.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

TABLE XXV
 TRANSHIPMENT TONNAGE (a)
 1926 - 1936

Year	Tonnage
1926	945,282
1927	856,242
1928	867,658
1929	817,208
1930	802,390
1931	556,594
1932	497,072
1933	471,544
1934	547,628
1935	516,532
1936	564,134

(a) Transshipments included twice.

Source:- Statistical Report on Trade and Shipping
Part II, 1926-36.

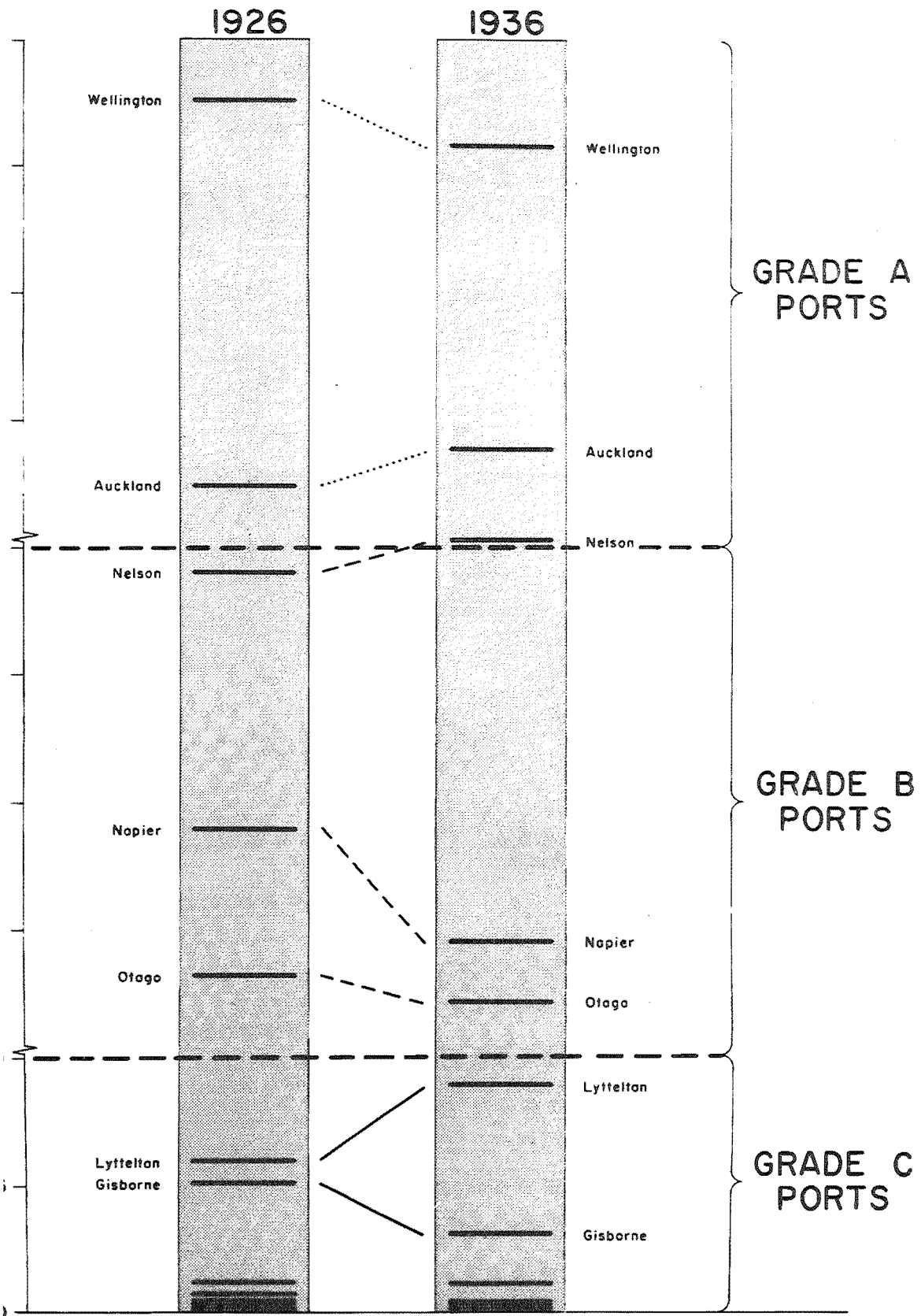


Fig.27. Changes in the Ranking of Ports on the Transshipment Scale 1926-1936.
 Source:- Statistical Report on Trade and Shipping Part II,
1926-1936.

TABLE XXVI
CHANGES IN TRANSHIPMENT TONNAGE
1926 - 1936(a)

Port	ACTUAL						HYPOTHETICAL	
	1926		1936		Change 1926-36		Estimated 1936(b)	Deviation (c)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Russell	20	0.00	-	-	- 20	-	-	-
Auckland	70,254	14.86	58,728	20.82	- 11,526	+5.96	41,915	+ 16,813
Onehunga	-	-	21	0.01	+ 21	+0.01	-	+ 21
Whakatane	4	0.00	-	-	- 4	-	-	-
Tokomaru Bay	298	0.06	333	0.12	+ 35	+0.06	169	+ 164
Tologa Bay	-	-	118	0.04	+ 118	+0.04	-	+ 118
Gisborne	688	0.15	624	0.22	- 64	+0.07	423	+ 201
Napier	11,805	2.52	5,356	1.90	- 6,449	-0.62	7,108	- 1,752
New Plymouth	143	0.03	-	-	- 143	-0.03	85	- 85
Wellington	355,421	75.20	192,996	68.43	-162,425	-6.77	212,113	- 19,918
NORTH ISLAND	438,633	92.82	258,176	91.54	-180,457	-1.28	261,815	- 3,639
Nelson	22,716	4.81	17,327	6.14	- 5,389	+1.23	13,567	+ 3,760
Motueka	11	0.00	19	0.01	+ 8	+0.01	-	+ 19
Westport	107	0.02	35	0.01	- 72	-0.01	56	- 21
Lyttelton	2,796	0.59	2,464	0.87	- 332	+0.28	1,664	+ 800
Akaroa	6	0.00	-	-	- 6	-	-	-
Timaru	20	0.00	-	-	- 20	-	-	-
Otago	7,756	1.63	4,046	1.43	- 3,710	-0.21	4,598	- 552
Bluff	596	0.13	-	-	- 596	-0.13	367	- 367
SOUTH ISLAND	34,008	7.18	23,891	8.46	- 10,117	+1.28	20,252	+ 3,639
NEW ZEALAND	472,041	100.00	282,067	100.00	190,514	-	282,067	-

(a) Transhipments included once.

(b) Number of tons required to retain 1926 share of total transhipments.

(c) Difference between actual tonnage in 1936 and tonnage required to retain 1926 share of total transhipment.

Source:- Statistical Report on Trade and Shipping, Part II, 1926, p.90 and 1936, p.94.

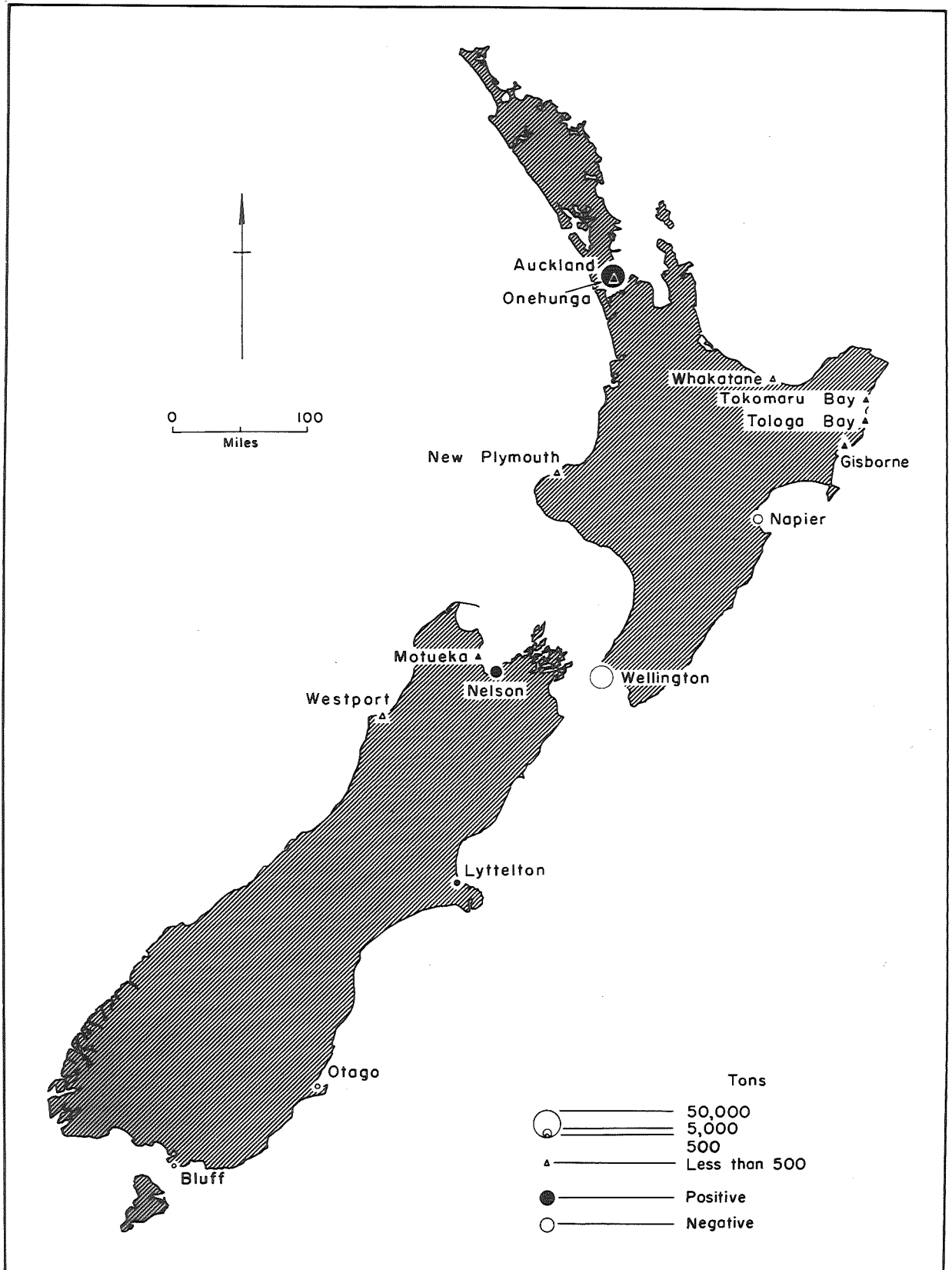


Fig.28. Changes in the Concentration of Transshipments 1926-1936.
 Difference between a port's transshipment tonnage in 1936 and tonnage required to retain 1926 share of New Zealand's transshipment tonnage. Transshipments included twice.

Source:- Statistical Report on Trade and Shipping Part II, 1926, p.90 and 1936, p.94.

TABLE XXVII
VOLUME AND PERCENTAGE OF TRADE IN TRANSHIPMENT CLASSES (a)
1926 - 1936

Class of Transshipment	1926		1936		Change 1926-36	
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent
Coastal to Coastal	97,273	20.57	58,820	20.86	- 38,453	+0.29
Coastal to Overseas	212,697	45.00	113,348	40.19	- 99,349	-4.81
Overseas to Coastal	154,696	32.74	105,643	37.46	- 49,053	+4.72
Overseas to Overseas	7,975	1.69	4,202	1.49	- 3,773	-0.20
Total	472,641	100.00	282,013 ^(b)	100.00	-190,628	-

(a) Transshipments included once.

(b) Figure given in Statistical Report on Trade and Shipping, Part II, 1936, p.94 is 282,067.

Source: N.Z. Official Yearbook, 1928, p.355 and 1938, p.283.

TABLE XXVIII
SUMMARY OF CHANGES IN STATUS BY GRADE
AND RANK ON THE GROSS TONNAGE AND COMPONENT SCALES
1926 - 1936

Status on gross tonnage (a)	1926					1936				
	Rank (b)	Port	Component scale Grade (c) and rank (d)			Rank (a)	Port	Component scale Grade (c) and rank (d)		
			Gross	Overseas	Coastal			T/S	Gross	Overseas
MAJOR	1	Wellington	A1	A2	A1	<u>1</u>	Auckland	<u>A1</u>	A1	A2
	2	Auckland	A2	A1	A2	<u>2</u>	Wellington	<u>A2</u>	A2	A1
	3	Lyttelton	A3	A4	C6	<u>3</u>	Lyttelton	<u>A3</u>	<u>A3</u>	C6
	4	Westport	B10	A3	C11	<u>4</u>	Otago	<u>A4</u>	<u>B6</u>	B5
	5	Otago	A4	B6	B5					
SECONDARY	6	Greymouth	B11	A5	-	5	Westport	C11	A4	-
	7	Napier	B7	B8	B4	6	Greymouth	<u>B9</u>	A5	-
	8	New Plymouth	B5	B13	C10	7	Napier	B7	B9	B4
	9	Wanganui	B9	B9	-	8	New Plymouth	B5	B14	-
	10	Whangarei	-	B7	-	<u>9</u>	Nelson	<u>C14</u>	<u>B8</u>	<u>A3</u>
	11	Timaru	B8	B12	C12=	<u>10</u>	Bluff	B6	<u>B15</u>	-
	12	Bluff	B6	B18	C8	11	Wanganui	<u>B8</u>	B12	-
	13	Nelson	C16	B10	B3	12	Timaru	B10	<u>B10</u>	-
	14	Gisborne	C12	B11	C7	13	Whangarei	<u>C18</u>	B7	-
						14	Gisborne	C12	B13	C7
					<u>15</u>	Picton	C16	<u>B11</u>	-	
MINOR	15	Thames	C22	B14	-	<u>16</u>	Onehunga	-	B16	<u>C10</u>
	16	Picton	C14	B15	-	<u>17</u>	Oamaru	C13	C20	-
	17	Onehunga	-	B16	-	<u>18</u>	Patea	-	<u>C17</u>	-
	18	Tauranga	C21	B17	-	<u>19</u>	Whakatane	-	<u>C18</u>	-
	19	Oamaru	C13	C19	-	20	Motueka	-	<u>C19</u>	-
	20	Motueka	-	C20	C14	<u>21</u>	Russell	<u>C15</u>	<u>C23</u>	-
	21	Patea	-	C21	-	<u>22</u>	Tauranga	-	C21	-
	22	Wairau	-	C22	-	<u>23</u>	Tokomaru Bay	<u>C17</u>	<u>C24</u>	<u>C8</u>
	23	Hokianga	C15	C31	-	<u>24</u>	Opotiki	-	<u>C22</u>	-
	24	Russell	C17	C30	C12=	<u>25</u>	Foxton	-	<u>C25</u>	-

Status on gross tonnage (a)	1926					1936				
	Rank (b)	Port	Component scale Grade (c) and rank (d)			Rank (b)	Port	Component scale Grade (c) and rank (d)		
	Gross		Overseas	Coastal	T/S	Gross		Overseas	Coastal	T/S
MINOR	25	Whakatane	-	C23	C16	26	Thames	-	C26	-
	26	Waikokopu	C19	C28	-	27	Wairau	-	C27	-
	27	Tokomaru Bay	C20	C29	C9	28	Hokitika	-	C28	-
	28	Opotiki	-	C24	-	29	Port Waikato	-	C29	-
	29	Invercargill	-	C25	-	30	Awanui	-	C30	-
	30	Wairoa	-	C26	-	31	Waikokopu	C19	C31	-
	31	Foxton	-	C27	-	32	Hokianga	-	C32	-
	32	Kaipara	C18	C42	-	33	Waitapu	-	C33	-
	33	Awanui	-	C32	-	34	Wairoa	-	C34	-
	34	Kaikoura	-	C33	-	35	Tologa Bay	C21	C36	C9
	35	Waitapu	-	C34	-	36	Raglan	-	C35	-
	36	Waitara	-	C35	-	37	Kaipara	C20	C39	-
	37	Kawhia	-	C36	-	38	Mangonui	-	C37	-
	38	Raglan	-	C37	-	39	Kawhia	-	C38	-
	39	Mangonui	-	C38	-	40	Coromandel	-	C40	-
	40	Tologa Bay	-	C39	-	41	Half Moon Bay	-	C41	-
	41	Mokau	-	C40	-	42	Great Barrier	-	C42	-
	42	Coromandel	-	C41	-	43	Mangawai	-	C43	-
	43	Whitianga	-	C43	-	44	Akaroa	-	C44	-
	44	Mangawai	-	C44	-	45	Waitara	-	C45	-
	45	Great Barrier	-	C45	-	46	Mokau	-	C46	-
	46	Half Moon Bay	-	C46	-	47	Invercargill	-	C47	-
	47	Akaroa	-	C47	C15	-	Whitianga	-	-	-
	48	Hokitika	-	C48	-	-	Kaikoura	-	-	-
	-	-	Port Waikato	-	-	-	-	-	-	-

- (a) Ports with over five per cent of the gross tonnage classed as major, under five per cent and over one per cent secondary and below one per cent minor.
- (b) Ranking of port based on position on gross tonnage scale.
- (c) In each of the component elements of the gross tonnage ports with over five per cent of either the overseas, coastal or transshipment trades are classed as grade A ports, under five per cent and over one per cent as grade B and under one per cent as grade C.

(d) Ranking of port indicated by subscript, based on its respective position on the overseas, coastal and transshipment trade.

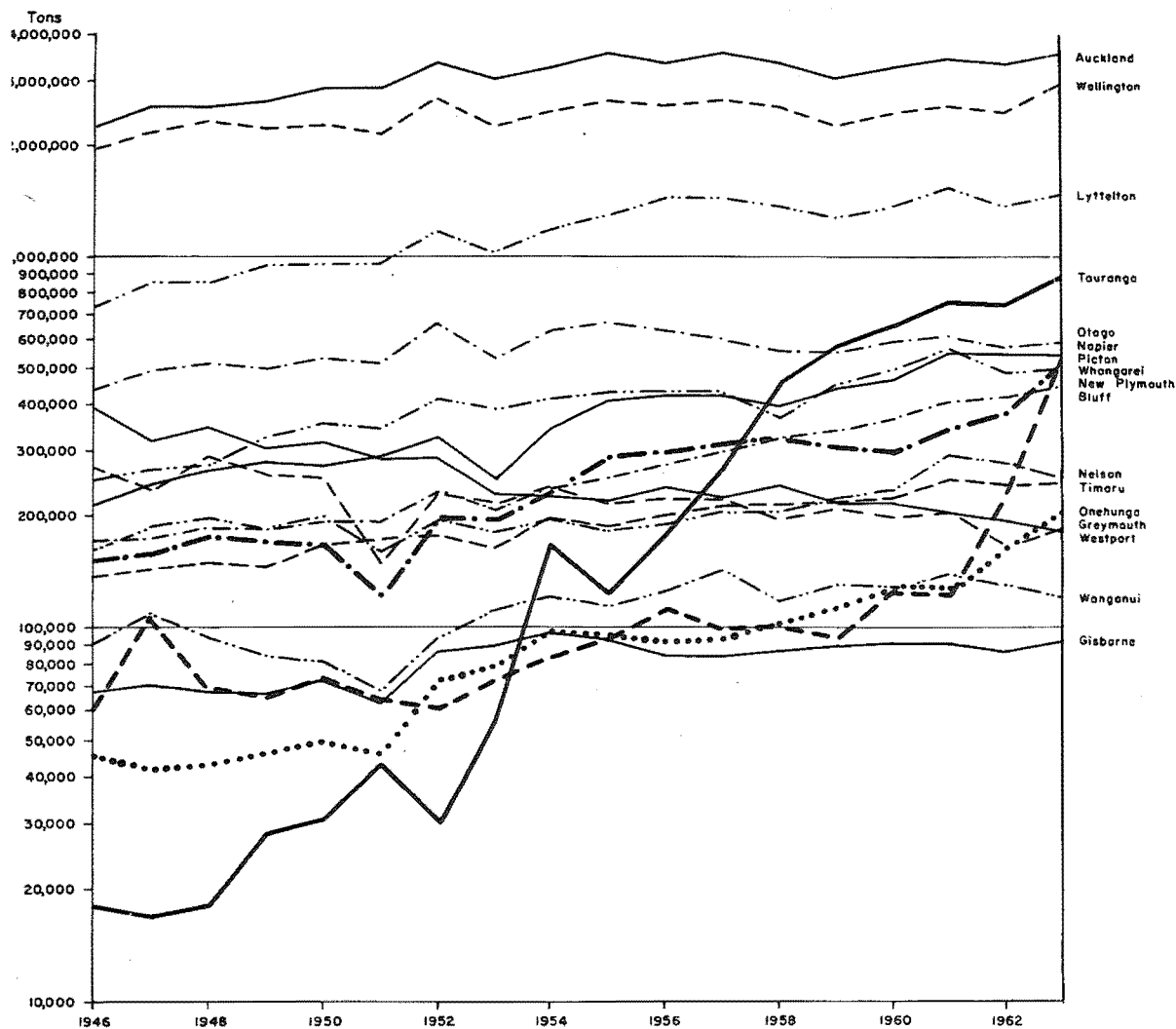


Fig.29. Gross Tonnage Handled by Leading New Zealand Seaports 1946-1963.
 Source:- Statistical Report on Trade and Shipping, Part II, 1946-48, and Report on the Transport Statistics of New Zealand, 1949-63.

TABLE XXIX
GROSS TONNAGE (a)
1946 - 1963

Year	Tonnage
1946	7,682,395
1947	8,407,181
1948	8,615,960
1949	8,631,285
1950	8,983,192
1951	8,528,064
1952	10,372,342
1953	9,271,951
1954	10,217,928
1955	10,954,959
1956	10,975,786
1957	11,344,746
1958	11,104,298
1959	10,772,262
1960	11,490,341
1961	12,599,946
1962	12,130,210
1963	13,464,169

(a) Transhipments included twice.

Source:- Statistical Report on Trade and Shipping, Part II, 1946-48, and Report on the Transport Statistics of New Zealand, 1949-63.

1950 - 1961

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Mangonui	8,162	0.09	5,872	0.05	- 2,290	- 0.04	11,340	- 5,468
Bay of Islands	1,495	0.02	36,498	0.29	+ 35,003	+ 0.27	2,520	+ 33,978
Hokianga	2,497	0.03	-	-	- 2,497	- 0.03	3,780	- 3,780
Whangarei	166,812	1.86	343,076	2.72	+ 176,264	+ 0.86	234,359	+108,717
Auckland	2,830,395	31.51	3,464,713	27.50	+ 634,318	- 4.01	3,970,243	-505,530
Onehunga	49,754	0.55	126,402	1.00	+ 76,648	+ 0.45	69,300	+ 57,102
Raglan	10,238	0.11	24,590	0.20	+ 14,352	+ 0.09	13,860	+ 10,730
Thames	4,231	0.05	4,524	0.04	+ 293	- 0.01	6,300	- 1,776
Tauranga	30,638	0.34	758,918	6.02	+ 728,280	+ 5.68	42,840	+716,078
Whakatane	22,444	0.25	-	-	- 22,444	- 0.25	31,500	- 31,500
Opotiki	11,772	0.13	-	-	- 11,772	- 0.13	16,380	- 16,380
Ohiva	-	-	9,912	0.08	+ 9,912	+ 0.08	-	+ 9,912
Tokomaru Bay	8,493	0.09	1,138	0.01	- 7,355	- 0.08	11,340	- 10,202
Tologa Bay	1,416	0.02	2,907	0.02	- 1,491	-	2,520	+ 387
Gisborne	72,097	0.80	91,250	0.72	+ 19,153	- 0.08	100,800	- 9,550
Napier	271,690	3.03	556,971	4.42	+ 285,281	+ 1.39	381,778	+175,193
New Plymouth	357,705	3.98	564,812	4.48	+ 207,107	+ 0.50	501,477	+ 63,335
Patea	17,237	0.19	-	-	- 17,237	- 0.19	23,940	- 23,940
Wanganui	81,978	0.91	139,824	1.11	+ 57,846	+ 0.20	114,660	+ 25,164
Wellington	2,277,571	25.35	2,563,345	20.34	+ 285,774	- 5.01	3,194,086	-630,741
NORTH ISLAND	6,226,625	69.31	8,694,752	69.00	+2,468,127	- 0.31	8,733,023	- 38,271
Picton	73,753	0.84	124,636	0.99	+ 50,883	+ 0.15	105,840	+ 18,796
Wairau	10,676	0.12	8,326	0.07	- 2,350	- 0.05	15,120	- 6,794
Nelson	197,034	2.19	290,959	2.31	+ 93,925	+ 0.12	275,939	+ 15,020
Motueka	30,309	0.34	36,390	0.29	+ 6,081	- 0.05	42,840	- 6,450
Tarakohe	-	-	152,446	1.21	+ 152,446	+ 1.21	-	+152,446
Waitapu	4,315	0.05	-	-	- 4,315	- 0.05	6,300	- 6,300
Westport	317,719	3.54	202,443	1.61	- 115,276	- 1.93	446,038	-243,595

Port	1950		1961		Change 1950-61		Estimate 1961(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Greymouth	251,394	2.80	205,101	1.63	- 46,293	- 1.17	352,798	-147,697
Hokitika	2,888	0.03	-	-	- 2,888	- 0.03	3,780	- 3,780
Jacksons Bay	-	-	786	0.01	+ 786	+ 0.01	-	+ 786
Kaipoi	-	-	35,145	0.28	+ 35,145	+ 0.28	-	+ 35,145
Lyttelton	945,375	10.51	1,546,312	12.26	+ 600,937	+ 1.75	1,324,253	+222,059
Timaru	165,927	1.85	250,889	1.99	+ 84,962	+ 0.14	233,099	+ 17,790
Oamaru	35,446	0.39	39,970	0.32	+ 4,524	- 0.07	49,140	- 9,170
Otago	527,723	5.87	604,608	4.80	+ 76,885	- 1.07	739,617	-135,009
Bluff	190,191	2.12	403,118	3.20	+ 212,927	+ 1.08	267,119	+135,999
Half Moon Bay	3,817	0.04	4,065	0.03	+ 248	- 0.01	5,040	- 975
SOUTH ISLAND	2,756,567	30.69	3,905,194	31.00	+1,148,627	+ 0.31	3,866,923	+ 38,271
NEW ZEALAND	8,983,192	100.00	12,599,946	100.00	+3,616,754	-	12,599,946	-

(a) Number of tons required to retain 1950 share of gross tonnage.

(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of the gross tonnage.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.18.

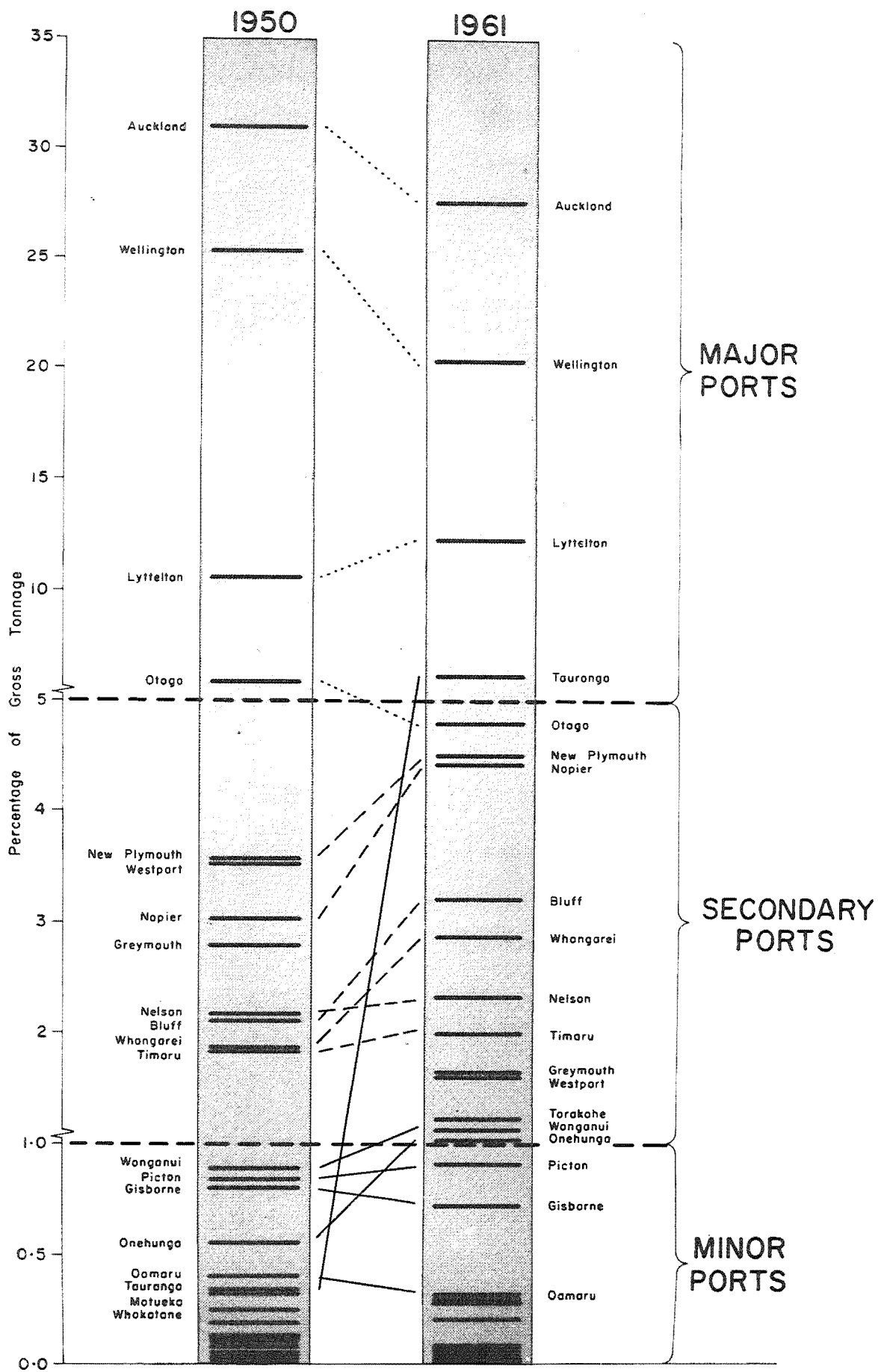


Fig.30. Changes in the Ranking of Ports on the Gross Tonnage Scale 1950-1961.
 Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, p.40 and for the year 1961, p.18.

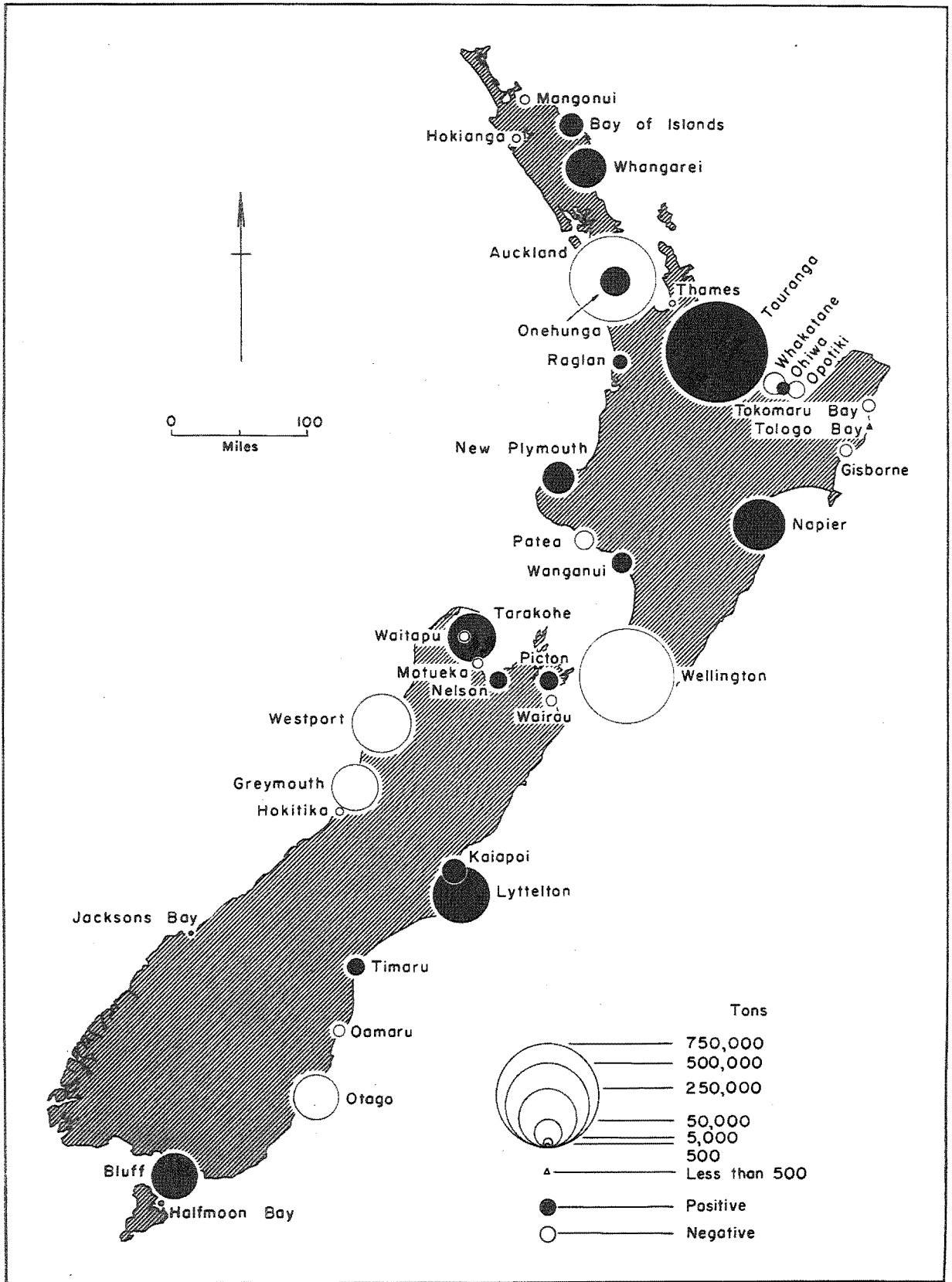


Fig.31. Changes in the Concentration of the Gross Tonnage 1950-1961.
 Difference between a port's gross tonnage in 1961 and tonnage required to retain 1950 share of New Zealand's gross tonnage.
 Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, p.40 and for the year 1961, p.18.

TABLE XXXI
OVERSEAS TONNAGE (a)
1950 - 1961

Year	IMPORTS	EXPORTS	TOTAL
	Tonnage	Tonnage	Tonnage
1950	3,504,616	1,203,203	4,707,819
1951	3,810,425	1,166,135	4,976,560
1952	4,811,147	1,328,218	6,139,365
1953	3,835,923	1,253,384	5,089,307
1954	4,529,665	1,277,572	5,807,237
1955	5,050,090	1,389,657	6,439,747
1956	4,947,327	1,555,598	6,502,925
1957	5,169,225	1,610,988	6,780,213
1958	4,865,187	1,664,984	6,530,171
1959	4,494,627	1,912,677	6,407,304
1960	5,059,083	1,932,786	6,991,869
1961	5,704,028	1,983,158	7,687,186

(a) Transshipments excluded.

Source:- Report on the Transport Statistics of New Zealand, 1950-61.

TABLE XXXII
CHANGES IN OVERSEAS TONNAGE
1950 - 1961

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Bay of Islands	-	-	28,836	0.38	+ 28,836	+ 0.38	-	+ 28,836
Whangarei	8,669	0.19	73,968	0.96	+ 65,299	+ 0.77	14,605	+ 59,363
Auckland	1,952,268	41.47	2,582,973	33.61	+ 630,705	+ 7.86	3,187,876	-604,903
Onehunga	520	0.01	-	-	- 520	- 0.01	769	- 769
Raglan	502	0.01	-	-	- 512	- 0.01	769	- 769
Tauranga	11,948	0.25	706,471	9.20	+ 694,523	+ 8.95	19,218	+687,253
Gisborne	-	-	23,654	0.31	+ 23,654	+ 0.31	-	+ 23,654
Napier	174,107	3.70	433,305	5.64	+ 259,198	+ 1.94	284,426	+148,879
New Plymouth	323,270	6.86	484,884	6.32	- 161,614	- 0.54	527,341	- 42,457
Wanganui	-	-	550	0.01	+ 550	+ 0.01	-	+ 550
Wellington	1,188,568	25.25	1,438,674	18.73	+ 250,106	+ 6.52	1,941,014	-502,530
NORTH ISLAND	3,632,852	77.17	5,777,936	75.16	+2,145,084	- 2.01	5,932,201	-154,265
Picton	-	-	10,667	0.14	+ 10,667	+ 0.14	-	+ 10,667
Nelson	19,961	0.43	123,341	1.60	+ 103,380	+ 1.17	33,055	+ 90,285
Westport	-	-	1,547	0.02	+ 1,547	+ 0.02	-	+ 1,547
Greymouth	2,343	0.05	13,542	0.18	+ 11,199	+ 0.13	3,844	+ 9,698
Hokitika	36	0.00	-	-	- 30	-	-	-
Jacksons Bay	-	-	786	0.01	+ 786	+ 0.01	-	- 786
Lyttelton	504,463	10.72	912,402	11.86	+ 407,739	+ 1.14	824,066	+ 88,336
Timaru	77,202	1.65	121,206	1.58	+ 44,004	- 0.07	126,839	- 5,633
Oamaru	5,192	0.11	2,613	0.03	- 2,579	- 0.08	8,456	- 5,843
Otago	338,644	7.19	403,079	5.23	+ 64,435	- 1.96	552,709	-195,525
Bluff	127,126	2.70	321,067	4.19	+ 193,941	+ 1.49	207,554	+113,513
SOUTH ISLAND	1,074,967	22.83	1,909,250	24.84	+ 834,283	+ 2.01	1,754,985	+154,265
NEW ZEALAND	4,707,819	100.00	7,687,186	100.00	+2,979,367	-	7,687,186	-

(a) Number of tons required to retain 1950 share of overseas tonnage.

(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of the overseas tonnage.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.18.

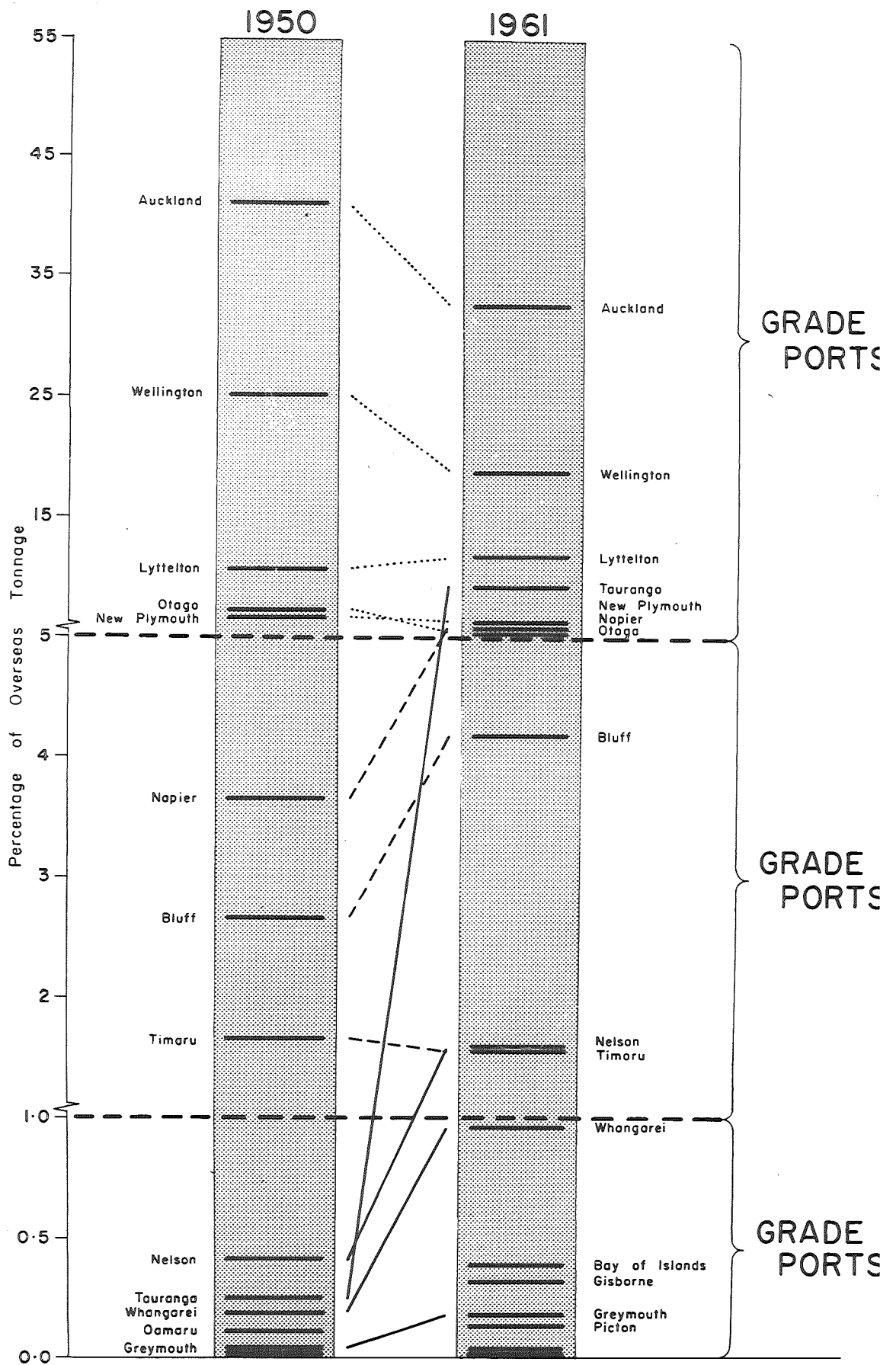


Fig.32. Changes in the Ranking of Ports on the Overseas Tonnage Scale 1950-
 Source:- Report on the Transport Statistics of New Zealand ²
 the years 1949-52 p.18 and for the year 1961. p.1

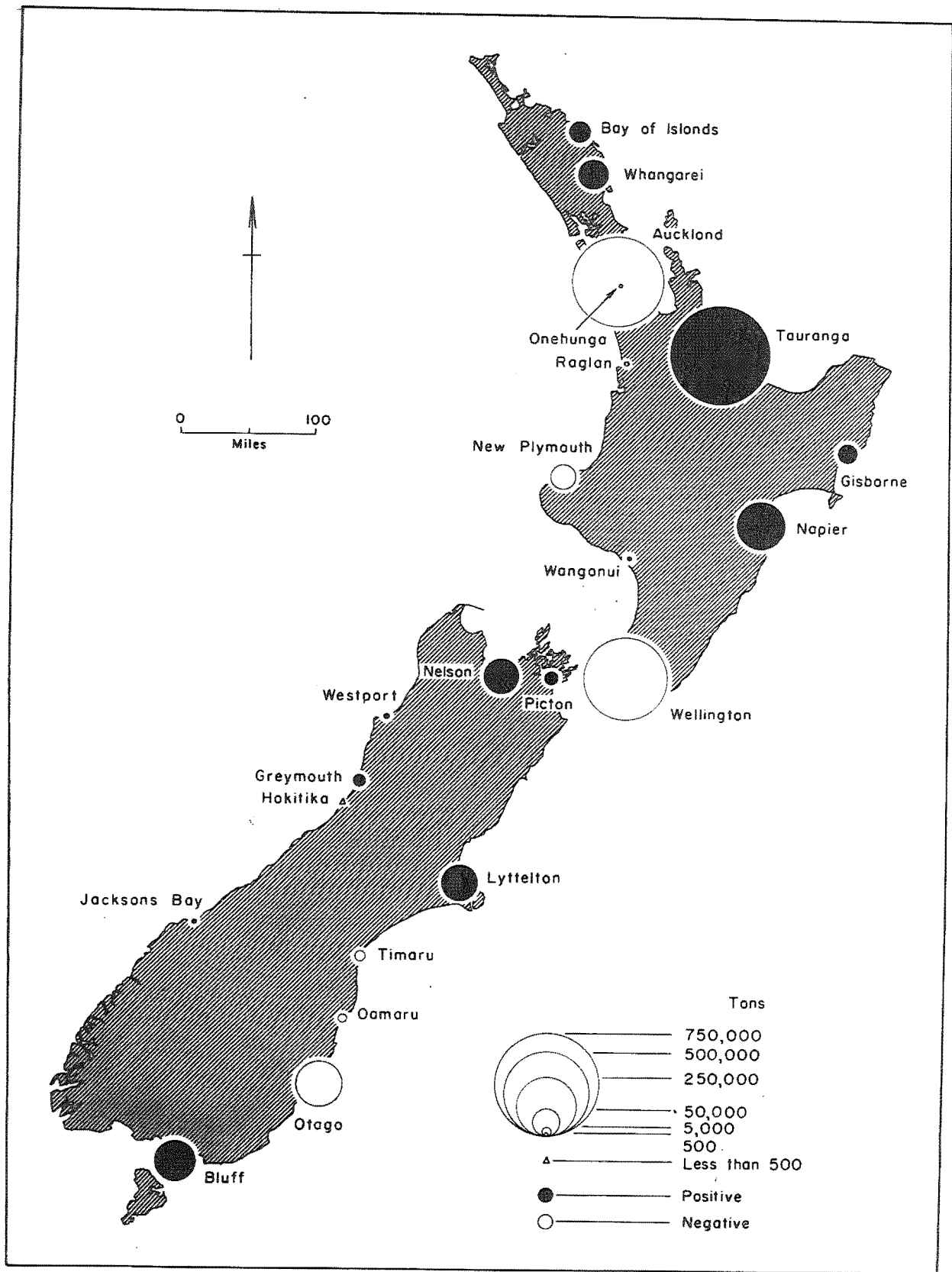


Fig.33. Changes in the Concentration of the Overseas Tonnage 1950-1961.
 Difference between a port's overseas tonnage in 1961 and tonnage required to retain 1950 share of New Zealand's gross tonnage.
 Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, p.40 and for the year 1961, p.18.

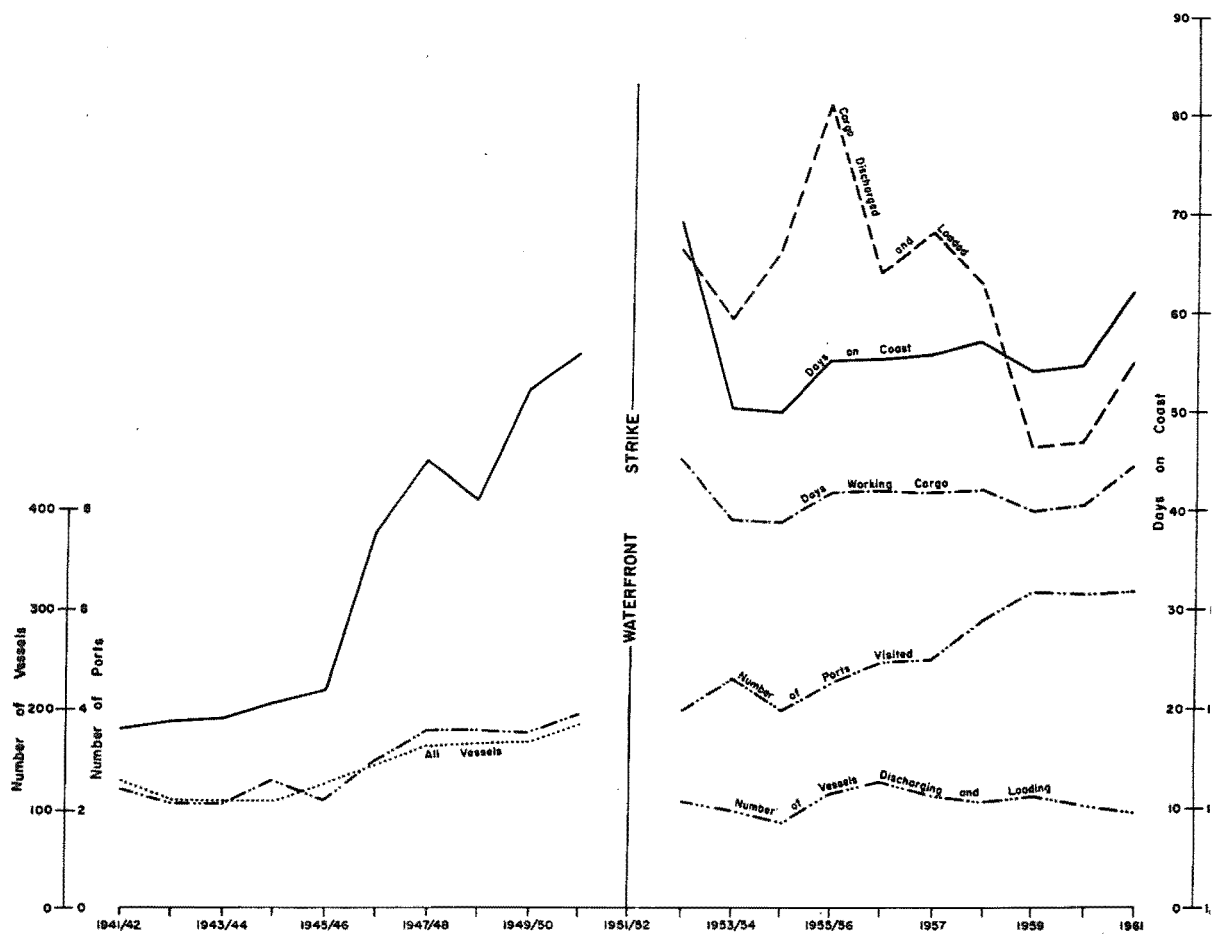


Fig. 34. Turn-round of Overseas Shipping on the New Zealand Coast 1941/2 -
 Source:- Annual Report and Statement of Accounts of the Waterfront Industry Commission, A.J.H.R. 1941/2 - 1961.

TABLE XXXIII
CHANGES IN IMPORTS
1950 - 1961

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Bay of Islands	-	-	4,621	0.08	+ 4,621	+ 0.08	-	+ 4,621
Whangarei	8,669	0.25	73,968	1.30	+ 65,097	+ 1.05	14,260	+ 59,708
Auckland	1,516,846	43.28	2,099,436	36.81	+ 582,590	- 6.47	2,468,703	-369,267
Onehunga	337	0.01	-	-	- 332	- 0.01	570	- 570
Raglan	502	0.01	-	-	- 502	- 0.01	570	- 570
Tauranga	1,024	0.03	331,047	5.80	+ 330,023	+ 5.77	1,711	+329,336
Gisborne	-	-	2,976	0.05	+ 2,976	+ 0.05	-	+ 2,976
Napier	68,130	1.94	280,887	4.93	+ 212,757	+ 2.99	110,658	+170,229
New Plymouth	250,086	7.14	324,007	5.68	+ 73,921	- 1.46	407,269	- 83,262
Wanganui	-	-	550	0.01	+ 550	+ 0.01	-	+ 550
Wellington	895,712	25.56	1,190,543	20.87	+ 294,831	- 4.69	1,457,950	-267,407
NORTH ISLAND	2,741,296	78.22	4,308,035	75.53	+1,566,739	- 2.69	4,461,691	-153,656
Picton	-	-	657	0.01	+ 657	+ 0.01	-	+ 657
Nelson	19,961	0.57	62,240	1.09	+ 52,279	+ 0.52	32,513	+ 29,727
Westport	-	-	1,547	0.03	+ 1,547	+ 0.03	-	+ 1,547
Greymouth	30	0.00	225	0.00	+ 195	-	-	+ 225
Hokitika	36	0.00	-	-	- 36	-	-	-
Jacksons Bay	-	-	-	-	-	-	-	-
Lyttelton	397,610	11.35	784,081	13.75	+ 386,471	+ 2.40	647,407	+136,674
Timaru	19,215	0.55	32,116	0.56	+ 12,901	+ 0.01	31,372	+ 744
Oamaru	5,162	0.15	1,584	0.03	- 3,578	- 0.12	8,556	- 6,972
Otago	277,786	7.92	319,100	5.59	+ 41,314	- 2.33	451,759	-132,659
Bluff	43,520	1.24	194,443	3.41	+ 150,923	+ 2.17	70,730	+123,713
SOUTH ISLAND	763,320	21.78	1,395,993	24.47	+ 632,673	+ 2.69	1,242,337	+153,656
NEW ZEALAND	3,504,616	100.00	5,704,028	100.00	+2,199,412	-	5,704,028	

(a) Number of tons required to retain 1950 share of imports.
(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of imports.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.18.

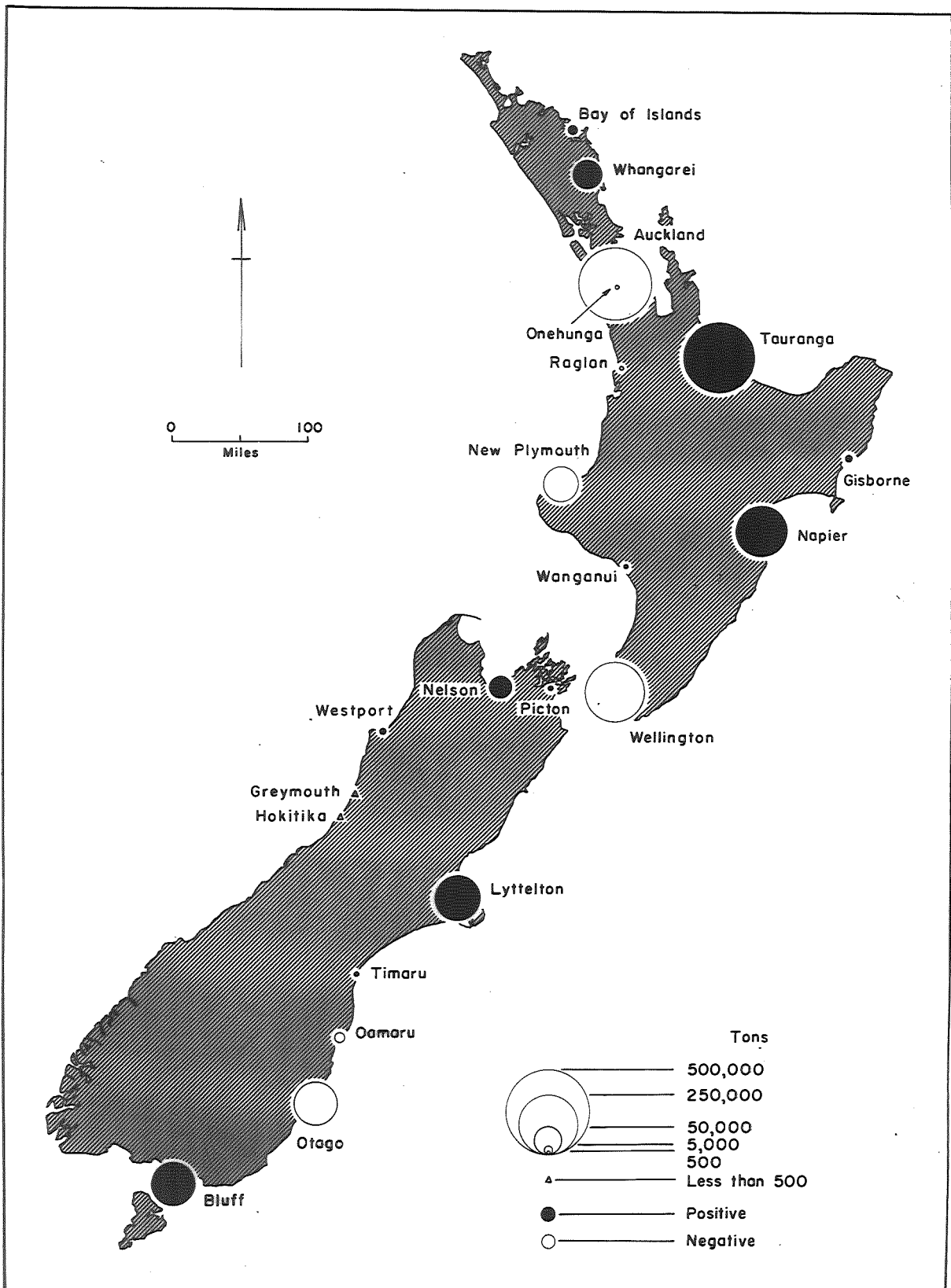


Fig.35. Changes in the Concentration of Imports 1950-1961.
 Difference between a port's imports in 1961 and tonnage required to retain 1950 share of New Zealand's gross tonnage.
 Source:- Report on the Transport Statistics of New Zealand f

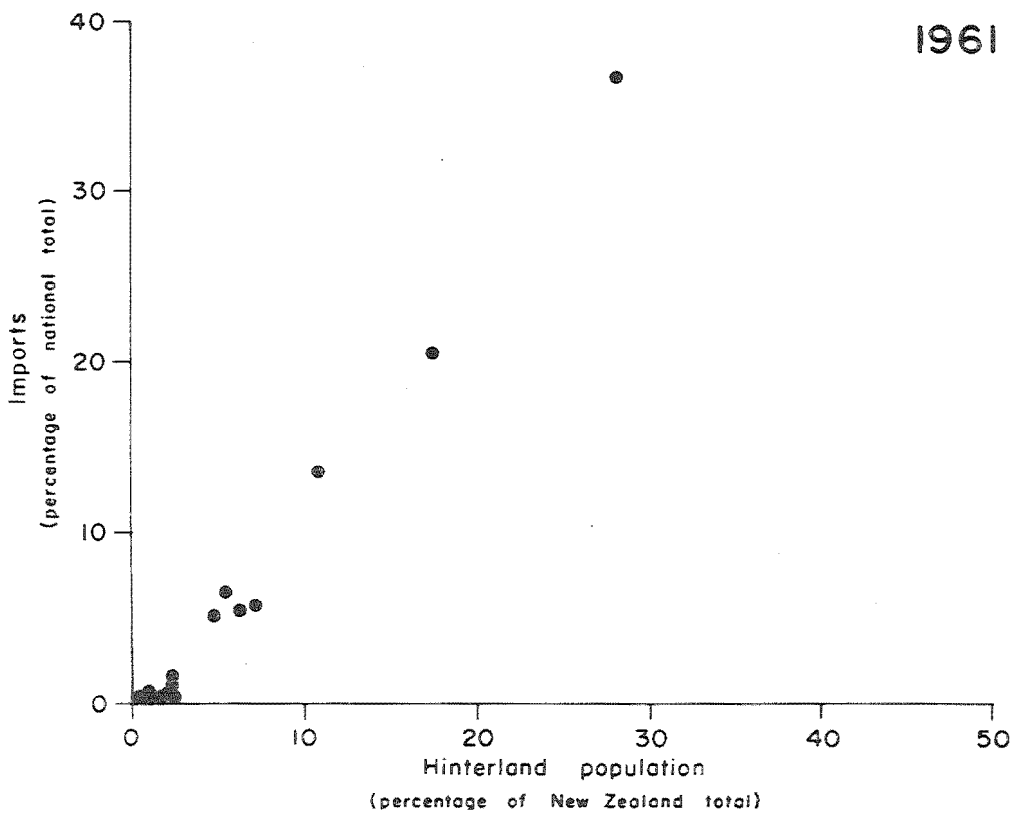
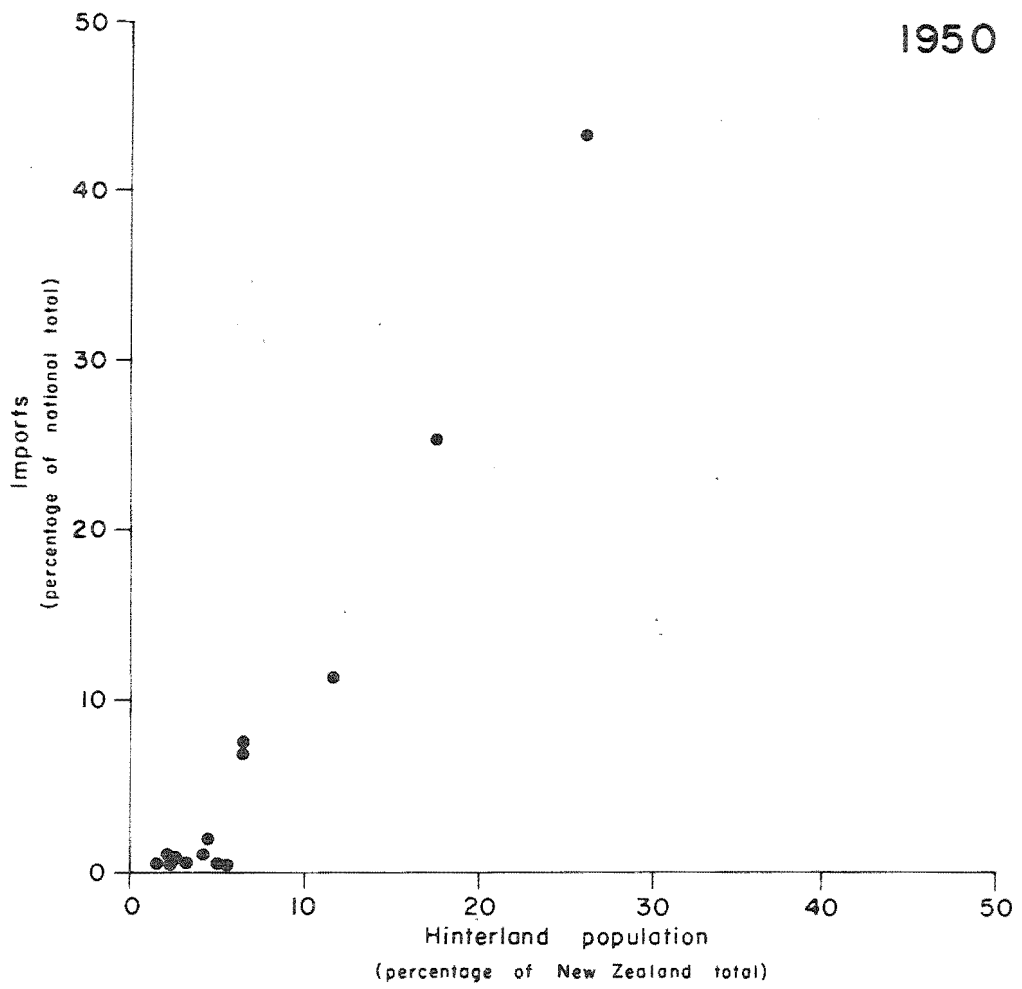


Fig.36. Relationship of Imports to Population 1950-1961.

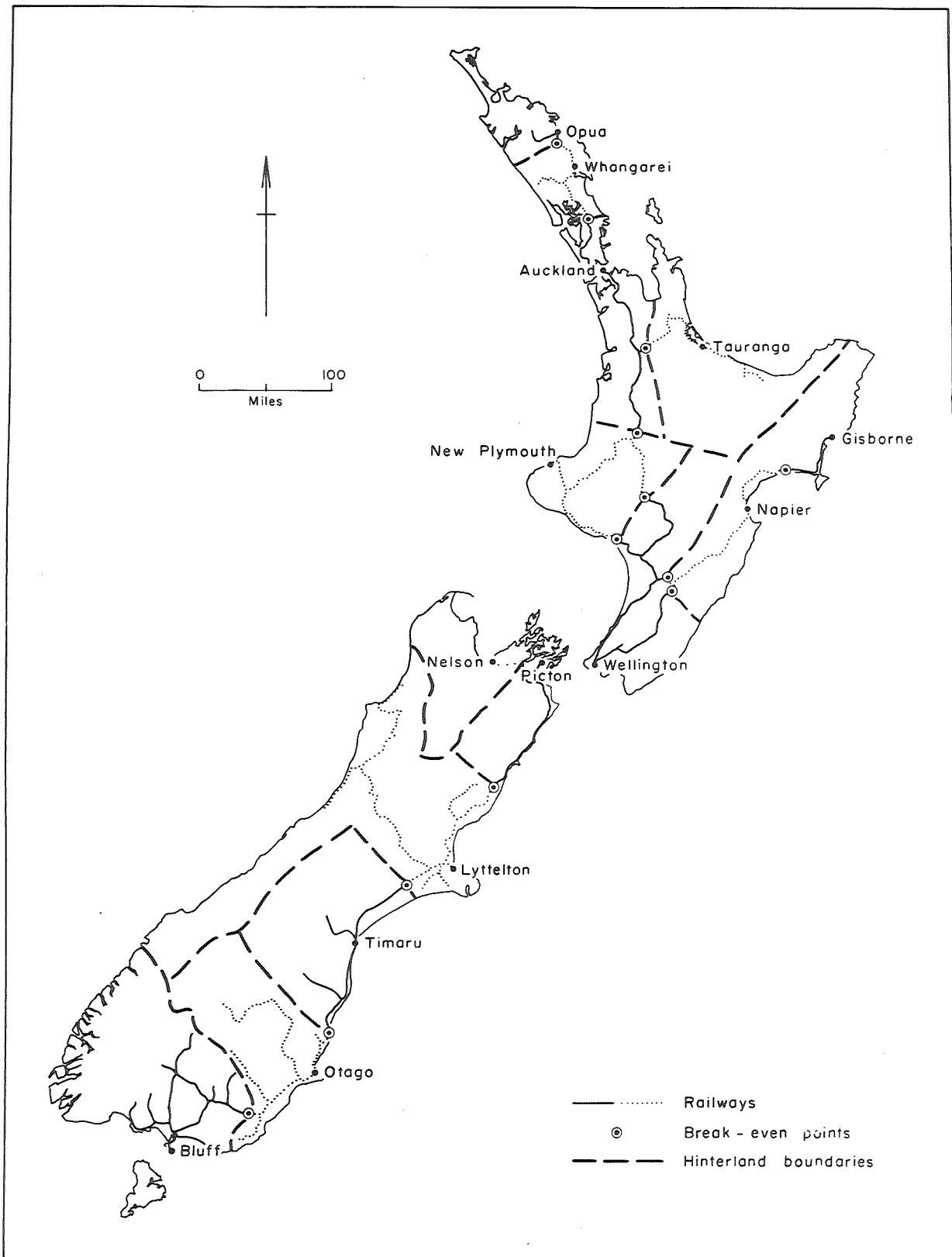


Fig.37. Import Hinterlands.

Hinterlands defined on basis that a given port attracted to itself all imports consumed within the area it enjoyed a railway freight rate advantage in Class C commodities over other ports in 1961.

Source:- New Zealand Railways Rate Books for 1962.

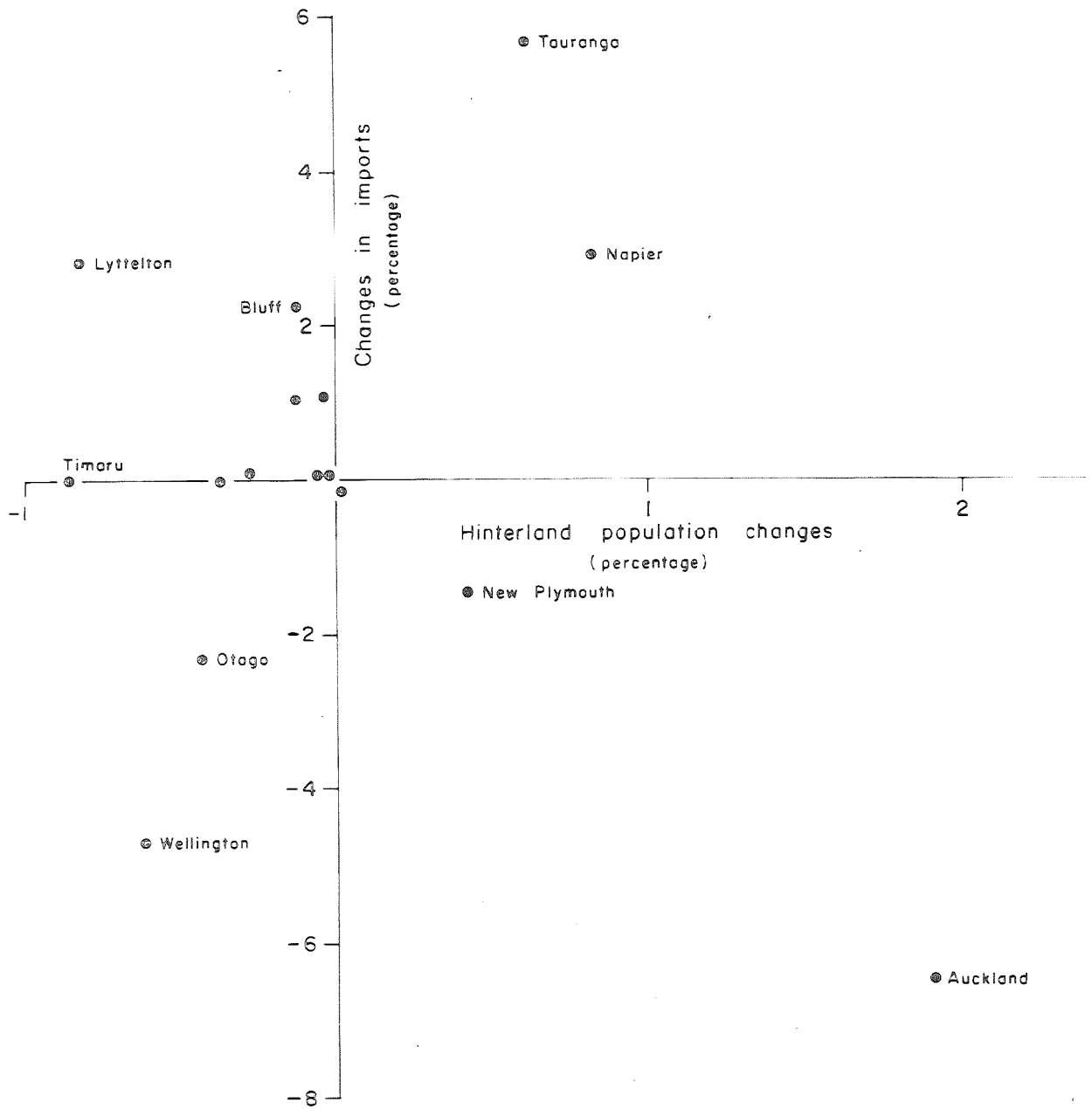


Fig.38. Relationship of Changes in Imports to Variations in Popu
1950-1961.

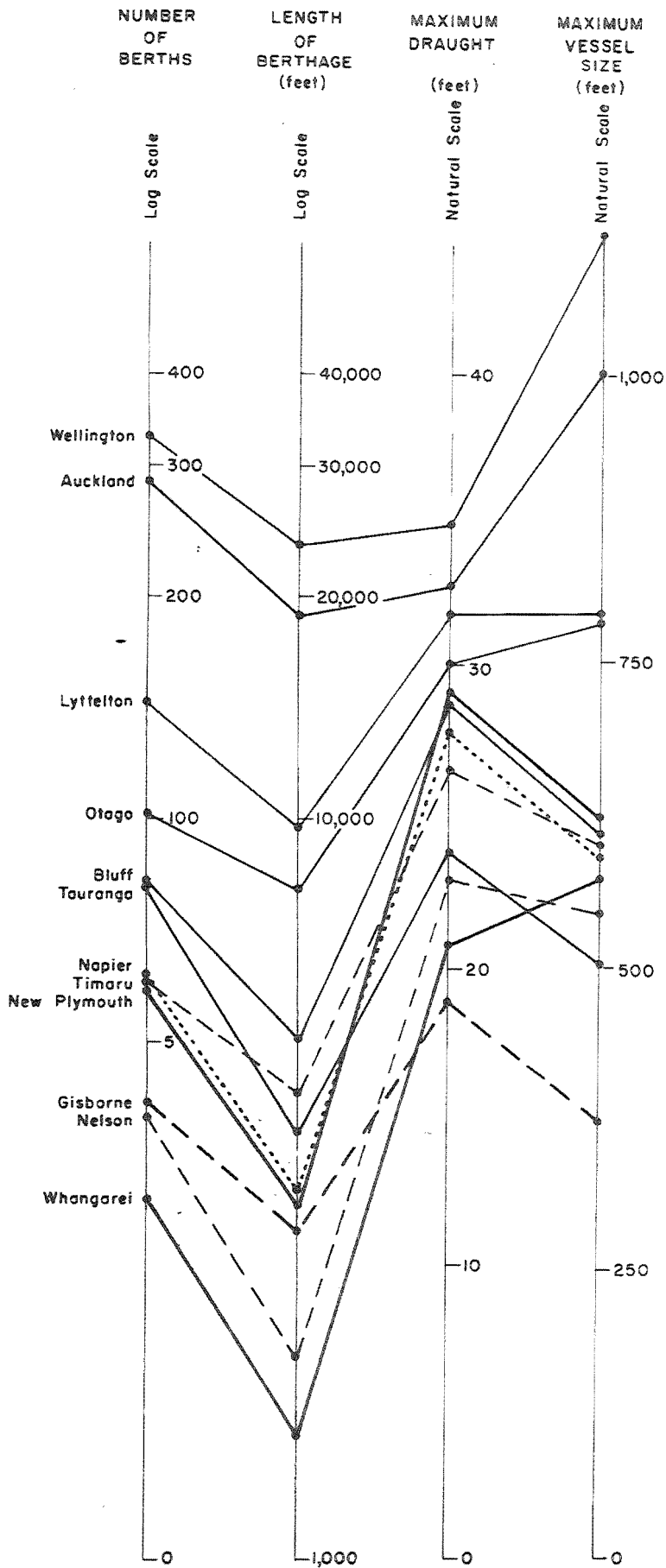


Fig.39. Details of Berthage, Permitted Draught and Permitted Vessel Size at Individual Ports 1961.

Source:- New Zealand Port Information Manual, Part II Text.

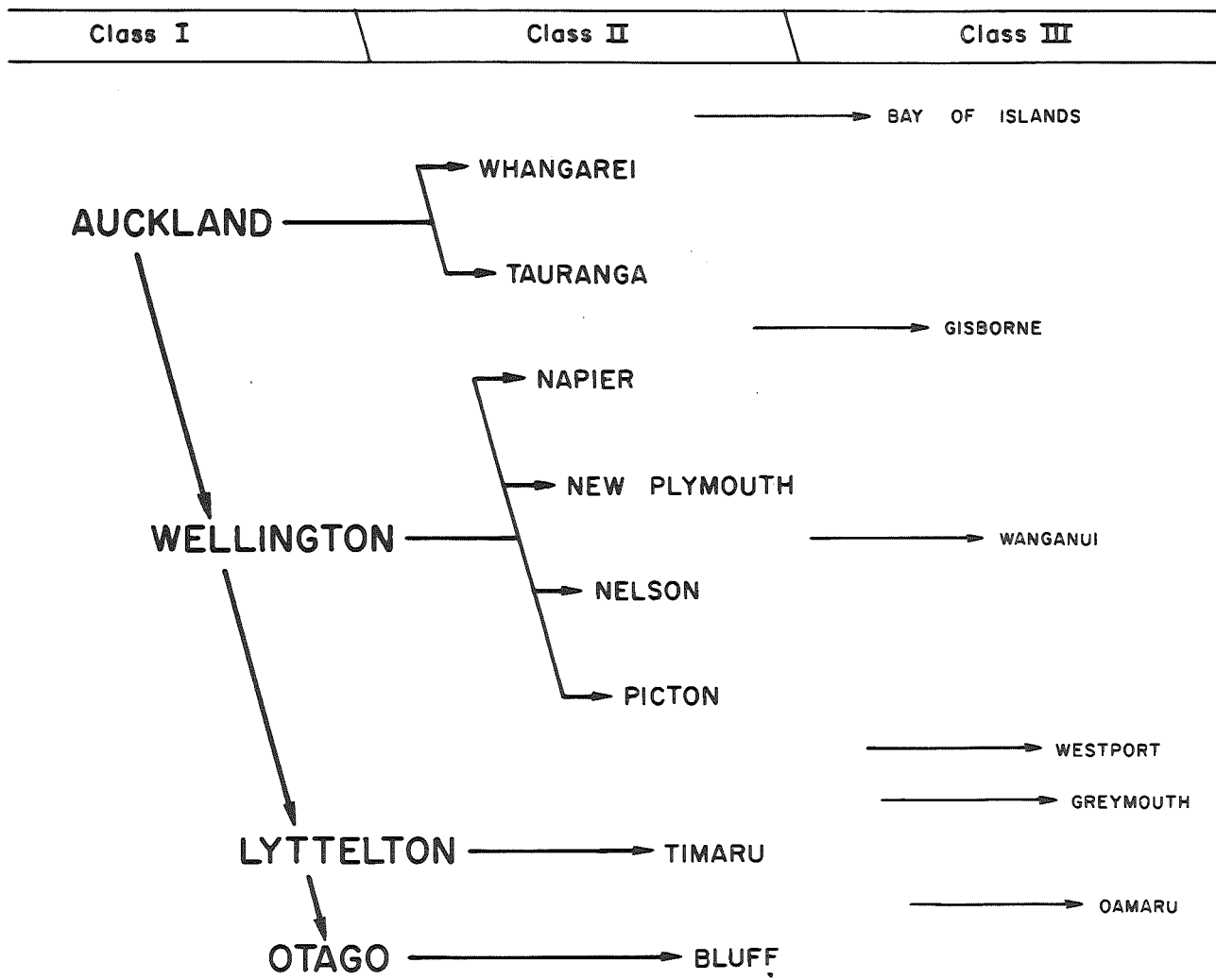


Fig.40. Hierarchy of Ports for Distributing Imports of High Intrinsic Value and Low Bulk.

TABLE XXXIV
NUMBER OF CALLS MADE BY OVERSEAS SHIPS
IN 1950 AND 1961

Port	1950		1961		Change 1950-61	
	Ships		Ships		Ships	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Auckland	455	29.72	854	23.64	+ 399	-6.08
Wellington	398	26.00	654	18.10	+ 256	-7.90
Lyttelton	203	13.26	498	13.79	+ 295	+0.53
Otago	168	10.96	335	9.28	+ 167	-1.68
Napier	71	4.64	226	6.26	+ 155	+1.62
New Plymouth	66	4.31	204	5.65	+ 138	+1.34
Bluff	62	4.05	196	5.43	+ 134	+1.38
Timaru	54	3.53	153	4.24	+ 99	+0.71
Nelson	10	0.65	88	2.44	+ 78	+1.79
Westport	10	0.65	6	0.17	- 4	-0.48
Tauranga	9	0.59	243	6.73	+ 234	+6.64
Greymouth	8	0.52	6	0.17	- 2	-0.35
Oamaru	6	0.39	5	0.14	- 1	-0.25
Whangarei	5	0.33	30	0.83	+ 25	+0.50
Gisborne	2	0.13	37	1.03	+ 35	+0.90
Onehunga	2	0.13	1	0.03	- 1	-0.10
Raglan	1	0.07	-	-	- 1	-0.07
Picton	1	0.07	21	0.58	+ 20	+0.51
Bay of Islands	-		50	1.39	+ 50	+1.39
Wanganui	-		3	0.84	+ 3	+0.84
Jacksons Bay	-		2	0.06	+ 2	+0.06
TOTAL	1531	100.00	3652	100.00	+2031	-

Source:- Report on Transport Statistics of N.Z. for the years 1949-52, p.32, and for the year 1961, p.15.

TABLE XXXV
ARRIVAL OF VESSELS BY PORTS OF ENTRY^(a)

Port	1950					1961				
	With Cargo			In Ballast ^(b)		With Cargo			In Ballast ^(b)	
	No. of vessels	Net tonnage	Cargo tonnage	No. of vessels	Net tonnage	No. of vessels	Net tonnage	Cargo tonnage	No. of vessels	Net tonnage
Auckland	278	1,139,047	1,620,491	9	51,889	497	2,541,862	2,765,673	40	251,166
Tauranga	-	-	-	1	6	9	18,642	40,144	45	124,198
Gisborne	1	328	620	-	-	-	-	-	2	410
Napier	15	74,226	73,835	3	10,290	14	50,626	107,612	3	8,560
New Plymouth	21	89,932	172,152	1	6,518	24	80,824	186,205	7	31,653
Wanganui	-	-	-	-	-	2	706	1,609	-	-
Wellington	162	890,944	1,162,133	15	63,388	189	994,360	1,016,696	42	248,407
Picton	-	-	-	-	-	3	3,717	7,000	5	17,111
Nelson	1	265	286	-	-	3	4,358	5,212	4	14,880
Greymouth	1	155	165	-	-	1	477	1,002	3	6,942
Westport	-	-	-	1	79	-	-	-	-	-
Lyttelton	44	204,430	354,943	3	18,920	73	334,900	690,329	3	32,752
Timaru	-	-	-	6	31,582	8	15,659	23,324	6	23,094
Oamaru	-	-	-	-	-	-	-	-	-	-
Otago	22	54,532	95,343	6	19,869	30	78,256	83,232	4	16,239
Bluff	4	5,234	12,064	3	21,859	12	25,638	23,597	9	28,502
Total	549	2,464,093	3,492,032	48	224,130	865	4,150,015	4,951,635	173	803,910

(a) Vessels arriving from overseas are recorded at the first port of call only.

(b) In ballast means having no cargo for discharge in New Zealand.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-1952, p.210, and for the year 1961, p.11.

TABLE XXXVI
PORT CHARGES (a)
1961

Port	Cost (£.s.d.)
Bay of Islands	991 13 4
Whangarei	600 - -
Auckland	958 6 8
Tauranga	749 3 4
Gisborne	1,104 13 4
Napier	729 6 2
New Plymouth	906 5 -
Wellington	1,010 8 4
Picton	895 16 8
Nelson	1,041 13 4
Lyttelton	927 10 -
Timaru	1,041 13 4
Otago	1,146 6 8
Bluff	1,177 1 8

(a) Based on hypothetical United Kingdom ship of 10,000 net registered tons which stayed 5 days in a New Zealand port and required a pilot in and out. Included in the costs are the pilotage, port charges, harbourmaster's fees and berthage charges.

Source:- Lyttelton Harbour Board, Comparative Return - 1962 Pilotage, Port Charges, Berthage Charges, Christchurch, 1962.

Lyttelton Harbour Board, Comparative Return - 1962 Summary of Wharfage Rates and H.I.R. (Harbour Improvement Rates), Christchurch, 1962.

TABLE XXXVII
 DEVIATIONS FROM EXPECTED IMPORTS (a)
 1950

Auckland	+602,762		
Wellington	+275,565		
Otago	+ 37,258		
New Plymouth	+ 8,895		
		- 12,494	Lyttelton
		- 15,745	Westport
		- 29,238	Oamaru
		- 42,936	Picton
		- 54,051	Greymouth
		- 54,081	Gisborne
		- 57,741	Nelson
		- 61,398	Bay of Islands
		- 69,602	Whangarei
		- 88,426	Timaru
		- 90,710	Napier
		-105,590	Bluff
		-330,023	Tauranga

(a) Difference between actual imports and imports that would have been expected on the population of a port's hinterland, assuming each individual consumed an equal share of the total imports in 1950.

TABLE XXXVIII
 DEVIATIONS FROM EXPECTED IMPORTS (a)
 1961

Auckland	+503,884	
Wellington	+211,899	
Lyttelton	+164,269	
Napier	+ 24,441	
		- 21,367 Westport
		- 34,955 Bluff
		- 46,660 Otago
		- 49,303 Whangarei
		- 55,472 Oamaru
		- 57,826 Nelson
		- 59,955 Tauranga
		- 66,498 Picton
		- 69,917 Greymouth
		- 79,549 Bay of Islands
		- 92,056 New Plymouth
		-113,365 Timaru
		-125,305 Gisborne

(a) Difference between actual imports and imports that would have been expected on the population of a port's hinterland assuming each individual consumed an equal share of the imports in 1961.

TABLE XXXIX
 DEVIATIONS FROM EXPECTED VARIATIONS IN IMPORTS (a)
 1950 - 61

Lyttelton	+217,629	
Tauranga	+127,584	
Bluff	+ 81,068	
Timaru	+ 37,403	
Whangarei	+ 28,485	
Napier	+ 24,034	
Wellington	+ 6,705	
		- 3,303 Westport
		- 4,782 Bay of Islands
		- 5,438 Greymouth
		- 15,328 Nelson
		- 21,298 Picton
		- 27,308 Oamaru
		- 43,996 Gisborne
		- 66,024 Otago
		-121,987 New Plymouth
		-152,528 Auckland

(a) Difference between actual variations in imports and the variations in imports that would have been expected from the changes in the population of a port's hinterland between 1950-61 assuming that the per capita increase in imports was parallel.

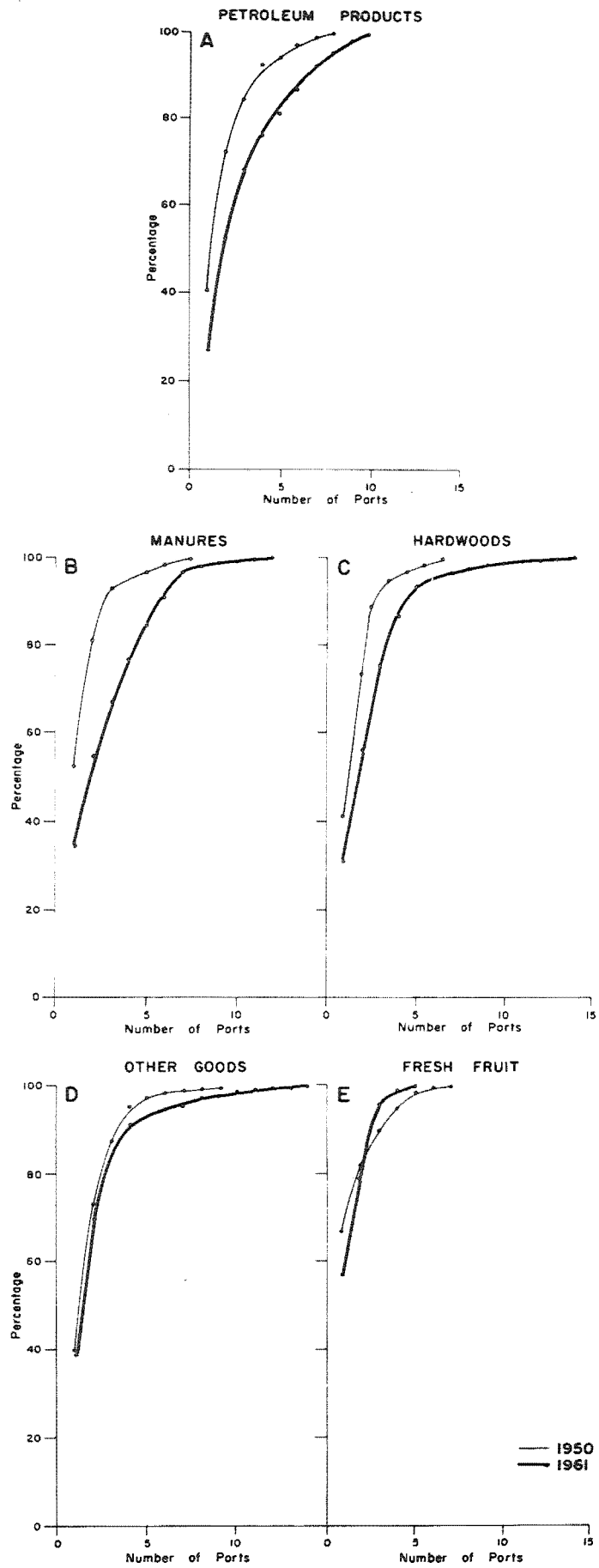


Fig.41. The Percentage Accumulation of Selected Commodities Imported by All Ports in 1950-1961.

TABLE XI
IMPORTS OF PETROLEUM PRODUCTS
1950 - 1961

Port	1950		1961		Change 1950-61	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
Whangarei	-	-	46,822	2.16	+ 46,822	+ 2.16
Auckland	439,499	40.83	605,231	27.91	+165,732	-12.92
Tauranga	-	-	167,060	7.71	+167,060	+ 7.71
Napier	35,181	3.27	115,134	5.31	+ 79,953	+ 2.04
New Plymouth	31,970	2.97	110,896	5.12	+ 78,926	+ 2.15
Wellington	347,244	32.25	531,025	24.49	+183,781	- 7.76
NORTH ISLAND	853,894	79.32	1,576,168	72.70	+722,274	- 6.62
Nelson	19,961	1.86	41,774	1.93	+ 21,813	+ 0.07
Lyttelton	126,474	11.75	351,456	16.21	+224,982	+ 4.46
Otago	69,837	6.48	121,928	5.62	+ 52,091	- 0.86
Bluff	6,361	0.59	76,751	3.54	+ 70,390	+ 2.95
SOUTH ISLAND	222,633	20.68	591,909	27.30	+369,276	+ 6.62
TOTAL	1,076,527	100.00	2,168,077	100.00	+1,091,550	-

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, pp.55-62, and for the year 1961, p.27.

TABLE XLI
IMPORTS OF MANURES
1950 - 1961

Port	1950		1961		Change 1950-61	
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent
Bay of Islands	-	-	4,338	0.46	+ 4,338	+ 0.46
Whangarei	-	-	8,355	0.89	+ 8,355	+ 0.89
Auckland	361,991	53.41	325,269	34.80	- 36,722	-18.61
Tauranga	-	-	90,262	9.65	+ 90,262	+ 9.65
Napier	-	-	121,877	13.04	+121,877	+13.04
New Plymouth	192,266	28.36	186,721	19.97	- 5,545	- 8.39
Wellington	13,069	1.93	7,893	0.84	- 5,176	- 1.09
NORTH ISLAND	567,326	83.70	744,715	79.65	+177,389	- 4.05
Nelson	-	-	4,906	0.52	+ 4,906	+ 0.52
Lyttelton	22,305	3.29	65,384	7.00	+ 43,079	+ 3.71
Timaru	-	-	1,120	0.12	+ 1,120	+ 0.12
Otago	78,055	11.52	50,533	5.41	- 27,522	- 6.11
Bluff	10,124	1.49	68,208	7.30	+ 58,084	+ 5.81
SOUTH ISLAND	110,484	16.30	190,151	20.35	+ 79,667	+ 4.05
TOTAL	677,810	100.00	934,866	100.00	+257,056	

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, pp.55-62, and for the year 1961, p.27.

TABLE XLIII
IMPORTS OF HARDWOODS
1950 - 1961

Port	1950		1961		Change 1950-61	
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent
Bay of Islands	-	-	203	0.18	+ 203	+ 0.18
Whangarei	-	-	270	0.24	+ 207	+ 0.24
Auckland	19,243	32.34	35,608	31.24	+ 16,365	- 1.10
Tauranga	1,024	1.72	1,299	1.14	+ 275	- 0.58
Gisborne	-	-	1,803	1.58	+ 1,803	+ 1.58
Napier	965	1.62	1,717	1.51	+ 752	- 0.11
New Plymouth	-	-	356	0.32	+ 356	+ 0.32
Wanganui	-	-	550	0.48	+ 550	+ 0.48
Wellington	24,452	41.10	28,524	25.03	+ 4,072	-16.07
NORTH ISLAND	45,684	76.78	70,330	61.72	+ 24,646	-15.06
Picton	-	-	657	0.58	+ 657	+ 0.58
Nelson	-	-	21	0.02	+ 21	+ 0.02
Greymouth	-	-	225	0.20	+ 225	+ 0.20
Lyttelton	3,281	5.51	22,455	19.70	+ 19,174	+14.19
Timaru	188	0.32	3,821	3.35	+ 3,633	+ 3.03
Oamaru	-	-	184	0.16	+ 184	+ 0.16
Otago	8,958	15.06	12,210	10.72	+ 3,252	- 4.34
Bluff	1,387	2.33	4,039	3.55	+ 2,652	+ 1.22
SOUTH ISLAND	13,814	23.22	43,612	38.28	+ 29,798	+15.06
TOTAL	59,498	100.00	113,942	100.00	+ 54,444	-

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, pp.55-62, and for the year 1961, p.28.

TABLE XLIII
IMPORTS OF OTHER GOODS
1950 - 1961 (a)

Port	1950		1961		Change 1950-61	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
Whangarei	4,834	0.38	8,560	0.40	+ 3,726	+0.02
Auckland	488,296	38.13	831,195	38.93	+342,899	+0.80
Onehunga	39	0.00	-	-	- 39	-
Tauranga	-	-	39,061	1.83	+ 39,061	+1.83
Gisborne	-	-	1,172	0.06	+ 1,172	+0.06
Napier	12,476	0.98	39,510	1.85	+ 27,034	+0.87
New Plymouth	9,445	0.74	26,223	1.23	+ 16,783	+0.49
Wellington	444,003	34.67	640,504	30.00	+196,501	-4.67
NORTH ISLAND	971,899	74.90	1,586,285	74.30	+614,386	-0.60
Picton	-	-	-	-	-	-
Nelson	-	-	15,705	0.74	+ 15,705	+0.74
Westport	-	-	1,547	0.07	+ 1,507	+0.07
Greymouth	30	0.00	-	-	-	-
Lyttelton	188,787	14.73	321,559	15.05	+132,772	+0.32
Timaru	4,007	0.31	22,664	1.06	+ 18,657	-0.75
Oamaru	9	0.00	2,981	0.14	+ 2,972	+0.14
Otago	105,515	8.24	136,053	6.38	+ 25,112	-1.86
Bluff	23,199	1.81	48,338	2.26	+ 25,139	+0.45
SOUTH ISLAND	321,547	25.10	548,847	25.70	+227,300	+0.60
TOTAL	1,293,446	100.00	2,135,132	100.00	+841,686	-

(a) For strict comparability the classification in 1950 has been adhered to. Hemp, iron and steel, machinery, motor vehicles and pulp and paper were shown in 1961 but in 1950 they were included with other goods.

Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, pp.55-62 and for the year 1961, pp.20-8.

TABLE XLIV
IMPORTS OF FRESH FRUIT
1950 - 1961

Port	1950		1961		Change 1950-61	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
Onehunga	288	0.68	-	-	- 288	- 0.68
Auckland	28,069	66.15	49,827	56.36	+21,758	- 9.79
Napier	-	-	300	0.34	+ 300	+ 0.34
New Plymouth	833	1.96	-	-	- 833	- 1.96
Wellington	6,667	15.71	15,573	17.61	+ 8,906	+ 1.90
NORTH ISLAND	35,857	84.50	65,700	74.31	-29,843	-10.19
Lyttelton	3,151	7.43	19,367	21.91	+16,216	+14.48
Timaru	-	-	2,630	2.97	+ 2,630	+ 2.97
Otago	3,059	7.21	716	0.81	- 2,343	- 6.40
Bluff	363	0.86	-	-	- 363	- 0.86
SOUTH ISLAND	6,573	15.50	22,713	25.69	+16,140	+10.19
TOTAL	42,430	100.00	88,413	100.00	+45,983	-

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, pp.55-62 and for the year 1961, p.26.

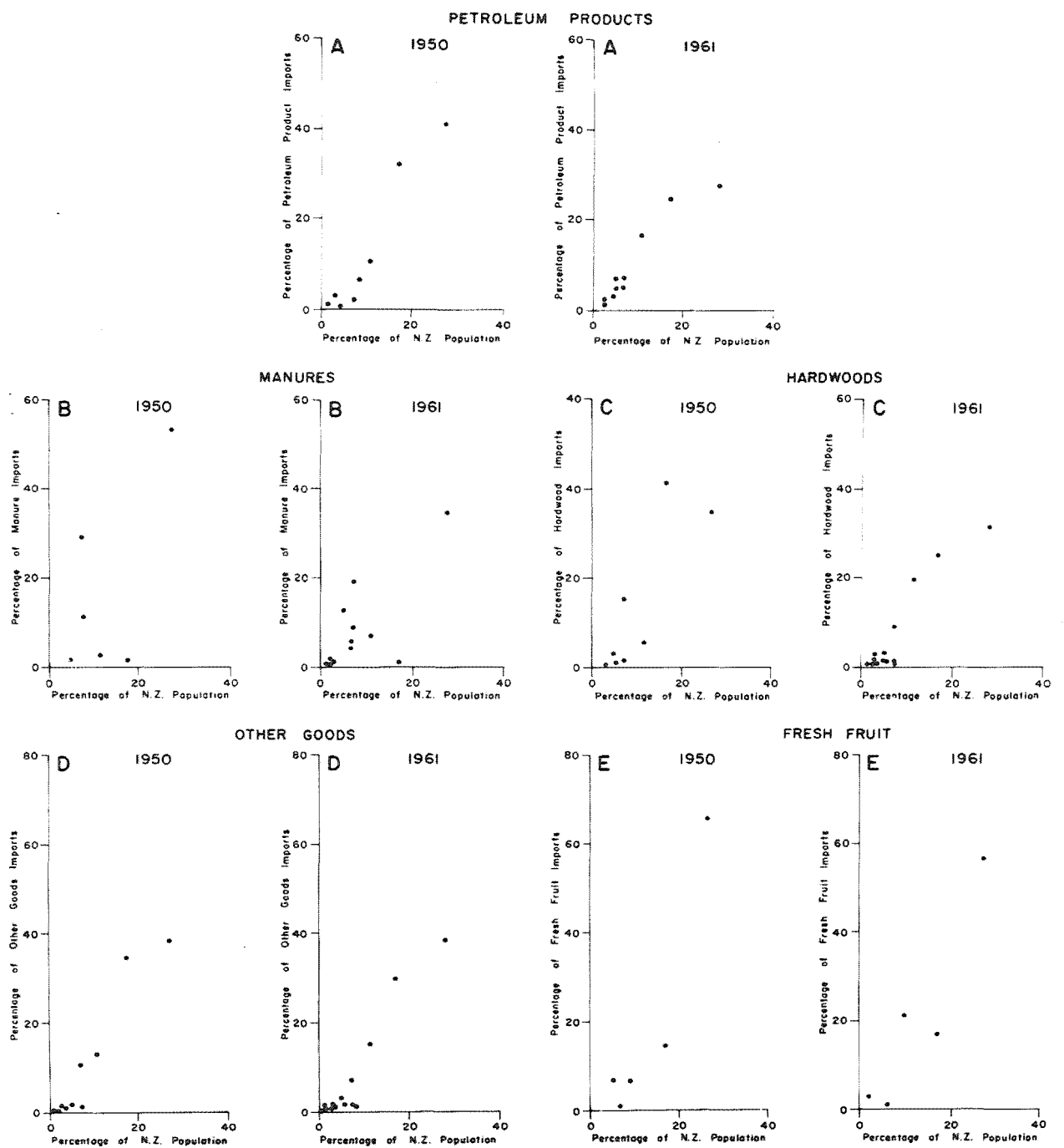


Fig.42. Relationship of Selected Commodities to Population 1950-1961.

TABLE XLV
IMPORTS OF WHEAT AND FLOUR
1950 - 1961

Port	Wheat				Flour			
	1950		1961		1950		1961	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
Auckland*	71,370	48.96	104,624	61.61	176	64.00	8	9.09
Napier	5,326	3.65	-	-	-	-	-	-
New Plymouth	5,734	3.93	-	-	-	-	-	-
Wellington*	16,664	11.43	26,809	15.79	83	30.18	79	89.78
Tauranga*	-	-	33,360	19.65	-	-	-	-
NORTH ISLAND	99,094	67.97	164,793	97.05	259	94.18	87	98.87
Lyttelton*	27,450	18.84	2,738	1.61	16	5.82	1	-
Timaru	14,082	9.66	2,104	1.24	-	-	-	-
Oamaru	5,142	3.53	165	0.10	-	-	-	-
SOUTH ISLAND	46,678	32.03	5,007	2.95	16	5.82	1	1.13
TOTAL	145,772	100.00	169,800	100.00	275	100.00	88	100.00

* Ports with bulk handling facilities.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, pp. 55-62, and for the year 1961, pp.20-8.

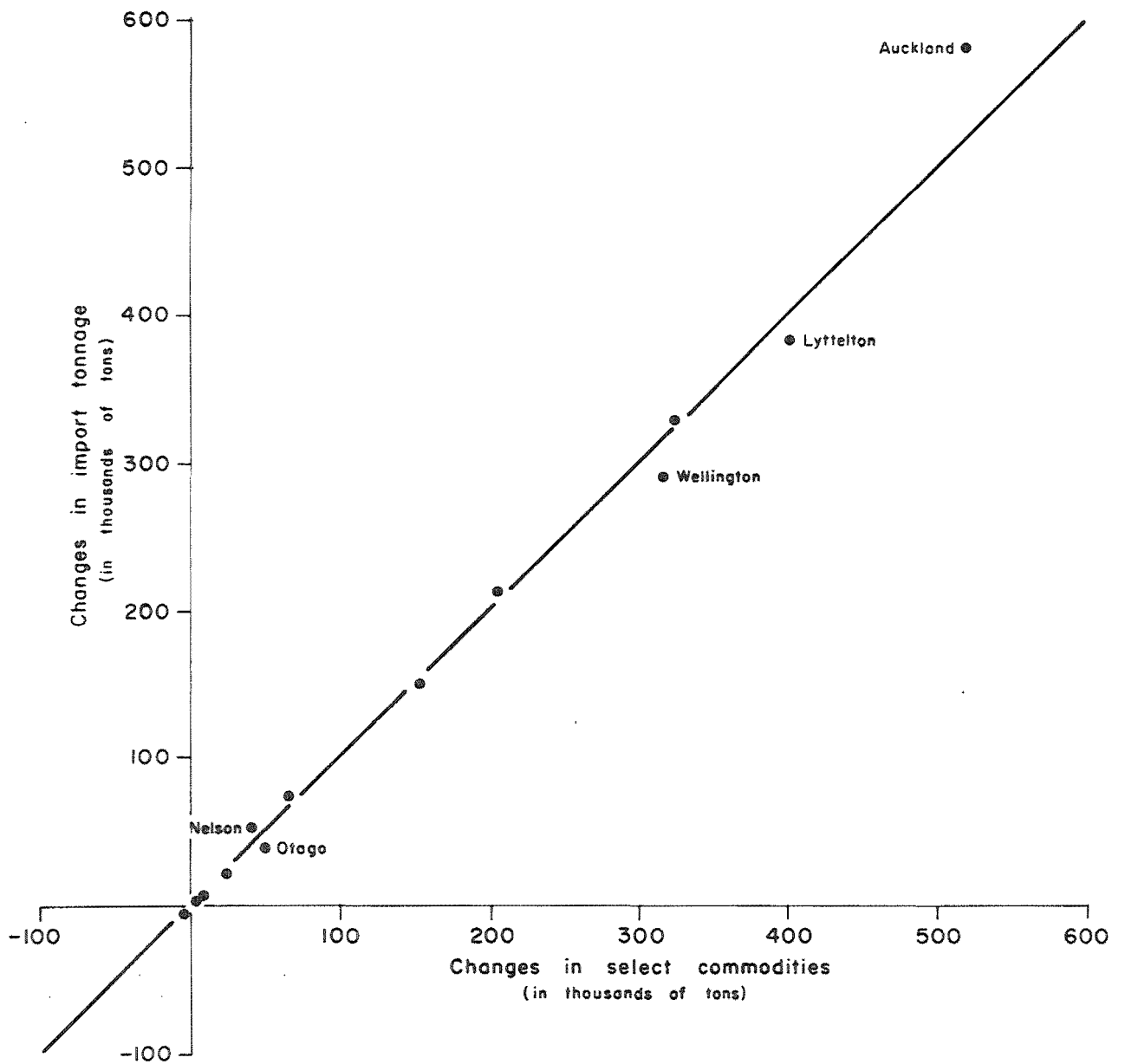


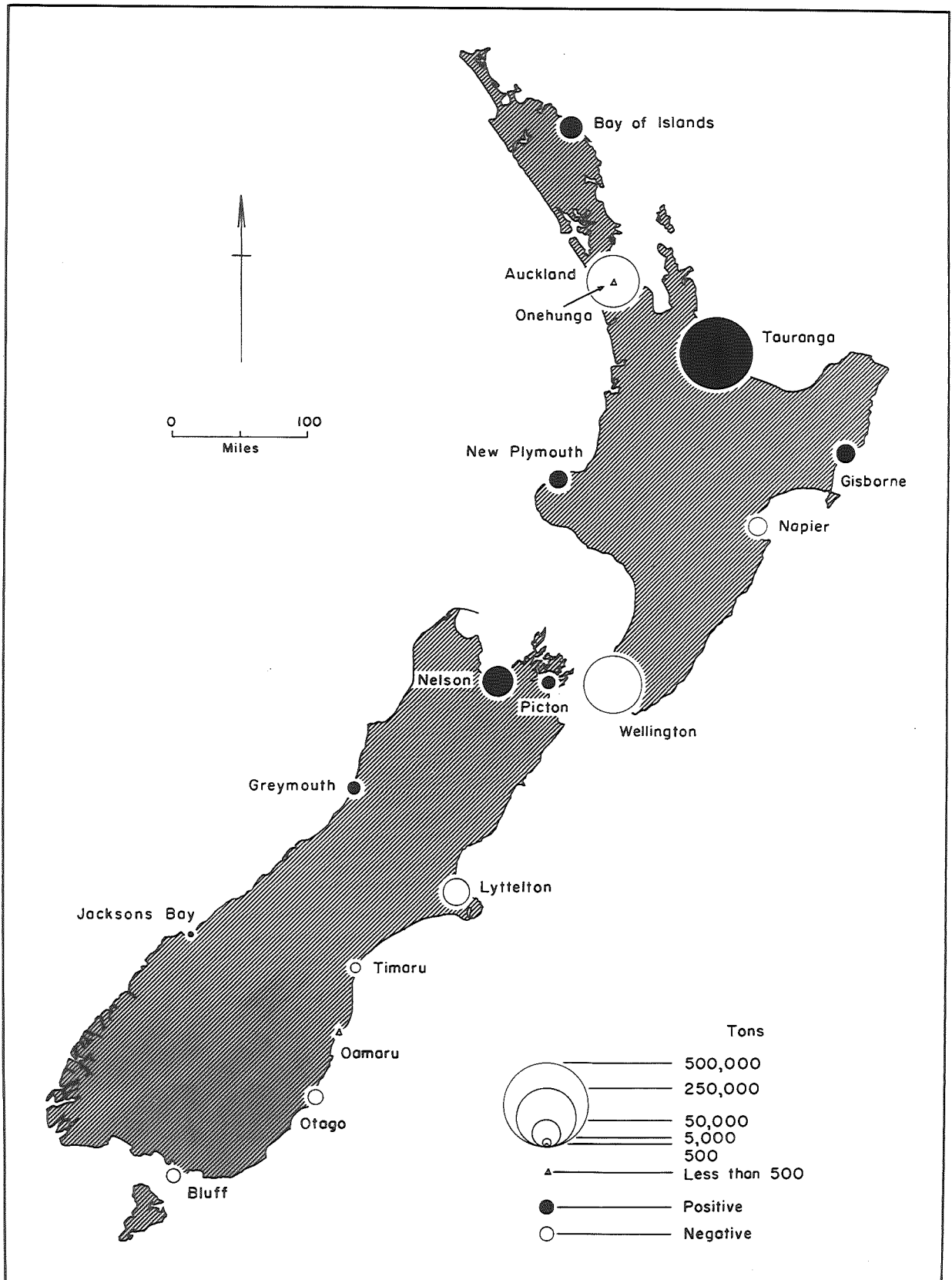
Fig.43. Relationship of Changes in Imports to Variations in a Select Group of Commodities 1950-1961.

TABLE XLVI
CHANGES IN EXPORTS
1950 - 1961

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Bay of Islands	-	-	28,836	1.45	+ 28,836	+ 1.45	-	+ 28,836
Whangarei	-	-	-	-	-	-	-	-
Auckland	408,422	33.94	483,537	24.39	+ 75,115	- 9.55	673,084	-189,547
Onehunga	193	0.01	-	-	- 193	- 0.01	198	- 198
Raglan	-	-	-	-	-	-	-	-
Tauranga	10,924	0.92	375,424	18.93	+ 364,500	+18.01	18,245	+357,179
Gisborne	-	-	20,678	1.04	+ 20,678	+ 1.04	-	+ 20,678
Napier	105,977	8.81	152,418	7.69	+ 46,441	- 1.12	174,716	- 22,298
New Plymouth	73,184	6.08	160,877	8.11	+ 87,693	+ 2.03	120,576	+ 40,301
Wanganui	-	-	-	-	-	-	-	-
Wellington	292,856	24.34	248,131	12.51	- 44,725	-11.83	482,701	-234,570
NORTH ISLAND	891,556	74.10	1,469,901	74.12	+ 578,345	+ 0.02	1,469,520	+ 381
Picton	-	-	10,010	0.50	+ 10,010	+ 0.50	-	+ 10,010
Nelson	-	-	61,101	3.08	+ 61,101	+ 3.08	-	+ 61,101
Westport	-	-	-	-	-	-	-	-
Greymouth	2,313	0.19	13,317	0.67	+ 11,004	+ 0.64	3,768	+ 9,549
Hokitika	-	-	-	-	-	-	-	-
Jacksons Bay	-	-	786	0.04	+ 786	+ 0.04	-	+ 786
Lyttelton	106,853	8.88	128,321	6.48	+ 21,468	- 2.40	176,104	- 47,783
Timaru	57,987	4.82	89,090	4.49	+ 31,103	- 0.33	95,588	- 6,498
Oamaru	30	0.00	29	0.00	- 1	-	-	+ 29
Utago	60,858	5.06	83,979	4.24	+ 23,121	- 0.82	100,348	- 16,369
Bluff	83,606	6.95	126,624	6.38	+ 43,018	- 0.57	137,829	- 11,205
SOUTH ISLAND	311,647	25.90	513,257	25.88	+ 201,610	- 0.02	513,638	- 381
NEW ZEALAND	1,203,203	100.00	1,983,158	100.00	+ 779,955	-	1,983,158	

(a) Number of tons required to retain 1950 share of exports.
(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of exports.

Source: - Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.18.



g.44. Changes in the Concentration of Exports 1950-1961.
 Difference between a port's exports in 1961 and tonnage required to retain 1950 share of New Zealand's exports.
 Source:- Report on the Transport Statistics of New Zealand

TABLE XLVII
CHANGES IN EXPORT COMMODITIES
1950 - 1961

Commodity	1950		1961		Change 1950-61	
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent
PASTORAL						
Frozen Meat	339,131	28.18	483,244	24.36	+144,113	- 4.82
Wool	178,561	14.84	263,568	13.28	+ 85,007	- 1.56
Butter	157,341	13.07	175,514	8.85	+ 18,173	- 4.22
Milk products	87,902	7.31	120,535	6.08	+ 32,633	- 1.23
Cheese	82,722	6.87	107,231	5.41	+ 24,509	- 1.46
Tallow	34,299	2.85	68,304	3.44	+ 34,005	+ 0.59
Sheep skins	22,459	1.87	57,237	2.89	+ 34,778	+ 1.02
Preserved meat	13,309	1.11	6,455	0.33	- 6,854	- 0.78
Hides	9,132	0.76	*		- 9,132	- 0.76
Livestock	*	-	303	0.02	+ 303	+ 0.02
	920,916	76.86	1,282,391	64.66	+361,475	-12.20
AGRICULTURAL						
Pollard and bran	53	0.00	21	0.00	- 32	-
Beans and peas	19,149	1.59	15,004	0.75	- 4,145	- 0.84
Barley	7,936	0.66	105	0.01	- 7,831	- 0.65
Flour	1,408	0.12	1,492	0.00	+ 84	- 0.04
Oats (human)	58	0.00	556	0.03	+ 498	+ 0.03
Oats	716	0.06	*	-	+ 716	- 0.06
Wheat	47	0.00	*	-	+ 47	-
Seeds	10,707	0.89	6,288	0.32	- 4,419	- 0.57
Potatoes	9,144	0.76	9,718	0.48	+ 574	- 0.28
	49,218	4.08	33,184	1.67	- 16,034	- 2.41
FORESTS						
Hardwoods	2,794	0.23	17	0.00	- 2,777	- 0.23
Softwoods	30,406	2.53	298,766	15.06	+268,360	+12.53
Paper etc.	*		47,480	2.40	+ 47,480	+ 2.40

Commodity	1950		1961		Change 1950-61	
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent
Woodpulp	*		66,855	3.37	+ 66,855	+ 3.37
	33,200	2.76	413,118	20.83	+379,918	+18.07
ORCHARDS						
Fresh fruit	13,486	1.13	57,668	2.91	+ 44,182	+ 1.78
Preserved fruit	20	0.00	66	0.00	+ 46	-
	13,506	1.13	57,734	2.91	+ 44,228	+ 1.78
MISCELLANEOUS						
Petroleum	93,084	7.74	63,808	3.22	- 29,276	- 4.52
All other goods	75,084	6.24	99,807	5.03	+ 24,003	- 1.21
Fish	5,300	0.44	4,472	0.23	- 828	- 0.21
Sugar	642	0.05	534	0.03	- 108	- 0.02
Coal	3,167	0.27	13,465	0.68	+ 10,298	+ 0.41
Cement	1,567	0.13	556	0.03	- 1,011	- 0.10
Wines	1,097	0.09	1,053	0.06	- 44	- 0.03
Artificial manures	564	0.05	9,071	0.45	+ 8,507	+ 0.40
Rabbits	1,914	0.16	*	-	- 1,914	- 0.16
Lime	4	0.00	29	0.00	+ 25	-
Coke	*	-	44	0.00	+ 44	-
Hemp	*	-	-	-	-	-
Honey	*	-	938	0.05	+ 938	+ 0.05
Machinery	*	-	2,420	0.12	+ 2,420	+ 0.12
Motor Vehicles	*	-	534	0.03	+ 534	+ 0.03
	180,856	15.17	196,731	9.53	+ 15,875	- 5.64
TOTAL	1,203,203	100.00	1,983,158	100.00	+779,955	-

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.44, and for the year 1961, p.19.

* Commodity not listed in that year.

TABLE XLVIII
CHANGES IN PASTORAL PRODUCE
1950 - 1961

Port	1950		1961		Change 1950-61	
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent
Bay of Islands	-	-	27,676	2.15	+ 27,676	+ 2.15
Auckland	355,282	35.76	412,907	32.03	+ 57,625	- 3.73
Tauranga	-	-	1,229	0.02	+ 1,229	+ 0.02
Gisborne	-	-	20,268	1.58	+ 20,268	+ 1.58
Napier	104,755	10.54	121,262	9.41	+ 16,507	- 1.13
New Plymouth	72,866	7.33	147,442	11.41	+ 74,576	+ 4.11
Wellington	225,320	22.68	179,416	13.92	- 45,904	- 8.76
NORTH ISLAND	758,223	76.31	910,200	70.55	+151,977	- 5.76
Picton	-	-	7,031	0.53	+ 7,031	+ 0.53
Nelson	-	-	6,209	0.48	+ 6,209	+ 0.48
Lyttelton	62,287	6.27	91,502	7.10	+ 29,215	+ 0.83
Timaru	47,520	4.78	80,556	6.25	+ 33,036	+ 1.47
Otago	48,404	4.87	71,891	5.58	+ 23,467	+ 0.71
Bluff	77,239	7.77	122,627	9.51	+ 45,388	+ 1.74
SOUTH ISLAND	235,450	23.69	379,816	29.45	+144,366	+ 5.76
TOTAL	993,673	100.00	1,290,016	100.00	+296,343	

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, pp.55-62, and for the year 1961, pp.20-8.

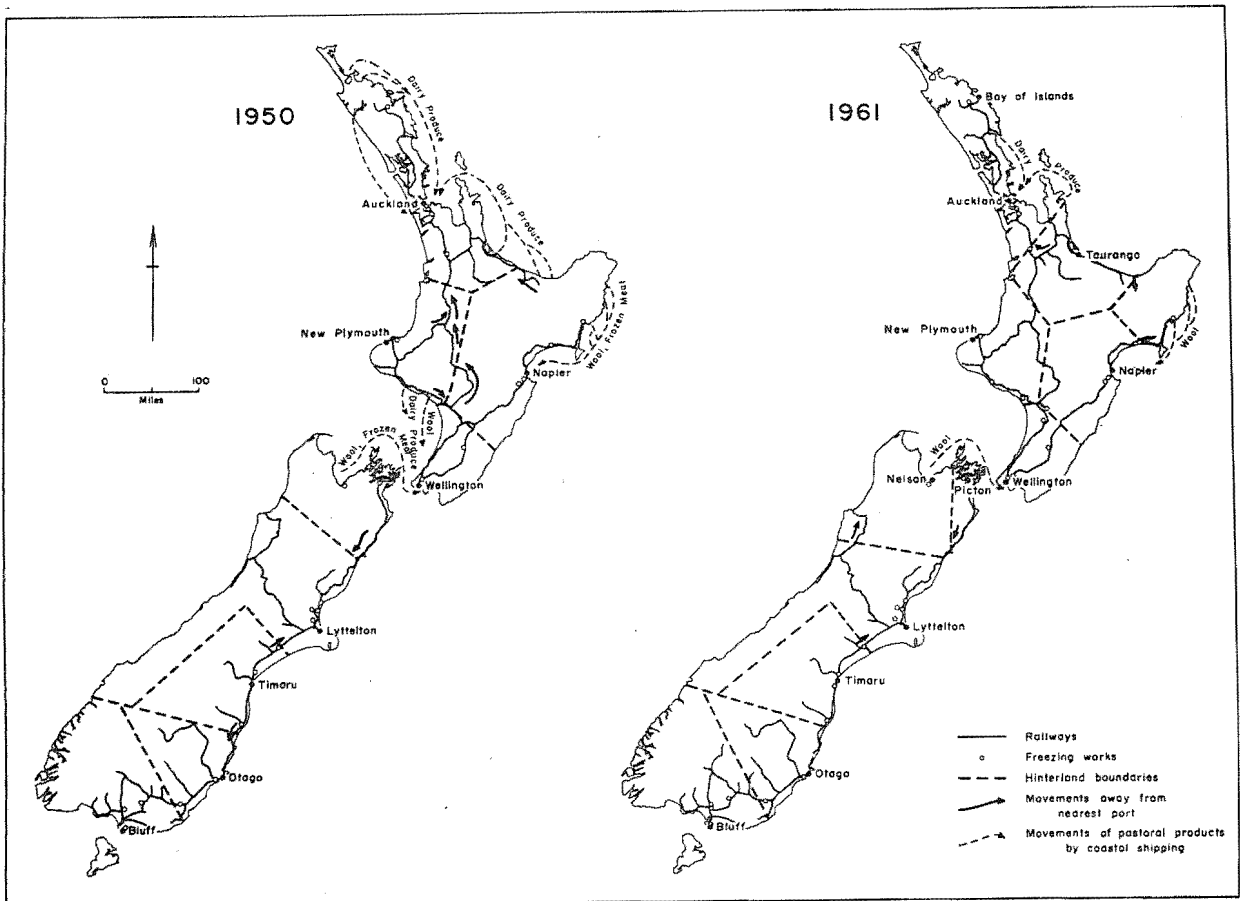


Fig.45. Export Hinterlands.

Hinterlands defined on basis that in 1950 (1961) a given port attracted to itself all exports from the area in which it enjoyed a railway freight rate advantage over other ports. Adjustments to the boundaries were made with information from the Meat and Wool Boards' Economic Service.

Source:- New Zealand Railway Rate Books
Meat and Wool Boards' Economic Service.

TABLE XLIX
ESTIMATED TONNAGE CHANGES FROM
HINTERLAND ADJUSTMENTS
1950 - 1961

Port	New Outlets	Reversals of flow	Change
	Tonnage	Tonnage	Tonnage
Bay of Islands	+21,000		+21,000
Auckland	-21,000 - 1,000 - 3,000		-25,000
Tauranga	+ 1,000		+ 1,000
Gisborne	+ 3,000 +17,000		+20,000
Napier	-17,000		-17,000
New Plymouth		+40,000	+40,000
Wellington	- 7,000 - 6,000	-40,000	-53,000
Picton	+ 7,000		+ 7,000
Nelson	+ 6,000		+ 6,000
Lyttelton		+ *	
Timaru		- * + 8,000	+ 8,000
Otago	- 8,000	- *	- 8,000
Bluff		+ *	

* Reliable estimates difficult to obtain.

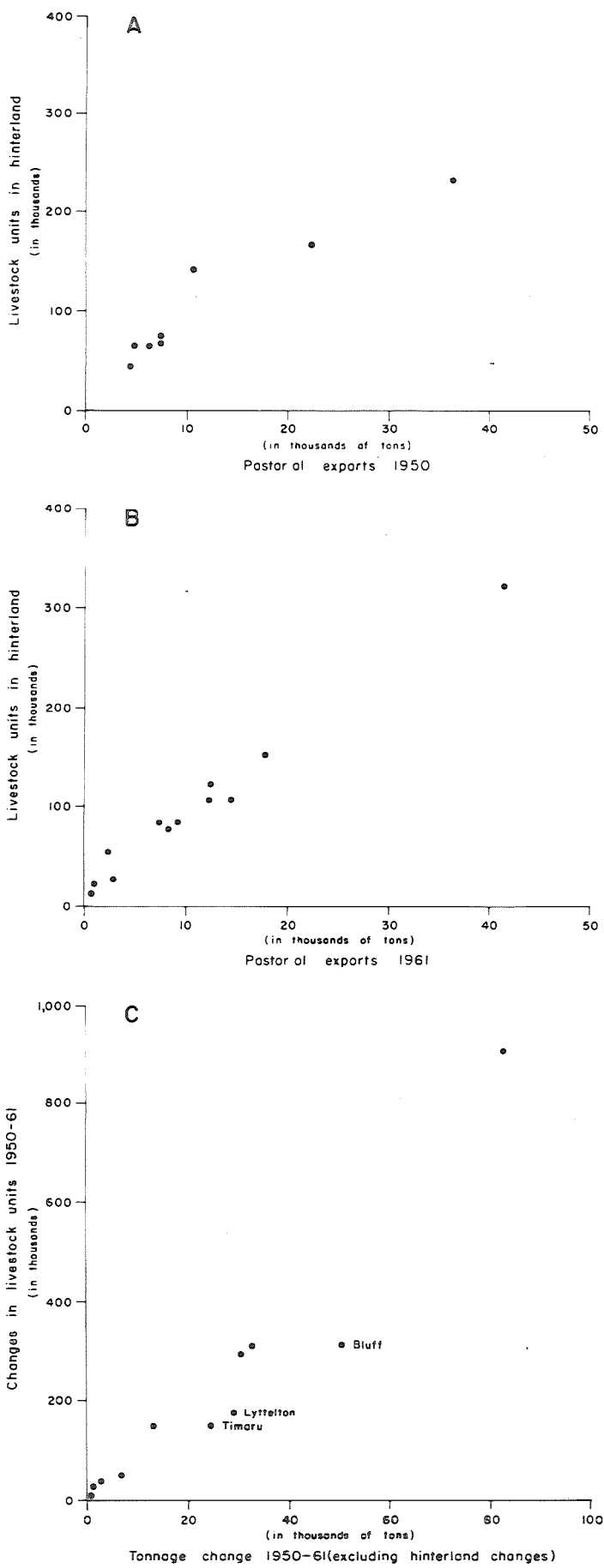


Fig.46. Relationship of Pastoral Exports and Livestock Units 1950-1961

TABLE I
VESSELS DEPARTING FOR OVERSEAS AT
THE FINAL PORT OF DEPARTURE ONLY
1950 - 1961

Port	1950					1961				
	With Cargo			In ballast ^(a)		With Cargo			In ballast ^(a)	
	No. of vessels	Net tonnage	Cargo tonnage	No. of vessels	Net tonnage	No. of vessels	Net tonnage	Cargo tonnage	No. of vessels	Net tonnage
Auckland	147	665,912	358,848	85	328,206	234	1,325,369	507,920	126	642,349
Tauranga	6	5,723	7,955	-	-	124	287,319	350,291	34	152,472
Gisborne	-	-	-	-	-	-	-	-	3	1,727
Napier	17	93,321	92,329	1	6,143	37	-	-	-	-
New Plymouth	2	9,320	6,147	14	64,997	5	21,300	3,651	36	184,495
Wanganui	-	-	-	-	-	-	-	-	1	385
Wellington	126	691,281	442,245	61	288,606	102	699,313	326,114	56	308,329
Picton	-	-	-	-	-	3	2,245	2,172	-	-
Nelson	-	-	-	4	19,328	27	18,970	26,470	11	55,900
Westport	1	155	113	-	-	-	-	-	-	-
Greymouth	2	2,561	6,053	-	-	-	-	-	-	-
Lyttelton	23	123,522	137,919	14	57,313	41	161,736	195,697	27	156,027
Timaru	6	24,851	19,699	-	-	12	40,309	33,528	-	-
Oamaru	-	-	-	-	-	-	-	-	-	-
Otago	14	49,912	41,929	26	113,757	29	133,026	113,006	46	216,466
Bluff	19	46,684	50,097	7	33,297	37	134,394	116,534	28	138,189
Total	363	1,713,242	1,163,934	212	911,647	651	2,999,025	1,848,869	380	1,924,397

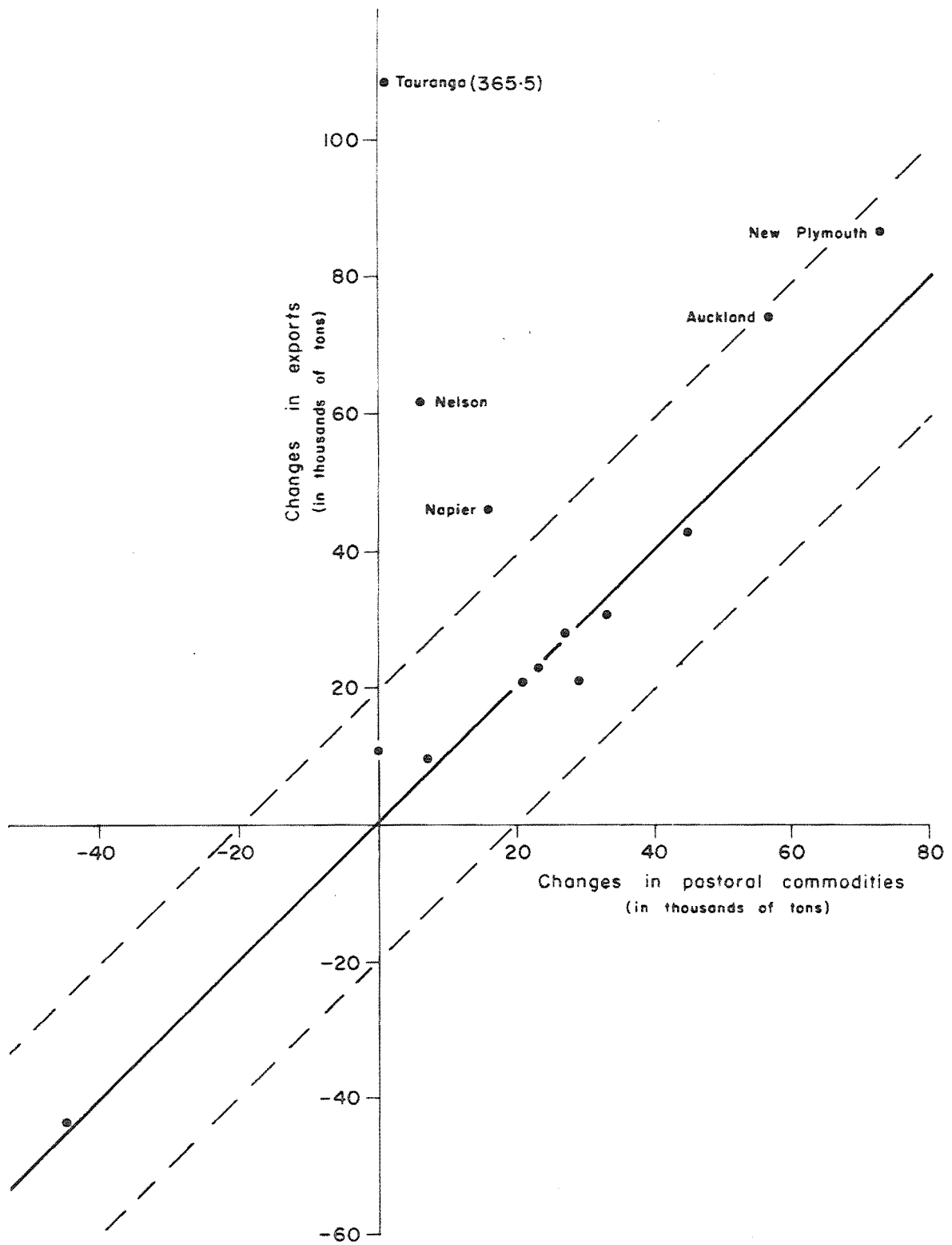
Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.20
and for the year 1961, p.11.

TABLE LI
CHANGES IN LIVESTOCK UNITS
1950 - 1961^(a)

Port	1950		1961		Change 1950-61		
	Livestock Units	Per cent	Livestock Units	Per cent	Livestock Units	Per cent	Percentage increase
Bay of Islands	184,497	2.08	231,254	2.01	46,757	- 0.07	20.22
Auckland	2,312,097	26.05	3,220,022	28.01	907,925	+ 1.96	28.20
Gisborne	518,820	5.85	527,725	4.59	8,905	- 1.26	1.69
Napier	931,946	10.50	1,233,953	10.74	302,007	+ 0.24	24.48
New Plymouth	767,439	8.65	919,618	8.00	152,179	- 0.65	16.55
Wellington	1,361,113	15.34	1,532,125	13.33	171,012	- 2.01	11.16
Picton	186,692	2.10	231,879	2.02	45,187	- 0.08	19.49
Nelson	115,425	1.30	151,205	1.31	35,780	+ 0.01	23.66
Lyttelton	648,071	7.30	834,756	7.26	186,685	- 0.04	22.36
Timaru	482,623	5.44	630,336	5.48	147,713	+ 0.04	23.43
Otago	681,200	7.68	981,141	8.53	299,941	+ 0.85	30.57
Bluff	684,880	7.71	1,001,889	8.72	317,009	+ 1.01	31.64
TOTAL	8,874,803	100.00	11,495,903	100.00	2,621,100	-	22.80

(a) In terms of 1961 hinterlands.

Source:- Report on the Farm Production Statistics of N.Z. for the season 1949-50, pp.51-6, and for the season 1960-1, pp.45-53.



• Relationship of Changes in Exports to Variations in tonnage of Pastoral Commodities 1950-1961.

TABLE LII
 VARIATIONS IN PASTORAL TONNAGE AND
 CHANGES IN PRODUCTIVITY ACCORDING TO 1961
 HINTERLANDS
 1950 - 1961

Port	Actual ^(a) Change	Estm. Hinterland ^(b) Change	Difference between ^(c) actual and hinter- land change	Changes in ^(d) Productivity.
	Tonnage	Tonnage	Tonnage	Livestock units
Bay of Islands	+27,660	+21,000	+ 6,660	+ 46,757
Auckland	+58,560	-25,000)83,789	+907,925
Tauranga	+ 1,229	+ 1,000		
Gisborne	+20,268	+20,000	+ 268	+ 8,905
Napier	+16,507	-17,000	+33,507	+302,007
New Plymouth	+74,576	+40,000	+34,576	+152,179
Wellington	-44,000	-53,000	+13,000	+171,012
Picton	+ 7,031	+ 5,000	+ 2,031	+ 45,187
Nelson	+ 6,209	+ 5,000	+ 1,029	+ 35,780
Lyttelton	+29,215		+29,215	+186,685
Timaru	+33,036	+ 8,000	+25,036	+147,715
Otago	+23,407	- 8,000	+31,407	+299,914
Bluff	+45,338		+45,338	+317,009

- (a) Difference in exports of pastoral tonnage between 1950-61.
 (b) Estimate of hinterland changes in terms of 1961 boundaries (Table XLIX).
 (c) Change in pastoral tonnage 1950-61 after excluding effect of changes in hinterland borders.
 (d) Changes in livestock units in terms of 1961 hinterlands (Table LI).

Source:- Tables XLIX and LI.

TABLE LIII
EXPORTS OF TIMBER PRODUCTS
1950 - 1961

1. Softwoods

Port	1950		1961		Change 1950-61	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
Auckland	10,894	37.21	9,515	3.18	- 1,379	-34.03
Tauranga	9,243	31.57	259,439	86.74	+250,196	+55.17
Napier	1,196	4.09	491	0.16	- 705	- 3.93
New Plymouth	-	-	68	0.02	+ 68	+ 0.02
Wellington	4,485	15.32	2,780	0.93	- 1,750	-14.39
North Island	25,818	88.18	272,293	91.03	+246,475	+ 2.85
Nelson	-	-	21,274	7.11	+ 21,274	+ 7.11
Lyttelton	2,454	8.38	162	0.05	- 2,292	- 8.33
Timaru	346	1.18	4,298	1.44	+ 3,952	+ 0.26
Otago	13	0.05	275	0.09	+ 262	+ 0.04
Bluff	648	2.21	-	-	- 648	- 2.21
Jacksons Bay	-	-	786	0.27	+ 786	+ 0.28
South Island	3,461	11.82	26,795	8.97	+ 23,334	- 2.85
Total	29,279	100.00	299,088	100.00	+269,809	-

2. Woodpulp

Port	1950		1961		Change 1950-61	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
Auckland	-	-	482	0.72	+ 482	+ 0.72
Tauranga	-	-	66,373	99.28	+ 66,373	+99.28
Total	-	-	66,855	100.00	+ 66,855	-

3. Paper, newsprint, etc.

Port	1950		1961		Change 1950-61	
	Cargo Tonnage	Per Cent	Cargo Tonnage	Per Cent	Cargo Tonnage	Per Cent
Auckland	-	-	1,982	4.09	+ 1,982	+ 4.09
Tauranga	-	-	46,399	95.70	+ 46,399	+95.70
Wellington	-	-	66	0.14	+ 66	+ 0.14
North Island	-	-	48,447	99.93	+ 48,477	+99.93
Lyttelton	-	-	30	0.05	+ 30	+ 0.05
Otago	-	-	8	0.02	+ 8	+ 0.02
South Island	-	-	38	0.07	+ 38	+ 0.07
Total	-	-	48,485	100.00	+ 48,485	-

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, pp.55-62, and for the year 1961, pp.20-8.

TABLE LIV
EXPORTS OF FRESH FRUIT
1950 - 1961

Port	1950		1961		Change 1950-61	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
Auckland	1,261	3.30	2,797	3.67	+ 1,536	+ 0.37
Tauranga	-	-	3	0.00	+ 3	+ 0.00
Napier	11,300	29.57	18,960	24.85	+ 7,660	- 4.72
New Plymouth	-	-	565	0.74	+ 565	+ 0.74
Wellington	25,597	66.98	18,739	24.56	- 6,858	-42.42
North Island	38,158	99.85	41,064	53.83	+ 2,906	-46.02
Picton	-	-	1,482	1.94	+ 1,482	+ 1.94
Nelson	-	-	32,823	43.01	+32,823	+43.01
Lyttelton	57	0.15	225	0.30	+ 168	+ 0.15
Otago	-	-	699	0.92	+ 699	+ 0.92
South Island	57	0.15	35,229	46.17	+35,172	+46.02
Total	38,215	100.00	76,293	100.00	+38,078	-

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, pp.55-62, and for the year 1961, p.26.

CHANGES IN FORELANDS
1950 - 1961

Foreland	1950		1961		Change 1950-61	
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent
United Kingdom	857,628	73.69	631,572	34.16	-226,056	-39.53
Australia	104,061	8.94	238,215	12.88	+134,154	+ 3.94
United States	79,034	6.79	137,964	7.46	+ 58,930	+ 0.67
Japan	548	0.04	301,631	16.31	+301,083	+16.27
India	4,958	0.43	19,102	1.03	+ 14,144	+ 0.60
Malaya	2,889	0.25	25,398	1.37	+ 22,509	+ 1.12
Canada	13,602	1.17	7,026	0.38	- 6,576	- 0.79
Fiji	24,068	2.07	35,884	1.94	+ 11,816	- 0.13
Gilbert & Ellice Is.	70	0.00	830	0.04	+ 760	+ 0.04
Nauru	12,338	1.06	13,978	0.76	+ 1,640	- 0.30
Norfolk Is.	1,120	0.10	-	-	- 1,120	- 0.10
Papua	543	0.04	-	-	- 543	- 0.04
Solomon Is.	500	0.04	14	0.00	- 486	- 0.04
W. Samoa	644	0.05	7,599	0.41	+ 6,955	+ 0.36
France	12,509	1.07	183,245	9.91	+170,736	+ 8.84
West Germany	5,757	0.50	-	-	- 5,757	- 0.50
Iran	12,133	1.04	-	-	- 12,133	- 1.04
Korea	7,750	0.67	-	-	- 7,750	- 0.67
Egypt	9,610	0.83	-	-	- 9,610	- 0.83
New Hebrides	196	0.02	-	-	- 196	- 0.02
Tuamotu Arch.	13,976	1.20	-	-	- 13,976	- 1.20
Aden	-	-	25,486	1.38	+ 25,486	+ 1.38
Bahrein	-	-	3,577	0.20	+ 3,577	+ 0.20
Ceylon	-	-	2,442	0.13	+ 2,442	+ 0.13
Chile	-	-	4,164	0.23	+ 4,164	+ 0.23
China	-	-	11,547	0.62	+ 11,547	+ 0.62
French Oceania	-	-	13,164	0.71	+ 13,164	+ 0.71
Hong Kong	-	-	15,914	0.86	+ 15,914	+ 0.86
Hawaii	-	-	2,515	0.14	+ 2,515	+ 0.14
Jamaica	-	-	16,351	0.89	+ 16,351	+ 0.89
Netherlands	-	-	5,680	0.31	+ 5,680	+ 0.31

Foreland	1950		1961		Change 1950-61	
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent
Netherland Antilles	-	-	1,722	0.09	+ 1,722	+ 0.09
Panama Canal Zone	-	-	78,858	4.27	+ 78,858	+ 4.27
Peru	-	-	15,428	0.83	+ 15,428	+ 0.83
Phillippines	-	-	12,090	0.66	+ 12,090	+ 0.66
Portugal	-	-	292	0.02	+ 292	+ 0.02
Singapore	-	-	13,440	0.73	+ 13,440	+ 0.73
Society Is.	-	-	46	0.00	+ 46	+ 0.00
South Africa	-	-	11,921	0.64	+ 11,921	+ 0.64
Trinidad	-	-	3,602	0.20	+ 3,602	+ 0.20
Venezuala	-	-	8,172	0.44	+ 8,172	+ 0.44
	1,163,934	100.00	1,848,869	100.00	+684,935	-

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.24, and for the year 1961, p.12.

TABLE LVI
INDEX OF CONCENTRATION (a)
1950 - 1961

Commodity	1950	1961	Change 1950-61
	Per cent	Per cent	Per cent
Butter	97.98	96.56	- 1.42
Cheese	95.19	95.41	+ 0.22
Frozen Meat	74.97	69.01	- 5.96
Wool	74.01	66.90	- 7.11
Fruit	100.00	96.13	- 3.87
Softwoods	85.71	98.47	+12.76

(a) Tonnage handled by the first four ports in each commodity.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, pp.55-62, and for the year 1961, pp.20-8.

TABLE LVII
BALANCE OF FLOW IN OVERSEAS TRADE
1950 - 1961

Port	1950		1961 (a)	
	Imports Per Cent	Exports Per Cent	Imports Per Cent	Exports Per Cent
Bay of Islands	-	-	-	86.18
Whangarei	100.00	-	100.00	-
Auckland	77.69	-	81.28	-
Onehunga	62.88	-	-	-
Raglan	100.00	-	-	-
Tauranga	-	91.42	-	53.14
Gisborne	-	-	-	87.41
Napier	-	60.86	<u>64.82</u>	-
New Plymouth	77.36	-	<u>66.82</u>	-
Wanganui	-	-	100.00	-
Wellington	75.36	-	82.75	-
Picton	-	-	-	93.84
Nelson	100.00	-	50.46	-
Westport	-	-	100.00	-
Greymouth	-	98.71	-	98.33
Hokitika	100.00	-	-	-
Jacksons Bay	-	-	-	100.00
Lyttelton	78.81	-	85.93	-
Timaru	-	73.39	-	73.50
Oamaru	99.42	-	60.61	-
Otago	82.02	-	79.16	-
Bluff	-	65.76	<u>60.56</u>	-

(a) Figure underlined indicates reversal in net flow.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.18.

TABLE LVIII
 COASTAL TONNAGE (a)
 1950 - 1961

Year	RECEIPTS	SHIPMENTS	TOTAL
	Tonnage	Tonnage	Tonnage
1950	1,923,221	1,901,224	3,824,445
1951	1,649,439	1,596,387	3,245,826
1952	1,971,925	1,846,616	3,818,541
1953	1,975,448	1,858,608	3,834,056
1954	2,120,786	1,948,195	4,068,981
1955	2,155,588	1,983,879	4,139,467
1956	2,148,733	1,943,784	4,092,517
1957	2,252,605	1,963,710	4,216,315
1958	2,259,487	2,018,076	4,277,563
1959	2,179,689	1,930,003	4,109,692
1960	2,282,968	1,995,578	4,278,546
1961	2,433,177	2,164,491	4,597,668

(a) Transshipments excluded.

Source:- Report on the Transport Statistics of N.Z., 1950-61.

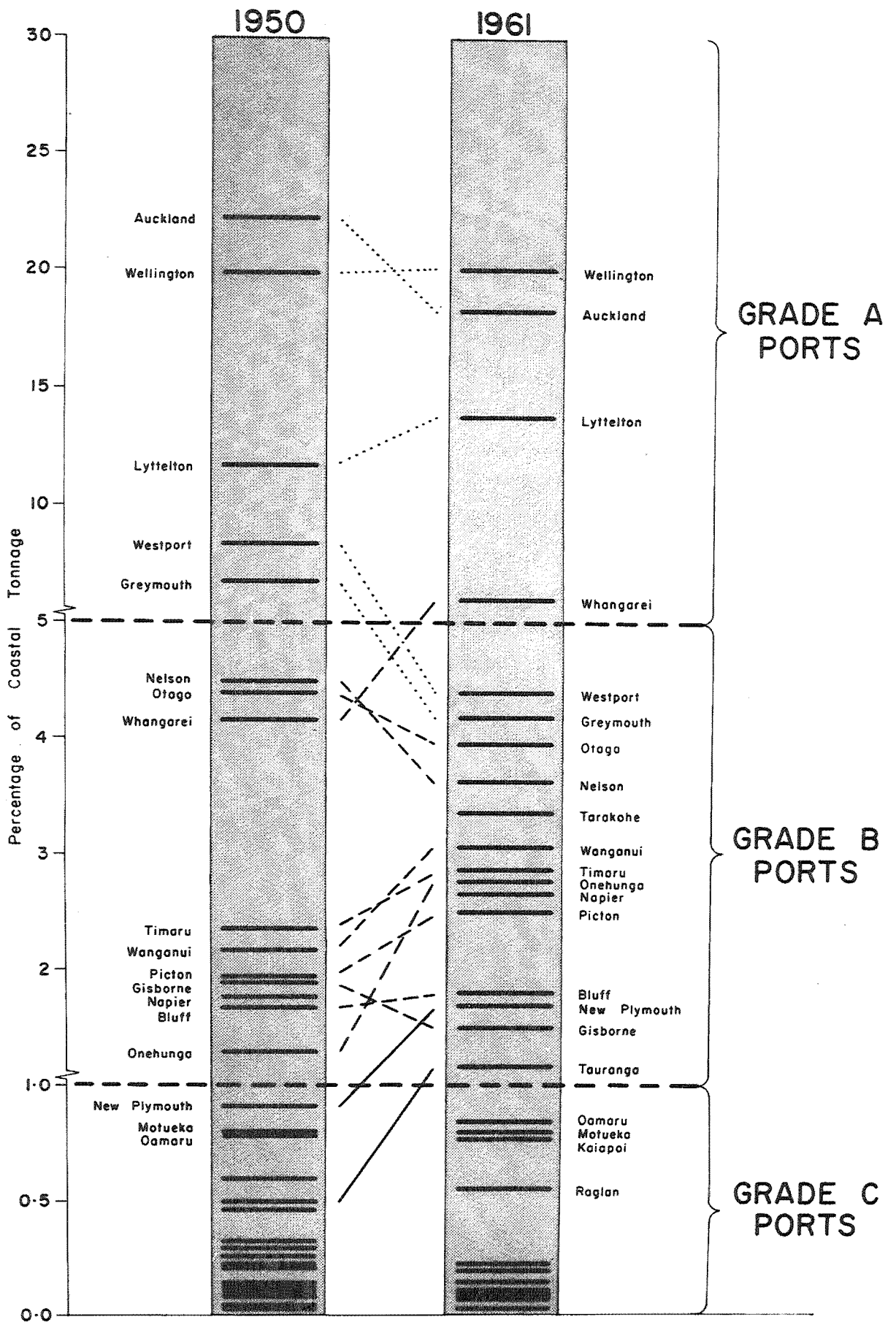


Fig.48. Changes in the Ranking of Ports on the Coastal Tonnage Scale 1950-1961.

Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, and for the year 1961, p.18.

TABLE LIX
CHANGES IN COASTAL TONNAGE
1950 - 1961

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Mangonui	8,162	0.20	5,872	0.13	- 2,290	- 0.07	9,195	- 3,323
Bay of Islands	1,495	0.04	3,041	0.07	+ 1,546	+ 0.03	1,839	+ 1,202
Hokianga	2,497	0.07	-	-	- 2,497	- 0.07	3,218	- 3,218
Whangarei	157,799	4.13	269,054	5.85	+111,255	+ 1.72	189,884	+ 79,170
Auckland	846,441	22.13	816,810	17.17	- 29,631	- 4.96	1,017,464	-200,654
Onehunga	49,224	1.29	125,818	2.74	+ 76,594	+ 1.45	59,310	+ 66,508
Raglan	9,736	0.25	24,590	0.54	+ 14,854	+ 0.29	11,494	+ 13,096
Thames	4,231	0.11	4,524	0.10	+ 293	- 0.01	5,057	- 533
Tauranga	18,690	0.49	52,447	1.14	+ 33,757	+ 0.65	22,529	+ 29,918
Whakatane	22,444	0.59	-	-	- 22,444	- 0.59	27,126	- 27,126
Opotiki	11,772	0.31	-	-	- 11,772	- 0.31	14,252	- 14,252
Ohiwa	-	-	9,912	0.22	+ 9,912	+ 0.22	-	+ 9,912
Tokomaru Bay	8,493	0.22	1,138	0.02	- 7,355	- 0.20	10,115	- 8,977
Tologa Bay	1,416	0.04	2,907	0.06	+ 1,491	+ 0.02	1,839	+ 1,068
Gisborne	72,097	1.88	67,580	1.47	- 4,517	- 0.41	86,436	- 18,856
Napier	66,421	1.74	120,604	2.62	+ 54,183	+ 0.88	79,999	+ 40,605
New Plymouth	34,435	0.90	77,150	1.67	+ 42,715	+ 0.77	41,397	+ 35,753
Patea	17,237	0.46	-	-	- 17,237	- 0.46	21,149	- 21,149
Wanganui	81,978	2.15	139,274	3.03	+ 57,296	+ 0.88	98,850	+ 40,424
Wellington	755,959	19.77	910,879	19.81	+154,920	+ 0.04	908,959	+ 1,920
NORTH ISLAND	2,170,527	56.75	2,631,600	57.24	+461,073	+ 0.49	2,609,177	+ 22,423
Picton	73,750	1.93	113,957	2.47	+ 40,207	+ 0.54	88,735	+ 25,222
Wairau	10,676	0.28	8,326	0.18	- 2,350	- 0.10	12,873	- 4,546
Nelson	171,101	4.47	165,392	3.60	- 5,709	+ 0.87	205,516	- 40,114
Motueka	30,345	0.79	36,390	0.79	+ 6,045	-	36,320	- 70
Tarakohe	-	-	152,446	3.32	+152,446	+ 3.32	-	+152,446
Waitapu	4,315	0.12	-	-	- 4,315	- 0.12	5,517	- 5,517

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Westport	317,719	8.31	200,896	4.37	-116,823	- 3.94	382,066	-181,170
Greymouth	249,051	6.51	191,559	4.16	- 57,492	- 2.35	299,308	-107,749
Hokitika	2,852	0.07	-	-	- 2,852	- 0.07	3,218	- 3,218
Jacksons Bay	-	-	-	-	-	-	-	-
Kaiapoi	-	-	35,145	0.76	+ 35,145	+ 0.76	-	+ 35,145
Lyttelton	440,696	11.52	627,178	13.64	+186,482	+ 2.12	529,651	+ 97,527
Timaru	88,725	2.32	129,619	2.82	+ 40,894	+ 0.50	106,666	+ 22,950
Oamaru	30,254	0.79	38,357	0.84	+ 8,103	+ 0.05	36,321	+ 2,036
Otago	167,755	4.39	180,677	3.93	+ 12,912	- 0.46	201,838	- 21,161
Bluff	63,035	1.65	82,051	1.79	+ 19,016	- 0.14	75,862	+ 6,189
Half Moon Bay	3,817	0.10	4,065	0.09	+ 248	- 0.01	4,597	- 532
SOUTH ISLAND	1,653,918	43.25	1,966,068	42.76	+312,150	- 0.49	1,988,492	- 22,424
NEW ZEALAND	3,824,445	100.00	4,597,668	100.00	+773,223	-	4,597,669	

- (a) Number of tons required to retain 1950 share of coastal tonnage.
(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of the coastal tonnage.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.8.

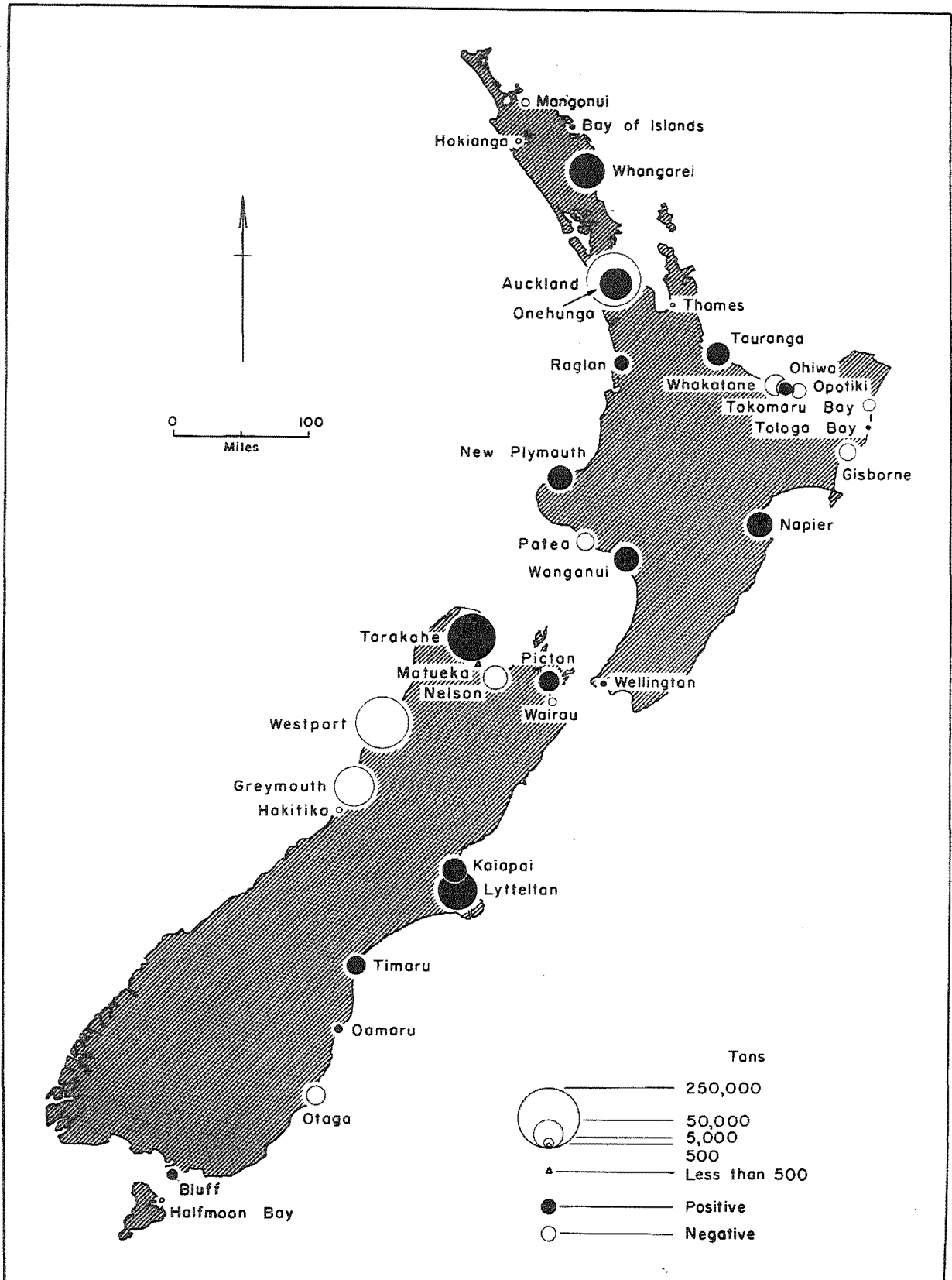


Fig.49. Changes in the Concentration of the Coastal Tonnage 1950-1961.
 Difference between a port's coastal tonnage in 1961 and tonnage required to retain 1950 share of New Zealand's gross tonnage.
 Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, p.40 and for the year 1961, p.18.

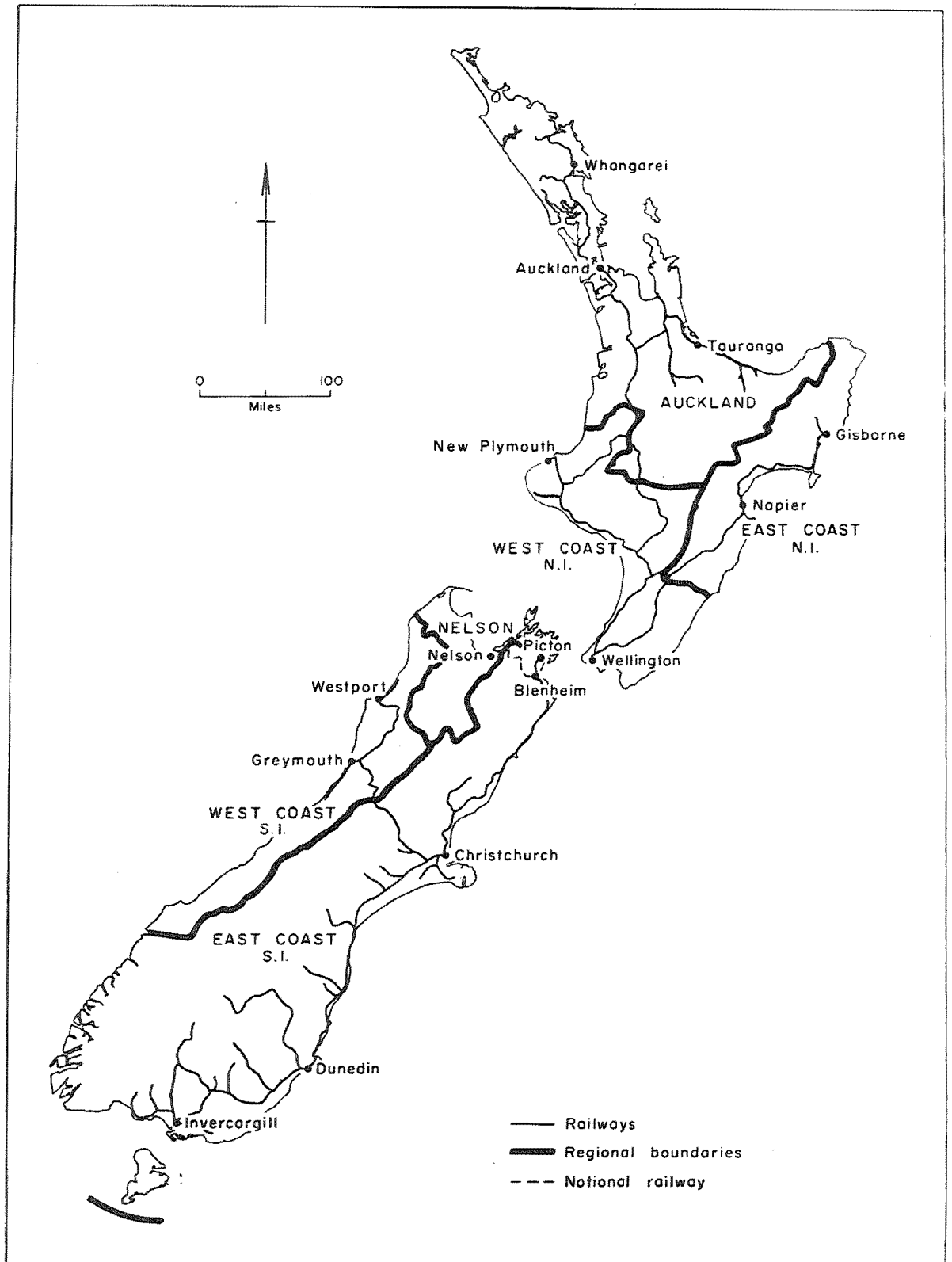


Fig.50. Regional Boundaries 1950-1961.
 Regions based on the location of economic activities, the transport network and the patterns of circulation between 1950-1961.

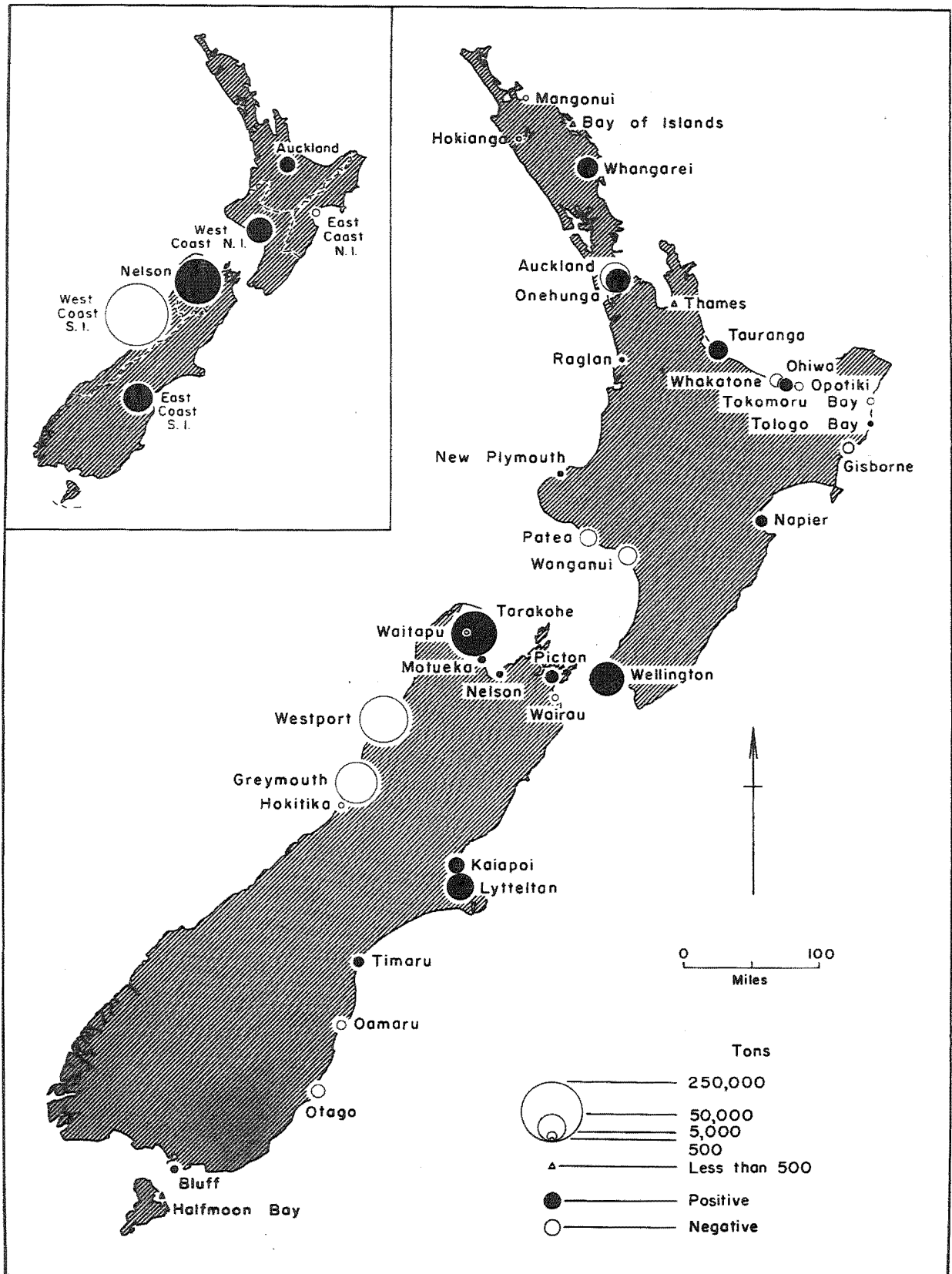


Fig.51. Changes in the Concentration of Shipments 1950-1961.
 Difference between a port's shipments in 1961 and tonnage required to retain 1950 share of New Zealand's shipments.
 Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, p.40 and for the year 1961, p.18.

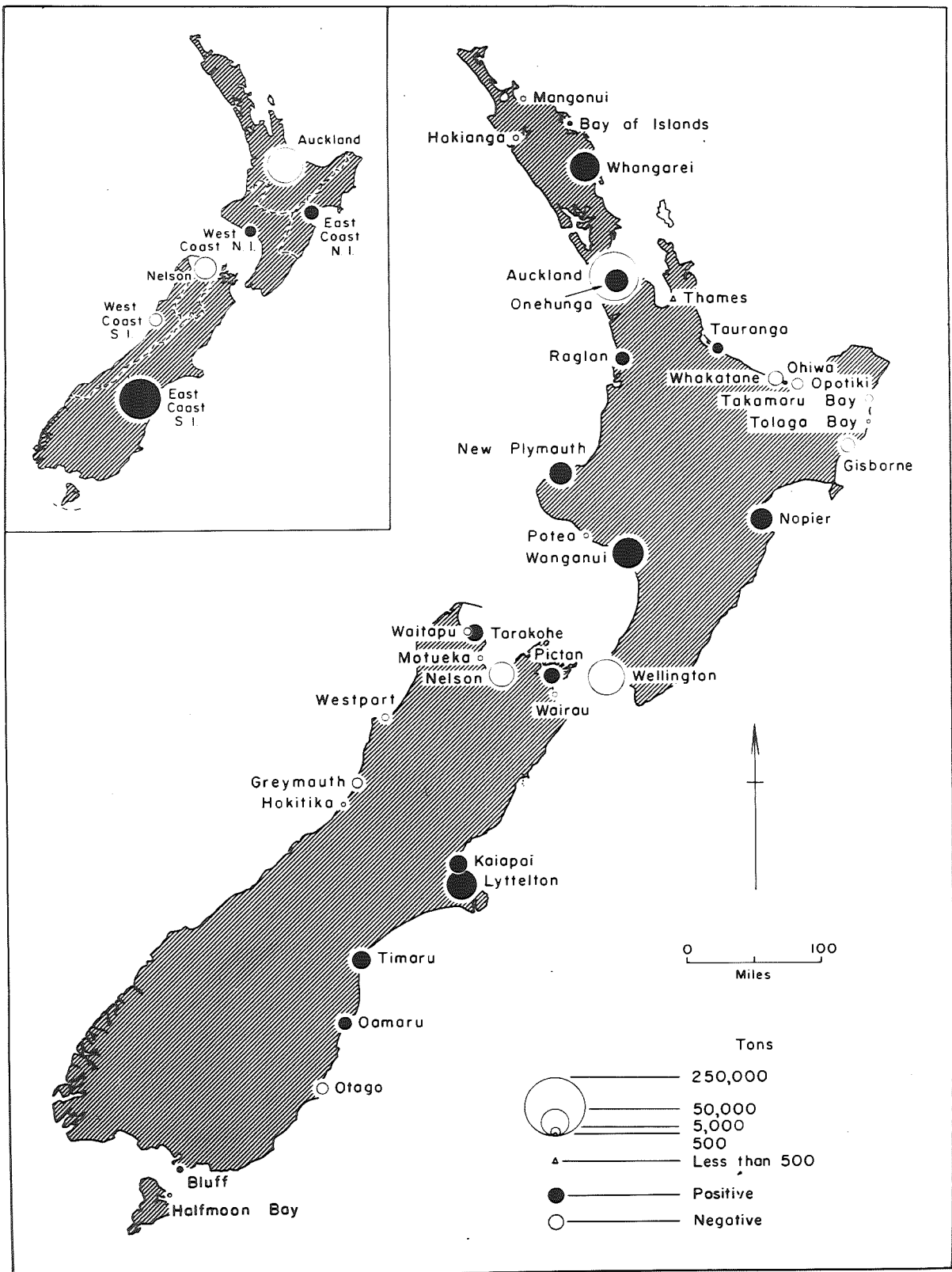


Fig.52. Changes in the Concentration of Receipts 1950-1961.
 Difference between a port's receipts in 1961 and tonnage required to retain 1950 share of New Zealand's receipts.
 Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, p.40 and for the year 1961, p.18.

TABLE LX
CHANGES IN SHIPMENTS
1950 - 1961

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Mangonui	2,415	0.13	500	0.02	- 1,915	- 0.11	2,814	- 2,314
Bay of Islands	340	0.01	-	-	- 340	- 0.01	216	- 216
Hokianga	1,052	0.05	-	-	- 1,052	- 0.06	1,082	- 1,082
Whangarei	103,690	5.46	145,625	6.73	+ 41,935	+ 1.47	118,181	+ 14,491
Auckland	235,858	12.41	210,916	9.74	- 24,942	- 2.67	268,613	- 57,697
Onehunga	27,749	1.46	65,885	3.05	+ 38,136	+ 1.59	31,602	+ 34,283
Raglan	595	0.03	2,007	0.09	+ 1,412	+ 0.06	649	+ 1,358
Thames	816	0.04	467	0.02	- 349	- 0.02	866	- 399
Tauranga	3,501	0.19	27,075	1.25	+ 23,574	+ 1.06	4,113	+ 22,962
Whakatane	11,097	0.58	-	-	- 11,097	- 0.58	12,554	- 12,554
Opotiki	4,697	0.25	-	-	- 4,697	- 0.25	5,411	- 5,411
Ohiwa	-	-	8,966	0.41	+ 8,966	+ 0.41	-	+ 8,966
Tokomaru Bay	4,848	0.25	1,001	0.05	- 3,847	- 0.20	5,411	- 4,410
Tologa Bay	717	0.04	2,838	0.13	+ 2,121	+ 0.09	865	+ 1,973
Gisborne	18,639	0.98	13,583	0.63	- 5,056	- 0.35	21,212	- 7,627
Napier	9,537	0.50	17,942	0.83	+ 8,405	+ 0.33	10,822	+ 7,120
New Plymouth	4,818	0.25	7,021	0.32	+ 2,203	+ 0.07	5,411	+ 1,610
Patea	16,033	0.84	-	-	- 16,033	- 0.84	18,182	- 18,182
Wanganui	29,010	1.53	10,769	0.50	- 18,241	- 1.03	33,117	- 22,348
Wellington	303,063	15.94	423,828	19.59	+120,765	+ 3.65	345,020	+ 78,808
NORTH ISLAND	778,475	40.94	938,423	43.36	+159,948	+ 2.41	886,143	+ 52,280
Picton	39,208	2.06	53,719	2.48	+ 14,511	+ 0.42	44,589	+ 9,130
Wairau	5,592	0.29	3,481	0.16	- 2,111	- 0.13	6,277	- 2,796
Nelson	78,445	4.13	91,228	4.21	+ 12,783	+ 0.08	89,393	+ 1,835
Motueka	23,655	1.24	29,473	1.36	+ 5,818	+ 0.12	26,840	+ 2,633
Tarakohe	-	-	135,852	6.28	+135,852	+ 6.28	-	+135,852
Waitapu	1,253	0.07	-	-	- 1,253	- 0.07	1,515	- 1,515

Port	ACTUAL				HYPOTHETICAL			
	1950		1961		Change 1950-61		Estimate 1961(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Westport	310,551	16.33	195,073	9.01	-115,478	- 7.32	353,461	-158,388
Greymouth	234,591	12.34	179,019	8.27	- 55,572	- 4.07	267,068	- 88,051
Hokitika	1,848	0.10	-	-	- 1,848	- 0.10	2,164	- 2,164
Jacksons Bay	-	-	-	-	-	-	-	-
Kaiapoi	-	-	17,417	0.80	+ 17,417	+ 0.80	-	+ 17,417
Lyttelton	246,780	12.99	324,937	15.02	+ 78,157	+ 2.03	280,951	+ 43,896
Timaru	60,501	3.18	75,002	3.47	+ 14,501	+ 0.29	68,831	+ 6,171
Oamaru	25,464	1.34	23,132	1.07	- 2,332	- 0.27	29,004	- 5,872
Otago	75,905	3.99	73,048	3.37	- 2,857	- 0.62	86,363	- 13,315
Bluff	17,596	0.93	22,968	1.06	+ 5,372	+ 0.13	20,130	+ 2,838
Half Moon Bay	1,360	0.07	1,719	0.08	+ 359	+ 0.01	1,515	+ 204
SOUTH ISLAND	1,122,749	59.06	1,226,068	56.64	+103,319	- 2.41	1,278,348	- 52,280
NEW ZEALAND	1,901,224	100.00	2,164,491	100.00	+263,267	-	2,164,491	-

(a) Number of tons required to retain 1950 share of shipments.

(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of shipments.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.8.

TABLE LXI
REGIONAL CHANGES IN SHIPMENTS
1950 - 1961

Region	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961(a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Auckland	391,810	20.61	461,441	21.31	+ 69,631	- 0.70	446,102	+ 15,339
East Coast	33,741	1.77	35,364	1.64	+ 1,623	- 0.13	38,311	- 2,947
West Coast	352,924	18.56	441,618	20.40	+ 88,694	+ 1.84	401,730	+ 39,888
NORTH ISLAND	778,425	40.94	938,423	43.35	+159,948	+ 2.41	886,143	+ 52,280
Nelson	103,353	5.44	256,553	11.87	+153,200	+ 6.42	117,748	+138,805
West Coast	546,990	28.77	374,092	17.28	-172,898	-11.49	622,724	-248,632
East Coast	472,406	24.85	595,423	27.50	+123,017	+ 2.65	537,876	+ 57,547
SOUTH ISLAND	1,122,749	59.06	1,226,068	56.65	+103,319	-2.41	1,278,348	- 52,280
NEW ZEALAND	1,901,224	100.00	2,164,491	100.00	+263,767	-	2,164,491	-

(a) Number of tons required to retain 1950 share of shipments.

(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of shipments.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.8.

TABLE LXII
CHANGES IN RECEIPTS
1950 - 1961

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Mangonui	5,747	0.30	5,372	0.22	- 375	- 0.08	7,299	- 1,927
Bay of Islands	1,155	0.06	3,041	0.12	+ 1,886	+ 0.06	1,460	+ 1,581
Hokianga	1,445	0.08	-	-	- 1,455	- 0.08	1,946	- 1,946
Whangarei	54,109	2.81	123,429	5.07	+ 69,320	+ 2.26	68,372	+ 55,522
Auckland	610,583	31.75	605,894	24.90	- 4,689	- 6.85	772,534	-166,640
Onehunga	21,475	1.12	59,933	2.46	+ 38,458	+ 1.34	27,251	+ 32,682
Raglan	9,141	0.48	22,583	0.93	+ 13,442	+ 0.45	11,679	+ 10,904
Thames	3,415	0.18	4,057	0.17	+ 642	- 0.01	4,380	- 323
Tauranga	15,189	0.79	25,372	1.04	+ 10,183	+ 0.25	19,222	+ 6,150
Whakatane	11,347	0.59	-	-	- 11,347	- 0.59	14,356	- 14,356
Opotiki	7,075	0.37	-	-	- 7,075	- 0.37	9,003	- 9,003
Ohiwa	-	-	946	0.04	+ 946	+ 0.04	-	+ 946
Tokomaru Bay	3,645	0.19	137	0.01	- 3,508	- 0.18	4,380	- 4,243
Tologa Bay	699	0.04	69	0.00	- 630	- 0.04	973	- 904
Gisborne	53,458	2.78	53,997	2.22	+ 539	- 0.56	67,642	- 13,645
Napier	56,884	2.96	102,662	4.22	+ 45,778	+ 1.26	72,022	+ 30,640
New Plymouth	29,617	1.54	70,129	2.88	+ 40,512	+ 1.34	37,470	+ 32,659
Patea	1,204	0.06	-	-	- 1,204	- 0.06	1,460	- 1,460
Wanganui	52,968	2.75	128,505	5.28	+ 75,537	+ 2.53	66,912	+ 61,653
Wellington	452,896	23.53	487,051	20.02	+ 34,155	- 3.51	572,526	- 85,475
NORTH ISLAND	1,392,052	72.38	1,693,177	69.58	+301,125	- 2.80	1,761,134	- 67,957
Piiton	34,539	1.80	60,238	2.48	+ 25,699	+ 0.68	43,797	+ 16,441
Wairau	5,084	0.26	4,845	0.20	- 239	- 0.06	6,326	- 1,481
Nelson	92,656	4.82	74,164	3.05	- 18,942	- 1.77	117,279	- 43,115
Motueka	6,490	0.34	6,917	0.28	+ 427	- 0.06	8,273	- 1,356
Taraki	-	-	16,594	0.68	+ 16,594	+ 0.68	-	+ 16,594
Waita	3,062	0.16	-	-	- 3,062	- 0.16	3,893	- 3,893
Westport	7,168	0.37	5,823	0.24	- 1,345	- 0.13	9,003	- 3,180

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Greymouth	14,460	0.75	12,540	0.52	- 1,920	- 0.23	18,249	- 5,709
Hokitika	1,004	0.05	-	-	- 1,004	- 0.05	1,217	- 1,217
Jacksons Bay	-	-	-	-	-	-	-	-
Kaiapoi	-	-	17,728	0.73	+ 17,728	+ 0.73	-	+ 17,728
Lyttelton	193,916	10.08	302,251	12.42	+108,335	+ 2.34	245,264	+ 56,987
Timaru	28,224	1.47	54,617	2.24	+ 26,393	+ 0.77	35,768	+ 18,847
Oamaru	4,790	0.25	15,225	0.63	+ 10,435	+ 0.38	6,083	+ 9,142
Otago	91,850	4.78	107,629	4.42	+ 15,779	- 0.38	116,306	- 8,677
Bluff	45,469	2.36	59,083	2.43	+ 13,614	+ 0.07	57,423	+ 1,660
Half Moon Bay	2,457	0.13	2,346	0.10	- 111	- 0.03	3,163	- 817
SOUTH ISLAND	531,169	27.62	740,000	30.42	+208,831	+ 2.80	672,043	+ 69,957
NEW ZEALAND	1,923,221	100.00	2,433,177	100.00	+509,956	-	2,433,177	-

(a) Number of tons required to retain 1950 share of receipts.

(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of receipts.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.8.

TABLE LXIII
REGIONAL CHANGES IN RECEIPTS
1950 - 1961

Region	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Auckland	770,681	38.51	850,627	34.96	+109,946	-3.55	937,016	- 86,389
East Coast	114,686	5.97	156,865	6.45	+ 42,179	+0.48	145,262	+ 11,603
West Coast	536,685	27.90	685,685	28.18	+149,000	+0.28	678,856	+ 6,829
NORTH ISLAND	1,392,052	72.38	1,693,177	69.59	+301,125	-2.79	1,761,134	- 67,957
Nelson	102,208	5.32	97,675	4.02	- 4,533	-1.32	129,445	- 31,770
West Coast	22,632	1.18	18,363	0.76	- 4,269	-0.42	28,711	- 10,348
East Coast	406,329	21.12	623,962	25.63	+217,633	+4.51	513,887	+110,075
SOUTH ISLAND	531,169	27.62	740,000	30.41	+208,831	+2.79	672,043	+ 67,957
NEW ZEALAND	1,923,221	100.00	2,433,177	100.00	+509,956	-	2,433,177	

(a) Number of tons required to retain 1950 share of receipts.

(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of receipts.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.8.

TABLE LXIV
CHANGES IN POPULATION
1951 - 1961

Region	1951		1961		1951-61	
	Number	Per cent	Number	Per cent	Number	Per cent
Northland	75,261	3.88	86,391	3.58	+ 11,130	-0.30
Central Auckland	382,014	19.70	514,507	21.31	+132,493	+1.61
South Auckland/ Bay of Plenty	246,080	12.68	349,624	14.48	+103,554	+1.80
AUCKLAND	703,355	36.26	950,522	39.37	+247,167	+3.11
Poverty Bay ^(a)	41,344	2.13	46,478	1.93	+ 5,134	-0.20
Hawke's Bay	91,205	4.70	114,470	4.74	+ 23,265	+0.04
EAST COAST	132,549	6.83	160,948	6.67	+ 28,399	-0.16
Taranaki	86,883	4.48	99,774	4.13	+ 12,891	-0.35
Wellington	390,682	20.16	473,541	19.61	+ 82,859	-0.55
WEST COAST	477,565	24.64	573,315	23.74	+ 95,750	-0.90
NORTH ISLAND	1,313,869	67.73	1,684,785	69.76	+370,916	+2.03
NELSON	42,257	2.19	50,338	2.08	+ 8,081	-0.11
WEST COAST	39,624	2.05	37,470	1.55	- 2,154	-0.50
Marlborough	22,891	1.18	27,748	1.15	+ 4,857	-0.03
Canterbury	283,987	14.64	344,597	14.27	+ 60,610	-0.37
Otago	159,231	8.21	176,325	7.31	+ 17,094	-0.90
Southland	77,613	4.00	93,721	3.88	+ 16,108	-0.12
EAST COAST	543,722	28.03	642,391	26.61	+ 98,669	-1.42
SOUTH ISLAND	625,603	32.27	730,199	30.24	+104,596	-2.03
NEW ZEALAND	1,939,472	100.00	2,414,984	100.00	+475,512	-

(a) To avoid confusion the East Coast region recognised as a Statistical Area in the Population Census is changed to Poverty Bay.

Source:- N.Z. Population Census, Vol. 1, 1961.

TABLE LXV
 PROPORTION OF TOTAL ENERGY CONSUMPTION, BY SOURCES,
 IN TERMS OF COAL EQUIVALENT

Sources of Energy	Percentages of total						
	1950	1955	1956	1957	1958	1959	1960
Solid fuels (a)	48	35	34	32	34	34	33
Liquid fuels (a)	41	51	51	53	51	50	52
Hydro-electricity (b)	11	14	15	15	15	16	15

(a) Excluding bunker oil.

(b) These percentages based on the United Nations' conversion factor, probably understate the importance of hydro-electricity to the economy. If the contribution of hydro-electricity were measured in terms of the coal required to produce it, this would have amounted in 1958 to over 3m. tons, or twice the actual coal production of New Zealand.

Source:- Commonwealth Development and its Financing,
4. New Zealand, 1963, p.24.

TABLE LXVI
NET FREIGHT TON-MILES BY FORMS OF
TRANSPORT

Form of Transport	1948		1958	
	Net ton-miles (millions)	Per cent	Net ton-miles (millions)	Per cent
Air	1	-	5	-
Coastal Shipping	447	21	466	15
Rail	937	45	1,151	38
Road	704	34	1,427	47

Note: No parallel figures are available for 1950 and 1961.

Source:- 'Transport of goods by Road in New Zealand', Statement of Policy by Hon. J. Mathieson, Minister of Transport. A.J.H.R. H.40A., 1959.

COMMODITY	INTRA REGIONAL						INTRA ISLAND						INTER ISLAND					
	North Is.			South Is.			North Is.			South Is.			North Is.			South Is.		
	A	E.C.	W.C.	N	W.C.	E.C.	A	E.C.	W.C.	N	W.C.	E.C.	A	E.C.	W.C.	N	W.C.	E.C.
Motor Vehicles	□		□				□	□	□									
Beer	□	●	□				□	○	□									
Rubber	□		□				○	○	○				●	●	●	●	●	●
Pulp and Paper	○						○	○	○									
Frozen and Canned Foods		□					□						●					
Glass	○						○	○								●	●	●
Grain	□	□					□	○	○									
Breakfast Foods	□	○					○	○	○				●	●	●			
Clothing	□		□				○	○	○	○	○		▲		▲			
Biscuits/Confectionery	□	○					○	○	○	○	○		●	●	●			
Stationery	□		○				○	○	○									
Sugar	□						●	●								●		●
Engineering	○	□	○				○	○	○							●	●	●
Cement	□	○					○	○	○				●	●	●			
Fertilizer	□	○					●									●		●
Fruit	□																	
Paints	□	○					○	○	○									

□ Road Transport ● Coastal Shipping ○ Rail ▲ Air

Fig.53. Methods Used by Sample Firms in Distributing Goods to Different Regions in New Zealand, 1962.

Regional location of firm and method of transporting goods within the same region is found in intra-regional column. The firm's method of transporting goods to other regions in the same island is found in intra island column and the firm's method of transporting goods to the other island is in the inter island column.

Source:- Personal interviews.

TABLE LXVII
THE COST OF THE INTER ISLAND MOVEMENT OF
GOODS BETWEEN THE MAIN CENTRES

2,240 LBS GENERAL CARGO

Cubic Feet	(i) Rail/Air	(ii) Rail/Sea Through Booking via Picton (Coastal Ship)	(iii) Rail/Sea Through Booking Direct Ship (Coastal Shipping) (a)
Wellington - Christchurch			
40	19 6 5	11 17 9	6 18 6
80	19 6 5	17 5 9	13 15 -
120	19 6 5	22 13 9	20 11 6
160	19 6 5	28 1 9	27 8 -
Wellington - Dunedin			
40	22 3 3	14 14 7	6 12 6
80	22 3 3	20 2 7	13 3 -
120	22 3 3	25 10 7	19 13 6
160	22 3 3	30 18 7	26 4 -
Auckland - Christchurch			
40	28 13 -	21 4 4	8 2 -
80	28 13 -	26 12 4	16 2 -
120	28 13 -	32 - 4	24 2 -
160	28 13 -	37 8 4	32 2 -
Auckland - Dunedin			
40	31 9 10	24 1 2	7 16 6
80	31 9 10	29 9 2	15 11 -
120	31 9 10	34 17 2	23 5 6
160	31 9 10	40 5 2	31 - -
<u>Volume of sample commodities.</u>			
C.ft			
40-50 Iron, Steel, Nails, Bottled Beer, Sugar			
50-80 Wire, Apples, Chests of Tea, Malt			
80-120 Washing Machines, Tyres, Clothing, Drapery, Blankets			
120-160 Radios, Radiograms, Refrigerators			
160-200 T.V. Sets, Furniture, Tubular steel ware, Drying Cabinets			

(a) Includes Wharfage and commission.

Source:- Commercial Branch, New Zealand Railways, 1962.

TABLE LXVIII
 COMMODITY ANALYSIS OF RECEIPTS
 1950 - 1961

Commodity	1950		1961		Change 1950-61	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
AGRICULTURAL						
Barley	7,415	0.39	-	-	+ 7,415	- 0.39
Beans and Peas	4,883	0.26	3,217	0.13	- 1,666	- 0.13
Flour	57,963	3.02	62,442	2.57	+ 4,479	- 0.45
Oats	15,756	0.82	-	-	-15,756	- 0.82
Oats for humans	6,025	0.31	-	-	- 6,025	- 0.31
Pollard	13,698	0.71	-	-	-13,698	- 0.71
Potatoes	43,934	2.28	39,613	1.63	- 4,321	- 0.65
Seeds	7,727	0.40	7,342	0.30	- 385	- 0.10
Wheat	2,613	0.14	-	-	- 2,613	- 0.14
Cereal products	-	-	25,683	1.06	+25,683	+ 1.06
Chaff, hay, straw	-	-	1,924	0.08	+ 1,924	+ 0.08
Grain	-	-	30,450	1.25	+30,450	+ 1.25
	160,014	8.33	170,671	7.02	+10,657	- 1.31
PASTORAL						
Butter	20,981	1.09	11,683	0.48	- 9,298	- 0.61
Cheese	4,641	0.24	198	0.01	- 4,443	- 0.23
Hides, skins	3,953	0.21	1,537	0.06	- 2,416	- 0.15
Milk Products	7,099	0.37	5,918	0.24	- 1,181	- 0.13
Sheep skins	784	0.04	-	-	- 784	- 0.04
Tallow	1,667	0.09	1,020	0.04	- 647	- 0.05
Livestock	-	-	3,166	0.13	- 3,166	- 0.13
Meat frozen	1,124	0.06	1,991	0.08	+ 867	+ 0.02
preserved	1,463	0.08	2,403	0.10	+ 940	+ 0.02
Wool	15,947	0.83	11,967	0.49	- 3,980	- 0.34
	57,659	3.01	39,883	1.63	-17,776	- 1.38

Commodity	1950		1961		Change 1950-61	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
FRUIT						
Fruit preserved	7,255	0.38	4,111	0.17	- 3,144	- 0.21
fresh	29,163	1.52	30,480	1.25	+ 1,317	- 0.27
	36,418	1.90	34,591	1.42	- 1,827	- 0.48
TIMBER						
Hardwoods	4,935	0.26	3,621	0.15	- 1,314	- 0.11
Softwoods	23,144	1.20	22,160	0.91	- 984	- 0.29
Paper	-	-	36,073	1.48	+ 36,073	+ 1.48
Woodpulp	-	-	4,778	0.20	+ 4,778	+ 0.20
	28,079	1.46	66,632	2.74	+ 38,553	+ 1.26
FOOD & DRINK						
Fish	12,723	0.66	3,130	0.13	- 9,593	- 0.53
Rabbits	518	0.03	-	-	- 518	- 0.03
Sugar	43,094	2.24	62,206	2.56	+ 19,112	+ 0.32
Wines	16,577	0.86	24,346	1.00	+ 7,769	+ 0.14
Honey	-	-	1,297	0.05	+ 1,297	+ 0.05
	72,912	3.79	90,979	3.74	+ 18,067	- 0.05
MISCELLANEOUS						
Cement	130,215	6.77	303,743	12.48	+173,528	- 5.71
Coal	495,074	25.75	334,487	13.74	-160,587	-12.01
Lime	10,011	0.52	7,656	0.32	- 2,355	- 0.20
Manures	21,261	1.06	48,286	1.98	+ 27,025	- 0.92
Petroleum	48,970	2.55	143,311	5.90	+ 94,341	+ 3.35
Coke	-	-	2,851	0.12	+ 2,851	+ 0.12
	705,531	36.65	840,334	34.54	+134,803	- 2.11

Commodity	1950		1961		Change 1950-61	
	Tonnage	Per Cent	Tonnage	Per Cent	Tonnage	Per Cent
ALL OTHER GOODS						
Other goods	862,608	44.84	795,949	32.72	- 66,659	+12.12
Hemp	-	-	1,213	0.05	+ 1,213	+ 0.05
Iron and steel	-	-	24,592	1.00	+ 24,592	+ 1.00
Machinery	-	-	16,197	0.67	+ 16,197	+ 0.67
Motor vehicles	-	-	352,136	14.47	+352,136	+14.47
	862,608	44.84	1,190,087	48.91	+327,479	- 4.07
	1,923,221	100.00	2,433,177	100.00	+509,956	-

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.44 and for the year 1961, p.11.

TABLE LXIX
CHANGES IN THE REGIONAL PER CAPITA TRADE
1950-1961

Region	RECEIPTS			SHIPMENTS			TOTAL		
	1950	1961	Change 1950-61	1950	1961	Change 1950-61	1950	1961	Change 1950-61
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Auckland	1.05	0.93	-0.12	0.55	0.50	-0.05	1.60	1.43	-0.17
East Coast	0.86	0.88	+0.02	0.25	0.19	-0.06	1.11	1.07	-0.04
West Coast	1.12	1.18	+0.06	0.73	0.76	+0.03	1.85	1.94	+0.09
NORTH ISLAND	1.06	1.01	-0.05	0.59	0.56	-0.03	1.65	1.57	-0.08
Nelson	2.44	1.95	-0.49	2.47	5.13	+2.66	4.91	7.08	+2.17
West Coast	0.60	0.49	-0.11	14.54	10.00	-4.54	15.14	10.49	-4.65
East Coast	0.75	1.02	+0.27	0.86	0.72	-0.14	1.61	1.84	+0.13
SOUTH ISLAND	0.85	1.01	+0.16	1.80	1.68	-0.12	2.65	2.69	+0.04
NEW ZEALAND	0.99	1.01	+0.02	0.98	0.90	-0.08	1.97	1.91	-0.06

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.8.
N.Z. Population Census, Vol.1.1961.

TABLE LXX
ESTIMATE OF THE VOLUME OF THE INTER REGIONAL INTRA
ISLAND AND INTER ISLAND ELEMENTS IN THE COASTAL TRADE
1950 - 1961

Port	RECEIPTS						SHIPMENTS					
	1950			1961			1950			1961		
	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island
AUCKLAND												
Mangonui	5,700	-	-	5,400	-	-	2,400	-	-	500	-	-
Bay of Islands	1,200	-	-	4,600	-	-	340	-	-	-	-	-
Whangarei	23,500	-	30,600	15,000	-	108,600	96,300	7,500	-	129,000	15,000	1,000
Hokianga	1,500	-	-	-	-	-	1,000	-	-	-	-	-
Auckland	380,000	35,000	195,000	321,000	45,000	225,000	129,500	21,000	85,500	60,000	39,000	138,000
Onehunga	7,000	1,000	13,600	-	1,500	58,700	1,100	2,400	24,000	-	4,000	62,100
Raglan	-	-	9,000	-	-	22,600	500	-	100	-	-	500
Thames	3,400	-	-	4,000	-	-	800	-	-	500	-	-
Tauranga	13,100	-	2,000	10,600	-	14,800	3,500	-	-	1,000	3,700	22,400
Whakatane	11,300	-	-	-	-	-	11,000	-	-	-	-	-
Opotiki	7,000	-	-	-	-	-	5,000	-	-	-	-	-
Ohiwa	-	-	-	100	-	800	-	-	-	-	-	9,000
	453,700	36,000	250,200	360,700	46,500	430,500	250,400	30,900	109,600	191,000	61,700	233,000
EAST COAST												
Tokomaru Bay	3,000	600	-	100	-	-	4,000	800	-	1,000	-	-
Tologa Bay	500	200	-	100	-	-	500	200	-	2,800	-	-
Gisborne	500	21,000	27,500	200	27,000	26,800	14,200	3,500	1,000	3,500	8,000	2,000
Napier	18,700	9,600	28,600	8,400	41,300	54,100	2,000	7,000	600	1,800	6,000	10,600
	22,700	31,400	56,100	8,800	68,300	80,900	20,700	11,500	1,600	9,100	14,000	12,600
WEST COAST												
New Plymouth	600	1,000	28,000	15,200	400	87,800	4,500	-	300	2,000	-	5,800
Patea	1,200	-	-	-	-	-	16,000	-	-	-	-	-
Wanganui	2,000	1,000	51,000	14,000	1,000	123,500	27,500	-	1,500	3,000	-	4,400
Wellington	19,000	22,000	430,000	3,500	17,000	466,500	3,000	15,000	285,000	35,000	16,000	372,800
	22,700	24,000	509,000	32,700	18,400	677,800	51,000	15,000	286,800	40,000	16,000	383,000

Port	RECEIPTS						SHIPMENTS					
	1950			1961			1950			1961		
	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island	Intra Regional	Intra Island	Inter Island
NORTH ISLAND	499,100	91,400	815,300	402,200	133,200	1,189,200	322,100	57,400	398,000	240,100	91,700	628,600
NELSON												
Waitapu	3,000	-	2,000	-	-	-	2,000	-	3,000	-	-	-
Tarakohe	-	-	-	-	-	16,600	-	-	-	-	-	135,800
Motueka	100	1,500	5,000	-	-	6,900	100	-	23,600	100	-	29,300
Nelson	8,000	1,500	66,600	700	2,200	71,800	3,500	1,000	77,000	100	400	92,900
	11,100	3,000	73,600	700	2,200	95,300	5,600	1,000	103,600	200	400	258,000
WEST COAST												
Westport	-	-	7,200	-	-	5,800	-	24,000	286,500	-	1,800	193,200
Greymouth	-	-	14,400	-	-	12,500	400	24,000	211,000	500	1,800	176,700
Hokitika	-	-	1,000	-	-	-	-	-	1,800	-	-	-
	-	-	22,600	-	-	28,300	400	48,000	499,300	500	3,600	369,900
EAST COAST												
Kaiapoi	-	-	-	-	-	17,700	-	-	-	-	-	17,400
Lyttelton	1,400	3,000	189,600	-	-	302,400	33,000	4,000	210,000	28,100	-	298,000
Timaru	9,000	-	19,200	12,000	-	44,700	-	-	60,500	-	-	89,100
Oamaru	100	-	4,100	4,100	-	15,200	-	-	25,500	-	-	23,100
Otago	1,000	-	90,900	1,500	-	107,500	400	-	60,400	400	-	83,000
Bluff	20,500	-	25,000	8,800	-	49,300	2,500	-	15,000	2,500	-	20,500
Half Moon Bay	2,500	-	-	2,300	-	-	1,400	-	-	1,700	-	-
	34,500	3,000	328,800	28,700	-	536,800	37,300	4,000	371,400	32,700	-	531,100
SOUTH ISLAND	35,600	6,000	425,000	29,400	2,200	660,400	43,300	53,000	974,300	33,400	4,000	1,159,000
NEW ZEALAND	534,700	97,400	1,240,300	431,600	135,400	1,849,600	365,400	100,400	1,372,300	273,500	95,700	1,787,600

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.8.

tes are derived from information supplied by individual shipping companies, harbour boards

TABLE LXXI
REGIONAL CHANGES IN COASTAL TONNAGE
1950 - 1961

Region	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961(a)	Deviation (b)
	Tonnage	Per. cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Auckland	1,132,491	29.61	1,312,068	28.54	+179,577	-1.07	1,361,369	- 49,301
East Coast	148,427	3.88	192,229	4.18	+ 43,802	+0.30	178,390	+ 13,839
West Coast	889,609	23.26	1,127,303	24.52	+237,694	+1.26	1,069,418	+ 57,885
NORTH ISLAND	2,170,527	56.75	2,631,600	57.24	+461,073	+0.49	2,609,177	+ 22,423
Nelson	205,561	5.38	354,228	7.70	+148,667	+2.32	247,355	+106,873
West Coast	569,622	14.89	392,455	8.54	-177,167	-6.35	684,593	-292,138
East Coast	878,735	22.98	1,219,385	26.52	+340,650	+3.54	1,056,544	+162,841
SOUTH ISLAND	1,653,918	43.25	1,966,068	42.76	+312,150	-0.49	1,988,492	- 22,424
NEW ZEALAND	3,824,445	100.00	4,597,668	100.00	+773,223	-	4,597,669	-

- (a) Number of tons required to retain 1950 share of the coastal tonnage.
(b) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of the coastal tonnage.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.8.

TABLE LXXII
 CHANGES IN RECEIPTS, SHIPMENTS AND
 TOTAL COASTAL TONNAGE HANDLED BY
 LEADING PORTS
 1950 - 1961

Region	RECEIPTS					SHIPMENTS					TOTAL				
	1950		1961		Change 1950-61	1950		1961		Change 1950-61	1950		1961		Change 1950-61
	Per cent	Port	Per cent	Port	Per cent	Per cent	Port	Per cent	Port	Per cent	Per cent	Port	Per cent	Port	Per cent
Auckland	85.18	Auckland	78.23	Auckland	- 6.95	60.19	Auckland	45.70	Auckland	-14.49	74.74	Auckland	62.25	Auckland	-12.29
East Coast	49.60	Gisborne	65.40	Napier	+15.80	55.24	Gisborne	50.74	Napier	- 4.50	48.57	Gisborne	62.09	Napier	+13.52
West Coast	84.39	Wellington	71.03	Wellington	-13.36	85.87	Wellington	95.97	Wellington	+10.10	84.97	Wellington	80.80	Wellington	- 4.17
Nelson	90.67	Nelson	75.93	Nelson	-14.74	75.90	Nelson	52.95	Tarakohe	-22.95	83.23	Nelson	46.65	Nelson	-36.58
West Coast	47.73	Greymouth	48.44	Greymouth	+ 0.71	56.74	Westport	52.15	Westport	- 4.59	55.78	Westport	51.19	Westport	- 4.59
East Coast	63.89	Lyttelton	68.29	Lyttelton	+ 4.40	52.24	Lyttelton	54.57	Lyttelton	+ 2.33	50.15	Lyttelton	51.43	Lyttelton	+ 1.28

Source:- Reports on the Transport Statistics of N.Z. for the year 1949-52, p.40, and for the year 1961, p.18.

TABLE LXXIII
BALANCE OF FLOW IN THE COASTAL TRADE
1950 - 1961

Port	1950		1961 (a)	
	Receipts	Shipments	Receipts	Shipments
	Per cent	Per cent	Per cent	Per cent
Mangonui	70.41		91.40	
Russell	77.25		100.00	
Hokianga	58.26		-	-
Whangarei		65.63		54.10
Auckland	72.13		74.18	
Onehunga		56.37		52.35
Raglan	99.38		91.83	
Thames	80.71		89.67	
Tauranga	81.26			<u>51.41</u>
Whakatane	50.55		-	-
Opotiki	60.10		-	-
Ohiwa	-	-	-	90.45
AUCKLAND	65.40		64.84	
Tokomaru Bay		57.08		87.96
Tolaga Bay		50.63		97.52
Gisborne	74.14		79.90	
Napier	85.64		85.12	
EAST COAST	77.27		87.93	
New Plymouth	86.00		90.38	
Wanganui	64.61		92.24	
Patea		93.01	-	-
Wellington	59.91		53.47	
WEST COAST	60.32		60.83	
NORTH ISLAND	64.15		64.35	
Nelson	54.01			<u>55.16</u>
Motueka		78.38		80.90
Tarakohe	-	-		89.11
Waitapu	70.96		-	-
NELSON		50.28		72.36
Westport		97.80		96.35
Greymouth		94.19		93.45
Hokitika		63.98	-	-
WEST COAST		96.03		95.32
Picton		53.16	52.58	
Wairau		52.37	58.21	
Kaiapoi	-	-	50.44	
Lyttelton		57.06		51.81
Timaru		68.18		57.84
Oamaru		84.16		60.02
Otago	54.75		59.57	
Bluff	72.09		72.01	
Half Moon Bay	64.36		57.71	
EAST COAST		53.76	<u>51.17</u>	
SOUTH ISLAND		67.88		62.36
NEW ZEALAND	50.29		52.93	

(a) Figure underlined indicates reversal in net flow.

Source:- Reports on the Transport Statistics of N.Z. for the years 1949-52, p.40 and for the year 1961, p.18.

TABLE LXXIV
 TRANSHIPMENT TONNAGE (a)
 1950 - 1961

Year	Tonnage
1950	444,956
1951	305,678
1952	414,436
1953	348,588
1954	341,710
1955	408,610
1956	380,344
1957	348,218
1958	296,564
1959	255,266
1960	219,926
1961	315,092

(a) Transhipments included twice.

Source:- Report on the Transport Statistics of N.Z., 1949-61.

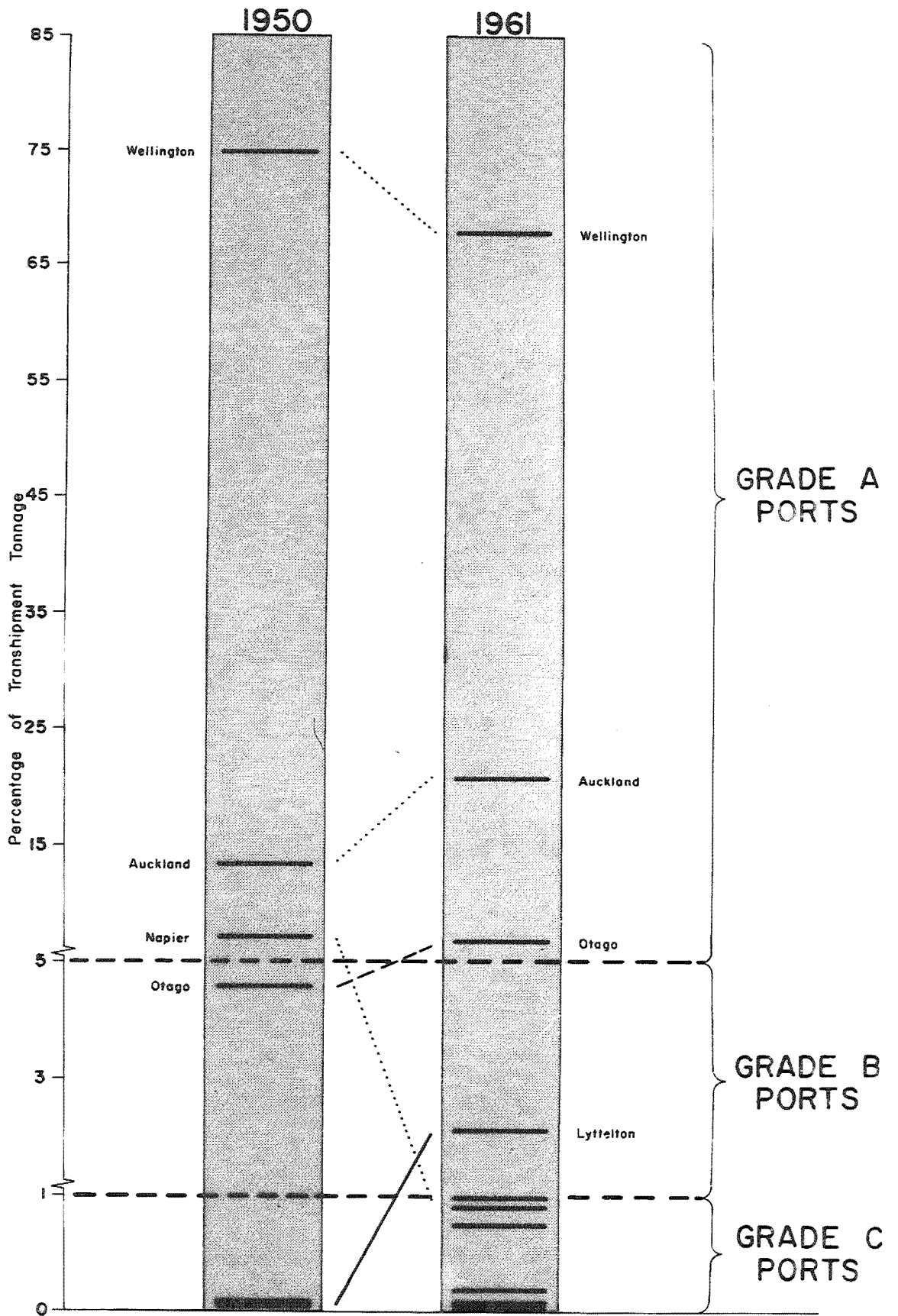


Fig.54. Changes in the Ranking of Ports on the Transshipment Scale 1950-1961.
 Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, p.40 and for the year 1961, p.18.

TABLE LXXV
CHANGES IN TRANSHIPMENT TONNAGE
1950 - 1961(a)

Port	ACTUAL						HYPOTHETICAL	
	1950		1961		Change 1950-61		Estimate 1961(b)	Deviation (c)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Whangarei	172	0.08	27	0.02	- 145	-0.06	126	- 99
Auckland	29,343	13.01	34,465	20.61	+ 3,122	+7.60	20,497	+11,968
Onehunga	5	0.00	292	1.85	+ 287	+1.85	-	+ 292
Gisborne	-	-	8	0.01	+ 8	+0.01	-	+ 8
Napier	15,581	6.91	1,531	0.97	-14,050	+5.94	10,886	- 9,355
New Plymouth	-	-	1,389	0.88	+ 1,389	+0.88	-	+ 1,389
Wellington	166,522	73.86	106,896	67.85	-59,626	+6.01	116,363	- 9,467
NORTH ISLAND	211,623	93.86	142,608	90.52	-69,015	-3.34	147,873	- 5,265
Picton	3	0.00	6	0.01	+ 3	+0.01	-	+ 6
Nelson	2,986	1.32	1,113	0.71	- 873	-0.61	2,080	- 967
Motueka	82	0.04	-	-	- 82	-0.04	63	- 63
Lyttelton	108	0.05	3,361	2.13	+ 3,253	+2.08	79	+ 3,282
Timaru	-	-	32	0.02	+ 32	+0.02	-	+ 32
Otago	10,662	4.73	10,426	6.62	- 236	+1.69	7,452	- 2,974
SOUTH ISLAND	13,841	6.14	14,938	9.48	+ 1,097	+3.34	9,673	+ 5,265
NEW ZEALAND	225,464	100.00	157,546	100.00	-67,918		157,546	-

- (a) Transshipments included once.
(b) Number of tons required to retain 1950 share of total transshipments.
(c) Difference between actual tonnage in 1961 and tonnage required to retain 1950 share of the total transshipments.

Source:- Report of the Transport Statistics of N.Z. for the years 1949-52,
p.40 and for the year 1961, p.18.

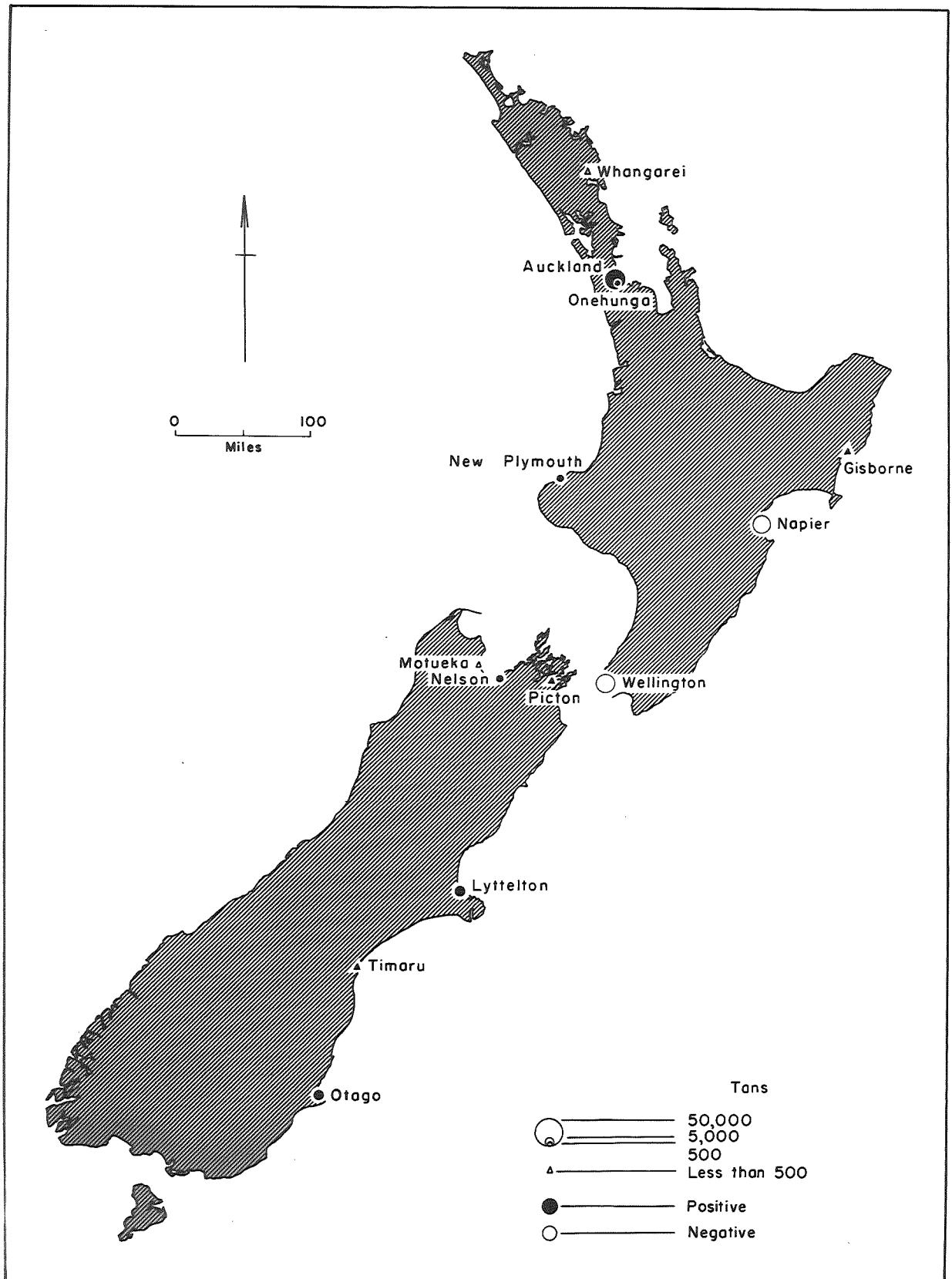


Fig.55. Changes in the Concentration of Transhipments 1950-1961.
 Difference between a port's transshipment tonnage in 1961 and tonnage required to retain 1950 share of New Zealand's transshipment tonnage. Transhipments included twice.
 Source:- Report on the Transport Statistics of New Zealand for the years 1949-52, p.40 and for the year 1961, p.18.

TABLE LXXVI
A BREAKDOWN OF THE TRANSHIPMENT
TONNAGE INTO CLASSES (a)
1950 - 1961

Port	1950					1961				
	C/C	C/O	O/C	O/O	Total	C/C	C/O	O/C	O/O	Total
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Whangarei	-	-	172	-	172	27	-	-	-	27
Auckland	1,741	3,294	21,770	2,538	29,343	2,629	2,818	23,287	3,731	34,465
Onehunga	5	-	-	-	5	292	-	-	-	292
Gisborne	-	-	-	-	-	8	-	-	-	8
Napier	-	12,747	2,834	-	15,581	78	1,073	380	-	1,531
New Plymouth	-	-	-	-	-	-	533	856	-	1,389
Wellington	6,756	84,960	74,414	392	166,522	1,570	23,838	80,881	607	106,896
NORTH ISLAND	8,502	101,001	99,190	2,930	211,623	4,604	28,262	105,404	4,338	142,608
Picton	3	-	-	-	3	6	-	-	-	6
Nelson	2,986	-	-	-	2,986	510	-	603	-	1,113
Motuēka	82	-	-	-	82	-	-	-	-	-
Lyttelton	17	-	91	-	108	43	78	1,911	1,329	3,361
Timaru	-	-	-	-	-	32	-	-	-	32
Otago	927	-	9,735	-	10,662	322	13	10,091	-	10,426
SOUTH ISLAND	4,015	-	8,826	-	13,841	913	91	12,605	1,329	14,938
NEW ZEALAND	12,517	101,001	109,016	2,930	225,641	5,517	28,353	118,009	5,667	157,546

(a) Transhipments included once.

Source:- Report on the Transport Statistics of N.Z. for the years 1949-52,
p.40 and for the year 1961, p.18.

TABLE LXXVII
SUMMARY OF CHANGES IN STATUS BY GRADE
AND RANK ON THE GROSS TONNAGE AND COMPONENT SCALES
1950 - 1961

Status on gross scale (a)	1950					1961				
	Rank(b)	Port	Component scale Grade(c) and rank(d)			Rank	Port	Component scale Grade(c) and rank(d)		
			Gross	Overseas	Coastal			T/S	Gross	Overseas
MAJOR	1	Auckland	A1	A1	A2	1	Auckland	A1	A2	A2
	2	Wellington	A2	A2	A1	2	Wellington	A2	<u>A1</u>	A1
	3	Lyttelton	A3	A3	C6	3	Lyttelton	A3	A3	<u>B4</u>
	4	Otago	A4	B7	B4	<u>4</u>	Tauranga	<u>A4</u>	<u>B18</u>	-
SECONDARY	5	New Plymouth	A5	C16	-	5	Otago	A7	A7	A3
	6	Westport	-	A4	-	6	New Plymouth	A5	B15	C6
	7	Napier	B6	B13	A3	7	Napier	A6	B13	C5
	8	Greymouth	C13	A5	-	8	Bluff	B8	B14	-
	9	Nelson	C9	B6	C7	9	Whangarei	C11	A4	C9
	10	Bluff	B7	B14	-	10	Nelson	B9	B8	B7
	11	Whangarei	C11	B8	C5	11	Timaru	B10	B11	<u>C12</u>
	12	Timaru	B8	B9	-	12	Greymouth	C14	B6	-
						13	Westport	C17	B5	-
						14	Tarakohe	-	B9	-
						15	Wanganui	<u>C19</u>	B10	-
						16	Onehunga	-	<u>B12</u>	C8
MINOR	13	Wanganui	-	B10	-	17	Picton	<u>C15</u>	B16	C13
	14	Picton	-	B11	C10	18	Gisborne	<u>C13</u>	B17	C10
	15	Gisborne	-	B12	-	19	Oamaru	C16	C19	-
	16	Onehunga	C14	B15	C9	20	Bay of Islands	<u>C12</u>	<u>C28</u>	-
	17	Oamaru	C12	C18	-	21	Motueka	-	C20	C11
	18	Tauranga	C10	C20	-	22	Kaipara	-	C21	-
	19	Motueka	-	C17	C8	23	Raglan	-	<u>C22</u>	-
	20	Whakatane	-	C19	-	24	Ohiwa	-	C23	-
	21	Patea	-	C21	-	25	Wairau	-	C24	-
	22	Opotiki	-	C22	-	26	Mangonui	-	<u>C25</u>	-
	23	Wairau	-	C23	-	27	Thames	-	<u>C26</u>	-
24	Raglan	C15	C24	-	28	Half Moon Bay	-	<u>C27</u>	-	
25	Tokomaru Bay	-	C25	-	29	Tologa Bay	-	<u>C29</u>	-	

Status on gross scale (a)	1950					1961				
	Rank (b)	Port	Component scale Grade (c) and rank (d)			Rank	Port	Component scale Grade (c) and rank (d)		
			Gross	Overseas	Coastal			T/S	Gross	Overseas
	26	Mangonui	-	C26	-	30	Tokomaru Bay	-	<u>C30</u>	-
	27	Waitapu	-	C27	-	31	Jacksons Bay	C18	-	-
	28	Thames	-	C28	-		Hokianga	-	-	-
	29	Half Moon Bay	-	C29	-		Whakatane	-	-	-
	30	Hokitika	C16	C30	-		Opotiki	-	-	-
	31	Hokianga	-	C31	-		Patea	-	-	-
	32	Bay of Islands	-	C32	-		Waitapu	-	-	-
	33	Tologa Bay	-	C33	-		Hokitika	-	-	-
		Tarakohe	-	-	-					
		Kaiapoi	-	-	-					
		Ohiwa	-	-	-					
		Jacksons Bay	-	-	-					

- (a) Ports with over five per cent of the gross tonnage classed as major, under five per cent and over one per cent secondary and below one per cent minor.
- (b) Ranking of ports based on gross tonnage scale.
- (c) In each of the component elements of the gross tonnage ports with over five per cent of either the overseas, coastal or transshipment trades are classed as grade A ports, under five per cent and over one per cent as grade B and under one per cent as grade C.
- (d) Ranking of ports, indicated by subscript, based on its respective position on the overseas, coastal and transshipment trade.

TABLE LXXVIII
POPULATION ESTIMATE
FOR 1972

Main Ports	Region	Population	Annual Increase Per cent
Bay of Islands and Whangarei	Northland	101,850	1.7
Auckland	(Auckland	698,750	2.7
	(South Auckland	232,600	2.5
	(King Country	40,000	1.6
	(Coromandel	23,400	0.6
Tauranga	Bay of Plenty	183,600	3.2
Gisborne	Poverty Bay	49,000	1.2
Napier	Hawke's Bay	145,000	2.0
New Plymouth	Taranaki	110,300	1.3
Wanganui	Wanganui	70,650	1.2
	(Manawatu	120,700	2.1
Wellington	(Wellington	324,400	2.0
	(Wairarapa	51,000	1.5
	NORTH ISLAND	2,151,250	2.3
Picton	Marlborough	33,200	1.6
Nelson	Nelson	59,800	1.9
Greymouth and Westport	West Coast	38,050	-0.1
Lyttelton	Christchurch	298,900	1.0
Lyttelton and Timaru	Canterbury	129,400	2.6
Otago	(Coastal Otago	173,400	1.0
	(Central Otago	17,900	0.6
Bluff	Southland	125,700	2.3
	SOUTH ISLAND	876,850	1.7
	NEW ZEALAND	3,028,100	2.1

Source:- Town and Country Planning Branch, Ministry of Works, A Revision of Part III of 'A Survey of New Zealand Population', Wellington 1961.

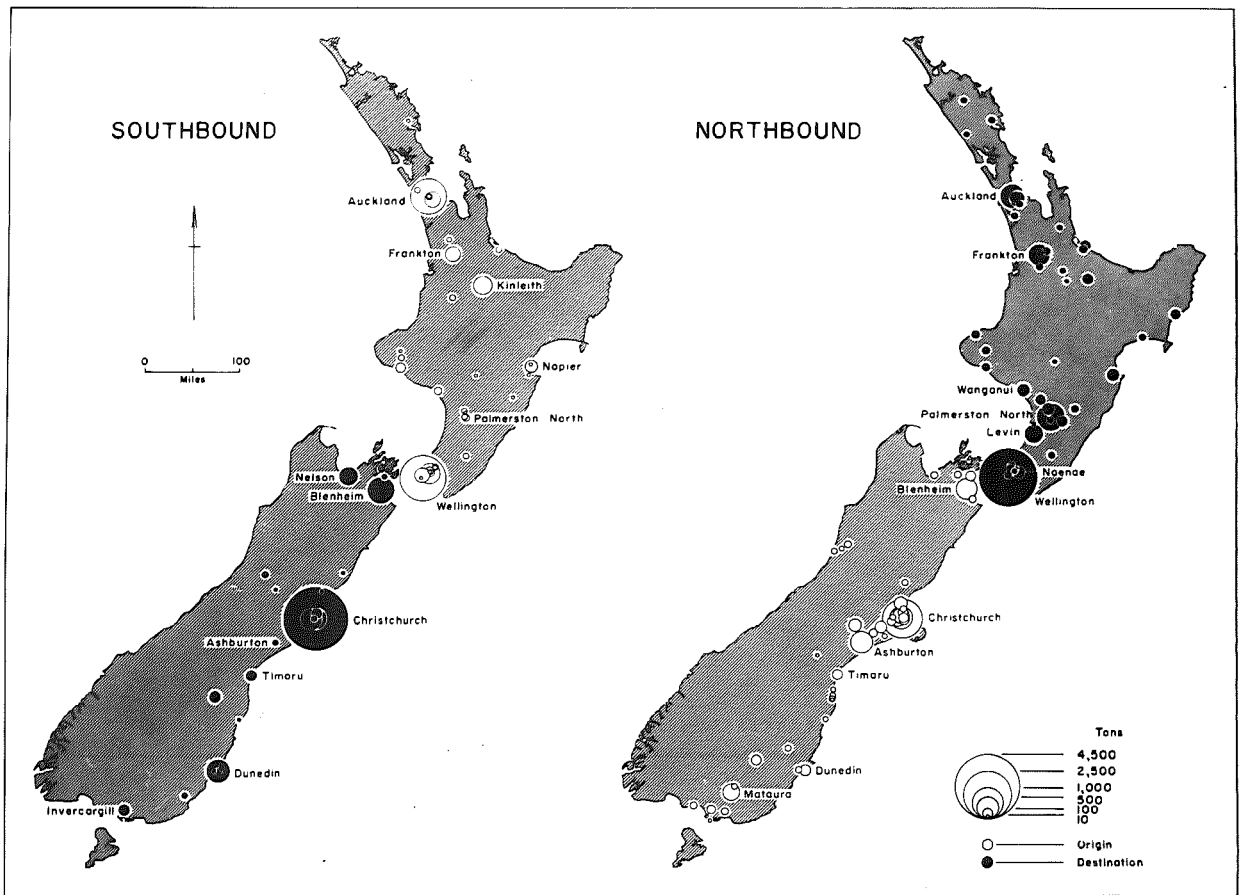


Fig.56. Origin and Destination of Northbound and Southbound Traffic Carried on the Cook Strait Rail-Road Ferry.
 Ship's manifests for five weeks October-November 1962.

TABLE LXXIX
 ORIGIN AND DESTINATION OF MAIN NORTHBOUND
 AND SOUTHBOUND CARGOES CARRIED BY G.M.V. 'ARAMOANA'

NORTHBOUND			SOUTHBOUND				
Commodity	Origin	Destination	Commodity	Origin	Destination		
Tyres	Papanui	Wellington	Paper	Kinleith	Hornby		
		Wanganui	Isolite	Auckland	Christchurch		
		Palmerston North	Perishables	Auckland	Christchurch		
		Frankton		Wellington	Dunedin		
Potatoes	Hornby Rolleston Belfast Dunsandel Templeton Ashburton Timaru	Hastings	Soap	Frankton	Blenheim		
		Auckland		Petone	Invercargill		
		Wellington	Tobacco	Napier	Christchurch		
		Rotorua		Wellington	Dunedin		
		Palmerston North		Wellington	Christchurch		
		Paper	Mataura	New Plymouth	Weeklies	Wellington	Christchurch
				Wanganui	Mail	Wellington	Christchurch
Fruit	Millers Flat Nelson	Marton	Fruit	Frankton	Christchurch		
		Levin	Bulk	Auckland	Nelson		
Scrap	Addington Dunedin	Wellington		Wellington	Ngauranga	Christchurch	
		Otahuhu	Dunedin				
Flour	Addington Ashburton	Tawa		Flax	Gorge Road Riverton Invercargill	Levin	
		Auckland					
Malt	Heathcote	Dannevirke					
Cable	Hornby	Mangatainoka					
		Palmerston North					

NOTE: The government directs that where possible the rail/road ferry should be used for inter island household removals, movements of equipment between defence establishments and government workshops.
 Source: Ship's Manifests.

TABLE LXXX
 COMPARATIVE COSTS OF MOVING
 2,240 LBS GENERAL CARGO

Cubic Feet	(j) Rail/Air	(ii) Rail/Road Ferry (Aramoana)	(iii) Rail/Sea Through Booking Direct Ship ^(a) (Coastal Shipping)
Wellington - Christchurch			
40	19 6 5	9 19 2	6 18 6
80	19 6 5	13 14 2	13 15 -
120	19 6 5	16 9 2	20 11 6
160	19 6 5	19 14 2	27 8 -
Wellington - Dunedin			
40	22 3 3	12 15 2	6 12 6
80	22 3 3	16 - 2	13 3 -
120	22 3 3	19 5 2	19 13 6
160	22 3 3	22 10 2	26 4 -
Auckland - Christchurch			
40	28 13 -	19 5 9	8 2 -
80	28 13 -	22 10 9	16 2 -
120	28 13 -	25 15 9	24 2 -
160	28 13 -	29 - 9	32 2 -
Auckland - Dunedin			
40	31 9 10	22 1 9	7 16 6
80	31 9 10	25 6 9	15 11 -
120	31 9 10	28 11 9	23 5 6
160	31 9 10	31 16 9	31 - -
<u>Volume of Sample Commodities.</u>			
C.ft			
40-50 Iron, Steel, Nails, Bottled Beer, Sugar			
50-80 Wire, Apples, Chests of Tea, Malt			
80-120 Washing Machines, Tyres, Clothing, Drapery, Blankets			
120-160 Radios, Radiograms, Refrigerators			
160-200 T.V. sets, Furniture, Tubular steel ware, Drying Cabinets.			

(a) Includes wharfage and commission.

Source:- Commercial Branch, New Zealand Railways, 1962.

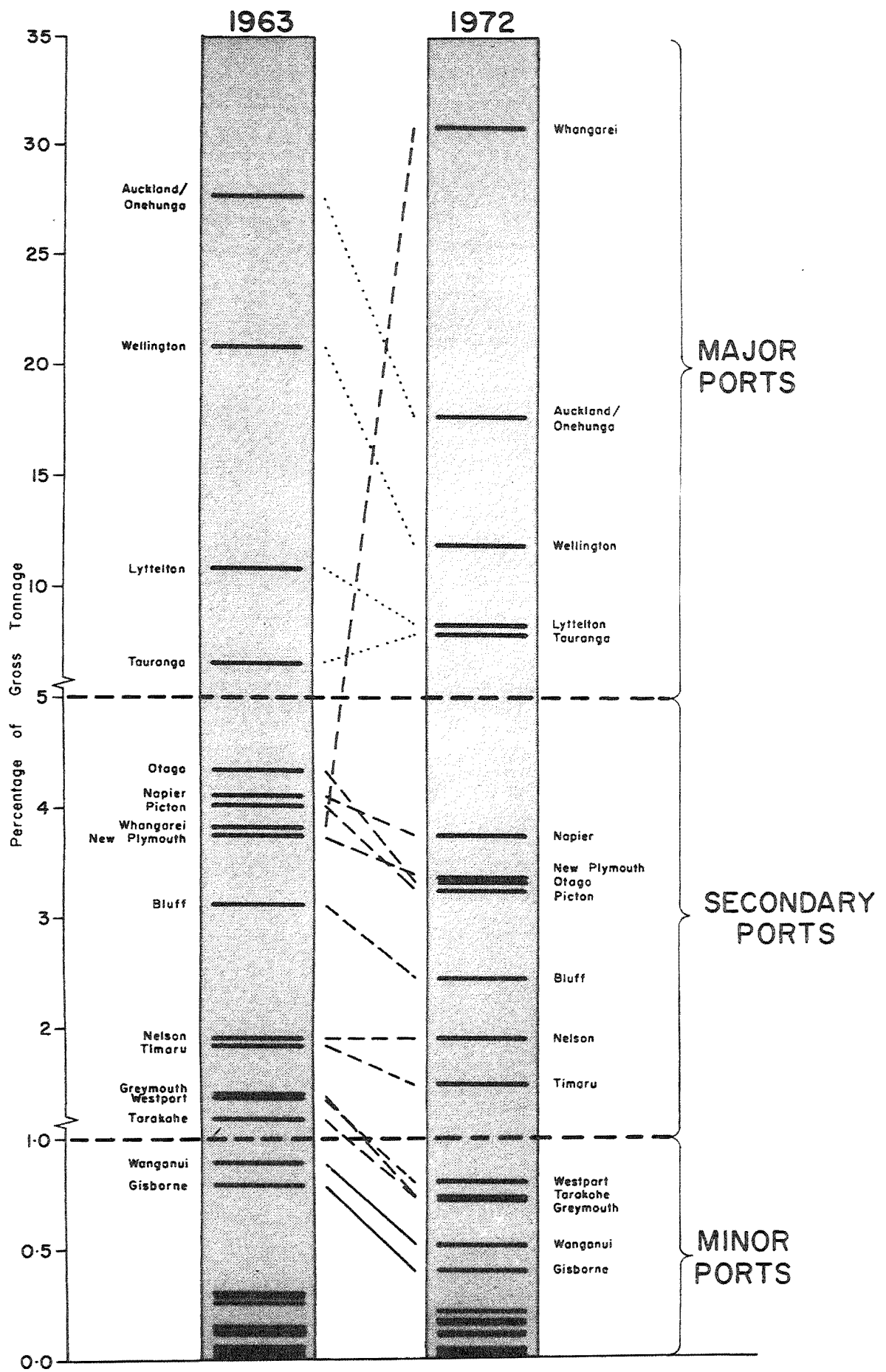


Fig.57. Projected Changes in the Ranking of Ports on the Gross Tonnage Scale 1963-1972.

Source:- Report on the Transport Statistics of New Zealand for the year 1963, p.18 and submissions to the World Bank made by individual harbour authorities.

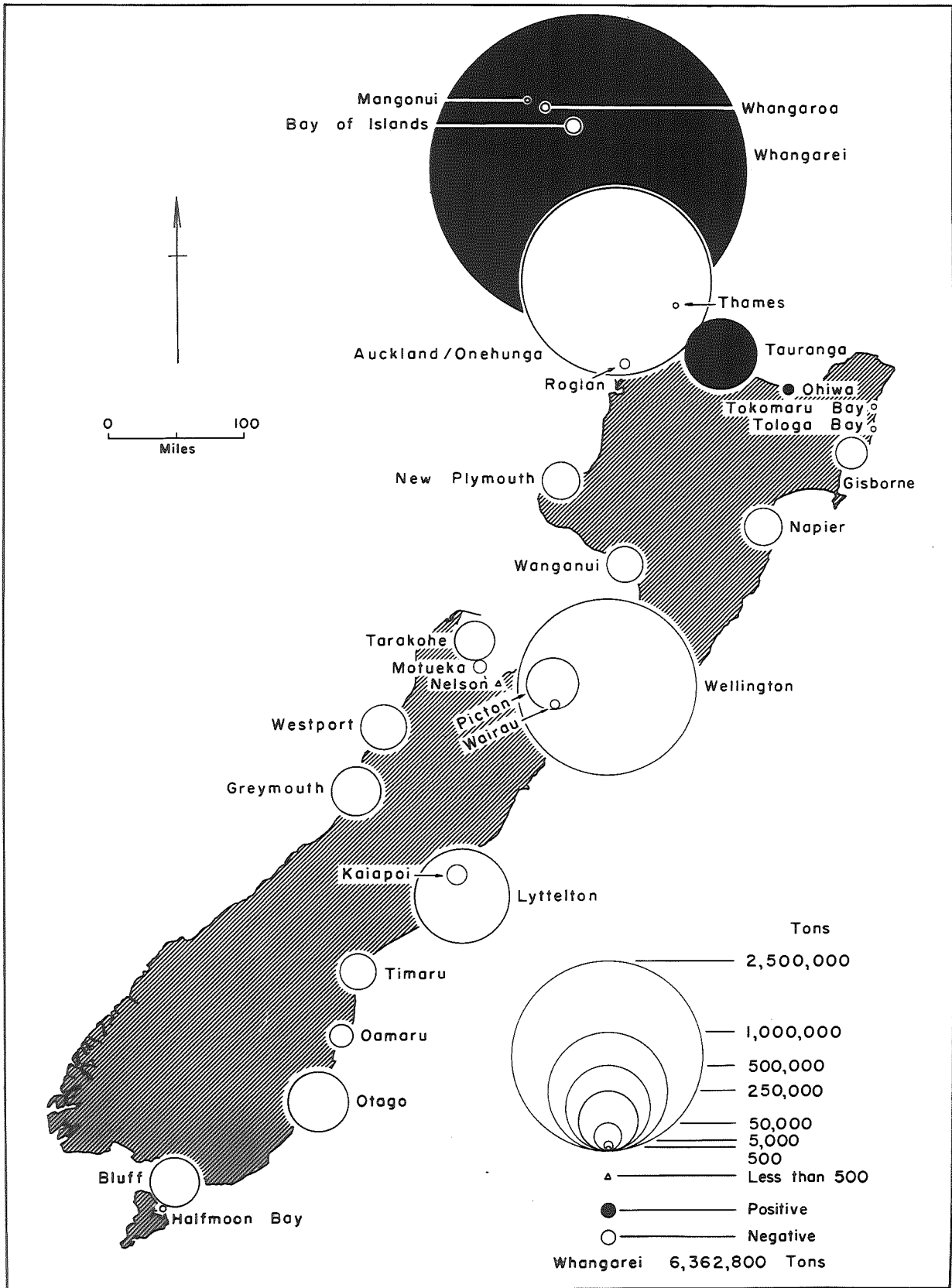
TABLE LXXXI
CHANGES IN GROSS TONNAGE
1963 - 1972

Port	ACTUAL		ESTIMATE		ACTUAL/ESTIMATE		HYPOTHETICAL	
	1963		1972		Change 1963/72		Estimate 1972 (a)	Deviation (b)
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Tonnage
Mangonui	3,137	0.02	3,800	0.02	+ 663	-	4,741	- 941
Whangaroa	5,152	0.04	4,900	0.02	- 252	- 0.02	9,481	- 4,581
Bay of Islands	36,099	0.27	50,000	0.21	+ 13,901	- 0.06	63,999	- 13,999
Whangarei	512,516	3.81	7,265,900	30.66	+6,753,384	+26.85	903,100	+6,362,800
Auckland	3,537,055	26.27	4,167,000	17.58	+ 426,501	-10.20	6,584,805	-2,417,805
Onehunga	203,444	1.51						
Raglan	18,579	0.14	26,800	0.11	+ 8,221	- 0.03	33,185	- 6,385
Thames	2,744	0.02	3,000	0.01	+ 256	- 0.01	4,741	- 1,741
Tauranga	880,247	6.54	1,866,900	7.88	+ 986,653	+ 1.34	1,550,202	+ 336,698
Ohiwa	17,195	0.13	38,100	0.16	+ 20,905	+ 0.03	30,814	+ 7,286
Tokomaru Bay	827	0.01	600	0.00	- 230	- 0.01	2,370	- 1,770
Tologa Bay	894	0.01	600	0.00	- 230	- 0.01	2,370	- 1,770
Gisborne	92,786	0.69	95,400	0.40	- 2,614	- 0.29	163,553	- 68,153
Napier	552,730	4.11	883,400	3.73	+ 330,670	-	974,210	- 91,110
New Plymouth	507,899	3.76	797,000	3.36	+ 289,101	- 0.40	891,248	- 94,248
Wanganui	120,396	0.89	120,500	0.50	+ 104	- 0.39	210,960	- 90,460
Wellington	2,808,121	20.85	2,825,000	11.92	+ 16,879	- 8.93	4,942,159	-2,117,159
NORTH ISLAND	9,299,821	69.07	18,148,900	76.56	+8,849,079	+ 7.49	16,371,938	+1,776,962
Picton	542,051	4.03	773,000	3.25	+ 230,949	- 0.78	955,247	- 182,247
Wairau	8,102	0.06	9,400	0.04	+ 1,298	- 0.02	14,222	- 4,822
Nelson	255,972	1.90	450,000	1.90	+ 194,028	-	450,365	- 365
Motueka	21,886	0.15	25,000	0.11	+ 3,114	- 0.04	35,555	- 10,555
Tarakohe	157,795	1.17	174,500	0.73	+ 16,705	- 0.44	277,330	- 102,830
Westport	184,793	1.38	189,300	0.80	+ 4,507	- 0.58	327,107	- 137,807
Greymouth	186,653	1.39	173,200	0.73	- 13,453	- 0.66	329,477	- 156,277
Kaiapoi	35,253	0.26	35,000	0.15	- 253	- 0.11	61,288	- 26,288
Lyttelton	1,470,108	10.92	1,975,000	8.33	+ 504,892	- 2.59	2,588,411	- 613,411

Port	ACTUAL		ESTIMATE		ACTUAL/ESTIMATE		HYPOTHETICAL	
	1963		1972		Change 1963-72		Estimate	Deviation
	Tonnage	Per cent	Tonnage	Per cent	Tonnage	Per cent	1972 (a)	(b)
Timaru	248,500	1.85	350,000	1.48	+ 101,500	- 0.37	438,513	- 88,513
Oamaru	40,810	0.30	37,000	0.16	- 3,810	- 0.14	71,110	- 34,110
Otago	584,947	4.35	781,100	3.30	+ 196,153	- 1.05	1,031,098	- 249,998
Bluff	423,283	3.14	577,000	2.44	+ 153,717	- 0.70	744,287	- 167,287
Half Moon Bay	4,195	0.03	5,000	0.02	+ 805	- 0.01	7,111	- 2,111
SOUTH ISLAND	4,164,348	30.93	5,554,500	23.44	+1,390,152	- 7.49	7,331,462	-1,776,962
NEW ZEALAND	13,464,169	100.00	23,703,400	100.00	10,239,231	-	23,703,400	-

- (a) Number of tons required to retain 1963 share of the gross tonnage.
(b) Difference between estimated tonnage in 1972 and tonnage required to retain 1963 share of the gross tonnage.

Source:- Report on the Transport Statistics of N.Z. for the year 1963, p.18.
Estimates for 1972 are derived from information supplied by individual ports.



F5

Changes in the Concentration of the Gross Tonnage 1963-1972.
 Difference between a port's estimated gross tonnage in 1972 and tonnage required to retain 1963 share of New Zealand's gross tonnage.
 Source:- Report on the Transport Statistics of New Zealand for the year 1963 and submissions to the World Bank made by individual harbour authorities.



Plate XII. Wellington in the 1930's.

Wellington was a well-equipped port with horse, motor and rail transport serving the wharves.

Photo: Turnbull Library.

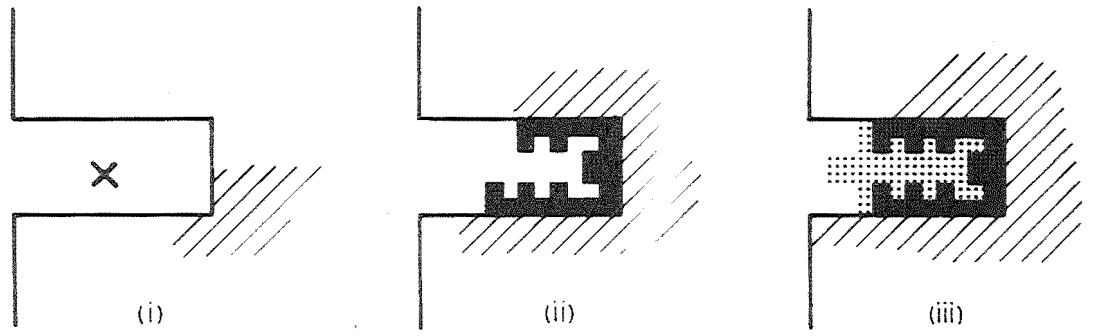


Plate XIII. Tokomaru Bay : The First Stage in the Development of an Artificial Harbour.

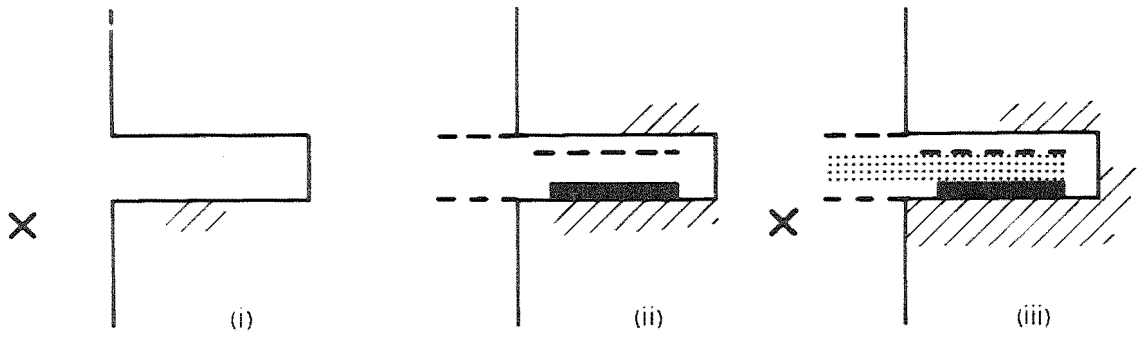
Cargo was lightered from the wharf to overseas ships anchored in the roadstead. There was sufficient depth for small coastal vessels to berth alongside the wharf.

Photo: Allan Kirk.

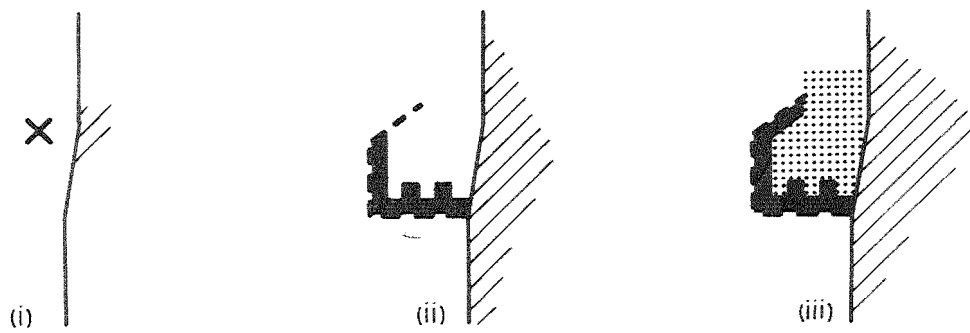
I. Natural Harbour



II. Tidal River



III. Roadstead



X Lightering ■ Wharves ▒ Dredging
 - - Harbour Works // Built up Area

Fig.59. Idealised Sequence of Port Development.



Plate XIV. New Plymouth at the Turn of the Century : The Second Stage in the Development of an Artificial Harbour.
 The breakwater, begun in 1881, is seen providing protection for vessels engaged in the ferry service between Onehunga and New Plymouth. This service ceased with the completion of the Main Trunk Railway in 1908.

Photo: Allan Kirk



Plate XV. Napier - The Third Stage in the Development of an Artificial Harbour.
 Dredging within the confines of the breakwater (first stone laid in 1887) is to check drift of sand.

Photo: National Publicity Studios.

TABLE LXXXII
 CLASSIFICATION OF THE LAYOUT OF
 NEW ZEALAND SEAPORTS 1926

	I Natural Harbour	II River	III Artificial Harbour
i Lightering/ Primitive wharves	Mangonui Whangarei Akaroa Half Moon Bay Kawhia Raglan Coromandel Hokianga	Mokau Mangawai Kaipara Port Waikato Whakatane Opotiki	Tokomaru Bay Tologa Bay Waikokopu
ii Harbour works/ wharves.	Russell Picton	Wairoa Hokitika Waitara Patea Foxton Thames Motueka	<u>Napier</u>
iii Dredging	Otago Lyttelton Bluff Nelson Wellington Auckland	Greymouth Westport Wanganui Gisborne	Timaru Oamaru New Plymouth

Port underlined moved to next class between 1926-63.

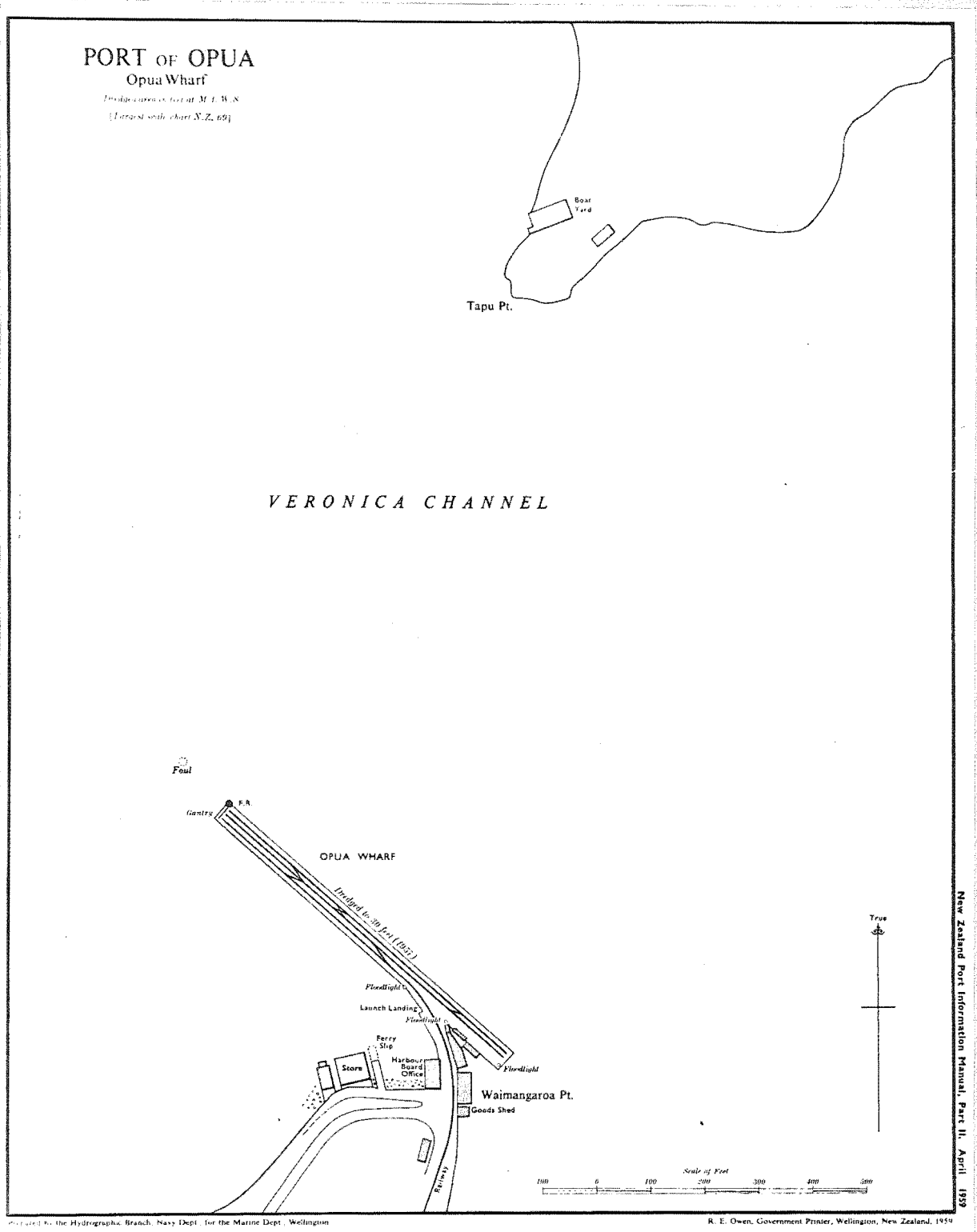


Fig.60. Port of Opuia, Bay of Islands.



late XVI. Opua, Bay of Islands.

The aerial view shows the Opua Wharf which is used primarily for exporting frozen meat and dairy produce brought by rail from the freezing works and cool stores at Moerewa, 8 miles away. Much of the area served by the port, such as the land in the vicinity of Opua, has yet to be developed for farming. The expansion of the Port of Opua, however, is limited as there is little land close to the port suitable for building or storage.

Photo: National Publicity Studios.

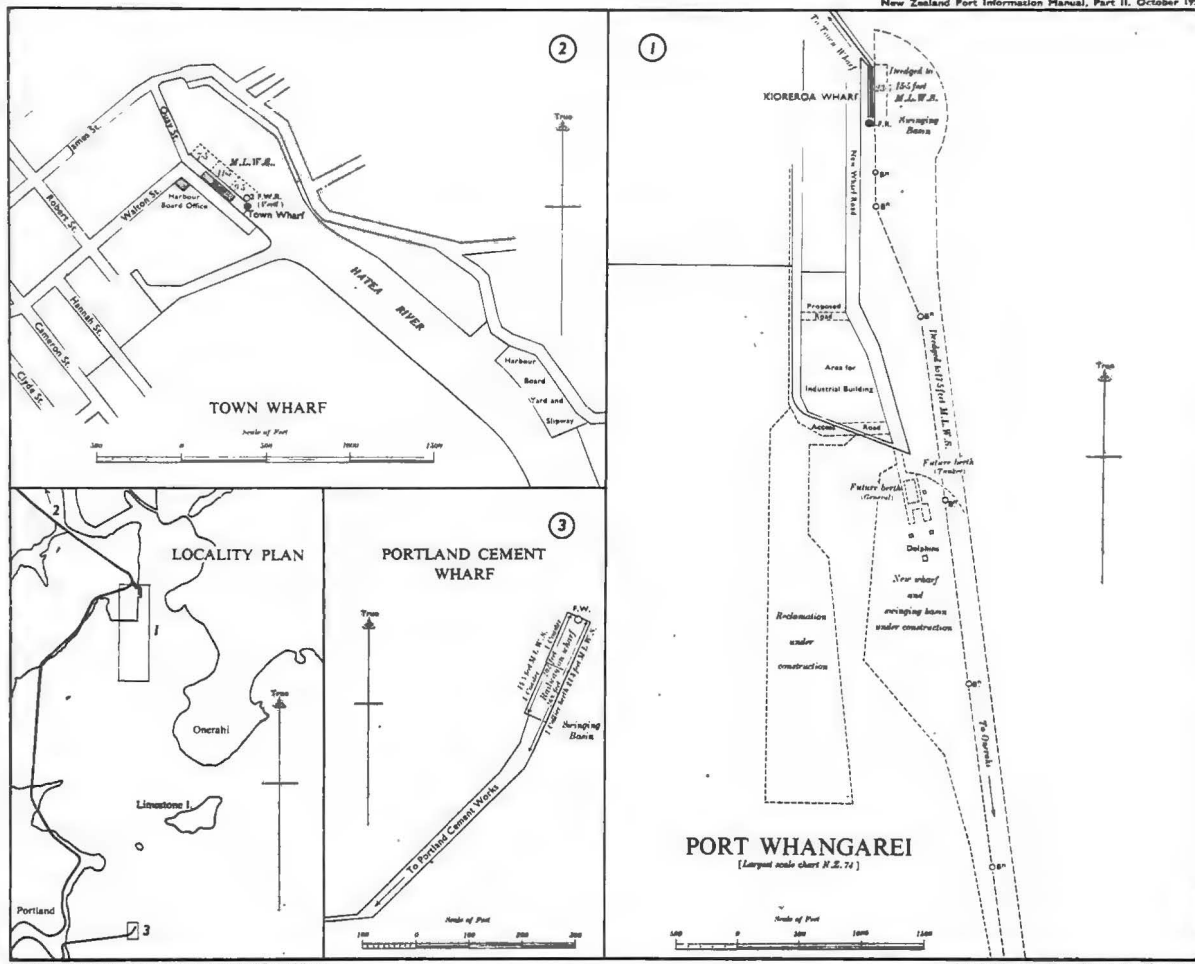


Fig.61. Port Whangarei.
 The Port comprises four separate wharf areas.
 The new oil refinery is not shown on the plan.



Plate XVII. Whangarei Harbour.
 The four separate wharf areas are widely scattered.
 (1) The Town Wharf used for coastal vessels.
 (2) Kioreroa Wharf used by overseas shipping for discharging oil, fertiliser and general cargo.
 (3) Portland Wharf used for shipping cement coastwise and receiving coal from West Coast (S.I.).
 (4) The site of the oil wharf which now serves the new refinery.
 Photo: Whites Aviation.



Plate XVIII. The Town Basin, Whangarei.

Situated close to the main business area of Whangarei, the Town Basin handles coastal vessels bringing general cargo for the city and the rest of Northland. The main outward cargo is derived from local industries (glass and pottery).

Photo: National Publicity Studios.

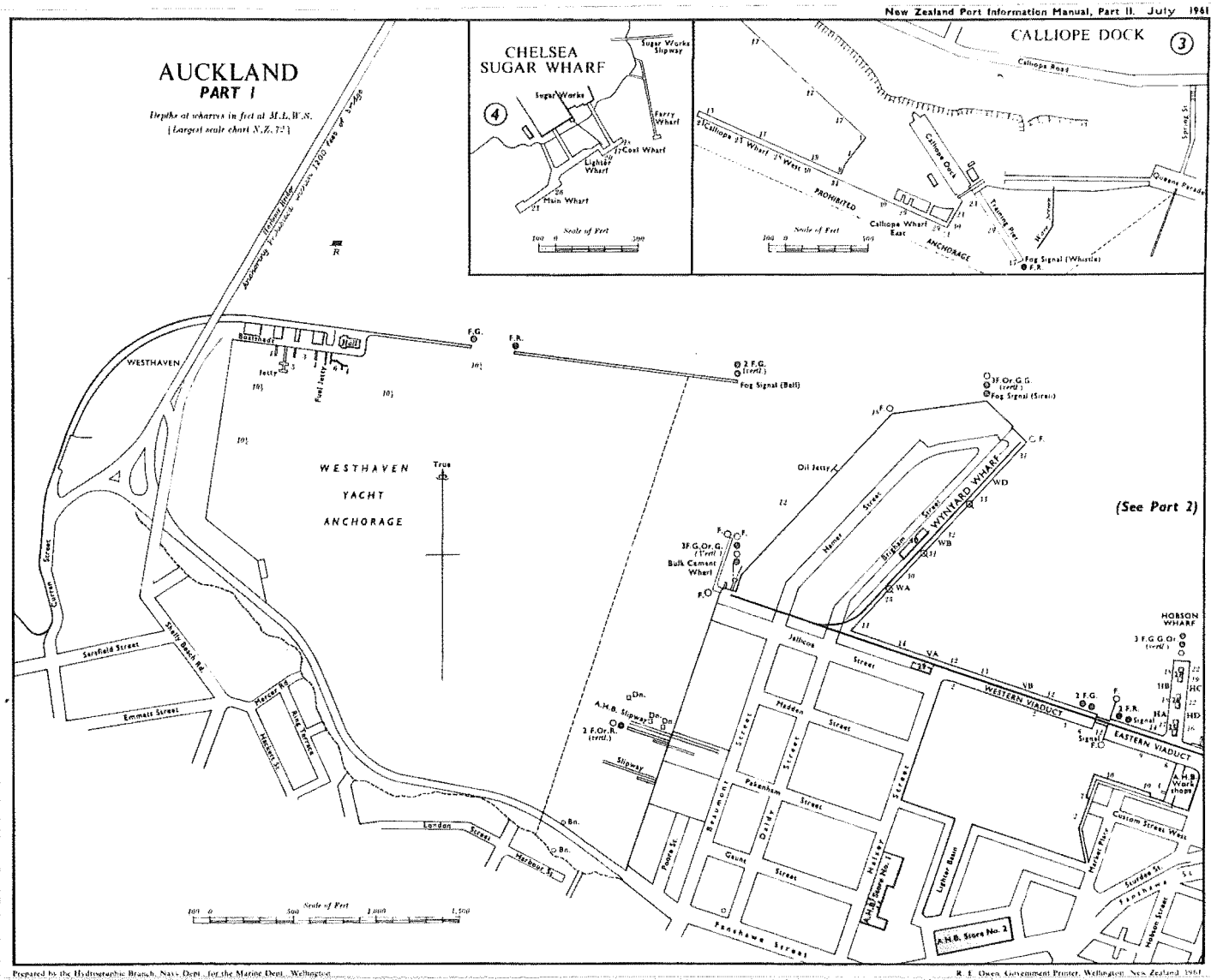


late XIX. Loading Cement at Portland, Whangarei.

The 'John Wilson' being loaded with cement drawn through a pipe line (4,200 ft. long) which is connected to silos at the works. Under this system of loading 170 tons of cement can be handled in one hour. The capacity of the ship is 1,850 tons. As a self discharging bulk carrier the ship is specially designed for unloading cement in bulk with the minimum of shore assistance. The rate of discharge is 280 tons per hour. With the introduction of such carriers coastal shipping can compete with the railways even for short distances.

Photo: Wilsons Portland Cement Co. Ltd.

Fig. 62(a). Auckland (Part 1).



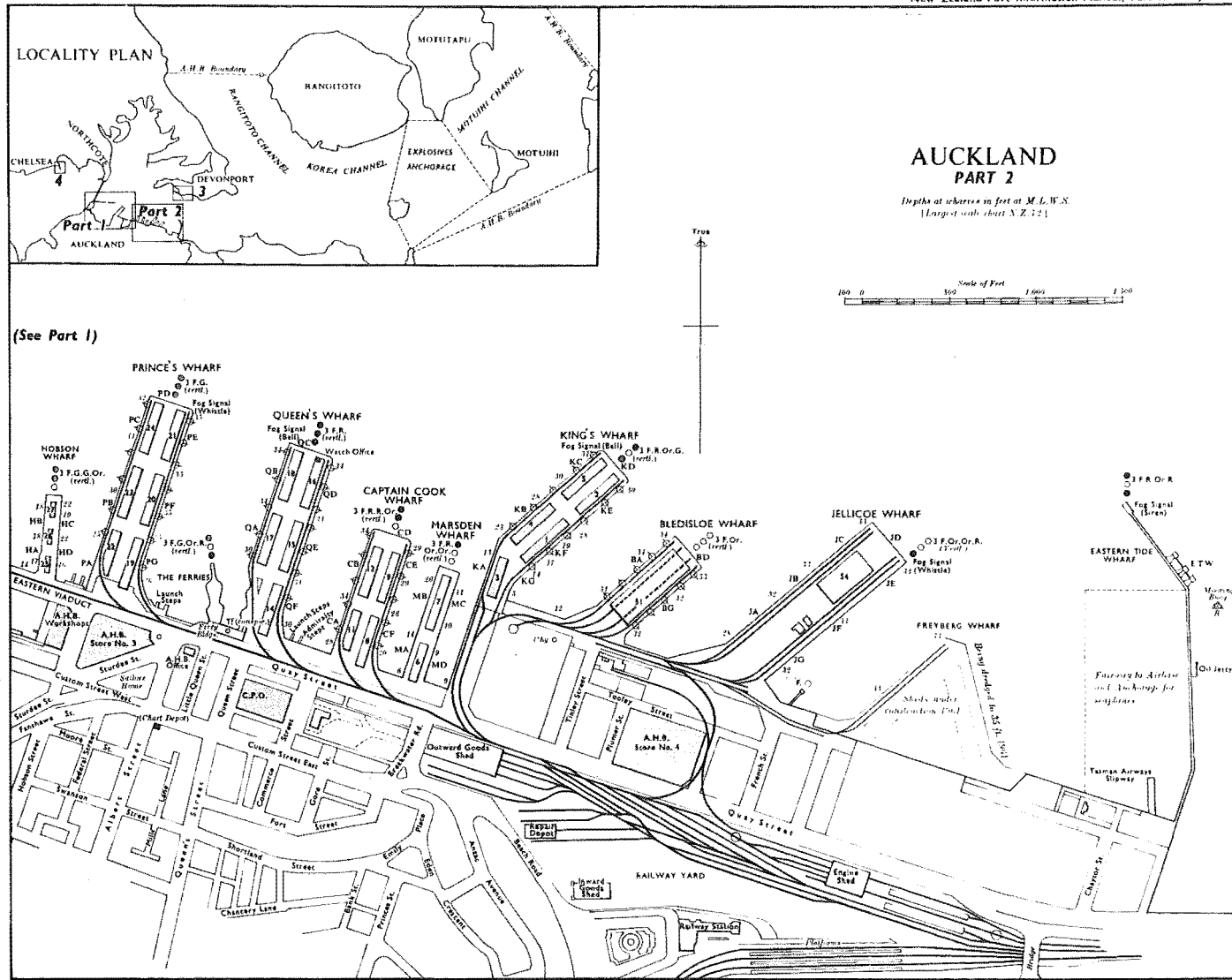


Fig. 62(b). Auckland (Part 2).



Plate XX. A General View of the Port of Auckland,
 looking across Herne Bay towards North Shore and Rangitoto Island.

- (1) Bulk Cement Wharf.
- (2) Rangitoto Island.

Photo: National Publicity Studios.

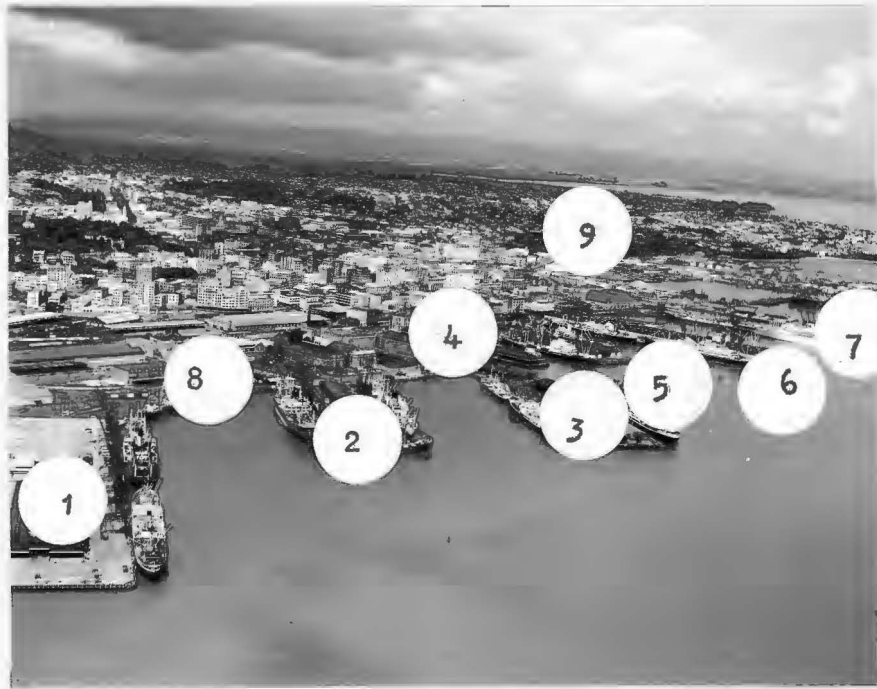


Plate XXI. The Wharves at Auckland.

- (1) Jellicoe Wharf.
- (2) Bledisloe Wharf.
- (3) King's Wharf.
- (4) Marsden Wharf.
- (5) Captain Cook Wharf.
- (6) Queen's Wharf.
- (7) Prince's Wharf (passenger terminal)
- (8) Cool Stores.
- (9) Chelsea Sugar Refinery.

Photo: National Publicity Studios.

Auckland

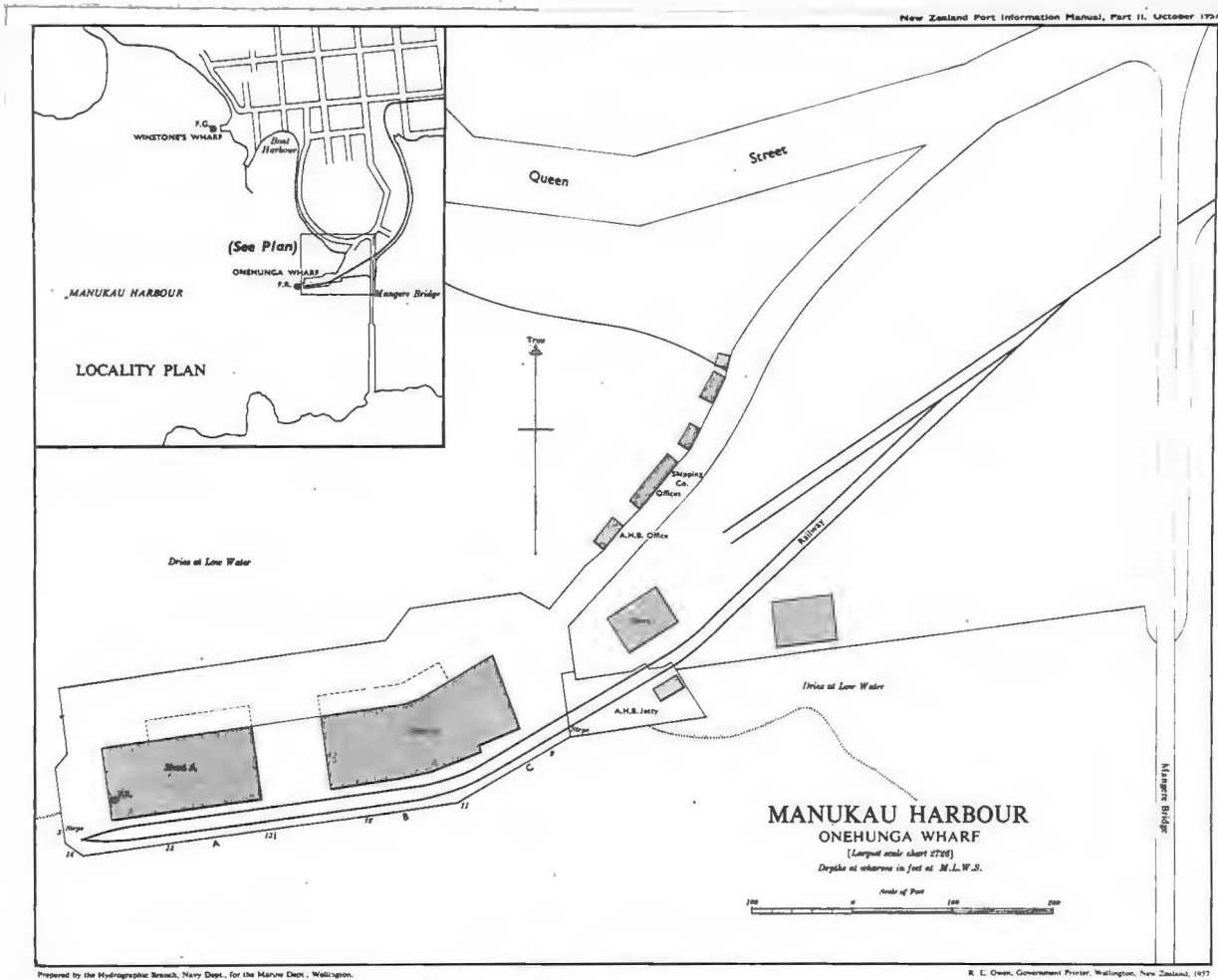


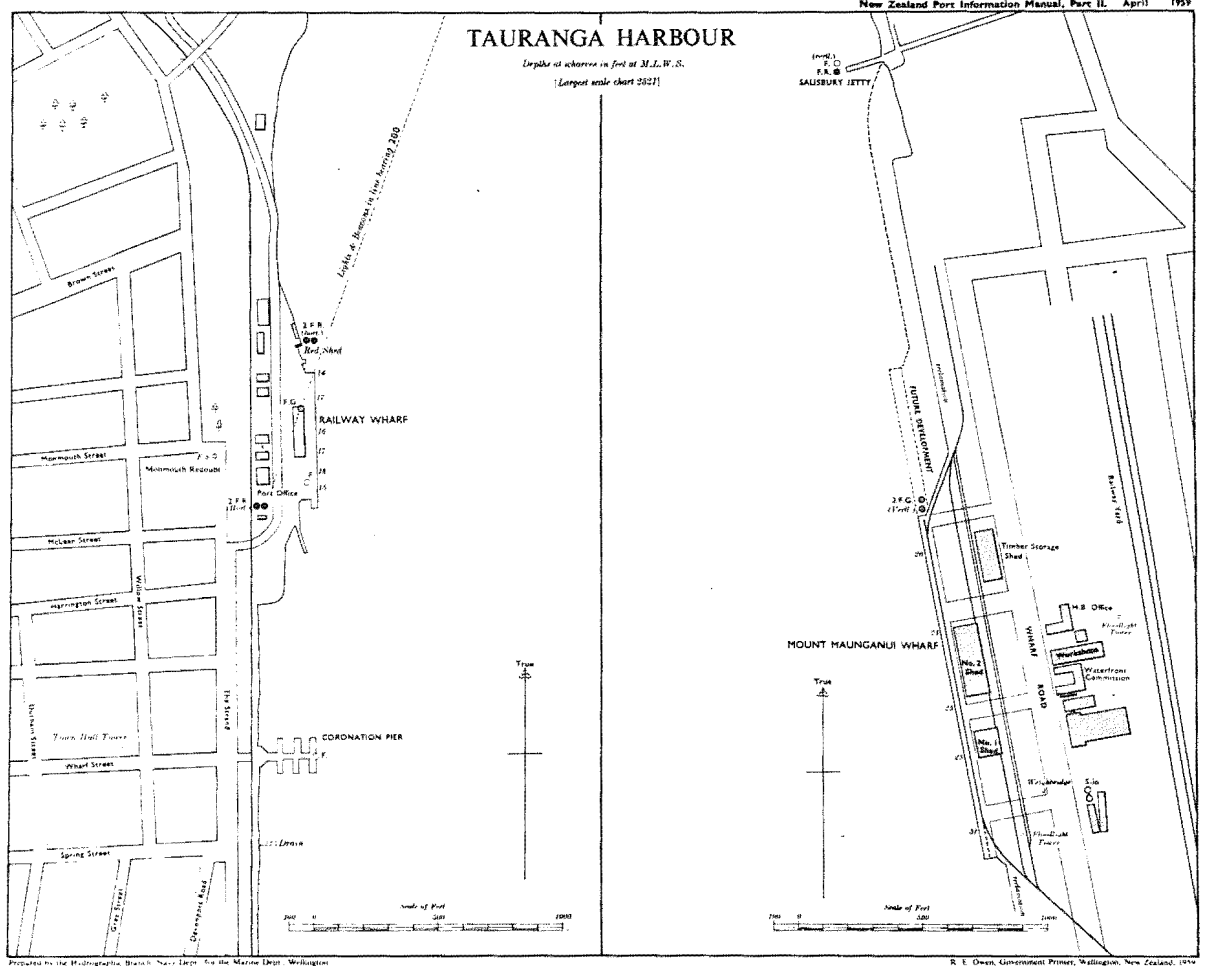
Fig. 63. Manukau Harbour - Onehunga Wharf



Plate XXII. Onehunga Wharf.

A busy port with four coastal vessels working cargo and a fifth anchored off shore. The Port ships out manufactured goods (including motor vehicles), and receives general cargo together with cement from Westport. In the foreground there is a cement silo which is serviced by road and rail transport.

Photo: Whites Aviation.



Prepared by the Hydrographic Branch, Navy Dept. for the Marine Dept., Wellington

R. E. Owen, Government Printer, Wellington, New Zealand, 1959

Fig. 64. Tauranga Harbour.



Plate XXIII. The Town Wharves, Tauranga.

An aerial view showing the Town Wharves on the left (1 and 2) with a railway bridge across the harbour to Mount Maunganui. The distant wharf (1) is used for coastal and trans-Tasman trade and the near wharf (2) for harbour traffic. Photo: National Publicity Studios.



Plate XXIV. Wharves at Mount Maunganui, Tauranga.

The Mount is in the background and the wharf area is on the left. This section of the Port of Tauranga handles some of the exports of timber and timber products, including pulp and paper, and the imports of oil, grain and fertiliser.

(1) Flour mill.

(2) Flour mill.

Photo: National Publicity Studios.

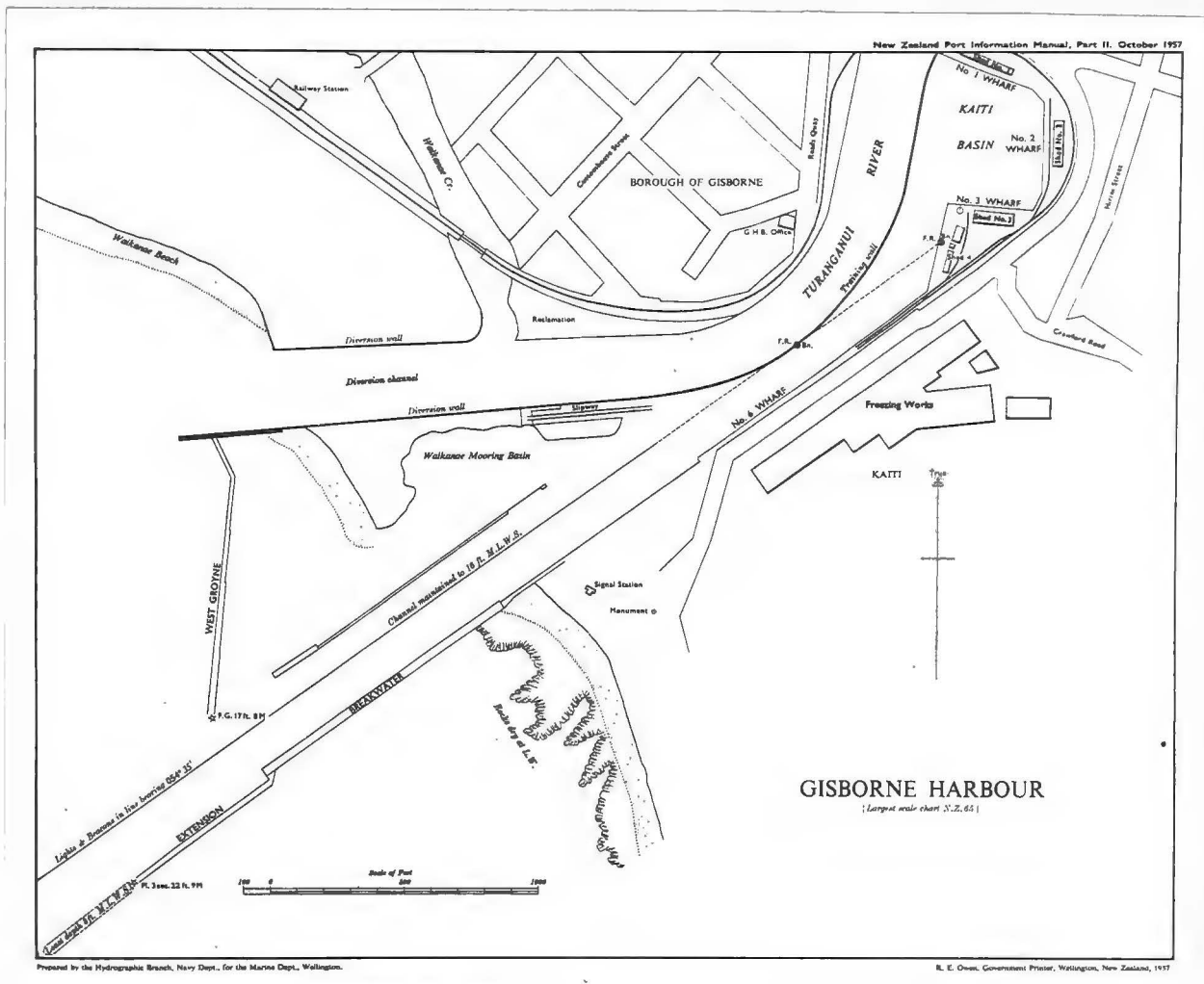


Fig. 65. Gisborne Harbour.



Plate XXV. Kaiti Basin, Gisborne.

- (1) Roadstead.
- (2) Site of Gisborne Outer Harbour which was never completed.
- (3) Lighter berth.
- (4) Freezing works.
- (5) Central business district of Gisborne.

Photo: National Publicity Studios.

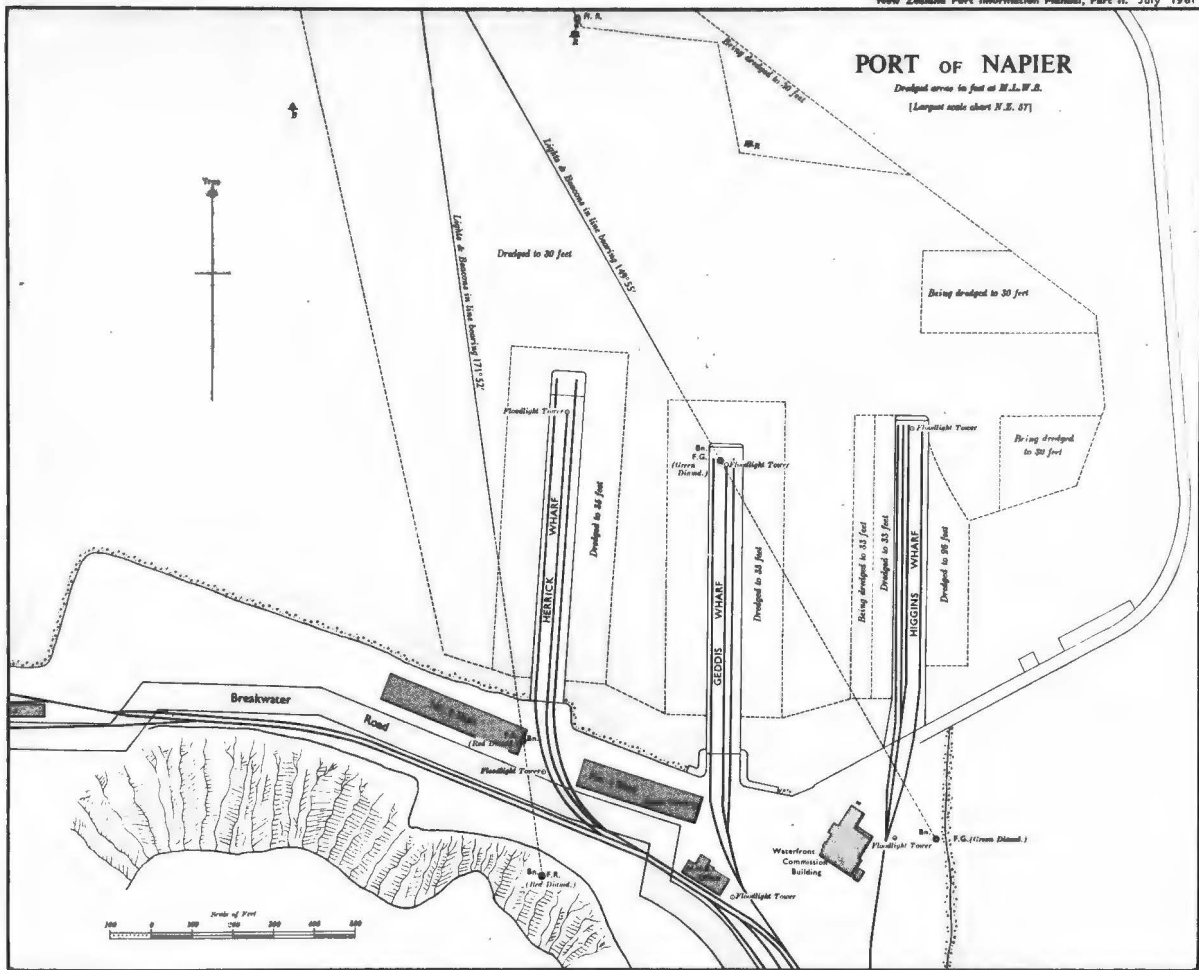


Fig. 66. Port of Napier.



Plate XXVI. Wharves at Napier.
Higgins Wharf is in the foreground, Geddis Wharf (centre) and Herrick Wharf (right). Note the calm water anchorage provided by the breakwater.

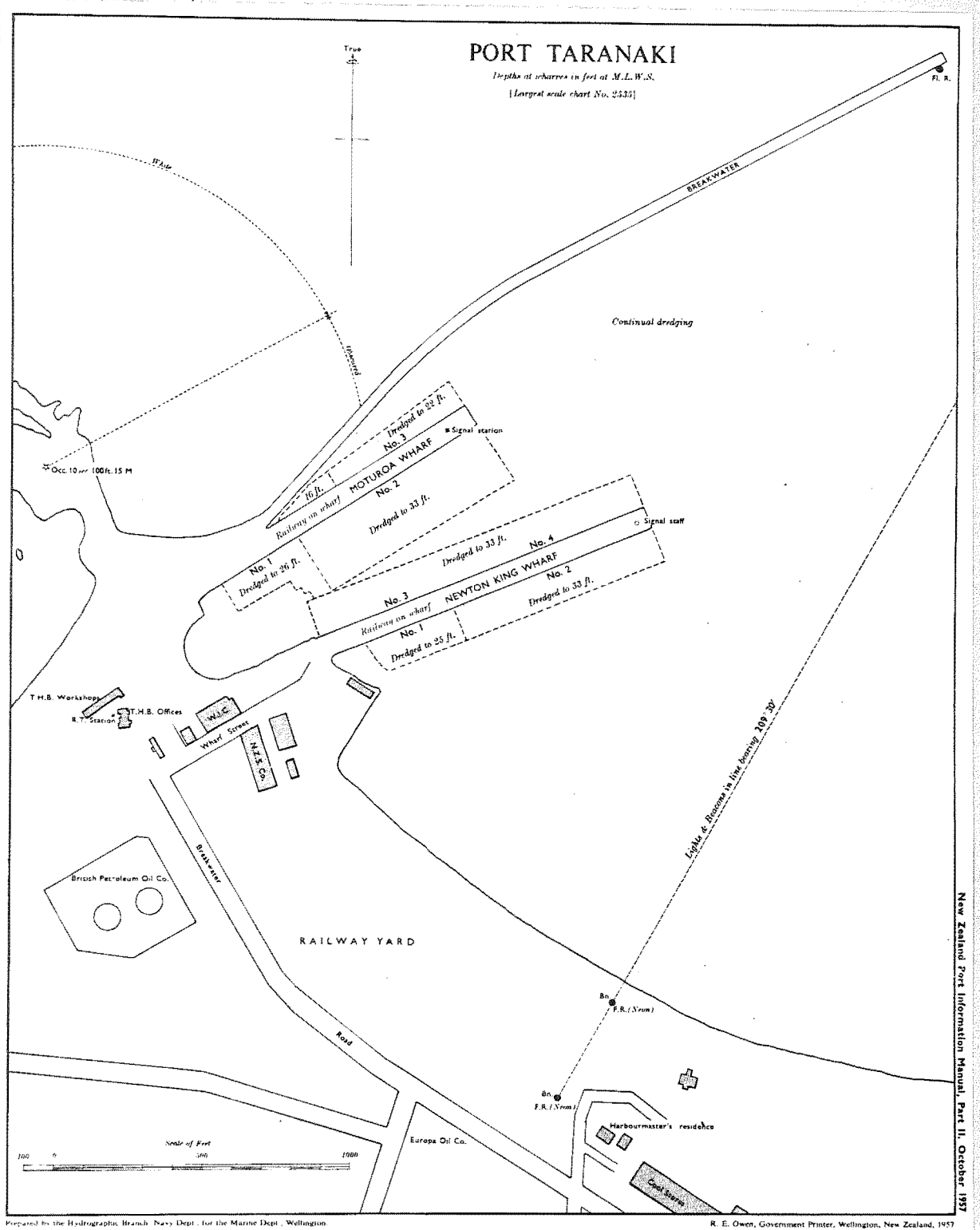


Fig.67. Port Taranaki (New Plymouth).



Plate XXVII. New Plymouth Harbour.
 A general view with Mt. Egmont (8,260 ft.) in the distance.
 Photo: National Publicity Studios.

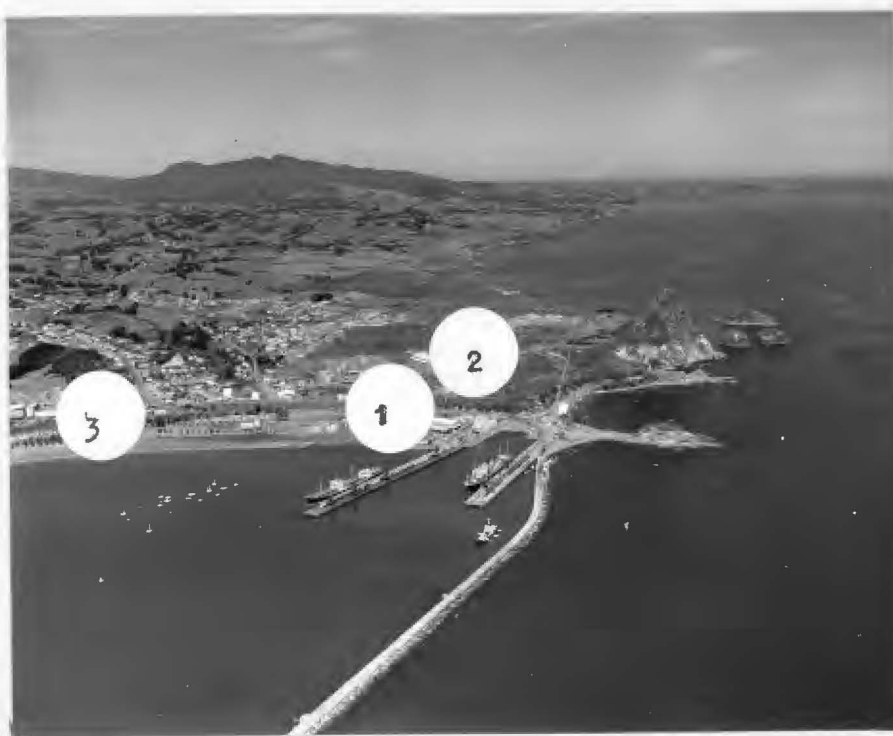


Plate XXVIII. Wharves at New Plymouth (looking south).
 Moturoa Wharf is on the right and Newton King Wharf is on the left. Note the wind screens on each wharf.
 (1) Wool store.
 (2) New industrial area.
 (3) Taranaki Producers' Freezing Company's cool stores.
 Photo: National Publicity Studios.

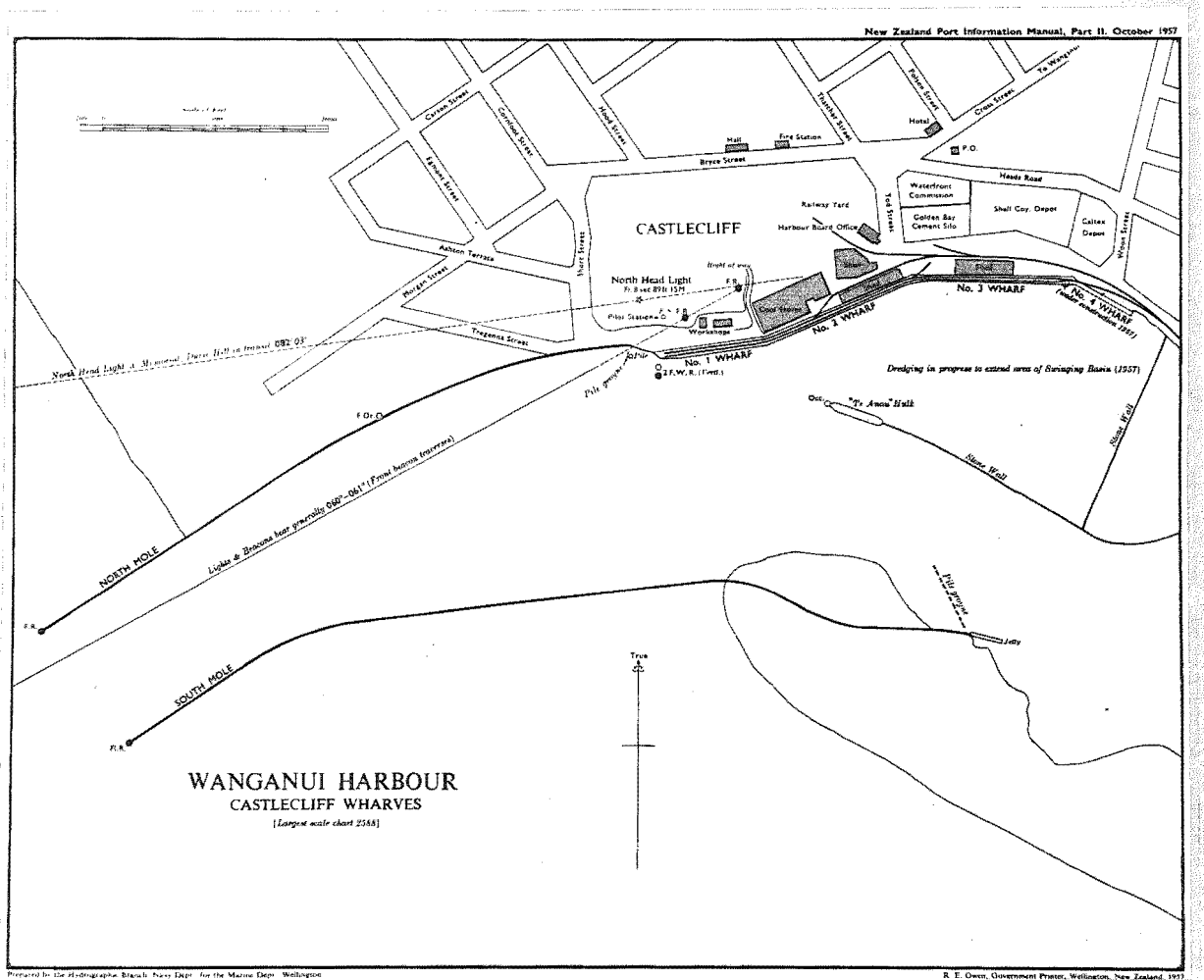


Fig.68. Wanganui Harbour: Castlecliffe Wharves.

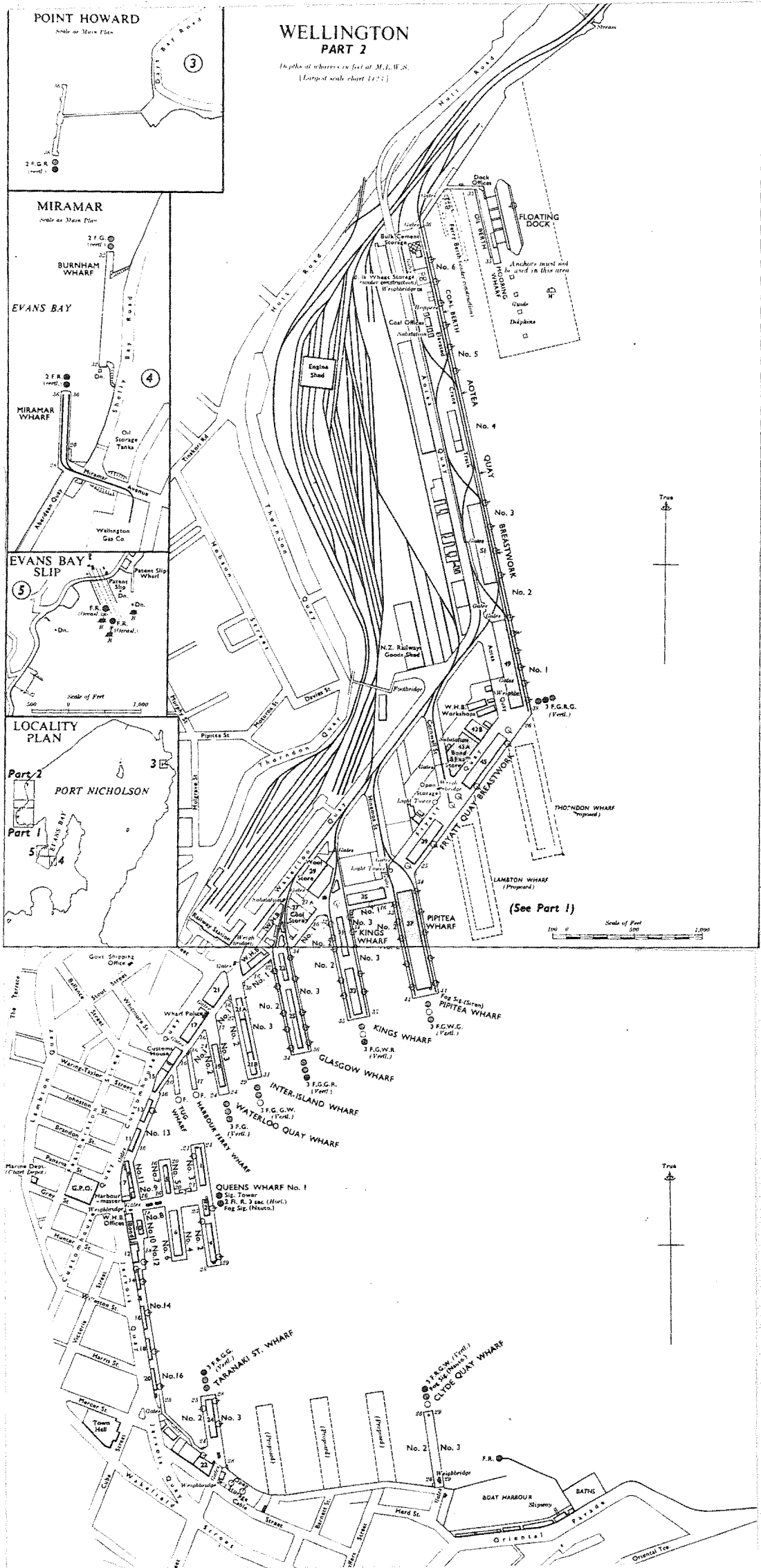


Fig.69. Wellington.



Plate XXIX. Wellington City and Wharves (from Tinakori Hills).
 There is tremendous scope for expanding the wharfage area
 of Wellington, if necessary.

Photo: National Publicity Studios.

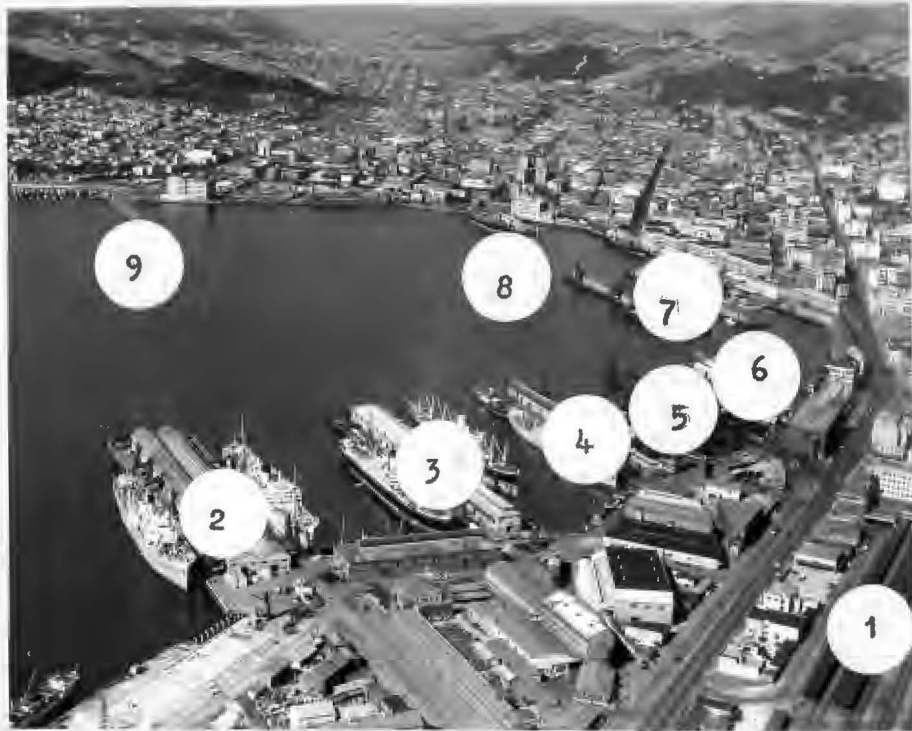


Plate XXX. Wellington Wharves.

An aerial view showing the close proximity of wharves to railway
 station and city business area.

- | | |
|------------------------|-------------------------|
| (1) Railway Station | (2) Pipitea Wharf |
| (3) Kings Wharf | (4) Glasgow Wharf |
| (5) Inter-Island Wharf | (6) Waterloo Quay |
| (7) Queens Wharf | (8) Taranaki St. Wharf. |
| (9) Clyde Quay. | |

Photo: National Publicity Studios.

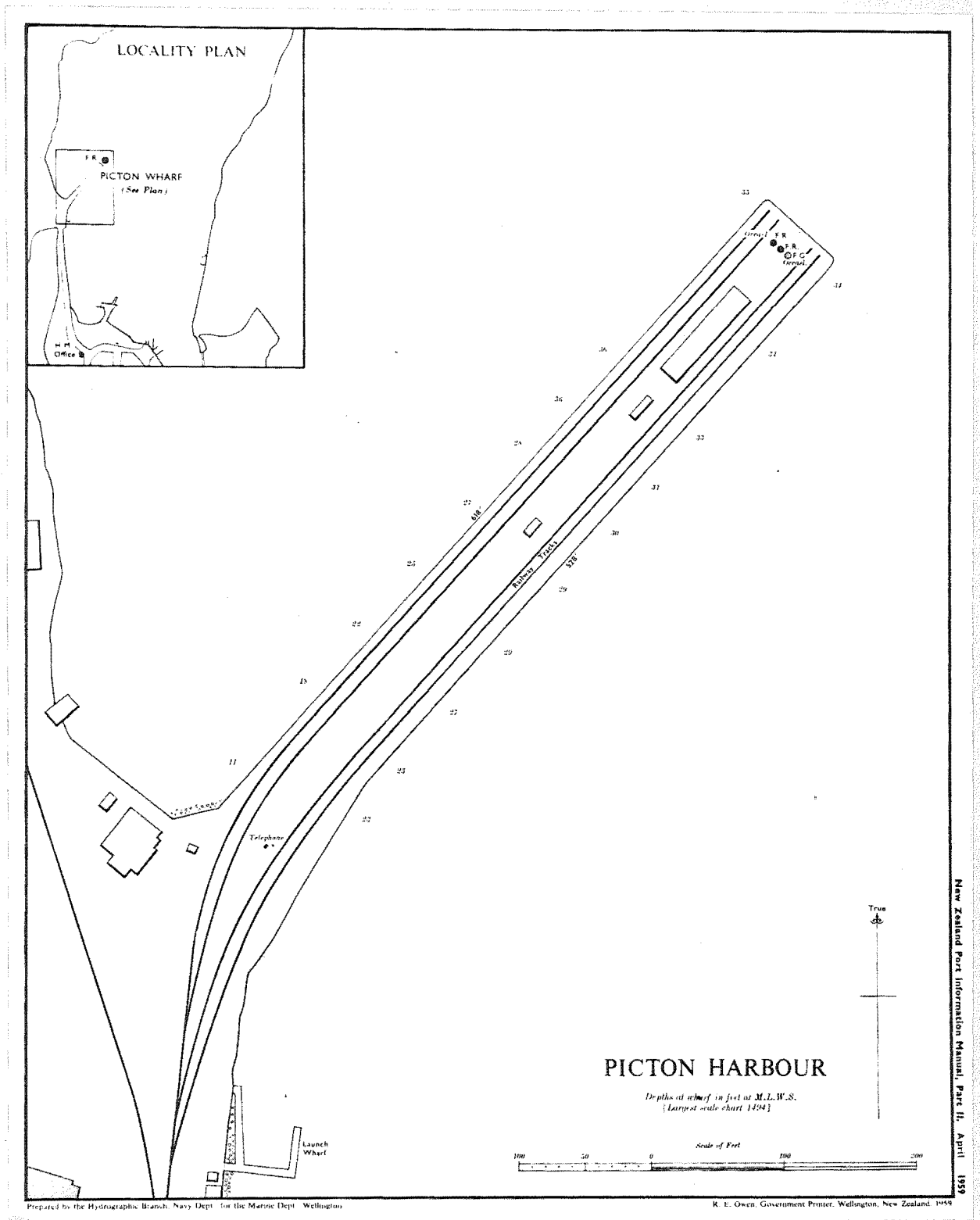


Fig.70. Picton Harbour.
 Ferry terminal had not been built when the plan was drawn.



Plate XXXI.

The Port of Picton.

Picton is a deep water port at the head of Queen Charlotte Sound. It is the northern terminal of the South Island Main Trunk railway and the southern terminal of the Cook Strait Rail-Road Ferry.

(1) Waitohi Wharf (2) Ferry terminal

Photo: National Publicity Studios.

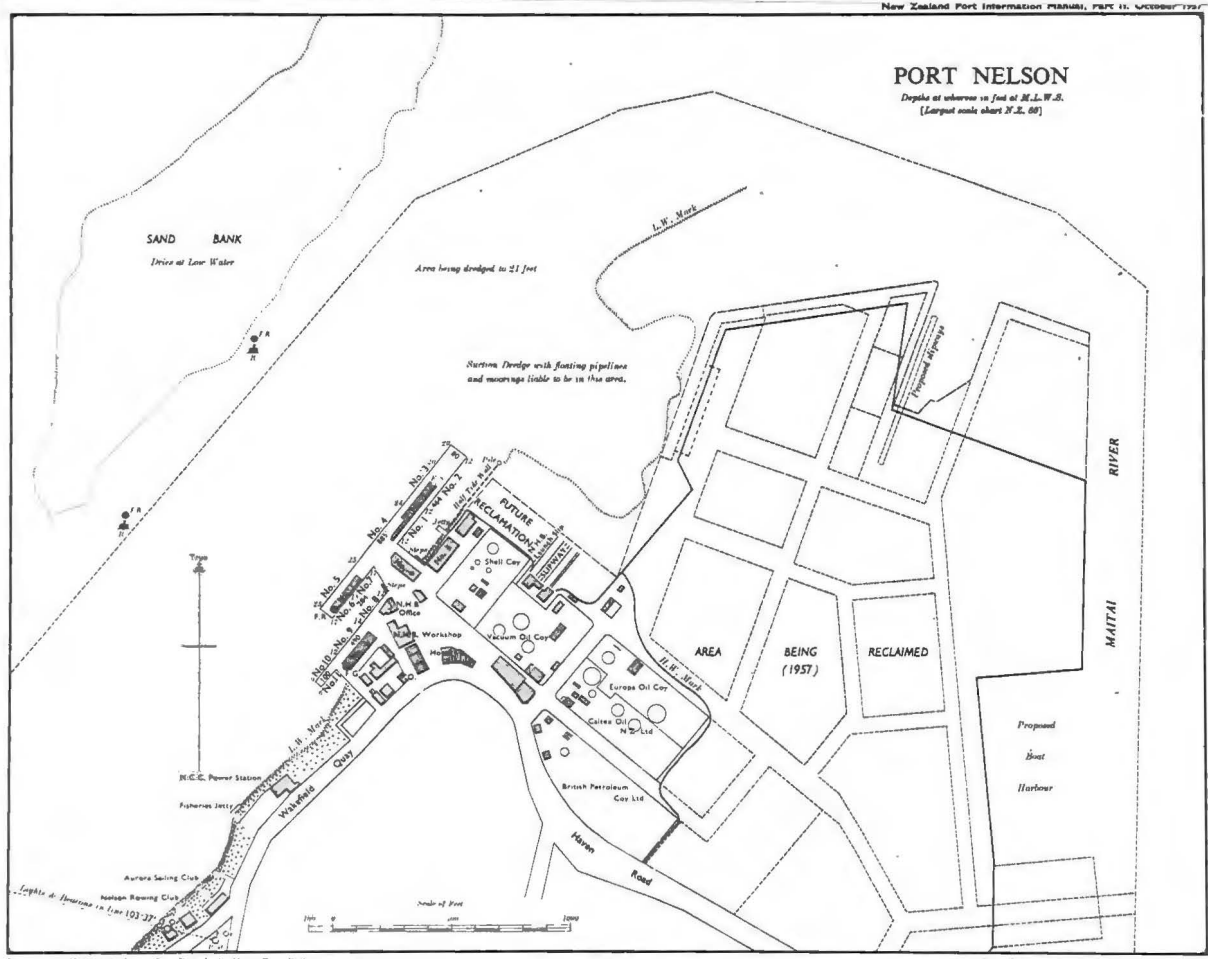


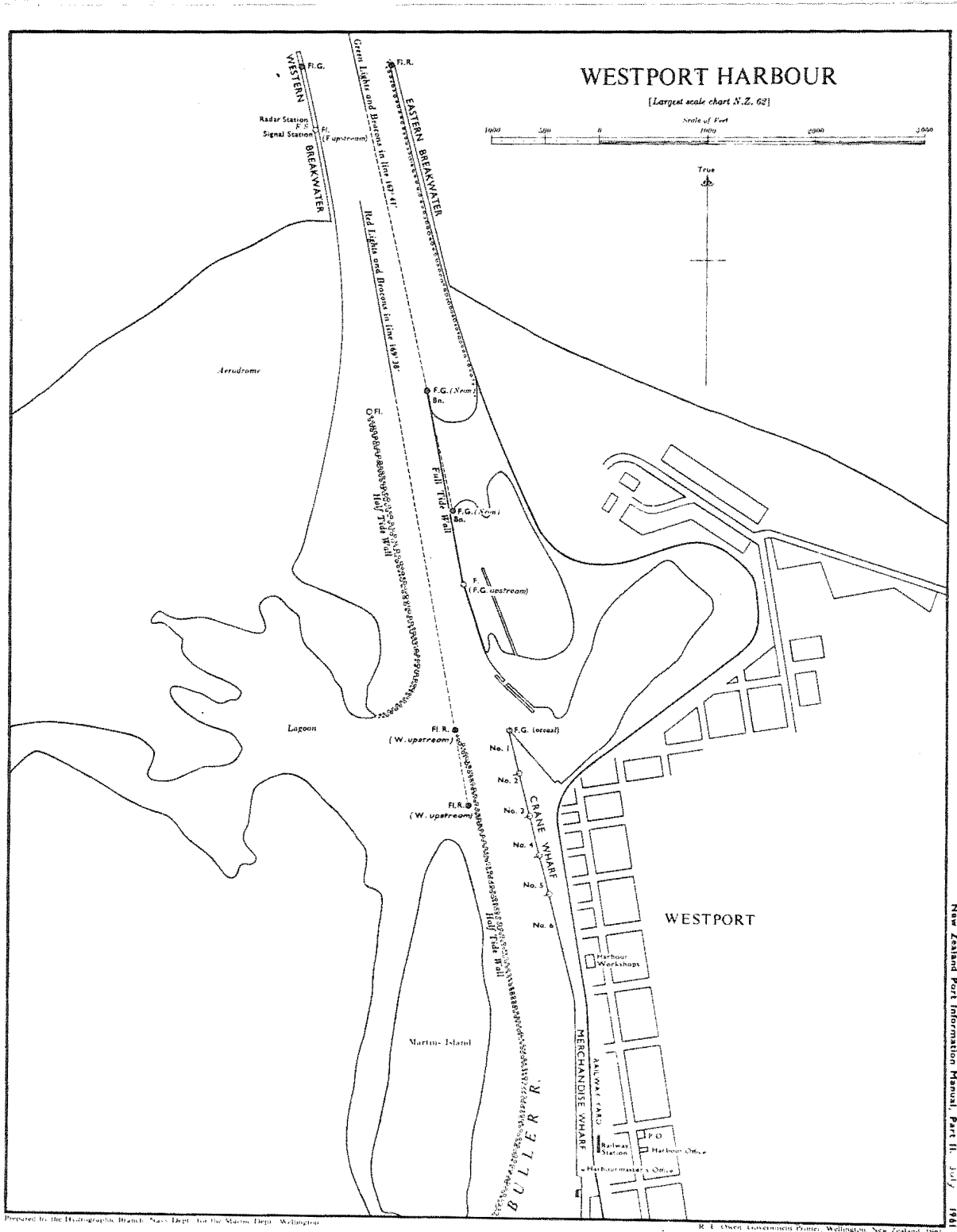
Fig. 71. Port Nelson.



Plate XXXII. Port Nelson.

- | | |
|------------------------------|---|
| (1) Boulder Bank | (2) Haulashore Island |
| (3) Main Wharf | (4) McGlashen Quay |
| (5) Log storage area | (6) N.Z. Apple and Pear Board's cool store. |
| (7) Light industrial area | |
| (8) Site for Kingsford Quay. | |

Photo: National Publicity Studios.



New Zealand Port Information Manual, Part II, July, 1981

Prepared by the Hydrographic Branch, Navy Dept. for the Marine Dept. Wellington
 R. E. Owen Government Printer, Wellington, New Zealand, 1981

Fig. 72. Westport Harbour.



Plate XXXIII. Westport.

A classic example of a New Zealand river port. The breakwater and half tide training walls are to direct and concentrate estuarial flow to scour the sand bar at the river mouth. As the breakwater trapped littoral drift, its effect on improving depths on the bar was temporary. Unsatisfactory bar conditions now delay ships carrying cement and coal to the North Island.

Photo: Whites Aviation.

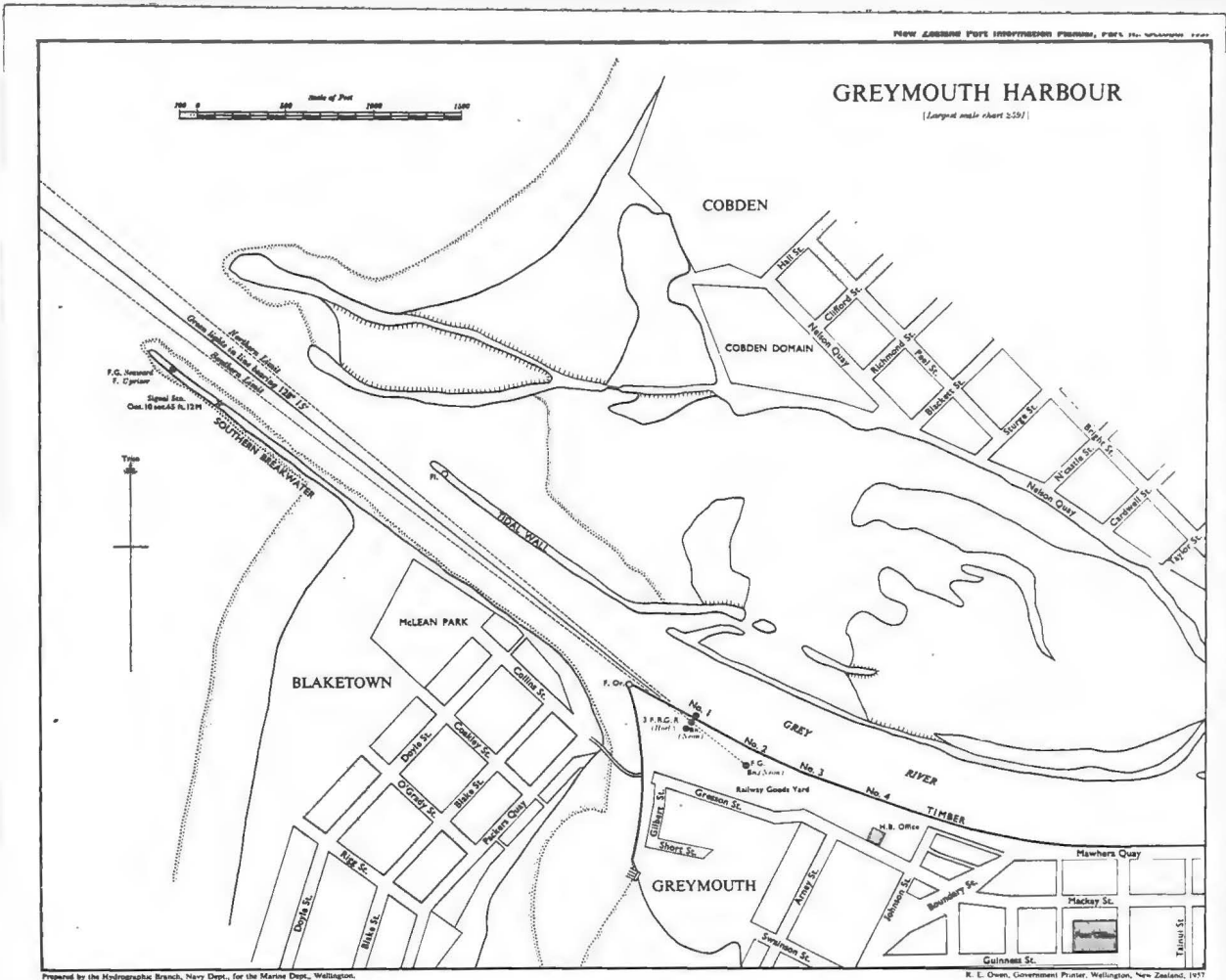
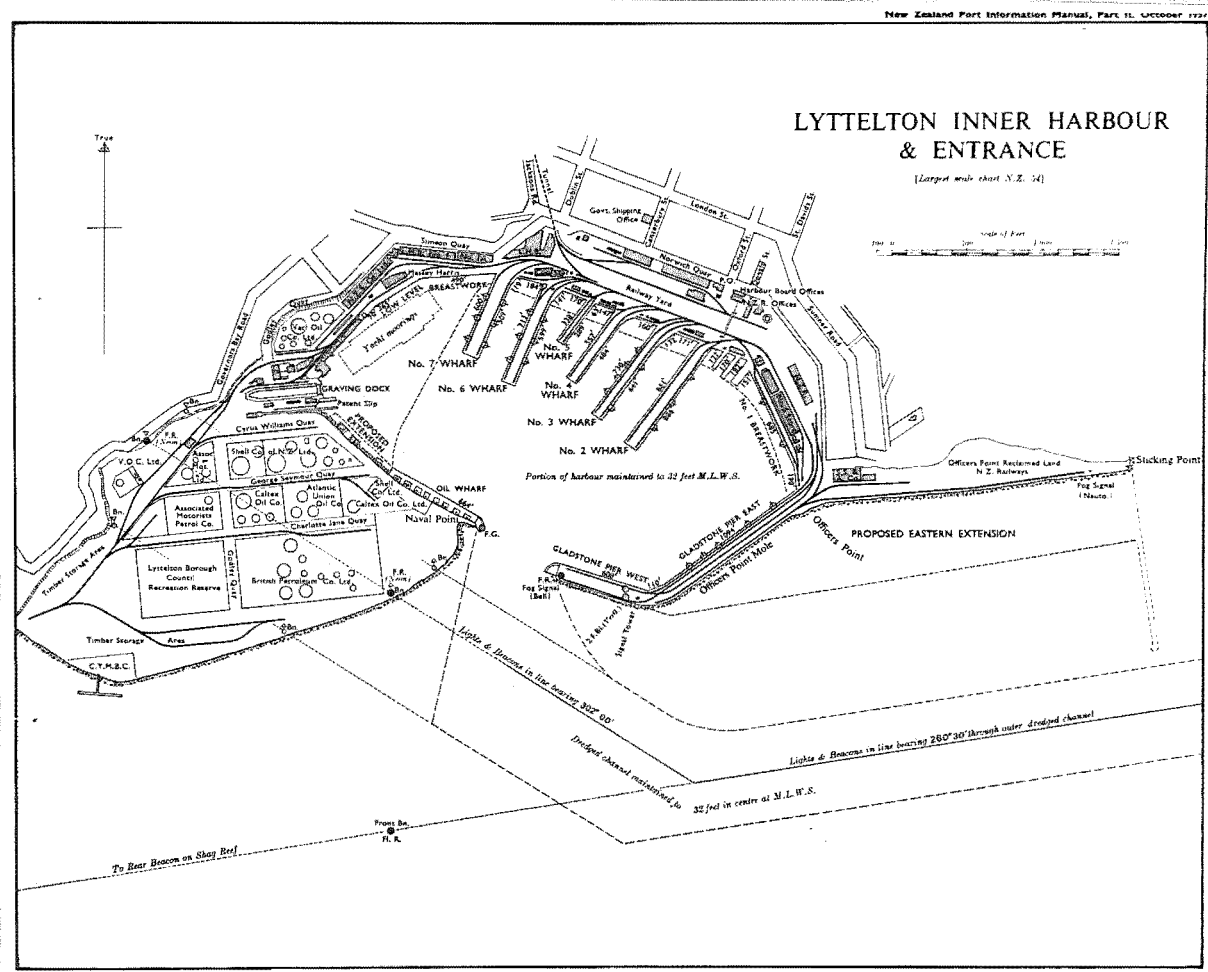


Fig. 73. Greymouth Harbour.



Plate XXXIV. Greymouth.
The port has parallel bar problems to Westport. Breakwater and half tide training walls have been built to concentrate estuarial flow to scour the bar at the river mouth.
Photo: Whites Aviation.



Prepared by the Hydrographic Branch, Navy Dept., for the Marine Dept., Wellington.

A. C. Owen, Government Printer, Wellington, New Zealand, 1922

Fig. 74. Lyttelton Inner Harbour and Entrance.

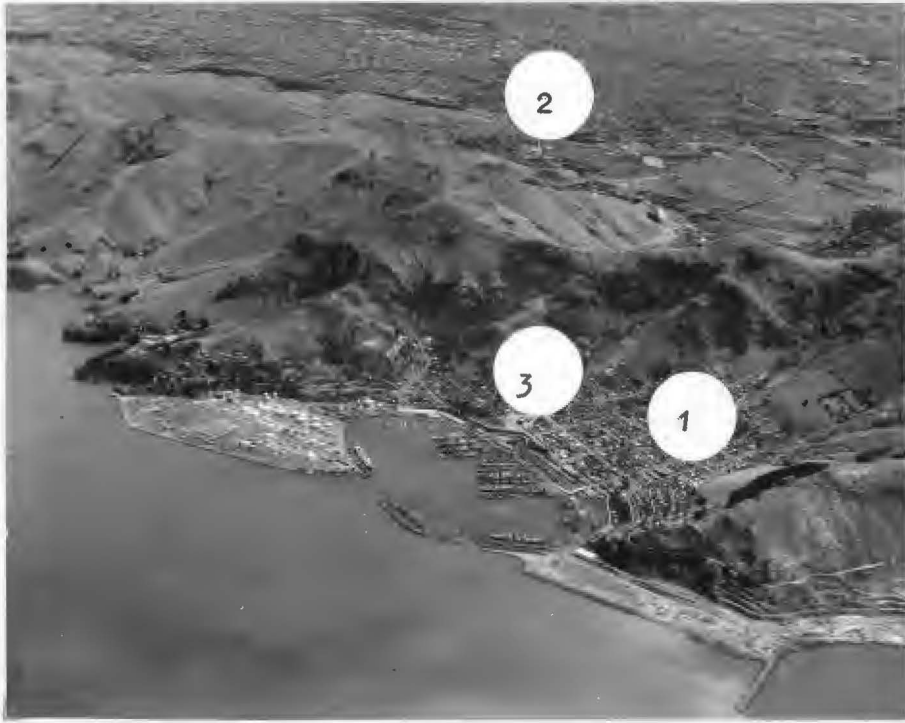


Plate XXXV. Lyttelton and Christchurch City.

Access between the Port and the City has always been a problem. There is now a road tunnel (1964) as well as the rail tunnel (1867) linking Lyttelton to its immediate hinterland.

(1) Lyttelton. (2) Christchurch.

(3) Entrance to Road Tunnel.

Photo: National Publicity Studios.



Plate XXXVI. Lyttelton Harbour.

- (1) New berthage at Cashin Quay.
- (2) Naval Point with bulk oil installations.
- (3) Inner harbour.

Photo: National Publicity Studios.

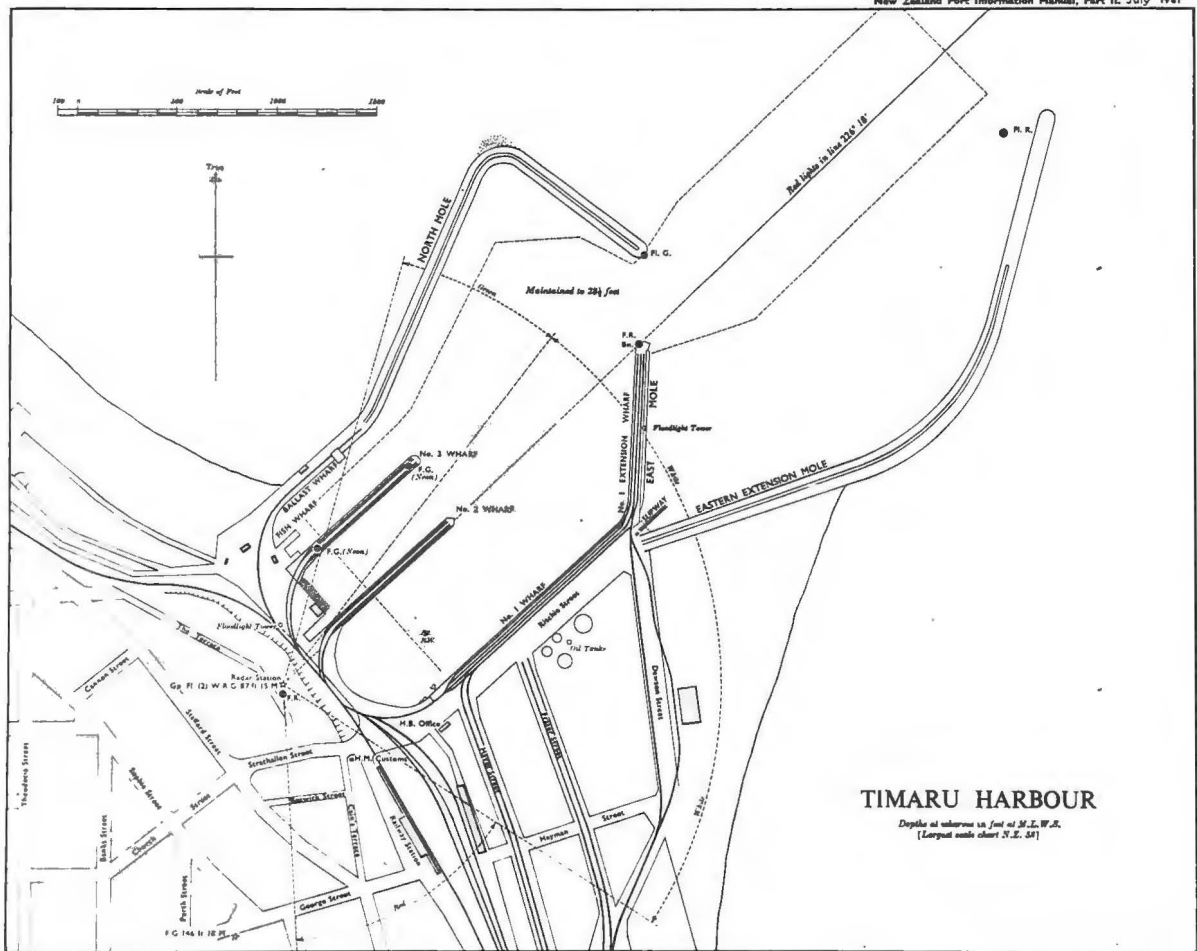


Fig. 75. Timaru Harbour.



Plate XXXVII. The Port of Timaru.

- (1) The central business district of Timaru.
- (2) Wool stores.
- (3) Site for all weather meat loaders.
- (4) This area has now been reclaimed.

Photo: Timaru Harbour Board.

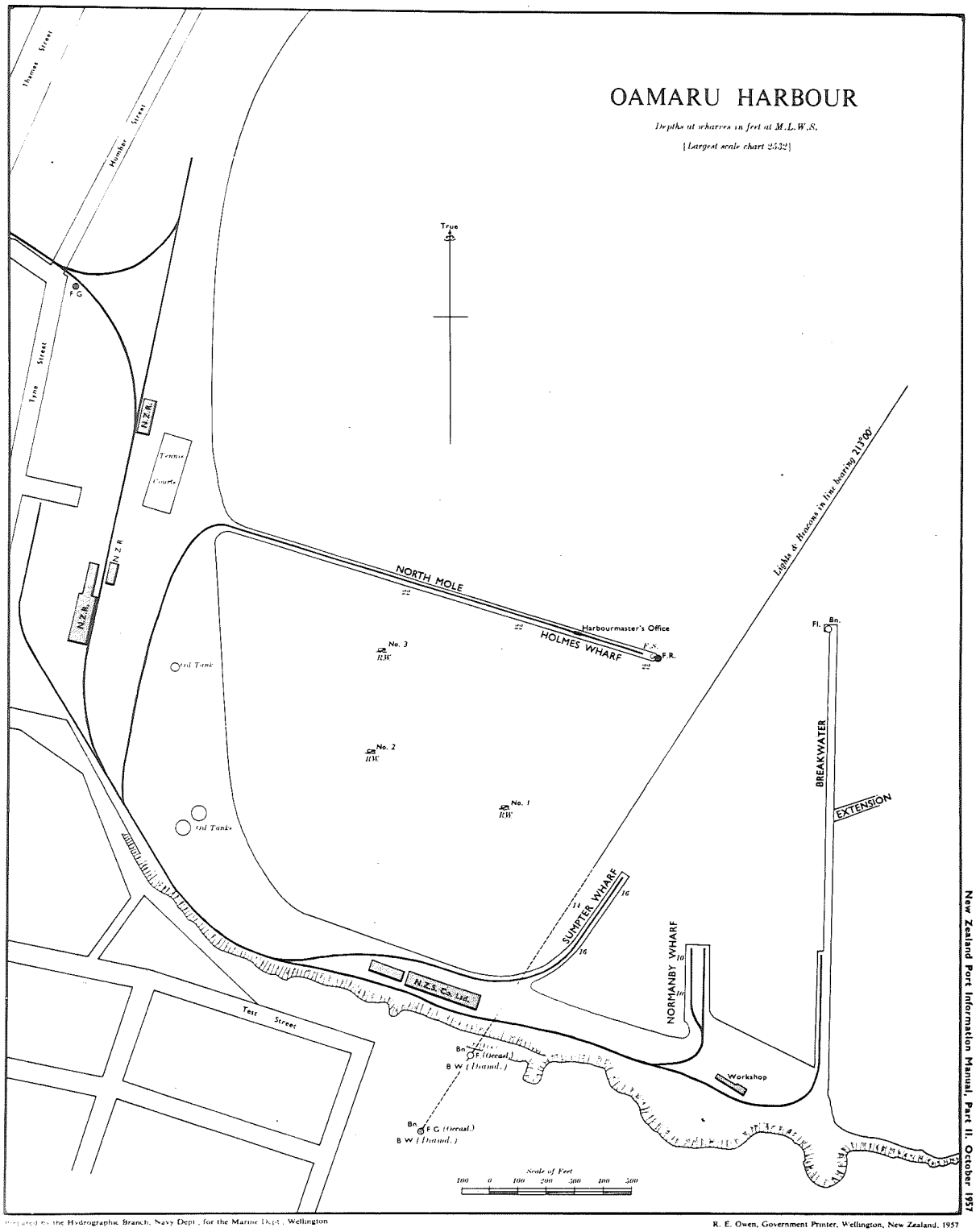


Fig.76. Oamaru Harbour.



Plate XXXVIII. The Port of Oamaru.
A compact port with 60 acres of protected water.
Photo: National Publicity Studios.

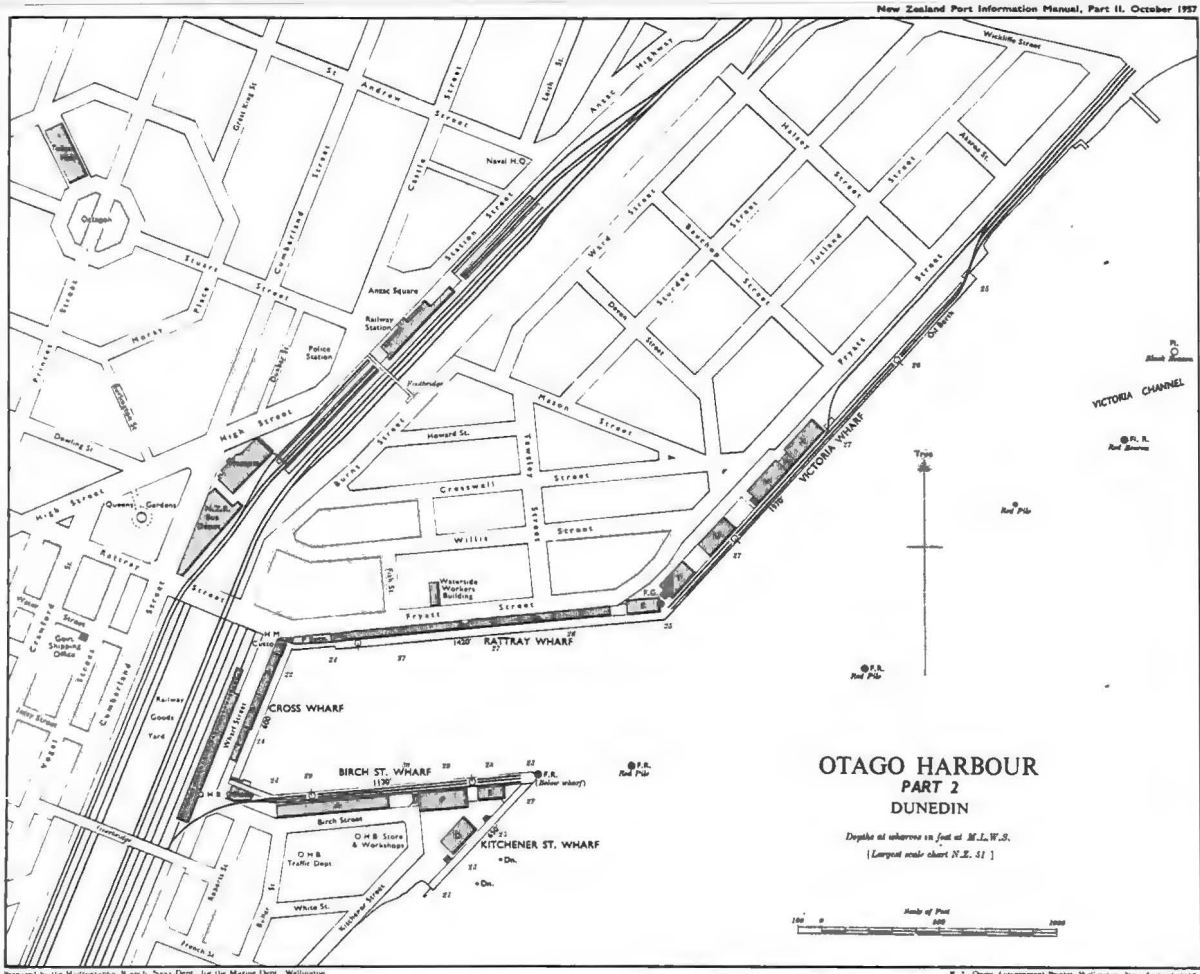


Fig. 77. Otago Harbour : Dunedin.

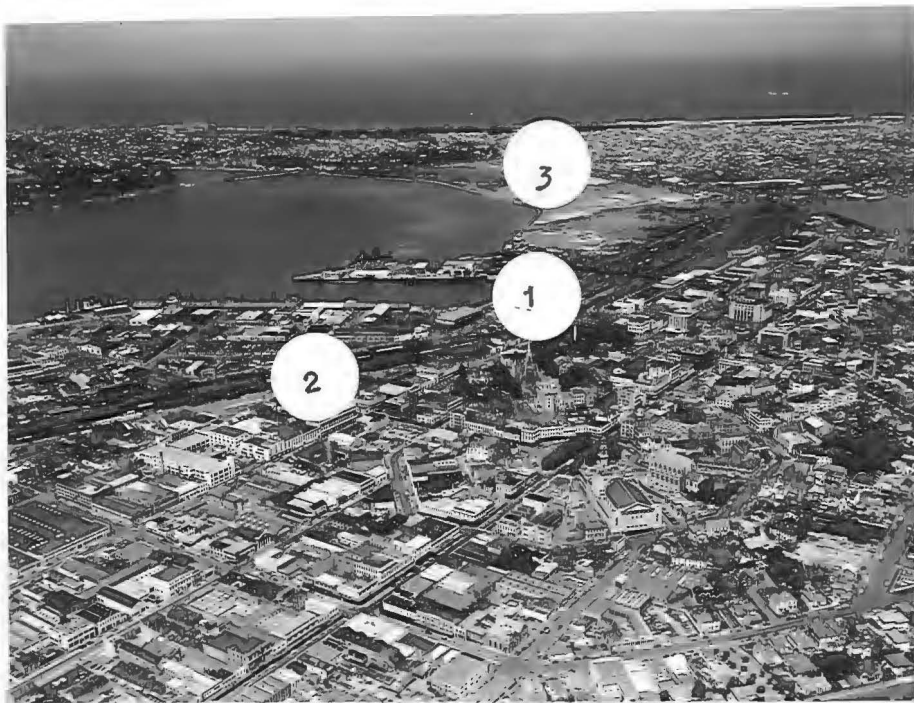


Plate XXXIX. City Wharves, Dunedin.

- (1) Wharf area.
- (2) Railway station.
- (3) New reclamation for light industrial use.

Photo: National Publicity Studios.

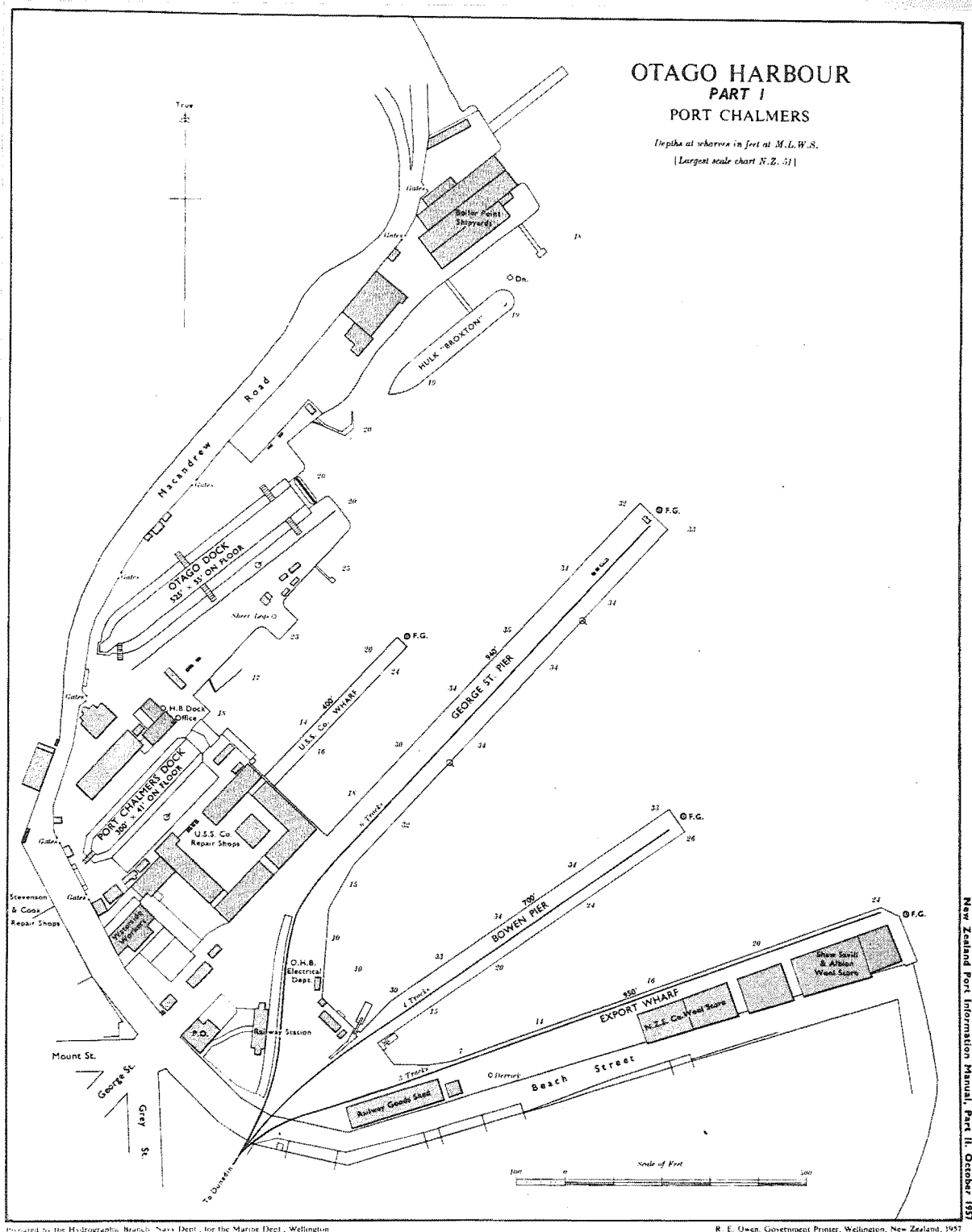


Fig.78. Otago Harbour : Port Chalmers.



Plate XL Port Chalmers.

The deep water section of the Port of Otago.

- (1) Site of new Export Wharf.
- (2) Bowen Pier demolished.
- (3) George Street Wharf.
- (4) Otago Dock.
- (5) Port Chalmers Dock.

Photo: National Publicity Studios.

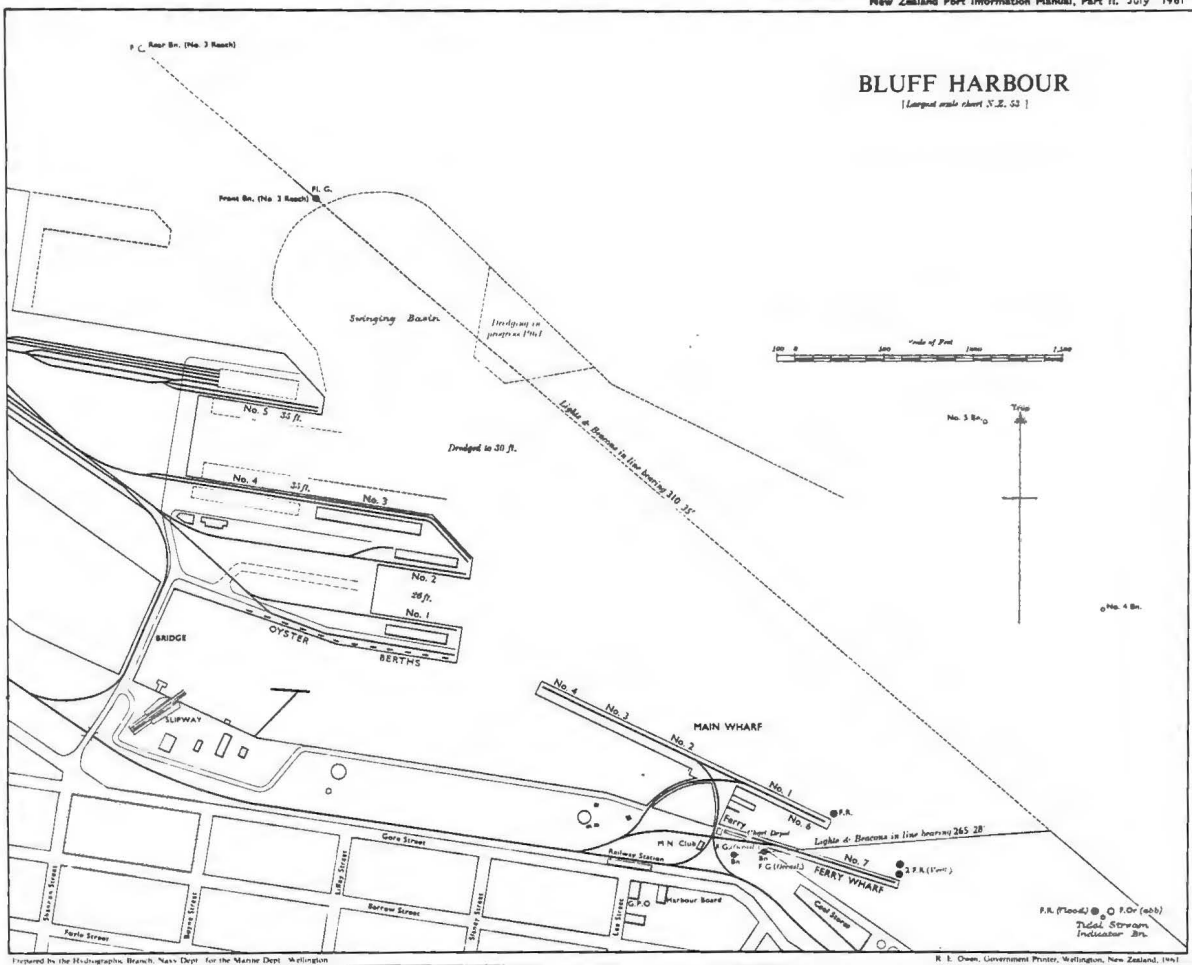


Fig. 79. Bluff Harbour.

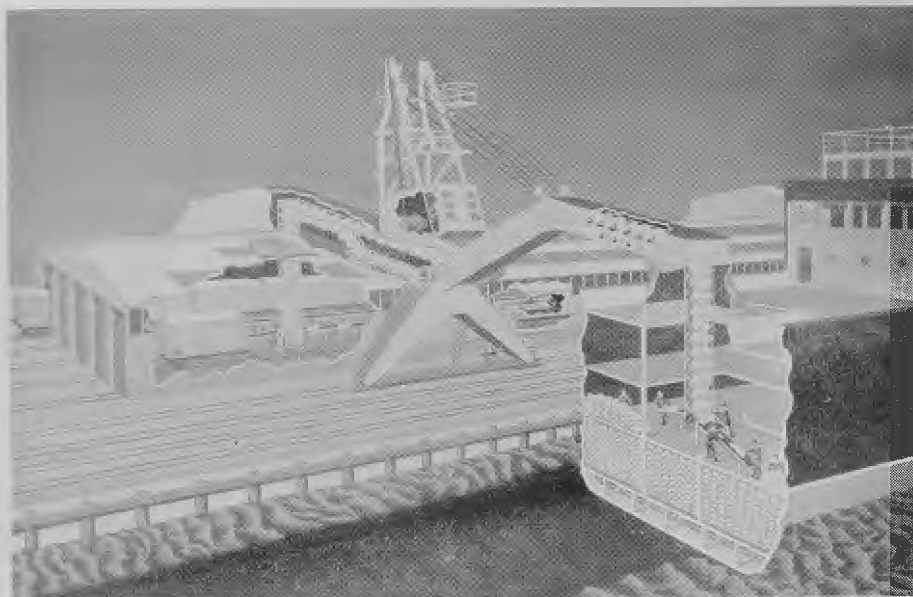
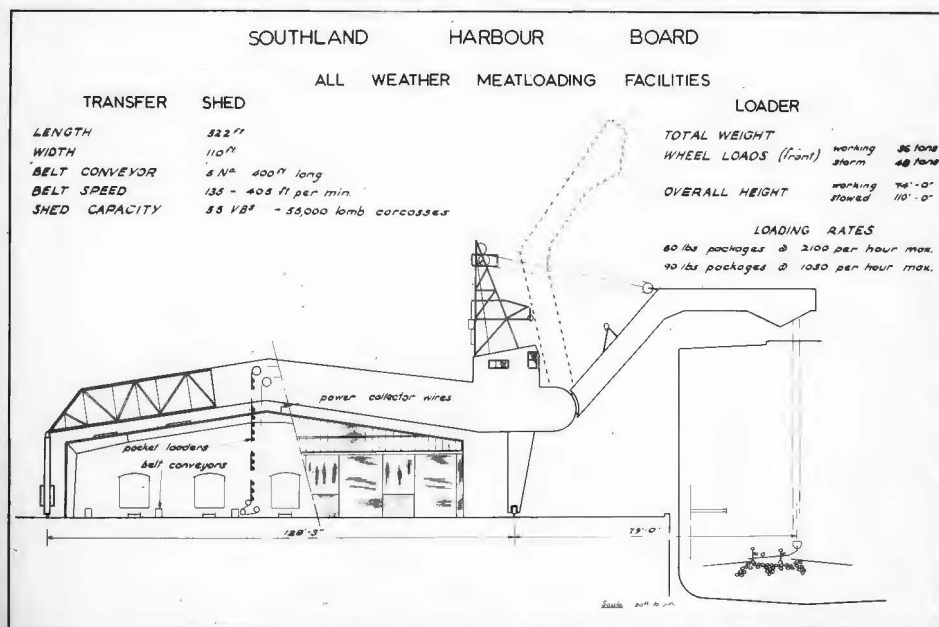


Plate XLI Bluff Harbour.

An aerial view looking across the wharf installations with Bluff township towards the entrance,

- (1) Old wharf area.
- (2) New wharf area completed 1962.
- (3) All weather meat loading berth.

Photo: National Publicity Studios.



BLUFF—THE PORT OF SOUTHLAND

An artist's impression of the first of five Package Loaders and Shed Facilities at the Specialised All-Weather Loading Berth.

Plate XLIII. Mechanical Meat Loader, Bluff.

The package loader and shed facilities at the specialised all-weather loading berth. This system has increased the loading rate per hour (2,100 carcasses of lamb per hour) and reduced delays from weather, shunting and other causes which previously wasted over 60 per cent of the available working hours.

Photo: Southland Harbour Board.