1946

NEW ZEALAND

DOMINION POPULATION COMMITTEE

(REPORTS OF THE)

(MR. JAMES THORN, CHAIRMAN)

Laid on the Table of the House of Representatives

ORDERS OF REFERENCE

Extracts from the Journals of the House of Representatives

FRIDAY, THE 7TH DAY OF DECEMBER, 1945

Ordered, "That a Select Committee be appointed, consisting of ten members, to consider ways and means of increasing the population of the Dominion, the Committee to have power to sit at such times and at such places as it sees fit; and to report to the House within fourteen days after the commencement of the next ensuing session: the Committee to consist of Mr. Acland, Mr. Algie, Mr. Armstrong, Mr. Gerard, Miss Howard, the Hon. Mr. Parry, Mr. Richards, Mrs. Ross, Mr. Thorn, and the Mover."—(Hon. Mr. NORDMEYER.)

WEDNESDAY, THE 3RD DAY OF JULY, 1946

Ordered, "That the Report of the Dominion Population Committee in regard to its action in admitting the press to the meetings of the Committee at which evidence was tendered, be adopted, and that the Committee's action validated."—(Right Hon. Mr. FRASER.)

Ordered, "That the period set down by order of the House dated 7th December, 1945, within which the Dominion Population Committee was required to present its report, be extended until 31st August next to enable the Committee to complete its deliberations and prepare its report."—(Hon. Mr. NORDMEYER.)

THURSDAY, THE 29TH DAY OF AUGUST, 1946

Ordered, "That the period set down by order of the House dated 7th December, 1945, within which the Dominion Population Committee was required to present its report, and which was extended by the House on 3rd July until 31st August, be now further extended until 30th September next to enable the Committee to complete its deliberations and prepare its report."—(Hon. Mr. NORDMEYER.)

SPECIAL REPORTS

3rd July, 1946:—

I have the honour to report that at the first meeting of the Dominion Population Committee the question was raised as to the admission of the press to the meetings of the Committee at which evidence was tendered. The House had omitted in the Order of reference to provide for the admission of the press, but it was the unanimous opinion of the Committee and of those consulted that the press should be admitted. The Committee therefore resolved that the press be admitted, and that when the House met again it be asked to validate its action.—(J. THORN, Chairman of the Committee.)

20th September, 1946:—

I have the honour to report that at its final meeting held on Tuesday, 17th September, 1946, the Dominion Population Committee unanimously passed the following resolution:—

"That this Committee desires to express its appreciation of the able manner in which the Chairman, Mr. James Thorn, has conducted the business of the Committee, and directs that this resolution be reported to the House."—(R. M. ALGIE, Member of the Committee.)

I have the honour to report that at its final meeting held on Tuesday, 17th September, 1946, the Dominion Population Committee unanimously passed the following resolutions:—

(*a*) That this Committee desires to express its appreciation of the services rendered by its secretary, Mr. F. B. Stephens, and the staff associated with him in connection with the preparation of the Committee's report, and directs that this resolution be reported to the House.

(*b*) That this Committee desires to express its appreciation of the services rendered by Mr. C. B. Bailey, who carried out the duties of Clerk of the Committee, and directs that this resolution be reported to the House.—(J. THORN, Chairman of the Committee.)

PREFACE

On behalf of the Dominion Population Committee, I have the honour to present the following report. In view of the complexity of the subject-matter of our investigations, I have thought it wise to give some indication of the structure of the report.

The first section to page 93 is concerned with a historical and statistical survey of the existing conditions, in which account is taken of the evidence which was placed before us. From page 94 to page 111 we have set out the conclusions as to current trends which emerge from our survey of existing conditions and from the evidence which was placed before us. From page 112 to page 119 we set out our recommendations in detail.

Appendix A (pages 120–123) is concerned with abortion. Appendix B (page 124) is concerned with contraception. From page 125 to page 130 we give a general summary of our conclusions and recommendations.

J. Thorn,
Chairman.

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PART I.—HISTORICAL AND STATISTICAL SURVEY

I. POPULATION IN RETROSPECT

A. GROWTH OF POPULATION

ORGANIZED settlement in the Dominion began in 1840, at which date New Zealand became a British colony. Before that date, however, whalers and sealers were established at various places round the coast, missionaries were operating quite extensively, and some few of the beachcomber type were living in the country. It has been estimated that there were about 1,000 Europeans living in New Zealand in 1839. No reliable figure as to the numbers of Maoris in New Zealand at this time is available, but since the various estimates range between 100,000 and 120,000, it is fairly safe to assume that there were approximately 110,000 in 1840, of whom all but 4,000 to 5,000 lived in the North Island.

For some time prior to 1840 there had been considerable agitation, particularly from missionaries in New Zealand, for the taking over of the country by Great Britain, but, as is well known, it was the decision of the New Zealand Company, under the direction of Edward Gibbon Wakefield and his colleagues, to begin organized European settlement in New Zealand which finally compelled the British Government to annex the country and provide formally for its government.

Although the New Zealand Company did not operate in the Auckland Province, the choice of this area for the seat of Government, and the trading facilities available there, did attract, from the first, considerable population in that locality. The development of Wellington, however, was a consequence of the deliberate policy of the New Zealand Company. The first ships with colonists under the company's scheme arrived in Wellington in January, 1840. Some eighteen months to two years later settlements at Nelson, in the South Island, and New Plymouth, in the North Island, were established under the ægis of the company. In 1848 a Scottish settlement organized by the Otago Association began at Dunedin. Two and a half years later the Canterbury Association sponsored the development of an English settlement in the Christchurch area.

Although the various organized settlements enumerated above provided the bulk of the immigrants during the period from 1840 to 1850, quite a large number of unassisted immigrants arrived in the colony, particularly at Auckland.

The following tables give some idea of the population trends in this period. The first table, which shows the total population from 1800 to 1850, illustrates in some measure the results of the activities of the New Zealand Company and its associates. The second table shows an estimate of the distribution of the European population at 1842 and 1851 respectively:—

Table No. 1.—Table showing Total European Population from 1800 to 1850

1800	*circa* 50
1815	*circa* 200
1839	1,000
1840	2,050
1841	5,000
1842	10,992
1843	11,848
1844	12,447
1845	12,774
1846	13,274
1847	14,477
1848	17,166
1849	19,543
1850	22,108

Table No. 2.—Table showing Estimate of Distribution of European Population at 1842 and 1851 respectively

District.	1842.	1851 (Census).
Auckland—		
Auckland	2,795	9,430
Windsor (near Auckland)	100	
Bay of Islands	380	
Hokianga	263	
Smaller settlements	200	
New Plymouth	895	1,532
Wellington	3,701	6,409
Nelson	2,560	4,287
Canterbury—		
Akaroa	198	3,273
Rest of province	..	
Otago	(Not then founded)	1,776
Total	11,092	26,707

The first general census of New Zealand population was taken in November–December, 1851, under the Census Ordinance of that year. This Ordinance provided for the taking of triennial censuses, although this particular provision with regard to triennial censuses was not implemented. Subsequent censuses were taken in 1858, 1861, 1864, 1867, 1871, 1874, 1878, and 1881, and thereafter at five-yearly intervals until 1926. Owing to the depression no census was taken in 1931, the next census being taken in 1936. No census was taken in 1941 owing to the war. The last census was taken in 1945.

The following table gives a picture of total population at the various censuses, and shows, besides the total population, the numerical increase as between censuses, the percentage increase, and the annual rate of increase.

Table No. 3.—Table showing the Total Population and Intercensal Increases from 1851 to the Present Date

Census.	Population (excluding Maoris).	Numerical Increase.	Percentage Increase.	Average Annual Percentage Increase.
1851	26,707	..	..	..
1858	59,413	32,706	122·46	12·14
1861	99,021	39,608	66·67	18·70
1864	172,158	73,137	73·86	20·54
1867	218,668	46,510	27·02	8·15
1871	256,393	37,725	17·25	5·11
1874	299,514	43,121	16·82	5·32
1878	414,412	114,898	38·36	8·43
1881	489,933	75,521	18·22	5·58
1886	576,524	86,591	17·67	3·32
1891	624,474	47,950	8·32	1·60
1896	701,101	76,627	12·27	2·33
1901	770,312	69,211	9·87	1·91
1906	886,000	115,688	15·02	2·79
1911	1,005,589	119,589	13·50	2·60
1916	1,096,228	90,639	9·01	1·57
1921	1,214,677	118,449	10·81	2·31
1926	1,344,469	129,792	10·69	2·05
1936	1,491,484	147,015	10·93	1·05
1945	1,603,554*	112,070	7·51	0·70

* Does not include 45,381 members of the Armed Forces overseas at the census date.

The interest in the above table centres not so much in the absolute increase of population as in the falling rate of increase in the population. This trend is similar to trends in all Western European countries, and a general indication of the extent of this trend is the reduction in increase in the European populations as shown in the following table :—

Table No. 4.—Table showing Percentage Increase in Quinquennial Periods from 1901–06 to 1931–36 of Population in New Zealand and certain Overseas Countries

Country.	Average Annual Percentage Increase in Quinquennial Periods approximating to—						
	1901–1906.	1906–1911.	1911–1916.	1916–1921.	1921–1926.	1926–1931.	1931–1936.
New Zealand	2·79	2·60	1·57	2·31	2·05	1·40	0·70
England and Wales	1·04	1·04	—0·77*	1·82	0·61	0·47	0·41
Scotland	0·63	0·63	0·13	0·36	—0·08*	—0·09*	0·55
Australia	1·39	1·96	2·18	1·84	2·10	1·56	0·76
Canada	2·93		2·16	1·84	1·55	1·80	1·41
Union of South Africa (Europeans)	1·91		1·88	1·64	2·00	1·73	1·75
Norway	0·64	0·68	0·95	1·11	0·77	0·43	0·48
Sweden	0·61	0·85	0·68	0·60	0·50	0·29	0·34
Denmark	1·11	1·27	1·16	2·27	1·05	0·67	0·80
Netherlands	1·55	1·25	1·62	1·26	1·56	1·36	1·32
France	0·15	0·18	—0·68*	0·56	0·77	0·53	0·06
Switzerland	1·29	1·21	0·74	—0·01*	0·17	0·73	0·46
Italy	0·48	0·84	1·06	0·70	0·83	0·86	1·35
United States of America ..	2·04	1·85	1·49	1·39	1·52	1·41	0·73

* Decrease.

(New Zealand, 1936–41, 0·56 ; 1941–45, 1·11.)

It is interesting to note that while the countries with predominantly western European population, including north-west European, the Scandanavian countries, England, Canada, U.S.A., and Australia, have all fallen very considerably, there has been a medium growth of population in Southern and Eastern European countries, the U.S.S.R., the Balkan countries, and South America. In the Asiatic countries there has been a very great increase in the rate of growth. These factors are very important in discussing the future of New Zealand's population.

B. NATURAL INCREASE

(1) The Birth-rate

Two factors must be taken into account in explaining the change in the population of a country over any given period. They are, first, the natural increase in the population—that is, the excess of births over deaths (this may be a minus figure where deaths exceed births), and, secondly, the net external migration figures—that is, the excess of arrivals over departures (this may again be a minus figure where departures exceed arrivals).

The following table shows the crude birth-rates in New Zealand from 1919 to 1945 :—

Table No. 5.—Table showing Birth-rates per 1,000 of Population from 1919 to 1945

Year.	Birth-rate.	Year.	Birth-rate.
1919	21·42	1933	16·63
1920	25·09	1934	16·51
1921	23·36	1935	16·17
1922	23·18	1936	16·64
1923	21·96	1937	17·29
1924	21·60	1938	17·93
1925	21·20	1939	18·73
1926	21·06	1940	21·19
1927	20·29	1941	22·81
1928	19·57	1942	21·73
1929	19·03	1943	19·70
1930	18·83	1944	21·59
1931	18·45	1945	23·22
1932	17·12		

A picture over a longer period is given in the next table, showing average birth-rates in each quinquennium, from 1871–75 to 1941–45 :—

Table No. 6.—Table showing Birth-rates per 1,000 of Population from 1871–75 to 1941–45

Quinquennium.	Average Birth-rate.	Quinquennium.	Average Birth-rate.
1871–75	39·88	1911–15	25·98
1876–80	41·21	1916–20	24·32
1881–85	36·36	1921–25	22·26
1886–90	31·15	1926–30	19·76
1891–95	27·68	1931–35	16·98
1896–00	25·75	1936–40	18·36
1901–05	26·60	1941–45	21·81
1906–10	27·06		

It will be realized, however, that crude birth-rates do not present a true picture of the fecundity of the population, which is related not so much to total population as to the number of women of child-bearing age in a given community. This, in turn, is related both to the age and sex structure of the community, and also to the marriage-rate. In the earlier years, despite the low proportion of females, crude birth-rates were high, reflecting the large families typical of a pioneering country. On the other hand, in later years the proportion of females increased, while the birth-rate fell, a tendency indicative of the fall in the size of the families.

The very high rates ruling from 1871 to 1885 are clearly associated with the prosperity of the period and the large increase of immigrants of the reproductive age-groups. From 1876–80 to 1931–35 there was a steady fall. A slight reversal in the trend from 1920 to 1924 as shown in Table No. 5 is clearly associated with the return of the troops from the 1914–18 war. This is particularly so in 1920. The steady rise from 1935 to date is of considerable interest. The economic insecurity during the depression undoubtedly restrained child-birth, but the rising wages and the emergence of a feeling of greater economic security, both actual and potential, undoubtedly stimulated the birth-rate. The possibility of conscription in the early years of the war also coincides with an increase in the birth-rate. In the 1914–18 war single men were called up first, and subsequent callings-up were determined by the number of children. The thought that this provision would hold sway in the 1939–45 war did stimulate the birth-rate in the early war years. The rise in more recent years is associated with the return of the troops.

The following table shows the sex-structure of the Dominion's population from 1851 to 1946 :—

Table No. 7.—Table showing Number of Females per 1,000 Males in New Zealand from 1851 to 1946 (excluding Maoris)

1851	776	1921	956
1861	620	1926	959
1871	704	1936	972
1881	817	1945	1,049 (at census date).
1891	882	1945	1,023 (31st December).
1901	903	1946	1,002 (31st March).
1911	896		

The steadily growing proportion of females to males indicates the maturing of the population. At the present time females are almost equal to males. New Zealand's population is thus approaching the sex-structure of the older European countries(1).

The second factor which influences the birth-rate is the age-structure of the population. The following table shows the age-structure of the population from 1881 to date :—

Table No. 8.—Table showing Percentage of Total Population (excluding Maoris), in Age-groups, from 1881 to 1945

Year.	Under 15.	15 to 64.	65 and over.
1881	42·5	56·1	1·4
1886	41·4	56·8	1·8
1891	40·0	57·7	2·3
1896	36·3	60·7	3·0
1901	33·4	62·5	4·1
1906	31·5	63·9	4·6
1911	31·3	64·0	4·7
1921	31·4	63·7	4·9
1926	29·9	65·0	5·1
1936	25·5	67·9	6·6
1945	24·8	66·8	8·4

In 1881, when the first major flow of immigration had ceased, 42·5 per cent. of the population were under 15 years of age, 56·1 per cent. from 15 to 64, and only 1·4 per cent. over 64 years of age. In 1945 only 24·8 per cent. of the population were under 15, 66·8 per cent. were in the working-ages of 15 to 64, while 8·4 per cent. (a 500-per-cent. increase) were 65 and over. This is a further indication of a maturing population.

The above table, when related to the tables showing the birth-rates, suggests that the future development of the population will not be so rapid as the past development, since the number of juveniles available for procreative purposes in the future will tend to be smaller, relatively, than in the past. In general, the population is growing steadily older. A more accurate view, however, of the relation between the population and the birth-rate can be seen from an examination of the female population of reproductive ages. The following table shows the relative structure of the female population, differentiating between ante-reproductive, reproductive, and post-reproductive ages.

(1) The above figures for 1945 and 1946 do not take into account the troops absent with the Forces. If these were taken into account there would be 995 females per 1,000 males in 1945.

Table No. 9.—Showing the Percentage Distribution of Female Population of New Zealand from 1881 to 1945

Census.	Ante-reproductive Ages (under 15).	Reproductive Ages. (15 and under 45).	Post-reproductive Ages. (45 and over).
1881	46·83	43·71	9·46
1891	42·20	44·72	13·08
1896	38·02	47·70	14·28
1901	34·66	50·03	15·31
1906	32·98	50·94	16·08
1911	32·58	50·56	16·86
1916	32·70	48·86	18·44
1921	31·57	48·47	19·96
1926	29·94	47·73	22·33
1936	25·32	46·85	27·83
1945	24·44	45·47	35·09

The most significant feature of this table is the very great relative fall in the female population of ante-reproductive ages from 46·83 per cent. in 1881 to 24·44 per cent. in 1945, and the increase in the post-reproductive ages from 9·46 per cent. to 35·09 per cent. The fall over a long period from 1881 to 1945 in the ante-reproductive ages is so great that we are definitely on a lower child-producing level. The causes are in the past. The alarming feature is that the steep fall in the numbers in the ante-reproductive ages between 1881 and 1911 has not been reversed but a moderate fall has continued. We are now reaping the results of the early fall in greatly increased percentages in the post-reproductive ages. The stage is now set for a fall in the proportion in the reproductive ages and an increase in the birth-rate will have little effect in the short run since the damage is done. While there will be and must be a lessened relative inflow into the reproductive age-groups the ante-reproductive group could be increased fairly rapidly if women of reproductive ages decided to have larger families.

The crude birth-rates as shown in Table No. 5 do not give an adequate picture of the real potentialities of the community, which, as stated earlier, is related rather to the number of women of child-bearing age. In the following table details are given both of legitimate births and of total births.

Since the principal source of population increase is from married women, the number of births per 1,000 married women is shown, as well as total births per 1,000 of all women of child-bearing age.

Table No. 10.—Table showing Legitimate and Total Births from 1878 to 1945

Year.	Number of Births.		Birth-rate of Legitimate Children per 1,000 Married Women.	Birth-rate per 1,000 Women 15 and under 45.
	Legitimate.	Total.		
1878	17,341	17,770	340·0	221·3
1881	18,198	18,732	315·0	194·8
1886	18,697	19,299	298·2	163·7
1891	17,635	18,273	279·2	139·2
1896	17,778	18,612	254·6	117·6
1901	19,554	20,491	246·2	111·7
1906	23,120	24,252	235·3	114·1
1911	25,276	26,354	211·7	109·5
1916	27,363	28,509	193·6	106·7
1921	27,309	28,567	181·6	99·0
1926	27,000	28,473	166·9	90·9
1936	23,711	24,837	136·6	72·2
1941	*	35,100	*	96·7
1942	*	33,574	*	92·0
1943	*	30,311	*	82·6
1944	*	33,599	*	91·2
945	*	37,007	*	*

* Not available.

Although the population was four times larger in 1945 than in 1878, the total number of births in 1945 was only 37,007, or only slightly double the number in 1878. The number of women of child-bearing age increased during this period approximately four and a half times, while the number of births had just about doubled. From whatever angle this is considered, the extent of the reduction in births must give rise to serious thought. There is no evidence to show any change in the public attitude to marriage; in fact, there is, if anything, a slight fall in the age of marriage of both sexes over the past three decades. Hence, changes in the birth-rates, in so far as legitimate children are concerned, are due to a reduction in the size of families. The following table shows the number of marriages per 1,000 of the mean population from 1888 to 1945:—

Table No. 11.—Table showing Number of Marriages per 1,000 of Mean Population from 1888 to 1945

1888	5·97	1923	7·90
1893	6·22	1928	7·58
1898	6·91	1933	7·18
1903	8·23	1938	10·09
1908	8·82	1943	7·53
1913	8·25	1944	8·43
1918	5·65	1945	10·06

A picture of more recent trends is shown in the next table, showing marriage-rates from 1929 to 1945:—

Table No. 12.—Table showing Number of Marriages per 1,000 of Mean Population from 1929 to 1945

1929	7·80	1938	10·09
1930	7·78	1939	11·12
1931	6·81	1940	11·28
1932	6·81	1941	8·65
1933	7·18	1942	7·91
1934	7·64	1943	7·53
1935	8·23	1944	8·43
1936	9·25	1945	10·06
1937	9·55		

There was a decline in marriages in 1931 and 1932, but 1933 and 1934 showed improvements. It is probable that the rise from 1936 onward is not directly due to the consummation of marriages postponed because of the depression, but rather to the tendency for higher incomes during the post-depression period to the lower-paid sections of the community and of legislation passed or in prospect easing the burdens of raising families. War marriages undoubtedly came into the picture in 1939 and 1940. Between 1941 and 1943 a large proportion of the males of marriagable age were overseas and the uncertainty of the war situation caused some postponement. The cessation of the war in 1945, accompanied as it was by the return of the troops and buoyant economic conditions, caused an upswing in the marriage-rate, while in 1946 a new record will probably be reached. In the first quarter of 1946 the rate was 28 per cent. higher than in the corresponding quarter of 1945 and was double the 1942 rate.

Taking all the above facts together, the following explanation of the fall in the birth-rate can be given with considerable confidence. Although the proportion of the population marrying has tended to increase, the actual fertility of the marriages has tended to fall. There is a very steady tendency to reduce the size of families. It will be obvious that if a married couple produce only two children, then, ignoring for the time being the death-rate, the population will not be reproducing itself, since only a proportion of people marry; hence, still ignoring the death-rate, it will be necessary for each married couple to produce more than two children if the population is to maintain itself—that is, on the assumption, of course, that there is no immigration.

As a further indication of the tendency to reduce the size of families, the following table shows the period elapsing after marriage before the birth of the first child :—

Table No. 13.—Table showing Duration of Marriage, in Years, before the Birth of the First Child, for 1914 to 1943

Duration of Marriage, in Years.	Proportion per Cent. of Total First Births.			
	1914.	1924.	1934.	1943.
Under 1 year	52·95	50·06	46·25	34·42
1 and under 2 years	28·62	26·64	26·79	30·47
2 „ 3 „	9·02	10·43	10·24	14·20
3 „ 4 „	3·43	5·51	6·16	9·40
4 „ 5 „	1·88	3·03	3·96	4·09
5 „ 10 „	3·26	3·36	5·49	6·06
10 years and over	0·84	0·97	1·11	1·36
Totals	100·00	100·00	100·00	100·00

The heavy decline in first births under one year of marriage in 1943 is probably due to causes connected with the war, and subsequent figures will probably show a increase, due to the increase in the marriage-rate. The average duration of marriage before the birth of the first child was :—

1914 ..	1·63 years.	1934	1·85 years.
1924 ..	1·76 years.	1943	2·14 years.

During the period 1936 to 1940 there was a larger relative increase in first births due largely to the consummation of marriages postponed during the depression. There was a fall from 1940 to 1943 due to the war. The subsequent rise has been due to the return of troops from the war.

Over the same period, however, the age of the mother at the birth of the first child tended steadily to decline, as shown in the next table.

Table No. 14.—Table showing the Age of the Mother at the Time of the First Birth for various Years from 1914 to 1943

Age of Mother.	First Births, Proportion per Cent. at each Age-group to Total First Births.			
	1914.	1924.	1934.	1943.
Under 20	6·73	7·55	8·90	6·13
20 and under 25	35·89	38·16	40·39	42·53
25 „ 30	35·01	32·59	32·79	31·45
30 „ 35	15·61	14·68	13·10	13·99
35 „ 40	5·52	5·33	3·79	4·46
40 „ 45	1·16	1·59	0·99	1·37
45 and over	0·08	0·10	0·04	0·07
Totals	100·00	100·00	100·00	100·00

The average age of mothers at the birth of their first child was—

1914	26·55	1934	25·90
1924	26·39	1943	26·10

To sum up, the last two tables show that though the age of the mother at the birth of the first child has tended to fall, on the average the parents have been married longer at the birth of the first child.

The above discussion has been concerned chiefly with intermaritally conceived children. The problem of illegitimacy can be considered under two headings—extra-maritally born and extra-maritally conceived. In 1933, 32·40 per cent. of the total first births were extra-maritally conceived—that is, the children were either born out of wedlock or born within seven months of marriage. This figure fell to 24·64 per cent. in 1938, and to 18·61 per cent. in 1941. It had risen to 23·84 per cent. in 1943. Children born within seven months of marriage were 17·34 per cent. of all first births in 1938, and 11·83 per cent. in 1943. Children conceived and born out of wedlock were 10·94 per cent. of all first births in 1938, and 15·77 per cent. in 1943.

No adequate statistics of recent date as to the size of families are available. The following table, giving the only figures available, shows a trend which has continued since the last date in the table.

Table No. 15.—Table showing the Average Number of Children born and living in each Family in New Zealand in 1911–16–21

Year.	Average Number of Children born.	Average Number of Children living.
1911	3·48	3·02
1916	3·21	2·85
1921	2·99	2·68

An approach to this problem can be obtained by analysing the previous issue of mothers who had children in the years mentioned. In 1938 the average total issue of mothers who had children in that year was 2·41 ; in 1939, 2·33 ; in 1940, 2·30 ; in 1941 2·29 ; in 1943, 2·56. In 1915, the earliest year for which statistics are available, the figure was 3·11. This falling trend is an indication of a fall in the size of families. The rise in 1943 is related to the lower marriage rates at this period and the consequent fall in first births.

(2) The Death-rate

An analysis of the birth-rate on its own, however, does not give a true picture of the capacity of the country to maintain its population. The question of change in the death-rate must also be considered in this connection. The following table gives an indication of the death-rates from 1871 to 1945 :—

Table No. 16.—Table showing at each Five Years the Death-rate per 1,000 from 1871 to 1945

1871	10·13	1921	8·73
1876	12·66	1926	8·74
1881	11·13	1931	8·35
1886	10·45	1936	8·75
1891	10·35	1941	9·84
1896	9·10	1942	10·60
1901	9·81	1943	10·04
1906	9·31	1944	9·87
1911	9·39	1945	10·07
1916	9·64		

The table shows in a remarkable way the steady fall in the death-rate up to about 1921, from which time till about 1937 it tended to be fairly stable. Thereafter it has increased slightly and is now more in line with the death-rate of other Western European countries. There is a point below which death-rates cannot fall. Perhaps the major factor in the reduction of the death-rate in New Zealand has been the reduction in infantile deaths—that is, deaths under one year of age. The following table gives an indication of trends in this connection :—

Table No. 17.—Table showing the Number of Deaths per 1,000 Live Births of Infants under One Year at Five-yearly Intervals from 1876 to 1945

1876	103·48	1921	47·82
1881	92·41	1926	39·76
1886	98·40	1931	32·15
1891	91·23	1936	30·96
1896	77·32	1941	29·77
1901	71·40	1942	28·71
1906	62·10	1943	31·37
1911	56·31	1944	30·12
1916	50·72	1945	27·99

Although in the early part of the period there was a steady decline, the decline in the last two decades was of most significance. Over the past ten years, however, the rate has tended to be stabilized at about 30 per 1,000. This, coupled with the ageing of the population, is an explanation of the tendency of the death-rate to rise in recent years. In the early years, when the fall in the infantile rate was very heavy and the average age was lower than it is to-day, any marked decline in the infantile death-rate had a more than proportionate influence on the crude death-rate. To-day, when the population is considerably older, it is obvious that age brings with it a growing tendency to death, and, with the relative stabilization of the infantile death-rate, the net result is a rise in the total crude death-rate. The fall in the infantile death-rate, which is now the lowest in the world, can be attributed to the efficient child-welfare services in the Dominion. Particular credit must be given for the work to the Royal New Zealand Society for The Health of Women and Children, Inc. (The Plunket Society).

Crude death-rates are arrived at by applying the mean population for the year to the total deaths during the year. It will be clear, however, that changes in the age and sex composition of a community will materially affect the comparability of the figures from year to year, due to the changes in risks and causes of dying. To eliminate this factor the device of standardized death-rates is used. Under this method the age and sex structure of the population over a period is considered to be fixed, and the mortality in other years is weighted according to the age-distribution of that standard population. These standardized death-rates for a number of years may thus be regarded as indexes of the relative mortality free from the distortion which might arise from differences due to changing sex or age constitutions. For instance, in two populations of the same size the crude death-rate will differ, *inter alia*, according to the age-distribution. A young population will tend to have a smaller death-rate than an older population other things being equal. Hence to compare the relative liabilities to death in their communities, it is necessary to compare the death-rates for each age-group in one country with the death-rate for a corresponding age-group in the other country. This process carried out with a number of countries will provide a standardized death-rate. It can also be applied to a single country over a period of years. In New Zealand the standard sex and age constitution adopted is that of the census of 1911. The following table gives the standardized death-rates at quinquennial periods from 1875 to 1944 :—

Table No. 18.—Table showing Standardized Death-rates at Quinquennial Periods from 1875 to 1944

1875	.. ..	17·30	
1880	.. ..	12·70	
1885	.. ..	12·36	
1890	.. ..	11·25	
1895	.. ..	11·22	
1900	.. ..	10·21	
1905	.. ..	9·60	
1910	.. ..	9·62	
1915	.. ..	9·09	
1920	.. ..	9·89	
1925	.. ..	7·78	
1930	.. ..	7·63	
1935	.. ..	6·78	
1940	.. ..	6·87	
1944	.. ..	6·75	

In 1915 the crude and standardized rates were nearly equal, being 9·06 and 9·09 respectively. This is because the sex and age distribution was approximately the same as in the standard year, 1911. By 1944, however, the crude rate had risen to 10·04, while the standardized rate had fallen to 6·75. Briefly, the relative change is due to an ageing population, as influenced by the greater longevity in recent years. The fall in the standardized rate indicates that the liability to death in a given age-group was less in 1945 than in 1911. The improvement is undoubtedly due to improving health services over the years.

C. TOTAL NATURAL INCREASE

Combining these two factors of birth and death rates we can arrive at the natural increase of the population, which is shown in the following table :—

Table No. 19.—Table showing Average Annual Births, Deaths, and Natural Increase in the Quinquennial Periods from 1871–75 to 1941–45

Period.	Annual Rates per 1,000 Population.		
	Births.	Deaths.	Natural Increase.
1871–1875	39·88	12·67	27·21
1876–1880	41·21	11·80	29·41
1881–1885	36·36	10·95	25·41
1886–1890	31·15	9·85	21·30
1891–1895	27·68	10·15	17·53
1896–1900	25·75	9·55	16·20
1901–1905	26·60	9·91	16·69
1906–1910	27·06	9·75	17·31
1911–1915	25·98	9·22	16·76
1916–1920	24·32	10·73	13·59
1921–1925	22·26	8·63	13·63
1926–1930	19·76	8·60	11·16
1931–1935	16·98	8·23	8·75
1936–1940	18·36	9·20	9·16
1941–1945	21·81	10·08	11·73

The most outstanding fact of this table is the dramatic fall from the years immediately prior to the 1914–18 war, when the rate was over 16 per 1,000 of the population, to a little over 8 in the quinquennium 1931–35. As already pointed out, this low figure was due to economic conditions of the period, which acted as a disincentive to childbirth. The rise in the quinquennium 1936–40 is probably due to some extent to the consummation of marriages postponed during the depression, but more probably due to the oncoming sense of economic security due to higher wage rates and better actual or potential economic environment, while the rise in the quinquennium 1941–45 is a normal phenomenon during war years. The vital factor, however, is the probabilities for the future.

The absolute figures on which the above results are calculated are given in the next table :—

Table No. 20.—Table showing Excess of Births over Deaths in the Quinquenniums from 1871–75 to 1941–45

Period.	Excess of Births over Deaths.		
	Males.	Females.	Both Sexes.
1871–75	19,410	21,129	40,539
1876–80	30,144	32,807	62,951
1881–85	32,362	35,046	67,408
1886–90	30,781	33,544	64,325
1891–95	27,255	30,630	57,885
1896–1900	28,097	31,437	59,534
1901–05	32,515	36,223	68,738
1906–10	38,681	43,067	81,748
1911–15	42,323	46,682	89,005
1916–20	35,248	41,359	76,607
1921–25	41,876	44,868	86,744
1926–30	36,886	40,456	77,342
1931–35	30,715	33,237	63,952
1936–40	32,604	37,192	69,796
1941–45	44,172	47,027	91,199

It needs to be emphasized that while the absolute number of New Zealand's population has been growing, the above figures show that there is a remarkable drop in the rate of growth. The lowest point was reached in 1936, since when, and until 1939, there was a steady improvement, when the rate was higher than at any time since 1927. (This discussion omits all reference to immigration.) A rate of 7·89 per 1,000, as in 1936, meant that, although the population was increasing, the increase was not sufficient in the long run to maintain even a stationary population.

The future size of a population—ignoring for the time being the question of immigration—is related not so much to the absolute size of the present population as to the number of women at the reproductive age at any given time. At the present time fairly reliable estimates can be arrived at of the number of children of both sexes who will be born within the next few years. The number in the next generation, however, is related to the number of girl children born to-day who will survive to the reproducing age. The number of such children who will die prior to the reproducing age can be calculated reasonably accurately. If it is assumed that the fertility rate—that is, roughly, the size of families—remains the same and that there is no change in the mortality rates, the size of the next generation can be calculated with some accuracy. Such an index is called the net reproductive rate (the gross reproductive rate ignores mortality figures). The following table gives some idea of the trends in recent years :—

Table No. 21.—Table showing Net Reproductive Rate in New Zealand from 1936 to 1944

1936	0·970	1941	1·274
1937	0·990	1942	1·208
1938	1·028	1943	1·077
1939	1·073	1944	1·207
1940	1·195		

If the rate is exactly 1, then, other factors remaining constant, the same number of female children will be born in the next generation as were born in the year under review. If lower than 1, then less will be born, and hence the potential increase will be less than sufficient naturally to maintain a stationary population. If greater than 1, the population will be increasing. From 1931 to 1937 the rate was less than 1, indicating a potentially declining population. This fall was due to the economic depression. Since 1937 the rate has always been above 1, and hence prospects are brighter. Any decline, however, in the present low birth-rate in the future will give cause for serious concern. In general the figures give cause for some concern. If the experience of the

last war is any criterion, then the birth-rate will in a year or two tend to fall. Any fall brings the danger-point much nearer. This tendency to follow the experience of the last post-war period, however, may be negatived by such positive measures as better wages and working-conditions, family allowances, maternity benefits, health benefits, social security provisions against sickness, invalidity, and old age, universal superannuation, improved housing conditions, and suchlike amenities. It is too early, however, to estimate the effects of these things. If they have had any effect on the birth-rate up to the present they have been masked by the influence of the war. Great interest attaches, therefore, to the next few years with a view to determining the real influences of these economic incentives on child-bearing.

In passing, it is well to mention that in most of the countries with western European populations, the net reproductive rate is well below 1—in England between 0·7 and 0·8. This means a serious potential decline in population within a relatively short time.

D. MIGRATION

A further factor affecting population growth is that of external migration. The following table shows, at five-yearly intervals, the arrivals, departures, and the excess of arrivals over departures :—

Table No. 22.—Table showing Immigration, Emigration, and Excess of Arrivals over Departures from 1861 to 1945

	Arrivals.			Departures.			Excess of Arrivals over Departures.
	M.	F.	T.	M.	F.	T.	
1861–65	107,526	34,680	142,206	44,241	4,796	49,037	93,169
1866–70	37,085	15,684	52,769	25,918	6,315	32,233	20,536
1871–75	67,560	42,522	110,082	21,059	7,077	28,136	81,946
1876–80	55,049	31,726	86,775	23,179	8,809	31,988	54,787
1881–85	48,144	27,924	76,068	32,186	14,923	47,109	28,959
1886–90	49,315	24,501	73,816	54,226	28,292	82,518	− 8,702*
1891–95	69,499	36,288	105,787	59,582	30,885	90,467	15,320
1896–1900	59,650	31,613	91,263	52,330	28,295	80,625	10,638
1901–05	102,293	49,286	151,579	71,070	35,063	106,133	45,446
1906–10	124,377	70,353	194,730	99,923	53,841	153,764	40,966
1911–15	115,012	78,822	193,834	97,356	60,917	158,273	35,561
1916–20	61,933	52,414	114,347	54,954	44,539	99,493	14,854
1921–25	109,749	89,515	195,264	80,095	66,286	146,381	48,883
1926–30	102,343	84,494	186,837	90,285	74,787	165,072	21,765
1931–35	58,874	53,059	111,933	62,924	55,152	118,076	− 6,143*
1936–40	86,145	85,279	171,424	78,528	80,986	159,514	11,910
1941–45	18,441	16,562	35,003	16,999	15,415	32,414	2,589

* Excess of departures.

(1) Armed Forces not included between 1914 and 1920 and between 1939 and 1945.

(2) Figures for the period from 1921–1925 do not correspond with figures for the same period in Table No. 24—the difference of 1,126 is due to a change in a recent Year-Book, for which no explanation is offered. Similarly for difference of 2,862 in the 1926–1930 period. The more recent figures are probably more accurate. From 1931 and onwards the figures in the above tables are for years ending 31st March. Hence there is some overlap in the above figures as between period 1926–1930 and 1931–1935. Figures from 1931 onward therefore do not agree with figures in next table, which are for calendar years.

The importance of external migration over the period under review is clearly marked in the table. In the early years up to approximately 1880, immigration was very important, principally of the assisted type, although during that period, particularly during the early years of the period, there were a large number of free immigrants arriving, particularly in connection with the discovery of gold. The excess of departures over arrivals for the period between 1886 and 1890, and again between 1931 and 1935, is due solely to the depressions which operated in those periods. The large increase between 1911 and 1915, and again between 1921 and 1925, are due to some extent to the

policy of assisted immigration which operated during that period. It would appear that there was a slight tendency to rise after the recent depression, from 1936–1940, a tendency which was stopped by the recent war. It should be noted that these figures do not include movements of troops overseas.

The table includes not only assisted immigrants, but all immigrants. Details for assisted immigrants are given at a later stage in this report. Some idea of the relative importance of assisted immigrants is given in the following table, which shows the annual average immigrants of both classes arriving in New Zealand from 1909 to 1945 :—

Table No. 23.—Table showing the Number of Governmentally-assisted Immigrants, Immigrants not assisted, and Average Total Migration Increase from 1909 to 1945

	Governmentally-assisted Immigrants.	Immigrants not Governmentally assisted.	Total Net Migration Increase.
1909–10 to 1913–14	3,518	*	6,508
1920–21 to 1924–25	6,848	6,715	9,701
1925–26 to 1929–30	5,301	5,497	5,052
1930–31 to 1934–35	317	2,376	—1,229†
1935–36 to 1939–40	8	4,566	2,382
1940–41 to 1944–45	3	1,319	518

* Not available. † Decrease.

The table shows the relative importance of the governmentally-assisted immigrants, particularly in the third decade of this century. In terms of total population, however, the importance of external migration is relatively small.

E. TOTAL POPULATION GROWTH

Total population growth is determined by two factors—first, the excess of births over deaths (that is, the natural increase), and, secondly, by the excess of arrivals over departures. The following table, which brings together all the factors discussed in the previous pages of this section, shows the effects of those two movements on the population of New Zealand :—

Table No. 24.—Table showing Natural Increase, net Migration, and Total Increase of Population in Quinquennial Periods from 1861 to 1945

Period.	Excess of Births over Deaths.			Excess of Arrivals over Departures.			Total Increase.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1861–65 ..	7,625	8,985	16,610	63,285	29,884	93,169	70,910	38,869	109,779
1866–70 ..	15,663	17,779	33,442	11,167	9,369	20,536	26,830	27,148	53,978
1871–75 ..	19,410	21,129	40,539	46,501	35,445	81,946	65,911	56,574	122,485
1876–80 ..	30,144	32,807	62,951	31,870	22,917	54,787	62,014	55,724	117,738
1881–85 ..	32,362	35,046	67,408	15,958	13,001	28,959	48,320	48,047	96,367
1886–90 ..	30,781	33,544	64,325	—4,911*	—3,791*	—8,702*	25,870	29,753	55,623
1891–95 ..	27,255	30,630	57,885	9,917	5,403	15,320	37,172	36,033	73,205
1896–1900	28,097	31,437	59,534	7,320	3,318	10,638	35,417	34,755	70,172
1901–05 ..	32,515	36,223	68,738	31,223	14,223	45,446	63,738	50,446	114,184
1906–10 ..	38,681	43,067	81,748	25,454	15,512	40,966	64,135	58,579	122,714
1911–15† ..	42,323	46,682	89,005	17,656	17,905	35,561	59,979	64,587	124,566
1916–20† ..	35,248	41,359	76,607	6,979	7,875	14,854	42,227	49,234	91,461
1921–25 ..	41,876	44,868	86,744	26,795	23,294	50,089	68,671	68,162	136,833
1926–30 ..	36,886	40,456	77,342	14,758	9,869	24,627	51,644	50,325	101,969
1931–35 ..	30,715	33,237	63,952	—5,256*	—4,662*	—9,918*	25,459	28,575	54,034
1936–40† ..	32,604	37,192	69,796	7,433	4,935	12,368	40,037	42,127	82,164
1941–45† ..	44,169	47,025	91,194	1,412	654	2,066	45,581	47,679	93,260
Totals ..	526,354	581,466	1,107,820	307,561	205,151	512,712	833,915	786,617	1,620,532

* Decrease. † Members of Armed Forces, &c., are not included in migration figures.

In the early years the immigration was obviously very much more important than the natural increase, but from approximately 1880 to the present date natural increase has been of very much more importance than immigration. This is an obvious movement with a growing population, despite the fall in the birth-rate which was previously noted.

II. THE MAORI POPULATION

As stated earlier, estimates of the Maori population about the year 1840 showed that there were around 110,000 in New Zealand as a whole. The first real census was taken in the years 1857–58, and the details of this and subsequent censuses are shown in the following table :—

Table No. 25.—Table showing Maori Population at Successive Censuses, and Intercensal Movements, from 1857–58 to 1945

Census.	Maori Population.			Numerical Increase.			Centesimal Increase.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1857–58 ..	31,667	24,303	56,049*	..	..	..	..	..	..
1874 ..	25,294	21,264	47,330†	−6,373	−3,039	−8,719	−20·1	−12·5	−15·6
1878 ..	24,906	20,636	45,542	−388	−628	−1,788	−1·5	−3·0	−3·8
1881 ..	25,420	20,721	46,141	514	85	599	2·1	0·4	1·3
1886 ..	23,809	20,118	43,927	−1,611	−603	−2,214	−6·3	−2·9	−4·8
1891 ..	23,983	20,194	44,177	174	76	250	0·7	0·4	0·6
1896 .	22,796	19,317	42,113	−1,187	−877	−2,064	−4·9	−4·3	−4·7
1901 ..	24,300	21,249	45,549	1,504	1,932	3,436	6·6	10·0	8·2
1906 ..	26,845	23,464	50,309	2,545	2,215	4,760	10·5	10·4	10·5
1911 ..	27,950	24,773	52,723	1,105	1,309	2,414	4·1	5·6	4·8
1916 ..	27,453	25,544	52,997	−497	771	274	−1·8	3·1	0·5
1921 ..	30,015	26,972	56,987	2,562	1,428	3,990	9·3	5·6	7·5
1926 ..	33,258	30,412	63,670	3,243	3,440	6,683	10·8	12·8	11·7
1936 ..	42,863	39,463	82,326	9,605	9,051	18,656	28·9	29·8	29·3
1945 ..	50,275	48,469	98,744	7,412	9,006	16,418	17·3	22·8	19·9

* Includes 79 sex not stated. † Includes 772 sex not stated.

NOTE.—Minus sign (−) signifies a decrease.

Some idea of the geographical distribution of the Maoris is shown in the next table :—

Table No. 26.—Table showing Provincial Distribution of Maori Population in 1936 and 1945

	1936.	1945.
Auckland	59,215	72,252
Hawke's Bay	6,633	7,363
Taranaki	4,280	4,728
Wellington	8,969	10,965
Total, North Island	79,097	95,308
Marlborough	586	669
Nelson	246	302
Westland	144	151
Canterbury	1,407	1,501
Otago—		
Otago portion	413	383
Southland portion	433	430
Total, South Island	3,229	3,436
Total, Dominion	82,326	98,744

As giving some idea of the racial purity of the Maori race, the following table shows the distribution of the various classes comprising the Maori race.

Table No. 27.—Table showing Proportion of Different Classes comprising the Maori Population at 1926 and 1936 Censuses

—	1926 Census.	1936 Census.
	Per Cent.	Per Cent.
Full Maori	71·35	67·92
Three-quarter Maori	10·42	13·84
Half-Maori	17·76	18·09
Maori-European n.o.d.	0·47	0·15
Total	100·00	100·00

Although the Maori population increased by 18,656 during the period, the proportion of Maoris of full blood decreased from 71·35 per cent. to 67·92 per cent.

It is generally felt, however, that the census returns overstate the proportion of full Maori blood. A more correct estimate would be in the region of 50 per cent. Earlier details on this question are not available.

In addition to the above, there were in 1936, 11,508 quarter-caste Maoris and 322 others with some Maori blood. These are all counted in the European population.

The following table shows over a period the relative importance of the Maori race :—

Table No. 28.—Table showing Percentage of Maoris to other Races from 1874 to 1945

Census.	Proportion Percentage Maoris to other Races.	Census.	Proportion Percentage Maoris to other Races.
1874	15·90	1906	5·68
1878	11·04	1911	5·24
1881	9·46	1916	4·83
1886	7·61	1921	4·69
1891	7·07	1926	4·74
1896	6·01	1936	5·52
1901	5·91	1945	6·16

Up till the end of last century it was feared that the Maori was dying out. In the past forty years the Maori population has doubled and is still increasing fast. As between 1926 and 1936, for instance, the total Maori population increased approximately 29·30 per cent., while between 1936 and 1945 it increased 19·94 per cent. This increase was different, however, in different districts, as the following table will show :—

Table No. 29.—Table showing Percentage Increase of Maori Population in various Districts as between 1926 and 1936

Provincial District.	Percentage Increase, 1926–1936.		
	Males.	Females.	Total.
Auckland	31·69	31·93	31·80
Hawke's Bay	39·81	40·50	40·14
Taranaki	15·89	16·36	16·12
Wellington	16·66	22·21	19·27
Total, North Island	29·47	30·48	29·95
Marlborough	21·37	25·23	23·11
Nelson	25·23	18·89	22·39
Westland	6·33	15·38	9·92
Canterbury	20·78	15·91	18·33
Otago—			
Otago portion	7·54	−0·50	3·51
Southland portion	5·04	7·65	6·13
Total, South Island	16·14	14·06	15·16
Total, Dominion	28·88	29·76	29·30

Of recent years the Maori birth-rate has been very much in advance of the European birth-rate :—

Table No. 30.—Table showing Birth-rate of Maori Population from 1939 to 1944

Year.	Number of Maori Births.			Rate per 1,000 of Mean Population.
	Males.	Females.	Total.	
1939	2,157	1,959	4,116	46·20
1940	2,217	2,048	4,265	46·87
1941	2,156	1,978	4,134	44·77
1942	2,222	2,108	4,330	45·84
1943	2,267	2,173	4,440	45·78
1944	2,328	2,180	4,508	45·32

Maori death-rates are also very high as compared with the European death-rates.

Table No. 31.—Table showing Death-rates of Maori Population from 1939 to 1944

Year.	Number.			Rate per 1,000 of Maori Population.		
	Males.	Females.	Total.	Males.	Females.	Total.
1939	967	808	1,775	20·89	18·87	19·92
1940	844	749	1,593	17·98	17·00	17·51
1941	1,020	881	1,901	21·66	19·48	20·59
1942	933	799	1,732	19·43	17·20	18·34
1943	862	812	1,675	17·51	17·11	17·27
1944	861	825	1,686	17·12	16·77	16·95

In particular, infantile deaths are at a very much higher figure than for the European population.

Table No. 32.—Table showing a Comparison between Maori and European Infantile Death-rates, from 1933 to 1944

Year.	Maoris.		Non-Maoris.	
	Number of Deaths under One Year.	Rate per 1,000 Maori Births.	Number of Deaths under One Year.	Rate per 1,000 Non-Maori Births.
1933	273	92·61	770	31·64
1934	279	93·59	781	32·11
1935	355	109·20	773	32·26
1936	399	109·92	769	30·96
1937	366	92·17	812	31·21
1938	566	153·26	971	35·63
1939	473	114·92	898	31·14
1940	372	87·22	990	30·21
1941	517	125·06	1,045	29·77
1942	424	97·92	964	28·71
1943	399	89·86	951	31·37
1944	461	102·26	1,012	30·12

A comparison of infantile mortality among Maori and European infants reveals important differences. There is little difference between the Maori and European infantile death-rate in the *first three months* of life, ante-natal and unavoidable causes being the essential factors in the death-rate at this stage. From this point on care of the infant plays an increasing part in its survival. In the second quarter the European rate falls considerably, but the Maori rate remains at a high figure. In the third quarter the Maori rate is twelve times as high as the European rate. The cause is carelessness of feeding at a crucial stage of the infant's growth. Maori mothers tend to wean their children early and subsequent thereto do not trouble about satisfactory feeding. The Maori death-rate in the ages 1 to 5 years is also very much higher than the European rate. Even in adult life to 35 years of age the Maori death-rate is two or three times greater than the European rate, although in later adult life the differences while still significant, tend to be reduced.

Combining the figures in the above two tables, the following table shows the Maori rate of natural increase, and for comparison the European rate of natural increase :—

Table No. 33.—Table showing Rate of Natural Increase of Maori and European Population from 1939 to 1945

Year.	Maori.	European.	Year.	Maori.	European.
1939	26·28	9·53	1943	28·51	9·66
1940	29·36	11·95	1944	28·37	11·72
1941	24·18	12·97	1945	29·86	13·15
1942	27·50	11·13			

Because of the much greater reproduction rate of the Maori people, the potential Maori population is relatively much greater than that of the non-Maori people. This people is increasing at the rate of approximately 2·0 per cent. annually, as compared with just over 1 per cent. per annum of the non-Maori population. Because of this fact the age-structure of the Maori population is entirely different from that of the non-Maori people in that the former have a large preponderance of younger people and relatively fewer older people.

The following table shows the age distribution of the Maori population in 1943 :—

Table No. 34.—Table showing Percentage Age-distribution of Maori Population compared with that of European Population in 1943

	Maori Age-distribution. Per Cent.	European Age-distribution. Per Cent.
Under 15	46·5	24·8
15 to 64	50·5	66·8
64 and over ..	3·0	8·4
	100·0	100·0

III. EXPECTATION OF LIFE

An important question in any population study is that of the average expectation of life. The extension of the average age of the community raises important problems as to the support of the aged section. This question will be discussed under the heading of financial implications of changes in population. Over a period an extension of the average expectation of life is to some extent a reflection of changing living and health standards.

The following table shows the expectation of life at age 0 for the European population from 1891–95 to 1934–38 :—

Table No. 35.—Table showing Expectation of Life for the European Population, from 1891–95 to 1934–38

Period.	Males.	Females.
1891–1895	55·29	58·09
1896–1900	57·37	59·95
1901–1905	58·09	60·55
1906–1910	59·17	61·76
1911–1915	60·96	63·48
1921–1922	62·76	65·43
1925–1927	63·99	66·57
1931	65·04	67·88
1934–1938	65·46	68·45

The figures show a steady increase with a tendency for the rate of increase to lessen over recent years.

For Maoris the corresponding figures for the latest date available are 46·2 for both males and females.

IV. RACIAL AND ALLEGIANCE STRUCTURE

A. RACE STRUCTURE

For census purposes statistics of the racial structure of the population are classified into European, including all of every European race, Maoris, and race aliens, which last includes all those not classified as Europeans or Maoris, and hence includes all the so-called coloured races. The following table shows that the population is predominantly European :—

Table No. 36.—Table showing Racial Structure of the Population of New Zealand at various Censuses from 1916 to 1936

Census.	Europeans.	Maoris.	Race Aliens.	Total Population.
	Numbers			
1916	1,093,024	52,997	3,204	1,149,225
1921	1,209,239	56,987	5,438	1,271,664
1926	1,338,167	63,670	6,302	1,408,139
1936	1,484,508	82,326	6,976	1,573,810
	Percentage			
1916	95·11	4·61	0·28	100·00
1921	95·09	4·48	0·43	100·00
1926	95·03	4·52	0·45	100·00
1936	94·33	5·23	0·44	100·00

In another section of this report details of immigration restriction regulations are given. Here it is necessary to consider only numbers involved.

(1) *Chinese.*—Considerable numbers of Chinese entered the country during the gold rushes of the "sixties." Later, restrictions were imposed. More recently very few Chinese have entered the country for permanent residence. The following table shows the number of Chinese at successive censuses :—

Table No. 37.—Table showing Number of Chinese in New Zealand at various Censuses from 1874 to 1936

Census.	Males.	Females.	Total.
1874	4,814	2	4,816
1878	4,424	9	4,433
1881	4,995	9	5,004
1886	4,527	15	4,542
1891	4,426	18	4,444
1896	3,773	86	3,859
1901	2,885	78	2,963
1906*	2,515	55	2,570
1911*	2,542	88	2,630
1916	2,017	130	2,147
1921	2,993	273	3,266
1926	2,927	447	3,374
1936	2,432	511	2,943

* Apparently omits Chinese of mixed blood.

Chinese represented only 0·19 per cent. of the total population in 1936.

(2) *Indians.*—The number of Indians in New Zealand is not large, as is seen from the following table :—

Table No. 38.—Table showing Number of Indians in New Zealand at various Censuses, 1881–1936

Census.	Males.	Females.	Total.
1881	6	..	6
1886	Not available.		
1891			
1896	46	..	46
1901	21	3	24
1906	6	..	6
1911	15	..	15
1916	167	14	181
1921	622	49	671
1926	810	177	987
1936	966	234	1,200

Indians represented only 0·07 per cent. of the total population in 1936.

(3) *Syrians.*—The next most important group of race aliens is Syrians, whose numbers are shown in the following table :—

Table No. 39.—Table showing Number of Syrians in New Zealand at various Censuses, 1896–1936

Census.	Males.	Females.	Total.
1896	153	42	195
1901	160	80	240
1906	219	142	361
1911	251	180	431
1916	267	192	459
1921	378	329	707
1926	525	426	951
1936	681	580	1,261

Syrians represented only 0·08 per cent. of the total population in 1936.

(4) *Other Asiatics.*—In 1936 there were only 172 other Asiatics in the population, representing only 0·01 per cent. of the total population in 1936.

(5) *Polynesians.*—There were 988 Polynesians—that is, Samoans, Cook Islanders, Tahitians, &c.—in New Zealand in 1936, of whom 825 were of mixed blood. They represented 0·06 per cent. of the total population in 1936.

(6) *Other Races.*—Of other races, including Melanesians and Negroes, there were 412 in New Zealand in 1936, representing 0·03 per cent. of the total population.

The above brief analysis shows the predominantly European character of the population. Apart from the Maoris the non-European stock aggregated only 0·44 per cent. of the total population in 1936.

(7) *Jews.*—No official statistical evidence is available as to the number of Jews in New Zealand. The Hebrew community estimate that there are approximately 3,700 Jews in New Zealand to-day, or 0·217 per cent. of the population or 22 out of every

10,000. Most of the Jews resident in New Zealand are British subjects. A considerable number of refugee Jews was admitted into New Zealand immediately prior to the last war. It is, however, not possible to distinguish between Jewish and non-Jewish people among these immigrants.

(8) *Birth-place of Race Aliens.*—A practical question is the extent to which these people are reproducing themselves within the country. The following table shows the birthplace of race aliens of full blood, omitting temporary residents :—

Table No. 40.—Table showing Birthplace of Race Aliens of Full Blood, omitting Temporary Residents, in 1936

Country of Birth.	Males.	Females.
New Zealand	625	535
India	753	34
Cook Islands and Niue	60	20
Western Samoa	17	5
Other British Pacific Islands*	28	18
Other British countries*	47	25
Syria and Lebanon	193	146
China	1,912	95
Japan	17	2
Other foreign countries	26	17
Not specified	29	17
Total	3,707	914

* Including mandated territories. † Includes Anglo-French Condominium.

Another view of the same problem is seen in the next table, which shows the percentage of certain races living in New Zealand in 1936 who were born here :—

Table No. 41.—Table showing Percentage of certain Race Aliens living in New Zealand in 1936 who were born here

——	Males.	Females.
	Per Cent.	Per Cent.
Chinese	13	68
Indians	3	25
Syrians	59	62
Polynesians	8	10

Omitting race aliens recorded in the census of 1936, but not domiciled in New Zealand, 64 per cent. of males of full blood were between 25–54 years of age ; only 10 per cent. were under 16 years of age. Thirty-four per cent. of the females of full blood were under 16 years ; 18 per cent., 16–24 years ; 18 per cent., 25–34 years ; 30 per cent., 35 years and over. Of males of full blood over 16 years, 22 per cent. were never married ; 74 per cent. married, and 4 per cent. separated, widowed, or divorced. Of females of full blood over 16 years, 33 per cent. were never married, 56 per cent. married, 11 per cent. separated, widowed, or divorced. Of Chinese there were 1,600 married men, and only 121 married women. The explanation is that a large number of men had wives still in China.

B. ALLEGIANCE

No present figures are available as to the allegiance of the inhabitants of New Zealand. The following table, while it does not show allegiance, does give an indication that the proportion of foreigners in the country is very small and is steadily falling :—

Table No. 42.—Table showing Percentage, at various Dates, of Total Population of New Zealand, born in Foreign Countries, 1901–1926

1901	2·41	1916	1·70
1906	2·24	1921	1·47
1911	1·95	1926	1·03

The last date on which census figures for allegiance were completed was 1921. The following table, which shows total number of foreigners in New Zealand at various censuses, further illustrates the point that, while the proportion of aliens in New Zealand was never high, it is still falling fast :—

Table No. 43.—Table showing Number of Non-naturalized Foreigners in New Zealand at various Censuses, 1881–1921

Year.	Number.	Percentage of Total Population.
1881	18,043	3·68
1886	17,884	3·09
1891	14,594	2·33
1896	13,357	1·90
1901	11,615	1·50
1906	12,856	1·45
1911	12,050	1·20
1916	9,640	0·88
1921	7,901	0·65

The following table, extracted from the report of the 1921 census, shows the number of persons owing allegiance to the various foreign powers :—

Table No. 44.—Table showing the Number of Persons of each Foreign Nationality in New Zealand

Chinese	2,712	Italian	229
United States ..	1,013	Swiss	219
Yugoslav	857	Russian	197
German	521	Finnish	166
Danish	480	Other nationalities ..	601
Swedish	341		
Norwegian	301	Total	7,901
French	264		

The next table, taken from the register of aliens in New Zealand in 1946, gives an up-to-date picture of the present situation.

Table No. 45.—Table showing Number of Aliens registered in New Zealand in 1946

Country of Allegiance*	Male.	Female.	Total.
Americans	364	125	489
Argentinians	3	1	4
Austrians	46	28	74
Belgians	25	9	34
Brazilians	..	2	2
Bulgarians	2	..	2
Chilians	5	1	6
Chinese	2,223	440	2,663
Croatians	3	..	3
Cubans	2	1	3
Czechs	55	47	102
Danes	166	51	217
Dutch	52	29	81
Egyptians	2	..	2
Estonians	19	4	23
Filipinos	1	..	1
Finns	34	7	41
French	50	53	103
Germans	377	343	720
Greeks	101	31	132
Hungarians	46	26	72
Icelanders	1	..	1
Italians	231	98	329
Japanese	3	..	3
Latvians	6	3	9
Lebanese	6	6	12
Lithuanians	4	2	6
Moravians	1	..	1
Norwegians	123	18	141
Palestinians	3	4	7
Peruvians	2	..	2
Poles	102	72	174
Russians	26	17	43
Rumanians	4	4	8
Samoans	3	2	5
Spaniards	3	..	3
Stateless	50	38	88
Swedes	81	8	89
Swiss	105	31	136
Syrians	19	8	27
Tongans	8	9	17
Turks	1	2	3
Yugoslavs	782	191	973
Totals	5,140	1,711	6,851

* Table reproduced exactly as supplied by the Commissioner of Police.

The table indicates further the relative unimportance of foreign nationals in New Zealand and shows that the number has declined still further than in 1921.

V. IMMIGRATION POLICIES

In the first twenty years of New Zealand's history as a British colony the Government did not take an active part in stimulating immigration. The various settlements developed by the New Zealand Company and its subsidiaries did to a major extent assist in the peopling of several parts of the Dominion, but without direct Government support. This type of immigration, however, was not in operation after 1860. During the "fifties" and early "sixties" the discovery of gold, particularly in Otago, attracted a fairly large number of gold-diggers. Due to the Maori wars, the development of the North Island was seriously retarded, until at least the "seventies," by which time the gold rushes had practically stopped.

From the early " sixties," however, the Government became directly interested in the encouragement of immigrants to the colony. In 1862 the then Governor, Sir George Grey, arranged for the reception of some German immigrants at the request of a German company. The company found the capital to send the immigrants to New Zealand, who, if approved on arrival, were to receive 1 acre village allotment and 20 acres of country land (plus 1 additional acre for each child) at a cost of £2 per acre. The Provincial Governments agreed to find rations for the immigrants for one year, the costs to be recouped over a period from the immigrants. It was proposed to settle five hundred of these immigrants in Taranaki to form a military settlement, but the plan was not proceeded with owing to the outbreak of hostilities with the Maoris and the non-agreement of the company to the conditions imposed by the New Zealand Government.

The next year, 1863, a Danish company arranged for 150 Danish immigrants to come to New Zealand. The Government, on its part, agreed to find 40 acres per immigrant in the Waikato and also to pay one-half of the passage-money. The Government stipulated that the age of the males was to be under forty.

For the first time, in 1863, the Government decided actively to encourage immigration. The chief motive behind this move was the recognition that peace in the North Island could be maintained only if a larger European population were available so that strong settlements in certain districts could be founded. The policy was to encourage labourers, mechanics, small farmers, and capitalists [*sic*]. For the first two classes the Government offered either to pay all the passage-money and grant a few acres of land, or half the passage-money and grant a larger area (say, twenty-five acres) of land. As a further inducement the Government promised that there would be no unemployment, as public works would be undertaken on a large scale. In general, emphasis was to be placed on the character of the immigrants with a view to the building-up of a well-balanced nation. It is interesting to notice that in defining the types of labourers required the Government specified that people who would work in manufacture. shops, or warehouses were not suitable, but that labourers who were qualified as bricklayers, carpenters, miners, masons, wheelwrights, and as agricultural and railway workers were urgently required. While married men were not disqualified, it was specified that people with more than two children were not acceptable. With this qualification, men and women in equal numbers were desired. As an inducement the Government was prepared to make allowances of up to £15 for the erection of houses—repayable in monthly instalments. In general, it was proposed to create self-supporting settlements with a view to opening up the country. It was agreed that in the early years the immigrants would be engaged chiefly on public works, but it was considered not desirable to encourage immigrants to remain as public-works employees. Immigrants, if acceptable to a board of examiners in England, were required to pay a deposit at the rate of £1 for each male and 10s. for each female over the age of fifteen. Free passages from England to Auckland and from Auckland to the place of settlement were granted by the Government. Settlements were to be surveyed and prepared by the Government, and were to consist of town, suburban, and farm sections. Each settler was to have town, suburban, and farm sections, and if he repaid half his passage-money within three months he was entitled to one ten-acre-farm section for himself and one five-acre-farm section for each child over twelve. When such grant was made, the settler was not permitted to leave his district for three years.

To encourage the larger agriculturalist the Government was prepared to make a free grant of land, not exceeding 500 acres, to encourage further land development.

In 1864 an Immigration Board was established in England and a sum of £200,000 was set aside for immigration purposes. The administration of the settlement was left to the provinces, which were authorized to recoup their expenses either from the sale of land within their borders or from their ordinary revenues.

All four provinces in the North Island pursued an active policy of encouraging immigration, Wellington and Hawke's Bay particularly obtaining large loans for public works and settling immigrants. In Auckland immigrants were impoverished because of a lack of a public-works policy.

In 1865 the sum of £600,000 was set aside to encourage immigration under the above proposals.

In the late "sixties" immigration had slackened off and a serious depression, brought about by the heavy cost of the Maori wars, was in full swing. There was, however, a revival of interest in immigration with a view to settling unoccupied parts and keeping the turbulent Natives in check. The main object was to open up new lands.

In 1869 the New Zealand Commissioners Act was passed, under which two Commissioners were sent to England to collect information and undertake negotiations on which proposals for systematized immigration could be drawn up. It was laid down that careful selection was necessary to prevent the import of undesirable types. Further, ample guidance as to the employment opportunities should be available to the immigrant on arrival. Advances to immigrants should be fully repaid to the Government.

While these exploratory talks were going on, the Immigration and Public Works Act, 1870, was passed, the underlying object of which was the concurrent progress of immigration and public works, so that works supplied a market for labour, and the increase in population created a demand for more works. Public works were undertaken with a view to the opening-up of land for settlement so that ultimately the immigrants would become settlers. Hence it was proposed that as railways and roads were opened up, adjacent land should be opened up for settlement by both the Central and Provincial Governments.

It was intended that there should be a very close liaison between the Provincial and the Central Governments in the matter of immigration, and in the matter of lands available for settlement. In addition to selected immigrants, provision was made whereby residents of New Zealand could nominate persons living in the United Kingdom as immigrants to the Dominion. The immigrant was required to pay £5 only for passage-money, and to pay 25s. for his outfit. The Agent-General in England was directed to select the immigrants and to provide for their care on the passage to New Zealand.

To implement this Act an Immigration and Public Works Department was set up in 1870, generally to co-ordinate the joint problem of public works and the provision of immigrants therefor. Waste land adjacent to proposed railways could be reserved for immigrants. This waste land was usually in the hands of the provinces, but it was the intention that these lands should be made available to the Central Government in return for the provision of railways. One section of the Act provided that the Government could set aside £1,000,000 for immigration.

While the principal intention of the Act was to provide for British immigrants, the New Zealand Commissioners in 1870 visited Norway, Sweden, Denmark, and North Germany with a view to inducing emigration from these countries to New Zealand, largely at the cost of the New Zealand Government. Under this arrangement a number of such immigrants arrived and were settled in the Manawatu, the Hutt, and the Wairarapa in special settlements. The early prejudice against foreigners was soon dispelled when it was realized that these northern European immigrants made very good settlers and soon became New Zealanders.

The co-operation expected as between the Central Government and the provinces in the 1870 Act did not materialize, and in 1871 a second Act was passed enabling the Government to act independently of the provinces in regard to immigration. For the first two or three years the results of the policy were not very satisfactory in point of numbers. Taranaki, for instance, recommended the introduction of twenty Scandinavian families only. Wellington and Hawke's Bay required immigrants to carry out public works. Auckland asked only for small farmers, nominated immigrants, and single women. Of the 6,186 immigrants in 1872, 1,514 were nominated. In view of the very small response, the Government, in 1873, offered free passages to assisted immigrants. During the first four or five years of the eighth decade of last century several shiploads of Scandinavian immigrants arrived and were settled in various places, particularly in the North Island. The free-passage system was limited to married men under forty-five, single men under forty, single women under thirty-five, and children under twelve,

not exceeding three per family. If there were more than three children in the family, promissory notes or cash were taken in payment for passages. A Committee of the Legislative Council in 1873, which inquired into the operations of the Immigration Act, found that very few settlers had ultimately been settled on the land, and as a result the Immigration Land Act was passed in 1873, which provided that immigrants who paid their own passages were entitled to £20 worth of land in any part of the colony that they might select within five years of their arrival. It is interesting, also, to note that companies or persons who paid for immigrants' passages were, under this Act, entitled to grants of land equivalent to the number of immigrants who might arrive. Under the new arrangement the immigration figures were doubled in 1874 and 1875, the average cost to the Government of each immigrant being £17 13s. By 1875 the number of immigrants available from Great Britain was sufficient to meet all the requirements of New Zealand, and hence the Government decided to cease contracting for Scandinavian immigrants as from 1875. By this time, however, there was sufficient population to cater for most of the needs of the country, and consequently the Government decided to reduce the number to arrive in the country. The figures for 1875–76 showed a drop from 30,000 in the previous year to 16,000. By 1878 the number had dropped to about one-third of the number in 1876, and by 1879, on account of the serious economic depression which was then affecting the country, the Government announced that the free-passage system was to cease, except for single women, and women not less than forty-five years of age who had not more than three children. Males from that date were required to pay £5 as their fare. It was also agreed that the principle of nomination was to operate more exclusively than previously. A change in Government at the end of this year resulted in the temporary suspension of nominated immigrants, the exception being single women. The major reason was that employment was scarce, and immigration was only aggravating the problem. By 1881 the immigration figures had dropped to 833, and in 1882 it was only 118. In 1883, however, the number rose to 3,000 again, since the Government had resumed its policy of assisting nominated immigrants. Two hundred thousand pounds were set aside for three years for the introduction of 5,000 immigrants per year, a special provision being that 1,000 single women should be included among the 5,000. Under this provision the figures rose to approximately 6,000 in 1884, but fell again to 1,000 in 1885. The depression, continuing with some severity, had its effect on assisted immigration, which fell to 9 in 1891–92.

The following table shows the total assisted immigrants from 1871 to 1892.

Table No. 46.—Table showing number of Immigrants from 1871 to 1892

Year.	Total for Year.	Nominated.	Cumulative Total.
November, 1871, to June, 1873	7,503	1,166	..
July, 1873, to June, 1874	15,102	1,729	22,605
July, 1874, to June, 1875	31,785	3,451	54,390
July, 1875, to June, 1876	16,612	1,800	71,002
July, 1876, to June, 1877	7,473	1,083	78,475
July, 1877, to June, 1878	5,628	1,029	84,103
July, 1878, to June, 1879	8,747	2,353	92,850
July, 1879, to June, 1880	7,413	4,569	100,263
July, 1880, to June, 1881	833	702	101,096
July, 1881, to June, 1882	118	118	101,214
July, 1882, to June, 1883	3,205	3,205	104,419
July, 1883, to June, 1884	6,267	6,267	110,686
July, 1884, to June, 1885	1,262	1,262	111,948
July, 1885, to April, 1886	545	545	112,493
May, 1886, to April, 1887	1,054	1,054	113,547
May, 1887, to April, 1888	851	851	114,398
May, 1888, to April, 1889	250	250	114,648
May, 1889, to April, 1890	82	82	114,730
May, 1890, to June, 1891	168	168	114,898
July, 1891, to June, 1892	9	9	114,907

[*Taken from appendices to Journals of the House of Representatives, which quote Agent's-General returns.*

The above table shows the importance of the immigration wave of the early "seventies" and apart from a slight rise in 1882–84 the steady falling off during the depression of the "eighties."

The next table shows the provincial distribution of immigrants during the two decades following 1871 :—

Table No. 47.—Table showing the Distribution of Immigrants into the Provinces in the 1870's and 1880's

Year.	Auckland.		Taranaki.		Hawke's Bay.		Wellington.		Marlborough.	
	Inflow	Total to Date.	Inflow.	Total to Date.	Inflow.	Total to Date.	Inflow.	Total to Date.	Inflow.	Total to Date.
1872–73 ..	1,062	..	15	..	809	..	1,538	..	141	..
1873–74 ..	1,731	2,273	27	42	1,063	1,870	2,889	4,407	57	198
1874–75 ..	4,599	7,391	813	858	2,579	4,477	4,343	8,656	407	631
1875–76 ..	2,536	9,927	859	1,717	924	5,401	2,479	11,135	259	890
1876–77 ..	1,002	10,929	109	1,826	610	6,011	1,309	12,444	233	1,123
1877–78 ..	498	11,427	99	1,925	405	6,416	560	13,004	93	1,216
1878–79 ..	637	12,064	193	2,118	555	6,971	1,119	14,123	145	1,361
1879–80 ..	793	12,857	105	2,223	333	7,304	1,309	15,432	69	1,430
1880–81 ..	171	13,028	25	2,248	21	7,325	103	15,535	21	1,451
1881–82 ..	43	13,071	5	2,253	1	7,326	..	15,535	..	1,451
1882–83 ..	556	13,627	14	2,267	160	7,486	223	15,768	8	1,459
1883–84 ..	1,388	15,015	92	2,359	337	7,823	1,132	16,900	130	1,589
1884–85 ..	365	15,380	43	2,402	84	7,907	190	17,090	14	1,603
1885–86 ..	161	15,541	27	2,429	23	7,930	137	17,227	1	1,604
1886–87 ..	206	15,747	39	2,468	109	8,039	264	17,491	22	1,626
1887–88 ..	107	15,854	13	2,481	69	8,108	240	17,731	6	1,632
1888–89 ..	37	15,891	8	2,489	14	8,122	65	17,796	3	1,635
1889–90 ..	1	15,892	1	2,490	11	8,133	21	17,817	..	1,635
1890–91 ..	19	15,911	12	2,502	16	8,149	55	17,872	1	1,636
1891–92 ..	..	..	..	..	2	8,151	1	17,873	3	1,639

Year.	Nelson.		Westland.		Otago.		Canterbury.	
	Inflow.	Total to Date.	Inflow.	Total to Date.	Inflow.	Total to Date.	Inflow.	Total to Date.
1872–73	9	..	18	..	2,090	..	1,903	..
1873–74	35	44	72	90	5,457	7,527	3,771	5,654
1874–75	936	998	290	415	8,403	15,846	9,415	15,118
1875–76	436	1,434	529	944	4,977	20,823	3,613	18,731
1876–77	178	1,612	411	1,355	1,613	22,436	2,008	20,739
1877–78	126	1,738	145	1,500	1,668	24,104	2,034	22,773
1878–79	70	1,808	134	1,634	2,906	27,010	2,988	25,761
1879–80	329	2,137	95	1,729	2,429	29,439	1,951	27,712
1880–81	3	2,140	14	1,743	233	29,672	242	27,954
1881–82	..	2,140	..	1,743	41	29,713	28	27,982
1882–83	19	2,159	27	1,770	1,114	30,827	1,074	29,056
1883–84	98	2,257	69	1,839	1,727	32,554	1,294	30,350
1884–85	28	2,285	29	1,868	285	32,839	224	30,574
1885–86	10	2,295	19	1,887	83	32,922	84	30,658
1886–87	27	2,322	14	1,901	208	33,130	165	30,823
1887–88	34	2,356	31	1,932	181	33,311	170	30,993
1888–89	9	2,365	26	1,958	45	33,356	43	31,036
1889–90	1	2,366	12	1,970	28	33,384	7	31,043
1890–91	2	2,368	3	1,973	48	33,432	12	31,055
1891–92	..	..	..	..	3	33,435	..	..

It is interesting to note that more than 56 per cent. of all immigrants in this period went to Otago and Canterbury. The provinces in the North Island received only 39 per cent. of the total immigrants as compared with 56 per cent. for Otago and Canterbury alone.

The following table shows the nationality of the immigrants from 1871 to 1892 :—

Table No. 48.—Table showing Nationalities of Immigrants from 1871 to 1892

Year.	English.	Irish.	Scottish.	German.	French.	Danish.	Swedish.	Norwegian.	Italian.	Others.
November, 1871, to June, 1873	4,237 + 90 Welsh	1,181	700	384	..	410	11	541	..	31
1873–74 ..	9,167	2,502	2,257	221	178	473	212	18	..	74
1874–75 ..	18,111	6,155	5,356	902	71	640	291	29	..	230
1875–76 ..	6,785	4,597	3,202	1,060	11	367	149	80	238	123
1876–77 ..	3,216	2,490	1,171	385	15	45	4	16	60	71
1877–78 ..	2,530	2,375	680	12	..	8	..	5	10	8
1878–79 ..	4,195	3,023	1,464	19	3	2	1	12	4	24
1879–80 ..	2,821	2,572	1,896	64	6	13	18	2	..	21
1880–81 ..	297	416	114	4	..	2	..	..	..	..
1881–82 ..	61	51	..	5	..	..	1	..	..	..
1882–83 ..	1,233	1,235	696	34	4	..	..	..	..	13
1883–84 ..	2,909	1,813	1,356	70	21	17	27	11	1	42
1884–85 ..	565	546	141	1	..	3	5	1	..	..
1885–86 ..	234	188	105	3	..	1	1	..	3	10
1886–87 ..	515	266	224	6	..	14	2	17	..	10
1887–88 ..	360	292	172	4	..	3	3	8	..	9
1888–89 ..	97	91	44	2	2	8	2	2	..	2
1889–90 ..	24	13	42	3	..	..	..	..	..	..
1890–91 ..	75	65	18	6	..	3	..	1	..	..
1891–92 ..	2	7	..	..	..	..	..	..	..	..
	57,524	29,878	19,638	3,185	311	2,009	727	743	316	668

The predominance of immigrants from the British Isles is shown in the above table. English immigrants provided about 50 per cent. of the total immigrants. The table also shows the wave of foreign immigration during the early and middle "seventies."

As from about 1890 there was a general change in the attitude towards assisted immigration. In 1893 the Agent-General was able to make arrangements with the New Zealand Shipping Company and the Shaw Savill Company that reduced fares in all classes should be given to persons likely to prove successful settlers. From 1900 till the beginning of the Great War in 1914, 3,000 to 4,000 persons per annum took advantage of these reduced rates. There was not the same stress at this period on the settling of land, since by this time most of the available and easily accessible land had been taken up. Consequently, the emphasis was rather on the introduction of farm labourers and family domestic servants.

The following table shows the number of immigrants receiving assistance by way of reduced fares :—

Table No. 49.—Table showing Number of Immigrants receiving Reduced Fares, 1893–95 and 1904–1921

Year.	Total assisted.	Nominated (included in Previous Column).	Year.	Total assisted.	Nominated (included in Previous Column).
1893	339	..	1913–14	5,064	2,755
1894	462	..	1914–15	2,986	2,119
1895	309	..	1915–16	1,103	874
1904–05	1,751	..	1916–17	638	515
1905–06	2,469	120	1917–18	171	171
1906–07	3,712	383	1918–19	906	906
1907–08	3,104	480	1919–20	3,811	3,811
1908–09	4,953	2,289	1920–21 (Overseas Settlement Scheme)	10,107	4,821
1909–10	2,672	1,341			
1910–11	2,624	1,458	1921–22 (Overseas Settlement Scheme)	7,005	3,153
1911–12	3,300	1,572			
1912–13	3,928	2,131			

Figures for years between 1895 and 1904–05 not available. See annual report of Immigration Department and Appendices to Journals, House of Representatives.

The peak years under the reduced-fares scheme were from 1906–07 to 1908–09 and 1913–14, but the aggregate number was always below those of the boom immigration period of the " seventies."

In 1920 there was another immigration wave, consisting chiefly of men in the Imperial Forces coming out under their free immigration scheme, and English and other wives and fiancees of New Zealand servicemen overseas. In 1921–22 approximately 10,000 people were assisted into this country, concessions being made chiefly to artisans, bricklayers, and mechanics.

In 1920 a decision was arrived at to take 10,000 persons per annum from the United Kingdom. This quota was increased to 13,500 at the beginning of 1926. The next tables will show that this quota was never reached. From May, 1927, a restriction on the acceptance of immigrants was introduced. Thereafter assistance was limited to the following :—

(*a*) Domestic servants (suspended 31st March, 1931) and single women under forty years of age :

(*b*) Juveniles, including parties of boys, for the Church of England Immigration Society and the Salvation Army, and boys and girls for Flock House :

(*c*) Separated families consisting of—

(i) Single sons and daughters where the parent was already in New Zealand.

(ii) Wives and children (where the husband had previously arrived, whether he was assisted or not.)

(iii) Solitary members of families remaining in the United Kingdom.

(iv) Hardship cases—*i.e.*, individuals and families who, in anticipation of the receipt of assisted passages, had entered into commitments to that end (*e.g.*, had sold their home or business).

Due to the onset of the depression, assistance had almost ceased by the end of 1932. This post-war immigration was the result of an agreement between the New Zealand Government and the United Kingdom Government. As far as the latter was concerned, the authority was the Empire Settlement Act, 1922. A further agreement was entered into in 1927, which was from time to time extended till 1941. Generally the measure of assistance was such amount as was necessary to reduce the passage charge to the immigrant to the following figures :—

Men (nineteen years of age and over)	£11.
Married women (and widows with children)	£11.
Single women of forty years of age and over	£11.
Single women and widows (without children) under forty years of age ..	Free.
Children and juveniles under nineteen years of age	Free.

The assistance required was met in equal shares by the two Governments, who also bore their own administrative costs, though the intention throughout appears to have been to equalize costs. As the agreed charge by the shipping lines for third-class passages was £33, the practical effect was that the immigrant and the two Governments bore one-third each (except where free passages were granted, in which case the Governments bore one-half each). Later passage charges were increased to £37, resulting in increased costs to the Governments. Where the immigrant was unable to finance his share of the passage-money, a loan could be obtained. Where, however, the immigrant failed to remain in New Zealand for the agreed period, he became liable to refund the amount contributed by the Governments to his passage-money.

In this post-war period, therefore, assistance has been limited to United Kingdom residents, generally to British-born subjects. There have been two methods of selection—namely, as a result of nomination by New Zealand residents, or as a result of advertising, the latter being restricted to certain classes, such as family domestics, farm labourers, and

skilled artisans, as determined from time to time. The nominator accepted responsibility for meeting and placing his nominee, and this system, therefore, reduced considerably the after-care arrangements required on the part of the New Zealand Government.

Until 1932 a special Immigration Department was in existence to implement the New Zealand side of the immigration arrangements. As a result of the depression the administrative responsibilities of immigration were, in 1932, passed to the Labour Department. The responsibility of the officers of these Departments was to meet immigrants on arrival, arrange for their transhipment and onward transport, and, in addition, perform the following services:—

(*a*) Delivery of letters from friends, &c., addressed care of the Department:

(*b*) Provision of accommodation while awaiting onward transport:

(*c*) Provision of employment (if necessary):

(*d*) Exchange of overseas currency:

(*e*) Customs clearances.

Domestics were in a special category. They travelled under supervision and were required to communicate at intervals with a special female officer. In addition, they signed an agreement containing the following clauses:—

(*a*) To carry out the requests of the Matron who is appointed by the High Commissioner in London to look after the welfare of myself and other girls on the voyage to New Zealand.

(*b*) To engage in Domestic Service on arrival in New Zealand and continue therein for a period of not less than one full year.

(*c*) To occupy only such positions as are approved by the Immigration Department in New Zealand.

(*d*) To reside permanently in New Zealand for a period of five years.

(*e*) To remain single during the first twelve months after my arrival in New Zealand—that is to say, that during the required twelve months' service I will refrain from marrying.

(*f*) To notify the Immigration Department, Wellington, before actually giving notice to my mistress that I intend leaving her.

(*g*) To refund to the Immigration Department the actual cost of my passage should I fail to adhere to the foregoing conditions, (*b*), (*d*), or (*e*).

(*h*) To confirm this undertaking on my arrival in New Zealand.

In addition to the normal adult immigration, special attention was paid to juvenile immigration, which was of the nature of a group immigration scheme. The following table gives an indication of the extent of this juvenile development:—

Table No. 50.—Table showing Juvenile Migration (in Groups) for the Years 1924 to 1932

Year ending 31st March,	Public School Boys.	Church of England Boys.	Salvation Army Boys.	Empire Exhibition Scholarship Boys.	Flock House Boys.	Flock House Girls.	Total.
1924	8	..	..	..	..	..	8
1925	208	..	..	..	..	..	208
1926	157	..	..	..	..	..	157
1927	235	52	186	12	61	36	582
1928	16	97	138	..	94	33	378
1929	15	149	100	..	66	24	354
1930	6	100	88	..	89	19	302
1931	..	96	52	..	89	9	246
1932	..	..	..	..	24	..	24
Date of last arrival ..	15/2/30	15/1/31	17/9/30	..	30/9/31	3/6/30	..

The following tables show, first, the total number assisted to New Zealand in the various allowed categories, and, secondly, the provincial distribution of those immigrants.

Table No. 51.—Table showing Number of Assisted Immigrants, from 1922 to 1935, distinguishing as to Classes of Immigrants

Year.	Total.	Nominated.	Farm Labourers.	Overseas Allotment.	Domestic Servants.	Schoolboys.
1922–23	6,737	3,255	684	3,482	550	..
1923–24	6,752	5,946	745	48	649	..
1924–25	8,924	7,987	553	..	617	208
1925–26	7,685	6,824	510	..	504	177
1926–27	11,239	10,134	690	..	589	1,400
1927–28	3,822	3,465	..	..	388	16
1928–29	1,968	1,754	..	..	232	15
1929–30	1,790	1,626	..	..	180	..
1930–31	1,233	1,078	..	..	155	..
1931–32	290	258	..	..	34	..
1932–33	56	56	..	..	..	..
1933–34	4	4	..	..	..	..
1934–35	1	1	..	..	..	..

The table shows clearly the absolute importance of the nominated class. The figures as to farm labourers and domestic servants are interesting in themselves. No information is available to show how long they remained in their original occupations.

Table No. 52.—Table showing Distribution into Provinces of Immigrants from 1921 to 1933

Year.	Auckland.	Canterbury.	Hawke's Bay.	Marlborough.	Nelson.	Otago.	Southland.	Taranaki.	Wellington.	Westland.
1921–22 ..	3,173	1,276	533	202	277	855	348	573	2,390	276
1922–23 ..	2,407	889	247	63	328	541	169	209	1,653	231
1923–24 ..	2,187	713	318	39	289	579	144	156	1,389	132
1924–25 ..	3,117	1,031	395	38	357	946	225	322	2,299	194
1925–26 ..	2,615	876	293	46	254	717	216	267	2,204	197
1926–27 ..	3,652	1,193	521	39	428	1,035	361	350	3,368	292
1927–28 ..	1,376	426	136	20	122	261	90	154	1,152	85
1928–29 ..	699	157	86	9	59	140	37	65	634	83
1929–30 ..	558	218	64	10	86	113	37	53	545	106
1930–31 ..	510	103	33	2	35	58	20	31	375	66
1931–32 ..	75	16	10	2	11	37	1	4	112	22
1932–33 ..	31	5	..	..	5	3	..	4	8	..

The predominance of Auckland and Wellington in the above table is in marked contrast with the figures given previously for the immigrants of the "eighteen seventies," most of whom were located in the South Island.

VI. ALIEN IMMIGRATION

During the "sixties" and early "seventies" of last century quite a number of northern European immigrants were assisted to New Zealand. When, by 1875, it was possible to obtain from the United Kingdom all the immigrants required, assistance to foreign immigrants ceased. A number of Chinese had arrived in New Zealand during the gold rushes of the "sixties," and in the early stages of the immigration boom of the "seventies" a proposal was put forward to import Chinese labourers. Nothing eventuated

from this suggestion, but quite a number of eastern Asiatics drifted to New Zealand during the "seventies." In 1879 the tendency for people of these races to immigrate to Australia was creating a problem of cheap labour, and Sir George Grey argued that if such a tendency developed in New Zealand the result would be disastrous for New Zealand's future. As a consequence of this outcry the Chinese Immigration Act was passed in 1881, limiting the number of Chinese to one for every ten tons of shipping, and imposing a poll-tax on all such immigrants.

In 1888–89 the restriction was tightened up so that in future only one for every 100 tons of shipping was allowed. This was increased in 1896 to one for every 200 tons. The Asiatic Restriction Act of 1896 extended the provision to all Asiatics except British Indians. These Acts caused certain international repercussions, and hence the Immigration Restriction Act of 1899 was drawn up in non-racial terms. The discrimination against Chinese still remained, however, and was tightened up in 1901 and 1907, when the education test was imposed on Chinese also.

By 1908, when all this legislation was consolidated, the policy of immigration restriction was generally accepted. The primary fear, at least in so far as Chinese were concerned, was economic, it being felt that a large influx of Chinese would seriously endanger living standards.

Following the 1914–18 war, the Undesirable Aliens Exclusion Act was passed, aimed at preventing ex-enemy aliens and other disaffected and disloyal persons from coming to New Zealand. This Act gave power to prevent even British subjects who were disaffected or disloyal from landing in New Zealand.

The Immigration Restriction Act of 1920 represents a still further step in the control of immigration into New Zealand. Educational tests were dropped and replaced by an individual permit system. All non-British subjects and people of some coloured races intending to reside in New Zealand must obtain a permit from the Minister of Customs, whose personal decision is final in any case. The poll-tax still remained for Chinese immigrants, and was, in effect, an attempt to prevent the emergence of cheap coolie labour. The poll-tax on Chinese was abolished in 1944, but prior to that date it had been waived for some time. In practice, however, the Act has been administered to prevent, *inter alia*, the immigration of cheap Chinese or coolie labour.

The following statement, presented to the Committee by the Customs Department, sets out in detail the present law and practice regarding the problem of immigration restriction :—

SUMMARY OF THE LEGISLATION RELATING TO IMMIGRATION RESTRICTION AND NOTES REGARDING ITS ADMINISTRATION

1. Acts and Regulations

The statutes and regulations relating to the restriction of immigration into New Zealand are the following :—

Immigration Restriction Act, 1908 :
Immigration Restriction Amendment Act, 1910 :
Immigration Restriction Amendment Act, 1920 :
Immigration Restriction Amendment Act, 1923 :
Finance Act (No. 3), 1944, Part II :
Undesirable Immigrants Exclusion Act, 1919 :
Immigration Restriction Regulations 1930, and Amendments Nos. 1–3.

2. Administration

The Customs Department is charged with the administration of all matters coming within the scope of the Immigration Restriction Legislation.

3. Prohibited Immigrants

Irrespective of their nationality or race, the following classes of persons are prohibited from landing in New Zealand:—

(*a*) Any idiot or insane person:

(*b*) Any person suffering from a contagious disease which is loathsome or dangerous:

(*c*) Any person arriving in New Zealand within two years after the termination of a period of imprisonment in respect of any offence which, if committed in New Zealand, would be punishable by death or imprisonment for two years or upwards:

(*d*) Any person who is considered by the Attorney-General to be disaffected or disloyal or of such a character that his presence in New Zealand would be injurious to the peace, order, and good government of New Zealand:

(*e*) Every person of the age of fifteen years or over who, on arrival, refuses or neglects to make the required declaration and who, in the case of an alien, refuses or neglects to take an oath (or make an affirmation) of obedience:

(*f*) Every person who is required to obtain a permit to enter New Zealand and who is not at the time of arrival in possession of a permit.

4. Infirm Passengers

With respect to any passenger arriving in New Zealand who is infirm and likely to become a charge upon the public or upon any public or charitable institution, the master, owner, or charterer of the ship by which such person comes to New Zealand may be called upon to enter into a bond in the sum of £100 for such person guaranteeing payment of any expenses which may be incurred for his maintenance or support by or in any such institution within a period of five years.

5. Permits to enter New Zealand as Permanent Residents: Persons who are not of British Birth and Parentage, Etc.

The admission to New Zealand of persons who are not of British birth and parentage and wholly of European race and colour is controlled by means of the individual permit system laid down in section 5 of the Immigration Restriction Amendment Act, 1920, which reads as follows:—

"(1) In addition to the restrictions imposed upon immigration into New Zealand of the several classes of persons specified in the principal Act, as amended by this Act, it is hereby enacted that no person other than a person of British birth and parentage shall (except as by this Act is specially provided) enter into New Zealand unless he is in possession of a permit to enter in the form and to the effect provided by regulations under this Act.

"(2) A person shall not be deemed to be of British birth and parentage by reason that he or his parents or either of them is a naturalized British subject, or by reason that he is an aboriginal Native or the descendant of an aboriginal Native of any Dominion other than the Dominion of New Zealand or of any colony or other possession or of any protectorate of His Majesty."

6. Applicants for Permits

(*a*) *Application Papers.*—Application for a permit to enter New Zealand as a permanent resident must be made in the prescribed form and signed by the applicant, and attested according to the law in force in the country where the application is made, and should then be sent by post to the Minister of Customs, accompanied by the following documents:—

(1) Documentary evidence that the applicant is fitted by training and experience to pursue the employment which he states that he will undertake in New Zealand:

(2) A certificate from a duly qualified medical practitioner regarding the condition of the mental and physical health of the applicant and the persons accompanying him:

(3) A certificate from a police officer or other public official regarding the character of the applicant and the persons accompanying him:

(4) Two unretouched and unmounted half-length recent photographs of the applicant and of each person accompanying him, of a size not exceeding 4½ in. by 3½ in. and not less than 3 in. by 2 in.

(*b*) *Translation of Documents.*—If any of the documents are not in the English language they should be accompanied by certified translations into the English language from a qualified interpreter.

(*c*) *Fees or Charges.*—No charge is made for the issue of a permit to enter New Zealand.

7. Alien Immigration Policy

At the beginning of each year it has been the practice for the Comptroller of Customs to prepare a statement showing the policy which has been followed during the past year for the purpose of assisting the Minister of Customs in the determination of the policy to be adopted for the ensuing year.

This policy can, of course, be modified should the number of applications made or conditions render it necessary to review the policy in operation.

8. Assisted Migration for Foreigners

No assistance is granted for alien migrants to come to this Dominion, and there is no official machinery established here for the reception, placing, and after-care of alien migrants.

9. Temporary Permits for Visitors

A person who arrives in New Zealand without a permit but proves to the satisfaction of the Customs Department that he desires to enter New Zealand as a visitor only for purposes of business, pleasure, or health, and that he intends to leave New Zealand within six months after his arrival, may be granted a temporary permit for six months or such shorter period as may in any case be determined. The period of stay under temporary permits is normally limited to six months, but may be extended if the Minister of Customs considers that the circumstances warrant such action. A deposit of £10 is required in respect of a temporary permit, and is returned on the departure of the visitor if the conditions of the temporary permit are complied with. The Collector of Customs may also require, if he so decides, before a temporary permit is issued, a deed to be entered into by some person or persons resident in New Zealand approved by him guaranteeing to pay all expenses that may be incurred by the Crown or any public body in New Zealand, or his deportation therefrom.

10. Students' Permits

Provision is also made in the Immigration Restriction Regulations whereby under certain conditions foreigners may be allowed to enter New Zealand temporarily for educational purposes, and many Chinese and South Sea Islanders have taken advantage of this provision.

VII. LOCATION OF POPULATION

A. PROVINCIAL DISTRIBUTION

The internal distribution of the population of New Zealand has varied considerably over the past hundred years. In the early history of New Zealand the settlement in the North Island was considerably influenced by the Maori Wars, particularly during the "sixties" and "seventies" of last century. As shown in another part of this report, the tendency for the majority of the assisted immigrants during the immigration boom of the "seventies" to go to Otago and Southland was another very important factor in this regard. There is little doubt that the South Island was more active and progressive during this period of New Zealand's history. The following table sets out the distribution of the population as between the North and South Islands at various censuses from 1858 to 1945 :—

Table No. 53.—Table showing Distribution of Population as between the North and South Islands at various Censuses from 1858 to 1945

Census Year.	Population (excluding Maoris).			Proportions per Cent.	
	North Island.	South Island.	Total.	North Island.	South Island.
1858	34,094	25,319	59,413	57·38	42·62
1861	41,641	57,380	99,021	42·05	57·95
1864	65,263	106,895	172,158	37·91	62·09
1867	79,913	138,755	218,668	36·55	63·45
1871	96,875	159,518	256,393	37·78	62·22
1874	111,934	187,580	299,514	37·37	62·63
1878	158,208	256,204	414,412	38·18	61·82
1881	193,047	296,886	489,933	39·40	60·60
1886	250,482	328,000	578,482*	43·30	56·70
1891	281,474	345,184	626,658*	44·92	55·08
1896	340,638	362,722	703,360*	48·43	51·57
1901	390,579	382,140	772,719*	50·55	49·45
1906	476,737	411,841	888,578*	53·65	46·35
1911	563,733	444,735	1,008,468*	55·90	44·10
1916	651,072	448,377	1,099,449*	59·22	40·78
1921	741,255	477,658	1,218,913*	60·81	39·19
1926	831,813	512,656	1,344,469	61·87	38·13
1936	938,939	552,545	1,491,484	62·95	37·05
1945	1,050,984	552,570	1,603,554†	65·54	34·46

* Inclusive of Maori half-castes living as Europeans. † In addition, there were 45,381 members of the Armed Forces still overseas at census date.

In 1867 practically two-thirds of the population of New Zealand were in the South Island and one third in the North Island. By 1945 the position was reversed, so that practically two-thirds of the population were in the North Island and only one-third in the South Island. The absolute numbers in both Islands, however, had considerably increased from 34,094 in 1858 to 1,050,984 in 1945 in the North Island, and from 25,319 in 1858 to 552,570 in 1945 in the South Island.

A more detailed analysis of this internal distribution is given in the following table, where the percentages of the total population at various dates are given :—

Table No. 54.—Table showing the Percentage Distribution of the Population in the various Provinces from 1881 to 1945

Year.	Auckland.	Taranaki.	Hawke's Bay.	Wellington.	Marlborough.	Nelson.	Westland.	Canterbury.	Otago.	Southland.	Total.
1881 ..	20·29	3·03	3·54	12·54	1·89	5·33	3·06	22·95	21·94	5·43	100·0
1886 ..	22·54	3·11	4·25	13·40	1·92	5·22	2·75	21·02	19·66	6·13	100·0
1891 ..	21·25	3·52	4·55	15·59	2·04	5·55	2·54	20·53	18·52	5·91	100·0
1896 ..	21·84	4·43	4·84	17·32	1·77	5·08	2·06	19·35	17·06	6·25	100·0
1901 ..	22·77	4·90	4·58	18·29	1·72	4·91	1·88	18·54	16·22	6·19	100·0
1906 ..	23·77	4·88	4·75	20·24	1·62	4·79	1·65	17·93	14·39	5·98	100·0
1911 ..	26·23	5·11	4·81	19·74	1·59	4·81	1·56	17·20	13·13	5·82	100·0
1916 ..	28·29	5·11	4·98	20·52	1·49	4·40	1·29	16·39	12·08	5·45	100·0
1921 ..	30·32	5·08	5·00	20·41	1·46	3·91	1·16	16·33	11·23	5·10	100·0
1926 ..	31·58	5·07	4·88	20·34	1·36	3·77	1·13	15·91	11·12	4·84	100·0
1936 ..	32·70	4·92	4·72	20·62	1·24	3·97	1·24	15·62	10·11	4·86	100·0
1945 ..	35·47	4·49	4·47	21·11	1·25	3·55	1·05	15·30	8·96	4·35	100·0

The table shows that over the period under review the relative position of the Auckland and Wellington Provinces has improved by approximately 75 per cent., while the relative position of Canterbury has fallen by 33 per cent. and the relative position of Otago has fallen by nearly 60 per cent. These figures relate to the relative, and not the absolute size of the population. That this movement is going on steadily, and tends to increase, is clearly shown by the following table :—

Table No. 55.—Table showing the Populations of the various Provinces at various Censuses from 1921 to 1945

(In thousands; excluding Maoris)

Province.	1921.	1926.	1936.	1945.
Auckland	370	425	488	569
Hawke's Bay	61	66	70	72
Taranaki	62	68	73	72
Wellington	249	274	307	338
Marlborough	18	18	19	20
Nelson	48	51	59	57
Westland	14	15	19	17
Canterbury	199	214	233	245
Otago and Southland	199	215	223	213

Both the above tables show in a marked fashion the relative importance of the Auckland Province from the point of view of the population of the Dominion. At the present time 35 per cent. (that is, one-third) of the population of New Zealand lives in the Auckland Province, and 21 per cent. (that is, one-fifth) in the Wellington Province. In other words, 56 per cent., or over one-half, of the population of New Zealand lives in the Auckland and Wellington Provinces combined.

It is interesting to notice that during the inter-censal period between 1926 and 1936 the natural increase (that is, excess of births over deaths) in the North Island was 92,130 and in the South Island 47,181. The actual increase recorded by the 1936 census, however, in the North Island was 107,126 and in the South Island 39,889, so that the actual increase in population in the South Island was over 7,000 less than the natural increase, which gives some idea of the drift from the South to the North Island.

During the inter-censal period 1936 to 1945 the natural increase figure in the North Island was 86,443, and in the South Island 45,688, whereas the actual total increases in population (exclusive of Maoris) for the same period were 112,045 in the North Island and 25 only in the South Island. It is, however, necessary to make allowance for a proportion of the 45,381 members of the Armed Forces still overseas at the census date, 25th September, 1945. Assuming that 16,000 to 17,000 of these would return to the South Island, the real actual increase in population in the South Island was therefore approximately 28,000 less than the natural increase in population. The drift from the South to the North Island shown in the previous inter-censal period (1926–1936) has thus been accentuated during the 1936–1945 period. To some extent the position has been influenced by directions of man-power, both male and female, to essential industries in the North Island, but, even making allowance for this, the figures quoted above give definite evidence of the continuing general drift of the population northwards.

Another view of the growth in population in the various Provincial districts can be seen from an examination of the relative densities of population in various areas.

The following table shows at various censuses from 1891 to 1945 the persons per square mile in each of the various Provinces :—

Table No. 56.—Table showing at various Censuses from 1891 to 1945 the Number of Persons per Square Mile (including Maoris) in each of the various Provinces

Provincial District.	Area, in Square Miles.	Persons to a Square Mile (including Maoris).									
		1891.	1896.	1901.	1906.	1911.	1916.	1921.	1926.	1936.	1945.
Auckland ..	25,400	6·35	7·09	8·07	9·59	11·76	13·50	16·08	18·48	21·53	25·23
Hawke's Bay ..	4,260	7·78	8·83	9·30	10·95	12·46	13·78	14·94	16·51	18·07	18·57
Taranaki ..	3,750	6·66	9·05	10·79	12·40	14·44	15·78	17·40	19·16	20·71	20·49
Wellington ..	10,870	9·35	11·59	13·46	17·03	18·80	21·09	23·43	25·85	29·11	32·14
Marlborough ..	4,220	3·11	3·05	3·26	3·49	3·90	3·97	4·33	4·45	4·54	4·91
Nelson ..	10,870	3·22	3·30	3·50	3·93	4·48	4·43	4·39	4·68	5·47	5·26
Westland ..	4,880	3·27	2·98	2·98	3·03	3·24	2·90	2·92	3·13	3·83	3·48
Canterbury ..	13,940	9·29	9·83	10·34	11·50	12·52	12·89	14·34	15·43	16·81	17·71
Otago—											
Otago portion	14,050	8·29	8·58	8·95	9·14	9·46	9·39	9·76	10·67	10·76	10·25
Southland portion	11,170	3·34	3·98	4·30	4·80	5·31	5·33	5·59	5·87	6·52	6·28
Totals ..	103,410	6·47	7·19	7·89	9·05	10·23	11·11	12·30	13·62	15·22	16·46

The table shows in marked form the increase in population in the North Island. As between 1901 and 1945 the number of persons per square mile had increased from 8·07 to 25·23 in Auckland, from 9·30 to 18·57 in Hawke's Bay, from 10·79 to 20·49 in Taranaki, and from 13·46 to 32·14 in Wellington. In every case the increase is 100 per cent. or more, and in the Auckland Province over 210 per cent. The position is entirely different, however, in the South Island. Marlborough has increased only from 3·26 to 4·91 persons per square mile, Nelson from 3·50 to 5·26, Westland from 2·98 to 3·48, Canterbury from 10·34 to 17·71, Otago from 8·95 to 10·25, and Southland from 4·30 to 6·28.

Even if a shorter period is taken, say the period since the 1914–18 war, the density of population in the Auckland Province has increased from 16·08 to 25·23 persons per square mile, and Wellington from 23·43 to 32·14. In the South Island the rate has been much smaller. In Otago persons per square mile have increased only from 9·76 to 10·25, and Southland from 5·59 to 6·28. Canterbury has shown the greatest increase in the South Island, from 14·34 to 17·71.

B. DISTRIBUTION BETWEEN URBAN AND RURAL AREAS

Another important feature in the location of population is the examination of the relative urbanization of the population. The following table shows the distribution of the population as between counties (including town districts) and boroughs (including cities). Although at the present time no new borough can be created unless the population is at least 1,000, there are in existence several boroughs where the population is under 1,000. The table, however, gives some idea of the relative urbanization of the community :—

Table No. 57.—Table showing the Distribution of the Population as between Counties (including Town Districts) and Boroughs (including Cities) at various Censuses from 1881 to 1945

(Excluding Maoris)

Census.	Counties (including Town Districts).	Boroughs (including Cities).	Percentage.		
			Counties.	Boroughs.	Shipboard, &c.
1881	291,238	194,981	59·44	39·80	0·76
1886	327,328	245,612	56·58	42·46	0·96
1891	352,097	270,343	56·18	43·14	0·68
1896	391,735	307,294	55·69	43·69	0·62
1901	417,596	350,202	54·04	45·32	0·64
1906	458,797	424,614	51·63	47·79	0·58
1911	496,779	505,598	49·26	50·14	0·60
1916	501,259	585,306	45·59	53·24	1·17
1921	530,852	681,988	43·55	55·95	0·50
1926	551,457	785,040	41·02	58·39	0·59
1936	601,343	884,282	40·32	59·29	0·39
1945	590,195	1,008,534	36·81	62·89	0·30

Urbanization has proceeded somewhat further in the North Island than in the South Island, as is shown in the following table :—

Table No. 58.—Table showing (a) Total Population in Counties and Boroughs, and (b) Percentage Distribution in Counties and Boroughs, in North and South Islands as at Censuses of 1936 and 1945

	Counties.		Boroughs.		Shipboard, &c.	
	1936.	1945.	1936.	1945.	1936.	1945.
Numbers—						
North Island ..	362,554	375,128	572,190	671,670	4,195	4,186
South Island ..	238,789	215,067	312,092	336,864	1,664	639
Total ..	601,343	590,195	884,282	1,008,534	5,859	4,825
Percentages—						
North Island ..	38·61	35·70	60·94	63·91	0·45	0·39
South Island ..	43·22	38·92	56·48	60·96	0·30	0·12
Total ..	40·32	36·81	59·29	62·89	0·39	0·30

The outstanding feature of the above table is the fall between 1936 and 1945 of 23,722 in the population of counties in the South Island. This subject is discussed in detail a little later in this section. The table also shows that urbanization has proceeded further in the North than in the South Island. In the North Island in 1945, 63·91 per cent. of the population lived in urban areas, an increase of 3 per cent. over the 1936 figure. County areas have shown an equal relative fall. Although this trend has been in operation for many years past, part of the large change in the period between 1936 and 1945 is due to the large numbers coming to the cities for war work.

A different split-up of the urban and rural population is given in the following table :—

Table No. 59.—Table showing the Population in Urban and Rural Districts at various Censuses from 1901 to 1936

—	1901.	1906.	1911.	1916.	1921.	1926.	1936.
				Numbers			
Boroughs and Town Districts with Populations of—							
1,000– 2,500 ..	59,117	66,046	81,011	93,995	98,292	102,201	99,875
2,500– 5,000 ..	74,489	57,030	67,322	76,914	92,778	85,430	70,768
5,000–10,000 ..	66,259	94,742	98,435	87,096	67,575	82,144	96,859
10,000–25,000 ..	53,821	10,239	56,519	78,860	135,493	185,580	244,407
25,000 or over ..	77,851	182,297	199,553	248,437	295,997	337,221	373,309
Total urban ..	331,537	410,354	502,840	585,302	690,135	792,576	885,218
Rural ..	437,419	473,752	500,620	501,960	523,547	544,808	601,594
Grand total (excluding migratory)	768,956	884,106	1,003,460	1,087,262	1,213,682	1,337,384	1,486,812
				Percentage of Total			
1,000– 2,500 ..	7·69	7·47	8·07	8·65	8·10	7·64	6·72
2,500– 5,000 ..	9·69	6·45	6·71	7·07	7·64	6·39	4·76
5,000–10,000 ..	8·62	10·72	9·81	8·01	5·57	6·14	6·51
10,000–25,000 ..	7·00	1·16	5·63	7·25	11·16	13·88	16·44
25,000 or over ..	10·12	20·62	19·89	22·85	24·39	25·21	25·11
Total urban ..	43·12	46·42	50·11	53·83	56·86	59·26	59·54
Rural ..	56·88	53·58	49·89	46·17	43·14	40·74	40·46
Grand total (excluding migratory)	100·00	100·00	100·00	100·00	100·00	100·00	100·00

At the beginning of the present century about 20 per cent. of the population lived in towns of over 10,000 population. By 1936, however, this proportion had grown to 40 per cent. Only 10 per cent. of the population lived in the larger cities in 1901. This had increased to 25 per cent. in 1936. In the secondary cities between 10,000 and 25,000 the increase was from 7 per cent. to 16·44 per cent. The rural population had increased from 437,419 to 601,594, but had fallen relatively from 56·88 to 40·46 per cent. It should be noted, however, that, contrary to the experience of Australia, there has not been the tendency for the population to congregate in one large town. While the four major cities occupy a predominant place in the urban areas, there is a growing tendency for a distribution of the population into the smaller areas. Prior to the 1914–18 war there were only four cities in the Dominion. (The term "city" has no legal significance, but is granted to a borough which has a population of over 20,000.) In 1945, there were nine cities.*

C. THE URBAN DRIFT

A good deal is made from time to time of what is called the urban drift, and many deductions are made of the necessity to counter this particular development. In the Section dealing with agriculture it will be shown that the numbers engaged directly in agriculture have increased at a rate only slightly less than the rate of increase of the total occupied population. There is a good deal of loose thinking on this subject of the urban drift. The important factor in connection with agriculture is not the number

*Nelson, which has a population of under 20,000, is also entitled to the appellation of "city," but this has an historial significance.

of people engaged therein, but the actual production of the land. The major question at issue is, Is the land being farmed as efficiently as possible? In other words, is the maximum production being obtained, or is it being retarded by the lack of persons engaged in agriculture? An historical review of the development will, perhaps, clarify the issue somewhat.

The mechanization of the dairy industry began about the end of the 1914–18 war. In 1920–21 there were approximately 890,000 dairy cows in milk. This number had doubled by 1939–40, and was then approximately 1,750,000 cows. There has been some considerable expansion of the area devoted to dairying, but the principal feature of the progress of the dairying industry during the period was the increasing number of cows per acre, plus the increasing yield of butterfat per cow. Ignoring for the time being the problem of the mechanization of the dairying industry, the number of cows handled by any farm could, in general terms, be increased if hand-milking were still in fashion only if the number of milking hands were increased. In actual fact, the number of milking hands did not increase proportionately to the number of cows. The explanation, therefore, is to be found in the field of the mechanization of the dairying industry. If at the end of the last war the maximum number of cows that could be milked by any one person was approximately twenty-five, this was increased to probably forty and over as the result of the introduction of milking-machines and mechanized separation procedures. A further step forward was taken towards the end of the fourth decade of this century when stripping tended to disappear with the greater efficiency of the milking-machine. This again tended to increase the number of cows which could be handled by any one man. Hence the labour efficiency tended to increase, and probably increased in a considerably greater proportion than the increase in the number of cows per acre.

A second factor of importance was the improvement in farm techniques, particularly in the increase in the use of artificial fertilizers and better farm management. The necessity for root-crops, particularly in the North Island, has tended to fall off, and hence the necessity for ploughing and similar cultivation became of considerably less importance. Labour requirements for maintaining pastures by artificial fertilizers are much less than the labour requirements where ploughing and cultivation have to be undertaken.

From the above points of view, any relative decline in the number of people on the land is not necessarily a retrograde step, but a sign of economic progress. In actual fact, as is shown in the section dealing with agriculture, there has been very little real decline.

Persons who argue against the drift from agriculture, however, tend to forget that the mechanziation of agriculture has created in urban areas the necessity for the development of a very large class of industrial worker concerned directly with the servicing of agriculture. The internal-combustion engine, particularly as it affects transport, has created a very important secondary industry in the Dominion, which in statistical returns is not regarded as engaged in agriculture. While it is a fact that this industry is partly concerned with urban requirements, a considerable proportion is concerned with servicing of agriculture. The transport industry is another instance of the same tendency. About the end of the 1914–18 war the farmer normally carted his own cream to the factory. At the present time practically no dairy-farmer, concerned at least with the buttermaking industry, carts his own cream. This particular phase of the industry is highly specialized, and the operatives generally tend to live in urban areas. The electricity industry is in a similar case. Hence, if account were taken of those industries concerned primarily with the servicing of agriculture it could be shown that there has probably been no drift from agriculture, but rather the reverse.*

* It is not denied that in certain areas, particularly in the South Island, there has been a relative decline in agricultural population. This, however, is a special problem which will be dealt with later.

A further important factor of a purely statistical nature may be illustrated as follows. One of the important features of New Zealand's population distribution has been the growth of the smaller towns adjacent to large rural areas. When these towns are under 1,000 population they are classified as rural areas. When the population increases to over 1,000 they are classified as urban areas. Take the case of Morrinsville. Morrinsville had a population of 463 and 687 in 1916 and 1921 respectively. It would therefore be classified as a rural area. By 1926 its population had increased to 1,536, and by 1936 to 1,796. Its status had been raised to that of a borough. It would therefore be classified as an urban area. Many of the people who were previously classified as rural in 1916 and 1921 would still be living in Morrinsville and would be classified as urban in 1926 and subsequently. Many cases could be cited, but one further will suffice to illustrate the point. Raetihi had a population of 508 and 848 in 1916 and 1921 respectively. In 1926 the population had risen to 1,127 and in 1936 to 1,182. In 1916 and 1921 Raetihi would be classified as rural; in 1926 and 1936 it would be classified as urban.

A further point of importance in this regard is the tendency for urban areas to spread. For instance, take the case of Christchurch, which has extended its boundaries from time to time to take in areas which were previously attached to counties adjacent to that city. People living in those areas were classified as rural before the areas were amalgamated with the Christchurch area. Subsequent to the amalgamation they were classified as urban. Many other cases of a similar character could be mentioned, but sufficient has been stated to show that even from this purely statistical point of view the crude figures really mask the real trends. If adjustments could be made to cover all the above factors, it would be obvious that, rather than showing a decline in agricultural population, the real position may be quite the reverse.

Quite apart, however, from this point of view, the so-called urban drift is not peculiar to New Zealand. It is a phenomenon that is world-wide in its incidence, particularly in countries peopled by western Europeans. The basic factor is the progress in agricultural techniques. In other words, the application of science to agriculture, both as it affects the mechanization of the industry and as it affects the productivity of agriculture, has resulted in a very much greater efficiency in terms of the output per unit of labour employed. Consequently, it has been possible to extract from the soil, the requirements of the population with a relatively less expenditure of labour directly on the farm. This, coupled with the increase in productivity of agriculture, has resulted in a steadily increasing standard of living, since a lesser proportion of the income of the rural community is devoted to the provision of food and clothing, and a larger proportion devoted to the provision of the semi-luxury lines. There is little doubt that this tendency will continue, and that, rather than being a source of alarm, is an achievement to be sought after. In so far as science is able to lessen the physical labour involved in the extraction of products from the soil, it is definitely a sign of economic progress.

The above discussion has been concerned with the general problem of the distribution of rural and urban population. On two questions, however, the above discussion is subject to some limitations. There is little doubt that for one reason and another considerable areas which were previously farmed have from time to time gone out of production, and it is common knowledge that this has occurred in some of the larger back-country stations in the South Island. The explanation of this is probably purely an economic one, in that, because of costs, it was impossible to maintain the extensive grazing which was undertaken, and this, coupled with the problem of soil erosion, from whatever cause this may have arisen, has rendered those farms uneconomic. It is also true that certain areas which went into production in the boom period immediately following the 1914-18 war were in terms of normal conditions sub-marginal and could not

be maintained economically in normal times. The application of scientific methods to these areas, however, may make them economic in the future, but, as pointed out in the Section dealing with agriculture, there was a considerable recession in the number of people engaged in agriculture between 1921 and 1926.

The second point is as to whether in any particular areas in New Zealand there is any definite evidence of a drift from farming. The following table, showing the number of persons engaged in agriculture in the various provinces in New Zealand, will enable some approach to be made to this problem: —

Table No. 60.—Table showing the Number of Males occupied in Agricultural Pursuits in the various Provinces as at the various Censuses from 1901 to 1936

—	Auckland.	Hawke's Bay.	Taranaki.	Wellington.	Marlborough.	Nelson.	Westland.	Canterbury.	Otago.	Southland.
1901 ..	15,493	6,561	4,179	14,372	2,181	4,029	442	18,410	19,601	
1906 ..	18,978	7,330	5,152	15,925	2,432	4,175	512	19,047	19,895	
1911 ..	23,481	8,380	5,941	16,516	2,521	4,587	568	20,079	11,821	8,621
1916 ..	27,857	8,724	6,432	17,384	2,474	5,159	603	17,715	11,279	7,829
1921 ..	36,199	7,161	9,947	19,601	2,960	5,919	802	20,290	11,847	8,254
1926 ..	34,901	6,794	9,452	18,094	2,482	4,793	687	18,024	11,335	7,302
1936 ..	50,814	8,418	11,432	21,635	2,866	6,602	876	20,816	11,831	9,166

Military camps, 1916 = 1,882. 1945 census figures not available.

The outstanding feature of the table is the very large increase in the Auckland Province. This increase is accounted for principally by the development of dairying in that area, and in the early years illustrates the opening-up of the Waikato. A similar development occurs in the Taranaki Province, and, to a lesser extent, in Wellington. In the South Island, which is not so suitable for dairying, the development has been relatively small. In Marlborough the increase has been from 2,181 to 2,866 in thirty-five years; in Nelson from 4,029 to 6,602; Canterbury, which was almost completely occupied in the early years of the century, has shown very little increase, from 18,410 to 20,816. No separate figures are available for the early years in Otago, but from 1911 to 1936 there was practically no change. There was some small increase in Southland, but, taking Otago and Southland together, there has been hardly any increase over the whole of the thirty-five years under review. The table illustrates in another way the drift to the North Island, but the cause is not so much the drift from the South Island as the availability of suitable land and climate in the North Island for the development of the dairying industry. If the above arguments with regard to the lesser number of people required on farms, and the mechanization of agriculture, are kept in mind, the relative increase in the North Island is shown to be very much greater than appears from these figures. It is true that in the grain areas of Otago and Canterbury, and particularly Canterbury, the labour requirements have tended to fall because of the development of tractors and headers, and, hence, even there the labour efficiency would tend to increase. Despite these factors, however, the relative decline in the South Island is cause for some serious consideration. When figures from the 1945 census are available some major changes may be observed.

D. THE DECLINE OF RURAL POPULATION IN THE SOUTH ISLAND

The relative decline of population in the South Island is of sufficient importance to warrant further analysis, particularly as to whether that decline affects any particular section of the community or any particular part of the area. The following table shows the urban and rural populations in the various provinces as at the 1936 and 1945 censuses:—

Table No. 61.—Table showing the Urban and Rural Populations in the various Provinces of New Zealand at the 1936 and 1945 Censuses

Provincial District.	1936 Census.				
	Total Population.	Urban Population.	Rural Population.	Urban Population Percentage of Total Population.	Rural Population Percentage of Total Population.
Auckland	546,970	294,041	252,929	53·8	46·2
Hawke's Bay	76,968	42,465	34,503	55·2	44·8
Taranaki	77,652	32,658	44,994	42·1	57·9
Wellington	316,446	230,583	85,863	72·9	27·1
North Island totals	1,018,036	599,747	418,289	58·9	41·1
Marlborough	19,149	6,417	12,732	33·5	66·5
Nelson	59,481	22,665	36,816	38·1	61·9
Westland	18,676	9,980	8,696	53·4	46·6
Canterbury	234,399	143,111	91,288	61·1	38·9
Otago (including Southland)	224,069	125,021	99,048	55·8	44·2
South Island totals	555,774	307,194	248,580	55·3	44·7
Totals	1,573,810	906,941	666,869	57·6	42·4

Provincial District.	1945 Census.				
	Total Population.	Urban Population.	Rural Population.	Urban Population Percentage of Total Population.	Rural Population Percentage of Total Population.
Auckland	640,971	357,447	283,524	55·8	44·2
Hawke's Bay	79,084	46,639	32,445	59·0	41·0
Taranaki	76,833	35,118	41,715	45·7	54·3
Wellington	349,404	260,449	88,955	74·5	25·5
North Island totals	1,146,292	699,653	446,639	61·0	39·0
Marlborough	20,737	7,357	13,380	35·5	64·5
Nelson	57,201	26,131	31,070	45·7	54·3
Westland	17,007	9,980	7,027	58·7	41·3
Canterbury	246,848	158,114	88,734	64·1	35·9
Otago (including Southland)	214,213	128,591	85,622	60·0	40·0
South Island totals	556,006	330,173	225,833	59·4	40·6
Totals	1,702,298	1,029,826	672,472	60·5	39·5

NOTES.—(1) For the purposes of the above table, the term "urban" includes the census population figures of all cities and boroughs of a popultion of 1,000 or over. The term "rural" includes the balance of population within each Provincial district.

(2) These figures are not exactly comparable with the figures given earlier in this Section as to the populations of counties and boroughs. In that table the population was divided purely in terms of the jurisdictional areas of counties and boroughs. In the present table the population is split up as between those urban areas which have over 1,000 population, and all other areas which are classified as "rural."

The table enables a much clearer picture to be obtained of the relative change in population distribution in the intercensal period. The outstanding instance of growth is the Auckland Province, where the total population has increased by approximately 94,000, of which the urban population represented approximately 63,000 and the rural population approximately 31,000. The larger increase of the urban population accounts for its relative increase from 53·8 per cent. of the total population of the province to 55·8 per cent., and also accounts for a similar relative fall in the rural population.

In Hawke's Bay the total population has increased by approximately 2,000, but the urban population has increased by over 4,000, while the rural population has decreased by over 2,000. As a consequence, the urban population is now 59 per cent. of the total population of the province, as compared with 55·2 per cent. in 1936. The rural population has shown a decline from 44·8 per cent. in 1936 to 41 per cent. in 1945.

In Taranaki the total population has fallen by almost 1,000. The urban population, however, has increased by 2,500, while the rural population has fallen by over 3,500. The urban population is now 45·7 per cent. of the total population of the province, as compared with 42·1 per cent. in 1936. The rural population has fallen from 57·9 per cent. in 1936 to 54·3 per cent. in 1945.

The Wellington Province, while not showing as phenomenal an increase as the population of the Auckland Province, does show a total increase of approximately 33,000 people, but the urban population has increased by 30,000, while the increase in the rural areas has been only 3,000. The increase in the urban population was from 72·9 per cent. in 1936 to 74·5 per cent. in 1945, the rural population having declined from 27·1 per cent. in 1936 to 25·5 per cent. in 1945.

For the whole of the North Island the total population increase was 128,000, but the urban population had increased by 100,000, as compared with an increase of only 28,000 in the rural population. As a consequence the urban population is now 61·0 per cent. of the total population, as compared with 58·9 per cent. in 1936, while the rural population has declined from 41·1 per cent. in 1936 to 39·0 per cent. in 1945.

Turning next to the South Island, the figures show, with the exception of the Marlborough Province, a very steady and serious decline in the rural population. Marlborough's population has increased by about 1,600, of which approximately 950 was an increase in urban areas and 650 an increase in rural areas. The Nelson Province shows an absolute decrease in population of approximately 2,300. On the other hand, the urban population has increased by 3,500, while the rural population has decreased by 5,800. The relative position of the urban areas, therefore, in the Nelson Province has increased to a very much greater extent, from 38·1 per cent. to 45·7 per cent. in 1945, while the rural population has decreased from 61·9 per cent. to 54·3 per cent.

In Westland the total population has decreased by about 1,600. The urban population is exactly the same, and hence the rural population has decreased by 1,600, the relative positions being, urban areas 53·4 per cent. in 1936 and 58·7 per cent. in 1945, and the rural population 46·6 per cent. in 1936 and 41·3 per cent. in 1945.

In Canterbury the total population has increased by approximately 12,000, but the urban population has increased by 15,000, so that the rural population has decreased by approximately 3,000. The urban population has increased from 61·1 per cent. to 64·1 per cent., the rural having declined from 38·9 per cent. to 35·9 per cent.

The Otago Province, including Southland, has decreased in total population by approximately 10,000, but the urban parts of this province have increased by nearly 3,500, while the rural population has decreased by approximately 13,500. The relative position of the urban areas has increased from 55·8 per cent. to 60·0 per cent., while the rural areas have declined from 44·2 per cent. to 40 per cent.

The South Island in total has increased in population by only 232. The urban areas have increased by approximately 23,000, while the rural areas have declined by approximately 23,000. Before any real deductions can be made from these figures,

however, it must be borne in mind that these figures do not take into account the servicemen overseas, of whom there were, as stated before, approximately 45,000 in 1945 for the whole of New Zealand. As has been said earlier in this Section, it is estimated that approximately 16,000 or 17,000 of these servicemen were from the South Island, but since only a small proportion of these would be resident in the rural areas the actual effect would be small. Similarly, for war purposes, either by man-power direction or otherwise, quite a number of South Island residents came to the North Island. This number, however, although considerable absolutely, is relatively of little significance.

With the exception of Auckland, Wellington, and Marlborough, the population of rural areas has seriously declined. The total rural population in New Zealand has increased by approximately 6,000, but this increase is due solely to the increase in rural population in Auckland, Wellington, and, to some extent, Marlborough. In every other province the rural population has fallen.

These figures, however, must be read with extreme caution. It has been shown in the Section dealing with agriculture that there has been a relative stability in the population gainfully occupied in agriculture. The figures dealt with in this particular Section deal with total rural populations. It has also been mentioned that there is little doubt that at the 1936 census quite a considerable number of people had returned to rural areas because of the prevailing lack of employment opportunities in the urban areas. Quite a considerable number of persons belonging to rural families, who normally worked in the cities, were in 1936 back on the farms, and possibly were classified as relatives assisting, or perhaps even as gainfully occupied in rural pursuits.

This discussion really means that there is a very considerable possibility that the 1936 figures for rural population were artificially swollen. With the return of economic prosperity prior to 1939 many of these persons would have returned to their normal occupations in the city. This tendency was possibly accentuated during the war, in that some persons came from rural areas to work in war industries or industries related to war production. In addition, quite a considerable number were engaged, either directly or indirectly, in the Armed Forces. The urban populations were probably artificially swollen at this period.

Always keeping these cautions in mind, however, the figures of the decline in the rural population, particularly in the South Island, are a cause for very grave concern. In the Nelson Province the fall in the rural areas is approximately 5,800. In a small area such as this this represents a major change in population distribution. It is possible, however, that since the 1936 census was taken in March that the rural population was swollen by the presence of many seasonal workers engaged in the harvesting of fruit, with which occupation Nelson Province is primarily engaged. Since the 1945 census was taken in September this transient population would not be included. We are inclined to think that the major fall in rural population as between 1936 and 1945 in the Nelson Province can be accounted for in this way. There has, however, been some recession in the areas devoted to fruit-farming, which has been noted elsewhere. This alteration in the month of the census is of less importance in the Canterbury and Otago areas, although it must have some relevance there also.

The fall of 3,000 rural population in the Canterbury Province and 13,500 in the Otago-Southland Province is of considerable importance. It cannot be accounted for *in toto* by the recession in the intensiveness of farming in the large back-country sheep-stations. There is, during the period, some evidence of aggregation of farm lands. There is little doubt, for instance, that the emergence of tractor ploughing and header harvesting has made it possible to utilize larger farms for wheat and grain production. This must have had some important effects. We think that there is a case for a detailed investigation of the recession of the rural population in Canterbury, Otago, and Nelson in order to find out with greater accuracy than we have been able to ascertain, the real reasons for this fall in rural population.

Most alarming of all, however, has been the fall in the rural population in the Otago-Southland Province, which totals approximately 13,500. Here again the change in the month at which the census was recorded may give some explanation. The problem is one to cause very serious concern, and we believe some active steps should be taken to counteract this trend if at all possible. We are unable to say whether this represents a real reduction in the efficiency of the utilization of land in the South Island, but it is obviously a question which should engage the earnest attention of the Government.

VIII. OCCUPATIONAL DISTRIBUTION OF POPULATION

One very important question which must be considered by any investigator into the field of population, particularly as it affects potential population, is the problem of occupational opportunities for any increase in the population. The following table gives some idea of the relative importance of the various types of physical production in the Dominion. It takes no account of services of any kind :—

Table No. 62.—Table showing the Value of Production in various Years from 1900–01 to 1943–44

Year.	Primary.	Factory.	Other.	Total.
	£(m.)	£(m.)	£(m.)	£(m.)
1900–01	20·0	5·4	14·5	39·9
1905–06	26·9	6·8	12·1	45·8
1910–11	31·9	8·1	13·4	53·4
1915–16	50·3	9·7	12·3	72·3
1920–21	65·2	18·6	15·7	99·5
1925–26	66·5	22·3	21·6	110·4
1930–31	55·6	23·3	18·3	97·2
1935–36	63·5	23·2	27·1	113·8
1940–41	99·4	37·1	23·8	160·3
1942–43	99·5	45·2	25·1	169·8
1943–44	99·5	49·4	25·3	174·2

The figures show fairly conclusively the relative importance of agricultural and pastoral pursuits in the Dominion, but perhaps the most interesting development has been that of the factory production in the Dominion, which has increased from £5,400,000 in 1900–1 to £49,400,000 in 1943–4. Admittedly the actual volume of production has not increased in the same ratio, as the price-level has risen considerably in the interim; but, comparing the development of the primary products with that of secondary products, it is interesting to notice that the actual value of factory production is now approaching 50 per cent. of that of primary production, whereas in 1900–1 it was only 25 per cent. No figures are available to show the value of "services" over a period of years, but a figure is available to show the aggregate private income in later years.

In 1939–40 the total value of physical production was £144,800,000, of which £86,400,000 came from agriculture and £33,500,000 from factory production. The aggregate private income for that year was £200,200,000, and speaking generally, and without absolute scientific accuracy, the difference between these two figures represents the value of services rendered to the community. While this figure will include considerable amounts of interest which can hardly be looked on for this purpose as a service, it does indicate the relative importance of services in the community.

Another approach to the same problem of industrial distribution is shown in the following tables, which show the occupational distribution of the population from 1901 to 1945. The first table shows the industrial distribution of occupied males :—

Table No. 63.—Table showing Occupied Males (excluding Maoris) engaged in Main Industrial Groups, from 1901 to 1945

Group.*	1901.	1906.	1911.	1916.	1921.	1926.	1936.	1945.
				In Thousands				
Farming pursuits ..	85·3	93·5	102·6	107·7	122·6	117·0	144·5	154·0
Other primary production	22·7	27·0	26·9	21·1	26·1	21·5	24·1	26·0
Total, primary industries	108·0	120·5	129·5	128·8	142·7	138·5	168·6	180·0
Secondary industries ..	70·8	84·7	93·7	83·8	98·6	113·4	129·1	134·0
Tertiary industries ..	76·4	96·3	118·0	124·0	150·0	163·1	185·2	166·0
Total, occupied males	255·2	301·5	341·2	336·6	391·3	415·0	482·9	480·0
Armed Forces ..	..	..	..	..	..	..	..	45·0
								525·0
Total population ..	772·7	888·6	1,088·5	1,099·4	1,218·9	1,344·5	1,491·5	1,503·6
				Percentage				
Farming pursuits ..	33·4	31·9	30·1	32·0	31·3	28·2	29·9	29·3
Other primary production	8·9	9·0	7·9	6·3	5·2	5·2	5·0	5·0
Total, primary industries	42·3	40·0	38·0	38·3	36·5	33·4	34·9	34·3
Secondary industries ..	27·7	28·1	27·4	24·9	25·2	27·3	26·8	25·5
Tertiary industries ..	30·0	31·9	34·6	36·8	38·3	39·3	38·3	31·6
Total, occupied males	100·0	100·0	100·0	100·0	100·0	100·0	100·0	91·4
Armed Forces ..	..	..	..	..	..	..	..	8·6
								100·0

* Primary industry has been subdivided into (*a*) farming pursuits, and (*b*) other primary production (mining, fishing and trapping, forestry, &c.), since these show somewhat different trends. Secondary industry includes the primary processing industries, manufacturing, building and construction, and gas, water, and electricity production and supply. Tertiary industry includes services other than those mentioned above, such as transport and communication, commerce and finance, public administration and professional, entertainment, accommodation, personal and domestic services, &c. Persons of independent means, pensioners, and other dependent persons, and those whose occupations have not been specified in the census returns, are not included.

The next table shows the distribution of occupied females :—

Table No. 64.—Table showing Occupied Females (excluding Maoris) in the Main Industrial Groups from 1901 to 1945

Group.	1901.	1906.	1911.	1916.	1921.	1926.	1936.	1945.
Primary industries ..	3,914	3,472	7,496	9,706	9,200	3,526	6,515	8,000
Secondary industries ..	16,561	18,749	20,157	20,170	20,319	20,616	27,712	37,000
Tertiary industries ..	42,574	49,841	59,977	67,720	78,115	82,140	98,535	155,000
Armed Forces ..	..	..	..	..	..	..	..	3,000
Totals	63,049	72,062	87,630	97,596	107,634	106,282	132,762	203,000
				Proportion per Cent.				
Primary industries ..	6·21	4·82	8·55	9·95	8·55	3·32	4·91	3·94
Secondary industries ..	26·27	26·02	23·00	20·67	18·88	19·40	20·87	18·23
Tertiary industries ..	67·52	69·16	68·45	69·38	72·57	77·28	74·22	76·35
Armed Forces ..	..	..	..	..	..	..	..	1·48
Total	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00

NOTE.—Since the number of females engaged in other primary industries is so small no separate classification was made of this group. They are included in "Primary industry." Farmers' wives and other relatives assisting on farms are not included.

The next table shows the total occupied population, which is obtained by grouping the two previous tables:—

Table No. 65.—Table showing the Percentage Industrial Distribution of Total Occupied Population (excluding Maoris), 1901–45

Group.	1901.	1906.	1911.	1916.	1921.	1926.	1936.	1945.
Primary industries ..	35·16	33·18	31·96	31·90	30·45	27·25	28·44	25·93
Secondary industries ..	27·45	27·71	26·54	23·95	23·84	25·70	25·48	23·57
Tertiary industries ..	37·39	39·11	41·50	44·15	45·71	47·05	46·08	44·28
Armed Forces ..	..	..	..	..	..	..	..	6·22
Total	100·00	100·00	100·00	100·00	100·00	100·00	100·00	100·00

The details of the various groups will be discussed later in this report. Here it is important only to discuss the relative importance of the groups among themselves. Throughout the whole period, with the exception of 1926 (at which period special circumstances were operating), the percentage of occupied males engaged directly in agricultural pursuits remained comparatively stable, particularly since 1906. The pervading public impression is that the relative position of agriculture as a source of employment has seriously declined. The figures do not bear that contention out. This stability is in spite of the fact that the swollen figure for 1945 is probably artificially high on account of the war.

Males engaged in other primary production, chiefly sawmilling, mining, and fishing, have changed very little over the period in absolute numbers, but the relative position has declined from 8·9 per cent. of the occupied males in 1901 to 5·0 per cent. in 1945.

Most people think that secondary industries have increased enormously at the expense of agriculture. The figures show that, though there has been a large increase in numbers of males engaged in secondary industries the relative position is remarkably stable, with, if anything, a tendency to fall.

Perhaps the most significant figure in these tables is that of the development of tertiary industries. Tertiary industries are in the service group, and include professional services, commercial services, transport and communication, and other occupations of a similar character including entertainment, hotel services, and other similar occupations. One has to mention only the development of communication services consequent on the greater use of the internal-combustion engine, the development of hydro-electricity, and the development of entertainment services to realize the importance of this development in New Zealand. The tertiary industry emerges as an important factor in the community at a fairly late stage in economic development. In the primary stages the main emphasis is on the production of food and clothing. The rural industries tend to predominate, and machinery and luxuries are of less importance. The second stage, of course, is the development of machinery, with the consequent increase in prosperity. The third and final stage is when it is possible, because of improvements in agricultural and industrial techniques, to produce the required food and clothing and machinery with a lesser expenditure of labour than at the previous periods. Consequently, a larger proportion of the population is available for what might be called the service industries and professions. If such a development has proceeded to any extent it is some indication of economic progress.

The movement can be explained in more detail in relation to New Zealand's development. In the early stages of New Zealand's history the bulk of the community was engaged in primary production chiefly for its own consumption. Such industries as were in existence were of the locality type, engaged in such things as baking, tailoring, and dressmaking, and generally in the rather direct servicing of production. As population increased and industrial inventions were applied to farming, particularly in the field of dairy-farming, a larger industrial population not only was necessary, but could be absorbed. The emergence of the dairy factories did away with the necessity for separating and churning on the farm. Refrigeration made it possible for large freezing-works to be established, and these in turn called for technicians to

service the machinery required. The third stage came with the development of the internal-combustion engine and the greater availability of electric power, each of which requires a fairly large non-rural community to maintain these services. Each of these developments in turn had its reaction on the rural income, and ultimately on the national income. The standard of life tended to rise, and a greater proportion of the income was devoted to luxury and semi-luxury lines. Social services of a more extensive character became possible. The provision of entertainment such as picture-theatres and radio called for a larger proportion of the population, and generally the standard of life increased.

The war placed a serious strain on the country's economy, and this is reflected in part in the heavy fall in the number of males engaged in the tertiary industries in 1945. When a country's economic structure is under a strain for one reason or another, the first industries to suffer are, naturally, the tertiary industries. For instance, as between 1926 and 1936 there was an economic depression. The number of males engaged in agriculture rose very steadily. The number of males engaged in secondary industries tended to maintain, in general, its relation to the increase in population. Owing to the fall in the national income over the depression period, however, the number of males in the tertiary industries increased at a lesser rate than the development of the population. If figures for 1932 and 1933 were available they would probably show even a smaller percentage engaged in the tertiary industries. When the war came along the tertiary industries were the first to suffer, and, although male figures show an increase in the number of persons engaged in agriculture and also in industry, the number of males engaged in the tertiary industries fell from 185,200 to 166,000. The proportion of the male population engaged in the tertiary industries fell from 38·3 per cent. to 31·6 per cent. ; in fact, if the year 1942 had been taken instead of 1945 a very much greater fall in the tertiary industries would have been indicated. For instance, as compared with September, 1939, there were 13.000 less males engaged in commerce and finance in 1942 and 4,000 less in 1945. In the group " Public administration and professional " there were 6,000 less males in 1942 and 3,000 less in 1945. Under the heading " Hotels, restaurants, entertainment, laundries, &c." there were 29,000 less males in 1942 and 8,000 less in 1945.

Over the whole period, in the tertiary group, there were wide fluctuations. In 1901 there were 76·4 thousand males engaged in the tertiary industries, as compared with 185·2 thousand in 1936. Over the whole period under review, except between 1936 and 1945 (when special war conditions were operating), the numbers of males showed a steady and consistent rise. Expressed as a percentage of the total occupied males, there were 30 per cent. engaged in the tertiary industries in 1901, as against 38·3 per cent. in 1936.

The figure for occupied females shows some different trends from the male figures. The relative importance of females in the primary industries has fallen from 6·21 per cent. of total occupied females in 1901 to 3·94 per cent. in 1945. Surprisingly, the figures for females in secondary industries have also fallen heavily, from 26·27 per cent. in 1901 to 18·88 per cent. in 1921, 20·87 per cent. in 1936, and 18·23 per cent. in 1945. On the other hand, the females in the tertiary group have risen very considerably from 67·52 per cent. in 1901 to 77·28 per cent. in 1926, 74·22 per cent. in 1936, and 76·35 per cent. in 1945. Within this tertiary group the number of females engaged in paid domestic and personal services—*e.g.*, hotels—fell from 44·17 per cent. in 1901 to 33·51 per cent. in 1936. It rose, however, from 8·86 per cent. in commerce and finance in 1901 to 18·11 per cent. in 1936 ; in public administration and professional occupations it rose from 13·72 per cent. in 1901 to 20·85 per cent. in 1936. This reflects the greatly increased number of females engaged in office work.

The figures for total occupied population are also of interest. The fall in persons engaged in primary production reflects the fall in the numbers of males engaged in gold-mining and sawmilling, and the relative fall in the number of females engaged in agriculture. It does not indicate a relative fall in the numbers of males engaged in agriculture. The relative fall in the numbers engaged in secondary industries illustrates

the point made earlier that while the absolute numbers engaged in secondary industries have risen, the tertiary industries have increased in greater proportion, a movement which illustrates the economic progress over the period.

The following table shows the proportions of the total population gainfully employed and those in dependent classes. The term " breadwinner " is not exactly comparable with the expression " occupied " as used in the previous tables in this section, but the difference is so slight as to be negligible.

Table No. 66.—Table showing the Percentage of Breadwinners, and Non-breadwinners and Dependants, both Male and Female, from 1901 to 1936

Year.	Breadwinners.			Non-breadwinners and Dependants.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1901 ..	67·67	17·91	44·05	32·33	82·09	55·95	100	100	100
1906 ..	68·79	18·02	44·92	31·21	81·98	55·08	100	100	100
1911 ..	68·44	18·94	45·04	31·56	81·06	54·96	100	100	100
1916 ..	64·36	18·31	41·42	35·64	81·69	58·88	100	100	100
1921 ..	66·85	19·17	43·54	33·15	80·83	56·46	100	100	100
1926 ..	67·37	19·73	44·07	32·63	80·27	55·97	100	100	100
1936 ..	66·85	18·89	43·21	33·15	81·11	56·79	100	100	100

The above figures are remarkably steady over the period; in fact, more steady than would be expected from the changed age-constitution over the period. In 1901 the population aged fifteen to sixty-four years were 62·5 per cent. of the total population, and 67·9 per cent. in 1936. Children under fifteen, however, were 33·4 per cent. of the total population in 1901 and only 25·5 per cent. in 1945. Aged people were 4·1 per cent. of the total in 1901, and 6·6 per cent. in 1936. On the face of these figures some considerable rise in the breadwinners, particularly males, would be expected. The explanation of the relative stability is probably to be found in the tendency to keep children at school much longer than in earlier days, and in the tendency, because of the provision of old-age benefits, for people to retire from work earlier. One factor of considerable interest is the slight tendency in 1936, in both males and females, for the proportion of the dependent class to increase over 1926, and for the breadwinners to decrease. The explanation is probably to be found in the economic stress of the period, which may have forced many people from gainful employment and rendered them dependent on their families. This deduction, however, must be used with caution since various other factors are important but intangible.

IX. THE DEVELOPMENT OF AGRICULTURE

A. HISTORY OF AGRICULTURE

The history of the development of agriculture in New Zealand can be divided roughly into three main periods. The first period began with the organized settlement of the Dominion in 1840, and lasted till approximately 1882. The emphasis during this period was on two major lines of development—first, subsistence farming, marked by the growing development of food crops to support the growing population of the Dominion, and, secondly, the development of pastoral farming where the emphasis was on the production of wool for export. Exports of agricultural products during this period were confined largely to the export of growing amounts of wool, to a small amount of grain, and to such meat by-products as tallow, which did not deteriorate as a result of long-distance haulage to the major markets of the world. Owing to the absence of steam, and primarily to the absence of refrigeration, the export of perishable food products, such as meat, butter, cheese, was to all intents and purposes impossible.

A new era began in 1882, and lasted till about the end of the first World War. The major advance in this period was the development of refrigeration, coupled with the availability of fast steam transport to the markets of the Old World. This made

possible the export of the more perishable food products such as butter, cheese, and meat. These developments, coupled with the improvement of internal transport by the construction of railways and of relatively good macadamized roads, led to the development of large new areas of land, particularly in the Waikato, and to the more intensive cultivation in the Canterbury, Otago, Manawatu, and Taranaki districts. As a net result, farming population increased in considerable numbers. Owing to the relative absence of mechanized appliances on the farms, there was a fairly strong demand for agricultural labour. Industries in the urban areas were largely of the localized service type necessary for the maintenance of the existing rural population.

The third period began at approximately 1920. The availability of the internal-combustion engine had revolutionary effects not only in terms of internal transport, but also in terms of farming methods. This fact, coupled with the development of hydro-electricity, made it possible for dairy-farms in particular to be very highly mechanized. When with this fact is coupled the development of artificial fertilizers and better farm-management techniques, some explanation is forthcoming for the very large increase in production, particularly in the dairying field, although in the frozen-meat field the development was only slightly less important. The per-man production in agriculture to-day is very much greater than in the previous period. There is no suggestion, even yet, that we have reached an end of the progress possible in this direction. The net consequence is that the demand for agricultural labour has relatively fallen. Since in the early days farmers' sons provided a good proportion of the farm labour necessary, it is obvious that with the mechanization of rural industry many of these sons themselves are to-day unable to find employment directly in rural pursuits. The mechanization of agriculture has created a very considerable demand for employment in those industries associated with the servicing of mechanized appliances, whether it be in the field of the internal-combustion engine or in the field of electricity. In a very real sense such industries are secondary to the primary industries, and in a realistic examination of the position of the agricultural population in New Zealand some allowance should be made for those employed in such direct secondary industries.

B. LAND HOLDINGS

The general trend of the evidence before the Committee was that there was little scope for further land settlement in New Zealand. Before commenting on the wisdom of accepting this conclusion it is proposed to outline the course of land settlement and development, both as it affects area and population.

The total area of the Dominion, excluding Cook Islands and other Pacific Islands annexed in 1901, but including the Kermadec and other outlying islands, is 66,390,657 acres, of which 42,978,309 acres were occupied in 1944. This latter figure includes reserves and Native land leased, but excludes land within borough boundaries, holdings of less than 1 acre in extent, and Native land held on the communal system.

A picture of the development of land settlement in New Zealand can be seen from a picture of the area of land occupied over a period of years. The following table shows the total area of land occupied (with the exceptions noted in the previous paragraph) at various dates :—

Table No. 67.—Table showing Total Area in Acres of Occupied Land in New Zealand at various Dates since 1878

Date.	Acres.	Date.	Acres.
1878	12,579,072	1911	40,238,126
1881	15,206,897	1916	41,262,193
1886	17,077,074	1921	43,473,079
1891	19,397,529	1925	43,632,372
1896	33,312,212	1930	43,368,653
1901	34,911,573	1935	43,104,559
1906	37,167,460	1941	42,888,337

The table shows in a dramatic fashion the periods of land settlement in the Dominion. Prior to 1890 New Zealand had been a paradise for the land speculator; most of the readily accessible fertile land had already been freeholded and the possibility of extended settlement rather retarded.

The aggressive land policy of the early "nineties," coming at a time when the economic depression was lifting, led to a very great increase in the land opened up. By far the largest area so occupied was one form or another of Crown leasehold. This development continued for some fifteen to twenty years. In the twenty years from 1891 to 1911 the area of occupied land had increased from 19,000,000 acres (approximately) to 40,000,000 acres (approximately), an increase of 111 per cent. To put the same facts in another way, in 1891, 30·6 per cent. of the total area of New Zealand had been occupied, while in 1911, 63·5 per cent. was occupied (these figures are not absolutely correct as they omit certain urban lands, but they give some indication of the trends).

The second fact that emerges from the table is the further, but smaller, rise between 1911 and 1921, this being probably due to another impetus given to land settlement after the last war. The increase over the period, however, was only 3,000,000 acres, the bulk of which was probably due to immediate post-war expansion and to the development of areas for returned soldiers. Since 1920 there has been little change in the occupied area, the tendency over the past few years being in a slightly downward direction. In 1944, 64·7 per cent. of the total land of the Dominion could be classified as occupied. No adequate statistics are available of these details, but land in boroughs and holdings of less than 1 acre in independent town districts, dependent town districts, road districts, and counties would not account, at the most, for more than 1,000,000 acres. Land unfit for settlement (including rivers, lakes, roads, &c.) amounts to 5,000,000 acres (approximately). Native land held on the communal system, but excluding areas alienated by sale to Europeans, totals about 4,000,000 acres. Crown land available for future disposal (but not necessarily fit for settlement) approximates 2,000,000 acres. The total of these figures of land not included in occupied land is 12,000,000 acres. The balance of land required to make up the total area of New Zealand is chiefly in the nature of large public reserves which are not classified as occupied, and total approximately 11,000,000 acres.

To summarize, the following table shows a very broad view of the distribution of land in the Dominion:—

Table No. 68.—Table showing Distribution of Available Land in the Dominion in 1943–44

	Acres (Millions).
Occupied	43
In boroughs, and holdings under 1 acre	1
Unfit for settlement	5
Native land under communal system	4
Reserves, &c.	11
Crown land available for disposal	2
	66

The above discussion is relevant to the question of the possibility of a further development of land settlement in New Zealand. The Lands and Survey Department estimate that there are 214,290 acres of land in developmental blocks, of which 35,000 acres is unsuitable for development, 69,000 acres capable of development but totally undeveloped, leaving 100,000 acres capable of being farmed at the moment, of which 25,000 acres is required for bases for future development—that is, 75,000 acres is available for early settlement (subject always to supplies of fertilizers and other materials). The main areas of undeveloped land capable of development are in the Auckland Province and in the hinterland of Taranaki and Wellington. An estimate

of the land available under this heading totals 100,000 acres. Summarizing these figures, we arrive at the position that 75,000 acres are available for early settlement, and only 169,000 acres capable of development but which could not be available for a number of years. These estimates are subject to correction when the present detailed survey is completed.

An estimate of the land required for the rehabilitation of returned soldiers totals 1,200,000 acres. Hence, if these soldiers are to be settled, it is obvious that existing occupied land will have to be purchased, since there is only 244,000 acres of Crown land available and suitable for settlement.

Relevant to this discussion is the possibility of subdividing existing holdings so that further population could be absorbed. It is therefore of interest to examine the history of any change in the size of land holdings. The following two tables show over a period of years, first, the number of acres involved, and, secondly, the percentage distribution of these holdings according to acreage. These figures do not include holdings of less than 1 acre, land in boroughs, or land held on the Maori communal system.

Table No. 69.—Table showing Number of Acres in Holdings of various Sizes at Selected Years from 1878 to 1941

Area of Holdings, in Acres.	1878.	1881.	1886.	1891.	1896.	1900-01.	1905-06.
1– 10 ..	27,394	27,629	42,566	52,467	69,626	71,387	79,926
10– 50 ..	175,772	197,204	219,418	254,716	316,493	320,158	324,375
50– 100 ..	311,346	346,502	390,743	435,263	548,035	556,868	591,209
100– 200 ..	669,455	785,019	904,350	1,028,751	1,369,170	1,389,120	1,514,084
200– 320 ..	525,606	632,714	826,516	1,013,319	1,387,431	1,493,761	1,692,824
320– 640 ..	845,170	1,015,378	1,276,021	1,717,746	2,449,451	2,772,325	3,306,475
640– 1,000 ..	589,634	672,121	787,335	1,058,461	1,486,693	1,843,235	2,220,149
1,000– 5,000 ..	1,982,186	2,307,407	2,975,095	3,425,185	4,929,539	5,715,047	6,955,310
5,000–10,000 ..	1,196,951	1,379,833	1,617,887	1,768,799	2,422,197	2,591,497	2,874,562
10,000–20,000 ..	2,018,661	2,368,448	2,519,168	2,699,404	3,293,706	3,272,741	3,278,498
20,000–50,000 ..	2,923,876	3,284,287	3,070,560	3,340,931	4,913,228	5,417,990	5,273,472
50,000 and over	1,313,021	2,183,311	2,447,417	2,602,487	10,126,643	9,467,444	9,056,576
Total ..	12,579,072	15,206,897	17,077,074	19,397,529	33,312,212	34,911,573	37,167,460

Area of Holdings, in Acres.	1910-11.	1916.	1920.	1925.	1930.	1935.	1941.*
1– 10 ..	81,397	69,390	72,191	73,700	56,030	51,162	52,525
10– 50 ..	335,056	358,726	376,722	405,650	354,963	372,315	374,038
50– 100 ..	618,980	708,228	780,437	887,840	814,829	878,596	925,878
100– 200 ..	1,628,608	1,812,196	1,942,252	2,118,701	2,118,963	2,247,660	2,330,867
200– 320 ..	1,818,087	2,054,917	2,186,233	2,265,477	2,350,763	2,387,045	2,476,209
320– 640 ..	3,872,809	4,355,985	4,641,779	4,735,425	4,676,166	4,620,674	4,614,325
640– 1,000 ..	2,931,721	3,149,598	3,301,292	3,425,566	3,394,215	3,300,499	3,307,731
1,000– 5,000 ..	9,388,126	10,366,504	11,305,733	11,477,823	11,844,345	11,592,077	11,517,582
5,000–10,000 ..	3,525,514	3,593,266	3,824,623	3,905,686	3,740,004	3,805,689	3,707,175
10,000–20,000 ..	3,751,346	3,880,927	4,235,689	4,242,147	4,251,895	4,110,362	4,133,400
20,000–50,000 ..	4,157,740	5,126,470	5,371,215	5,139,745	4,942,770	4,549,725	4,406,409
50,000 and over	8,128,742	5,785,986	5,434,913	4,954,612	4,823,710	5,188,775	5,042,198
Total ..	40,238,126	41,262,193	43,473,079	43,632,372	43,368,653	43,104,559	42,888,337

* Latest figure available.

Table No. 70.—Table showing Percentage Distribution of Holdings according to Acreage at Selected Years from 1878 to 1941

Area of Holdings, in Acres.	1878.	1881.	1886.	1891.	1896.	1900–01.	1905–06.
1– 10 ..	0·2	0·2	0·3	0·3	0·2	0·2	0·2
10– 50 ..	1·4	1·3	1·3	1·3	1·0	0·9	0·9
50– 100 ..	2·4	2·3	2·3	2·2	1·6	1·6	1·6
100– 200 ..	5·3	5·2	5·3	5·3	4·1	4·0	4·1
200– 320 ..	4·2	4·2	4·8	5·2	4·2	4·3	4·5
320– 640 ..	6·7	6·7	7·5	8·9	7·3	7·9	8·9
640– 1,000 ..	4·7	4·4	4·6	5·5	4·5	5·3	6·0
1,000– 5,000 ..	15·8	15·2	17·4	17·7	14·8	16·4	18·7
5,000–10,000 ..	9·5	9·1	9·5	9·1	7·3	7·3	7·7
10,000–20,000 ..	16·1	15·5	14·7	13·9	9·9	9·4	8·8
20,000–50,000 ..	23·3	21·6	18·0	17·2	14·7	15·6	14·2
50,000 and over	10·4	14·3	14·3	13·4	30·4	27·1	24·4
Total ..	100·0	100·0	100·0	100·0	100·0	100·0	100·0

Area of Holdings, in Acres.	1910–11.	1916.	1920.	1925.	1930.	1935.	1941.*
1– 10 ..	0·2	0·2	0·2	0·2	0·1	0·1	0·1
10– 50 ..	0·8	0·9	0·9	0·9	0·8	0·9	0·9
50– 100 ..	1·6	1·7	1·8	2·0	1·9	2·0	2·2
100– 200 ..	4·1	4·4	4·5	4·9	4·9	5·2	5·4
200– 320 ..	4·5	5·0	5·0	5·2	5·4	5·5	5·8
320– 640 ..	9·6	10·6	10·7	10·8	10·8	10·7	10·8
640– 1,000 ..	7·3	7·6	7·6	7·8	7·9	7·7	7·7
1,000– 5,000 ..	23·3	25·1	26·0	26·3	27·3	26·9	26·8
5,000–10,000 ..	8·8	8·7	8·8	9·0	8·6	8·9	8·6
10,000–20,000 ..	9·3	9·4	9·7	9·7	9·8	9·5	9·6
20,000–50,000 ..	10·3	12·4	12·3	11·8	11·4	10·6	10·3
50,000 and over	20·2	14·0	12·5	11·4	11·1	12·0	11·8
Total ..	100·0	100·0	100·0	100·0	100·0	100·0	100·0

* Latest figure available.

Analysing the above figures, the following facts stand out. Taking the year 1891 as the time before which the major land-settlement programmes of the "nineties" and early nineteen hundreds commenced, it can be seen that in the range 1–10 acres there has been no increase in the occupied area. At the other extreme of holdings of over 50,000 acres there have been very wide fluctuations in the area involved, ranging from 10,000,000 acres in 1896 to 5,000,000 acres in 1941. Part of the explanation for this decrease has been the abandonment of some very big sheep-runs in the South Island as uneconomic, the cutting-up of other areas into two or more large runs, and the cutting-up of some areas into smaller farms. The range from 1 to 320 acres contained 14·3 per cent. of the occupied area in 1891, and 14·4 per cent. in 1941. The range from 320 to 1,000 acres contained 14·4 per cent. in 1891, and 18·5 per cent. in 1941. Holdings from 1,000 to 5,000 acres increased from 17·7 per cent. to 26·8 per cent. from 1891 to 1941. Of the larger holdings, those from 5,000 to 10,000 acres remained stable relative to the total acreage of holdings although the absolute area increased. From 10,000 to 20,000 acres the proportion was stable from 1896 to 1941 although the total area increased; all holdings over 20,000 acres declined in relative importance from 1896 to 1941.

The same problem can be approached from the point of view of the number of occupiers. This is shown in the next two tables :—

Table No. 71.—Table showing Number of Occupiers on Holdings of each Size in Selected Years from 1878 to 1941

Area, in Acres.	1878.	1881.	1886.	1891.	1896.	1900–01.	1905–06.
1– 10 ..	6,076	7,680	9,172	11,116	16,715	17,468	19,787
10– 50 ..	5,700	6,498	7,507	8,899	11,008	11,399	11,745
50– 100 ..	3,970	4,462	5,014	5,613	6,833	7,162	7,562
100– 200 ..	4,730	5,066	5,926	6,851	8,804	9,080	9,950
200– 320 ..	2,039	2,453	3,161	3,916	5,296	5,751	6,531
320– 640 ..	1,890	2,258	2,804	3,802	5,244	6,023	7,219
640– 1,000 ..	730	828	977	1,321	1,829	2,212	2,750
1,000– 5,000 ..	934	1,097	1,396	1,675	2,367	2,802	3,497
5,000–10,000 ..	164	185	222	247	343	392	408
10,000–20,000 ..	140	169	170	189	227	232	237
20,000–50,000 ..	96	111	106	117	162	167	166
50,000 and over	17	25	30	31	112	97	90
Totals ..	26,486	30,832	36,485	43,777	58,940	62,786	69,942

Area, in Acres.	1910–11.	1916.	1920.	1925.	1930.	1935.	1941.*
1– 10 ..	18,075	15,454	15,554	15,381	13,029	11,014	11,265
10– 50 ..	12,151	12,748	13,367	14,265	14,435	14,739	14,585
50– 100 ..	7,948	9,122	10,039	11,495	11,350	12,157	12,739
100– 200 ..	10,746	12,159	13,079	14,371	15,172	16,069	16,646
200– 320 ..	7,083	7,972	8,500	8,846	9,409	9,533	9,861
320– 640 ..	8,466	9,572	10,166	10,395	10,336	10,209	10,202
640– 1,000 ..	3,611	3,895	4,080	4,261	4,257	4,151	4,154
1,000– 5,000 ..	4,780	5,284	5,722	5,864	6,105	5,941	5,883
5,000–10,000 ..	526	517	550	570	552	555	544
10,000–20,000 ..	264	277	299	301	306	294	294
20,000–50,000 ..	136	165	174	169	162	148	145
50,000 and over	90	64	62	59	54	57	55
Totals ..	73,876	77,229	81,592	85,977	85,167	84,867	86,373

* Latest figure available.

Table No. 72.—Table showing Percentage Distribution of Number of Occupiers classified according to Size of Holdings in Selected Years from 1878 to 1941

Area, in Acres.	1878.	1881.	1886.	1891.	1896.	1900–01.	1905
1– 10 ..	22·9	24·9	25·1	25·4	28·3	27·8	28·3
10– 50 ..	21·5	21·1	20·6	20·3	18·7	18·1	16·8
50– 100 ..	15·0	14·5	13·7	12·8	11·6	11·4	10·8
100– 200 ..	17·9	16·4	16·2	15·7	14·9	14·5	14·2
200– 320 ..	7·7	8·0	8·7	8·9	9·0	9·2	9·3
320– 640 ..	7·1	7·3	7·7	8·7	8·9	9·6	10·3
640– 1,000 ..	2·8	2·7	2·7	3·0	3·1	3·5	3·9
1,000– 5,000 ..	3·5	3·5	3·8	3·8	4·0	4·4	5·0
5,000–10,000 ..	0·6	0·6	0·6	0·6	0·6	0·6	0·6
10,000–20,000 ..	0·5	0·5	0·5	0·4	0·4	0·4	0·4
20,000–50,000 ..	0·4	0·4	0·3	0·3	0·3	0·3	0·3
50,000 and over	0·1	0·1	0·1	0·1	0·2	0·2	0·1
Total ..	100·0	100·0	100·0	100·0	100·0	100·0	100·0

Table No. 72—continued

Area, in Acres.	1910–11.	1916.	1920.	1925.	1930.	1935.	1941.*
1– 10 ..	24·5	20·0	19·1	17·9	15·3	13·0	13·0
10– 50 ..	16·4	16·5	16·4	16·6	16·9	17·4	16·9
50– 100 ..	10·8	11·8	12·3	13·3	13·3	14·3	14·8
100– 200 ..	14·5	15·8	16·0	16·7	17·8	18·9	19·3
200– 320 ..	9·6	10·3	10·4	10·3	11·0	11·2	11·4
320– 640 ..	11·4	12·4	12·4	12·1	12·1	12·0	11·8
640– 1,000 ..	4·9	5·0	5·0	4·9	5·0	4·9	4·8
1,000– 5,000 ..	6·5	6·8	7·0	6·8	7·2	7·0	6·8
5,000–10,000 ..	0·7	0·7	0·7	0·7	0·7	0·7	0·6
10,000–20,000 ..	0·4	0·4	0·4	0·3	0·4	0·3	0·3
20,000–50,000 ..	0·2	0·2	0·2	0·2	0·2	0·2	0·2
50,000 and over	0·1	0·1	0·1	0·1	0·1	0·1	0·1
Total ..	100·0	100·0	100·0	100·0	100·0	100·0	100·0

* Latest figure available.

The tables show a number of very interesting trends. The number of occupiers in the smallest group has fallen both absolutely and relatively since 1896, although there was a slight rise in the early years of this century. The development of dairy-farming is reflected in the group from 50 to 320 acres. The number of occupiers has increased from 20,933 in 1896 to 39,246 in 1941. Expressed as a percentage of total occupiers, these sizes accounted for 35·5 per cent. of the total occupiers in 1896 and 45·5 per cent. in 1941. The range from 320 to 5,000 acres, which includes most wheat and mixed farming areas and the smaller sheep-farmers, increased from 16 per cent. to 23·4 per cent. of the total occupiers from 1896 to 1941. Generally, the figures over recent years illustrate a tendency to stability due to the pattern of farming becoming relatively fixed.

Combining the previous four tables, the following deductions may be made. In 1891, taking all holdings over 10,000 acres, then 0·8 per cent. of the occupiers held 44·5 per cent. of the occupied area; in 1941, the relative position was that 0·6 per cent. held 31·7 per cent. of the total occupied area. Most of these holdings, however, will be Crown leaseholds of second- and third-grade land, suitable only for extensive grazing land. No deductions are available from these figures to show aggregation of wealth or land ownership. Little, if any, of the land would be suitable for subdivision. At the other extreme—that is, in holdings from 1 to 10 acres—25·4 per cent. of the occupiers held 0·3 per cent. of the land in 1891, as against 13 per cent. of the occupiers holding 0·1 per cent. of the land in 1941. Actually the number of occupiers and the area involved is practically equal in 1891 and 1941. In the predominantly dairying group from 50 to 320 acres, 12·7 per cent. of the total occupied area was held by 37·4 per cent. of the occupiers in 1891, as against 13·4 per cent. of the area held by 45·5 per cent. in 1941. In the middle range from 320 to 5,000 acres, which includes most of the grain, mixed, and smaller sheep-farmers, the position was as follows: In 1891, 32·1 per cent. of the total occupied area was held by 15·5 per cent. of the occupiers; in 1941, 45·3 per cent. of the area was held by 23·4 per cent. of the occupiers. To sum up as to the area held for the predominant types of farming—that is, the areas from 50 to 5,000 acres—in 1891, 44·8 per cent. of the total occupied area was held by 52·9 per cent. of the occupiers; in 1941, 58·7 per cent. of the total occupied area was held by 68·9 per cent. of the occupiers.

C. LAND UTILIZATION

Not all occupied land can be classified as at present developed, or even capable of full development. As at 31st January, 1944, there were approximately 43,000,000 acres of occupied land in the Dominion, of which 23,000,000 (approximately), or 53·86 per cent., were classified as unimproved. This does not mean that this land is unproductive or unusued, but rather that it has not been cultivated. The following table shows the total area of this unimproved occupied land in January, 1942, classified as to its coverage :—

Table No. 73.—Table showing Total Area of Occupied Unimproved Land in 1942 classified as to its Coverage

Coverage.	Acres.
Phormium (New Zealand flax)	47,264
Tussock and other native grasses	13,869,330
Fern, scrub, and second growth	4,349,575
Standing native bush	2,885,884
Barren and unproductive land	2,010,573
Total	23,162,626

Some of the phormium area is being cut regularly. A large proportion of the tussock and native grass country is used for extensive sheep grazing, particularly in the South Island, as is also some proportion of the fern, scrub, and second growth country. Some of the standing native bush country is being milled. In general, however, this class of country is in very large holdings and is unsuitable for closer settlement.

As perhaps further indicative of the unsuitability for developmental purposes of this class of land, the following table shows the relative area occupied, cultivated, and unimproved over a period of years :—

Table No. 74.—Table showing the Cultivated, Unimproved, and Occupied Areas at Selected Periods from 1891 to 1944

Year.	Cultivated.	Unimproved.	Total Occupied.
	Acres.	Acres.	Acres.
1891	8,524,662	10,862,867	19,397,529
1896	10,779,226	22,532,986	33,312,212
1901	12,728,617	22,182,956	34,911,573
1906	14,233,629	21,823,731	37,167,460
1911	*	*	*
1916	16,595,590	24,366,603	41,262,193
1920	18,004,776	25,468,303	43,473,079
1925	18,510,558	25,122,714	43,632,372
1930	19,156,074	24,212,579	43,368,653
1935	19,474,519	23,630,040	43,104,559
1941	19,906,656	22,981,681	42,888,337
1944	19,829,999	23,148,310	42,978,309

* Not available.

The above table illustrates the point made earlier that certain areas, while suitable for extensive sheep-farming, are quite unsuitable for intensive farming in smaller areas. The actual area of occupied land has varied little over the past fifty years. The gradual decline since 1920 in unimproved areas, coupled with the gradual extension of the cultivated area, would indicate some slight development, but the extent is relatively unimportant.

Turning next to the actual utilization of cultivated lands as giving an indication of the change in the character of land development, the following table shows for selected years the main types of utilization practised :—

Table No. 75.—Table showing Occupied Areas under Cultivation, differentiating as to Different Types of Uses, in Selected Years from 1890 to 1944

Year.	Pasture Land.	Field Crops.	Plantations.*	Orchards.	Fallow.	Other Cultivated Land.	Total Cultivated Land.
1890–91	6,966,218	1,285,768	35,310	17,047	210,509	9,810	8,524,662
1895–96	9,285,230	1,355,600	43,426	19,362	58,039	17,569	10,779,226
1900–01	11,081,912	1,486,376	49,394	25,777	67,747	17,411	12,728,617
1905–06	12,525,461	1,535,484	61,479	27,310	54,080	29,815	14,233,629
1915–16	14,560,797	2,051,895	108,685	31,733	84,649	57,791	16,895,590
1919–20	16,125,265	1,658,991	54,837	33,179	81,760	50,724	18,004,776
1924–25	16,450,625	1,768,303	71,218	27,525	124,459	68,428	18,510,558
1929–30	16,872,948	1,762,792	289,020	24,861	124,565	81,888	19,156,074
1934–35	16,501,811	1,981,804	753,684	25,087	115,832	96,301	19,474,519
1940–41	16,788,121	2,048,198	852,196	20,064	104,189	93,888	19,906,656
1943–44	16,774,304	1,965,670	859,737	19,196	110,000†	101,092	19,829,999

* Prior to 1934–35 large areas of State forests excluded. † Approximate.

This table shows conclusively that the major development in farming in New Zealand has been in the pastoral field. The extension of sown pastures from 1891 to 1920 is an indication of the rise of the dairying industry to its present important place, but this figure is also indicative of the development of the small mixed farm, particularly in the South Island. The relatively minor fluctuations in the area devoted to field crops denotes some stability about arable farming in New Zealand. Actually the bulk of the land most suitable for grain crops is in Otago and Southland. This has been so used for many years, although there have been fairly wide fluctuations in the actual grain sowings from time to time. Root crops for stock feeding have utilized about 500,000 acres in recent years. The area devoted to hay and ensilage, however, over the period has tended to increase quite markedly. The figures available for plantation are obviously unreliable due to some flaw in tabulation. Until 1935 State plantations were excluded, and the area recorded to this date is indicative chiefly of the activities of commercial afforestation companies. The steady rise between 1935 and 1944 has been due to some State, some commercial, and some private activity. The most striking feature of the table, however, is the decline in areas devoted to orchards. From a peak of 33,179 in 1920 it has fallen to 19,196 in 1944. There is little doubt that the boom in fruit-farming in the early "twenties" did result in many unsuitable areas being planted in fruit-trees. However, though there has been a reduction in the number of trees, particularly apples and pears, the crop up to the present has been maintained, although there is some reason to think that the crop will soon decline unless some immediate steps are taken.

The following table shows something of the importance of the smaller crops :—

Table No. 76.—Table showing Area devoted to various Types of Cultivation at Selected Dates

Year.	Market Gardens.	Linen Flax.	Nurseries.	Tobacco.	Grape-vines.
1919–20	3,540	..	456	*	*
1924–25	4,516	..	482	*	*
1929–30	5,871	..	657	1,073	*
1934–35	7,284	..	1,276	1,358	244
1940–41	9,432	13,118	957	2,150	131
1943–44	16,083	9,755	871	2,586	79

* Not available.

The large increase in 1943–44 in the area devoted to market gardens does not necessarily indicate a permanent development of market gardening. Large areas were at this period devoted to vegetable-producton to supply Allied troops in the Pacific. Apart from this, however, there was a steady development of market gardening between 1919 and 1939. The linen-flax industry was essentially a wartime development, although the recent setting-up of the Linen Flax Coporation suggests that it will be a permanent feature of New Zealand's agriculture. Tobacco-growing has become of some importance, particularly since the cessation of imports of cigarettes and tobacco.

The above discussion has given some idea of the general structure of New Zealand agriculture with a view to examining the potential absorptive capacity of that industry. Before examining the population structure, however, it is proposed to discuss briefly the effects of the mechanization of agriculture which has proceeded rapidly over the past two decades.

The availability of machinery has had a very marked influence on the development of agriculture in the Dominion. The internal-combustion engine and electricity are, as direct influences on farming techniques, essentially developments of the period from 1920 onwards. The following table gives in summarized form the number of the various types of machines on farms from 1920 to 1942 :—

Table No. 77.—Table showing Number of various Types of Machines on Farms from 1920 to 1942

Year.	Milking-plants	Percentage of Cows in Milk Machine-Milked.	Cream-separators.	Shearing-machines.		Agri-cultural Tractors.	Rotary Hoes and Garden Tractors.	Electric Motors.	Internal-combus-tion Engines.
				Plants.	Stands.				
1920 ..	8,806	51·2	26,678	5,155	17,242	324	..	*	13,981
1921 ..	10,450	53·4	32,024	5,354	17,618	380	..	456	15,685
1922 ..	12,468	53·4	38,861	5,468	17,788	412	..	778	17,551
1923 ..	13,553	55·2	40,916	5,317	17,394	439	..	1,339	18,207
1924 ..	14,553	57·4	42,473	5,480	17,844	512	..	2,587	18,864
1925 ..	15,561	59·8	44,656	5,728	18,445	1,026	..	3,451	19,894
1926 ..	16,391	62·8	45,765	5,949	18,797	2,025	..	6,356	19,584
1927 ..	17,090	64·9	45,246	6,305	19,269	2,588	..	8,436	18,885
1928 ..	18,049	66·8	45,246	6,518	19,677	2,883	..	10,806	18,321
1929 ..	18,756	68·9	45,781	6,887	20,329	3,377	..	13,377	18,489
1930 ..	20,415	70·7	48,302	7,394	21,482	3,891	..	16,456	19,169
1931 ..	22,547	74·1	47,112	8,191	23,140	5,023	..	22,520	22,136
1932 ..	23,222	73·5	51,334	7,853	22,326	4,856	..	24,164	20,974
1933 ..	24,350	73·2	54,200	7,936	22,562	4,972	..	26,757	21,667
1934 ..	25,178	73·7	55,625	7,894	22,482	5,062	..	29,164	21,758
1935 ..	25,630	75·2	55,920	8,174	22,982	5,349	..	31,631	22,117
1936 ..	26,181	76·4	56,199	8,468	23,526	5,710	..	35,426	22,159
1937 ..	27,331	78·6	56,850	8,867	24,229	6,585	..	40,201	22,358
1938 ..	28,192	80·9	56,543	9,680	25,685	8,031	..	46,100	22,573
1939 ..	28,970	82·8	55,665	10,664	26,063	9,639	..	51,344	22,601
1940 ..	29,564	84·1	55,773	10,634	27,216	11,278	..	56,511	23,276
1941 ..	30,878	86·2	54,896	10,916	27,550	12,516	757	61,826	23,644
1942 ..	31,487	86·2	54,107	11,555	28,611	13,967	813	65,699	23,882

* Not available.

This table shows in unmistakable terms the extent of the mechanization of agriculture, particularly dairy-farming. To-day over 86 per cent. of the cows in milk are milked by machines. Most of these milking-machines are driven by electricity, the number of electric motors having increased from practically nil in 1920 to approximately 66,000 to-day. There has been an equally marked increase in the number of tractors over the period. In the grain-farming districts the old-time horse-plough and reaper-and-binder are giving place to tractor-drawn ploughs and headers respectively.

This mechanization, coupled with improved farm-management techniques, particularly in the field of artificial fertilizers, has had a remarkable effect on production particularly in the dairying field. The following table gives a picture of the increase in dairy production over the period since 1923–24:—

Table No. 78.—Table showing Estimated Production of Butterfat from 1923–24 to 1943–44

Season.	Tons of Butterfat (to nearest 100 Tons).*	Butterfat, in Million Pounds.*	Cows in Milk, in Thousands.	Butterfat per Cow (to nearest Pound).
Old Series—				
1923–24	102,000	228·5	1,185	193
1924–25	107,600	241·0	1,196	202
1925–26	104,400	233·9	1,181	198
1926–27	115,500	258·7	1,182	219
1927–28	118,000	264·2	1,243	213
1928–29	129,000	289·1	1,291	224
1929–30	140,200	314·1	1,390	226
1930–31	143,800	322·0	1,500	215
1931–32	151,700	339·8	1,583	215
1932–33	177,300	397·1	1,724	230
1933–34	190,500	426·7	1,816	235
1934–35	183,000	409·9	1,828	224
New Series—				
1935–36	192,300	430·9	1,823	236
1936–37	203,500	455·8	1,805	252
1937–38	191,200	428·4	1,764	243
1938–39	179,600	402·4	1,744	231
1939–40	194,900	436·6	1,740	251
1940–41	210,500	471·5	1,780	265
1941–42	196,400	439·9	1,777	248
1942–43	182,800	409·6	1,736	236
1943–44	173,100	387·8	1,669	232

* Department of Agriculture data.

The steady rise in numbers of cows in milk, and in the aggregate and per-cow production of butterfat from 1919–20 to the outbreak of the war are a clear indication of the development of dairying in the period. When it is remembered that this rise was not due to any great increase in the area devoted to dairying, but rather to the mechanization of the industry and to the better farm-management techniques (including artificial fertilizers), some idea of the importance of these factors can be appreciated. The fall in the number of dairy cows in milk and in the aggregate and per-cow production of butterfat since 1941 is directly due to the inability to obtain phosphatic fertilizers because of war conditions, and is not an indication of a real recession in dairy-farming. There are indications, however, that herd-replacement is proceeding at a very rapid rate at the present time.

D. POPULATION ENGAGED IN AGRICULTURE

The above discussion leads on to the question of the population engaged in agriculture.

The following table, extracted from successive censuses from 1901 to 1936, together with an estimate for 1945, gives the number of males and females actively engaged in farming pursuits :—

Table No. 79.—Table showing Number employed in Farming Pursuits from 1901 to 1945

(In Thousands)

Year.	Males.	Females.	Total.
1901	85·3	3·9	89·2
1906	93·5	3·5	97·0
1911	102·6	7·5	110·1
1916	107·7	9·7	117·4
1921	122·6	9·0	131·6
1926	117·0	3·3	120·3
1936	144·5	6·3	150·8
1945	154·0*	8·0*	162·0*

* Estimate by Employment Department.

The figures are not strictly comparable over the period, but show a general trend. The figures for 1945 must be taken with caution as they are computed on a basis entirely different from, although equally exhaustive, as the censuses.

If we take the year 1901 as a datum line when most of the available suitable land was taken up, we find a steadily increasing agricultural population until 1921, which would be in line with the steady development of "cultivated" land over the period. From 1921 begins the period of intensive dairy-farming with increasing mechanization. This resulted in some fall in rural population. From 1926 begins the period of increased carrying-capacity due to better farm management and the greater use of fertilizers. This fact, coupled with the drift to the country as a result of urban employment falling off during the depression, resulted in a greatly increased rural population in 1936. The importance of primary production during the war, the development of such new avenues as linen flax, and the increased attention to grain farming, all led to the increase in 1945.

This latter increase, however, may not be as large as the figures prove on account of the difference in computation.

The following table gives a comparison between the growth of male agricultural population and the total population of the Dominion between the years 1901 and 1945 :—

Table No. 80.—Table showing Index Numbers of Male Agricultural Population and Total Male Population as at the various Censuses from 1901 to 1945

Year.	Male Agricultural Population.	Total Male Population.
1901	1000	1000
1906	1096	1160
1911	1203	1310
1916	1263	1359
1921	1437	1535
1926	1372	1691
1936	1694	1863
1945	1805	2029*

* This figure makes allowance for troops overseas.

The above table shows the relative trend away from agriculture. Contrary to popular opinion, however, the trend is not so marked as is generally thought. The last two figures, however, which show a marked increase over previous figures, perhaps hide the real trends in that in 1936 the Dominion was just emerging from the depression, which as one of its incidental effects caused a temporary reversal of the drift to the towns, and the 1945 figures are influenced by the war-time agricultural drive.

The same facts can be viewed another way in the following table :—

Table No. 81.—Table showing Percentage of Total Male Occupied Population engaged in Agricultural Pursuits as at the various Censuses from 1901 to 1945

Year.	Per Cent.	Year.	Per Cent.
1901	31·6	1921	30·5
1906	29·4	1926	26·6
1911	28·8	1936	28·5
1916	31·2	1945	29·3

The actual change in the number of males engaged in agriculture relative to the change in the total number of occupied males is therefore not as marked as previously thought. The figures for 1936 and 1945, however, must be treated with caution, as, for the reasons stated above, they may hide a real trend.

Another view of the population development in agriculture is shown in the following table, wherein details are given from successive censuses of the number of employers of labour and the number of farmers who have been working on their own account without employing labour :—

Table No. 82.—Table showing the Number of Farmers employing Labour and the Number of Farmers working on their Own Account without employing Labour, differentiating as between Male and Female, for the Period from 1901 to 1936

Year.	Males.			Females.			Grand Total.
	E.	O.	Total.	E.	O.	Total.	
1901 ..	16,491	20,595	37,086	601	937	1,528	38,622
1906 ..	20,312	21,989	42,301	664	862	1,526	43,827
1911 ..	19,275	28,795	48,070	711	1,146	1,587	49,927
1916 ..	21,005	32,881	53,936	815	1,294	2,109	56,045
1921 ..	24,129	39,956	64,106	950	1,313	2,264	66,370
1926 ..	21,776	37,062	58,838	1,105	1,196	2,301	61,139
1936 ..	30,176	35,179	65,355	2,204	2,008	4,212	69,567

NOTE.—E = employers ; O = owners working on own account. 1945 figures not available.

Certain features of the table are of considerable interest. In the first place, until 1921 the number of farmers working on their own account without employing labour increased by practically 100 per cent., over 1901 while the number employing labour increased by only approximately 50 per cent. As between 1921 and 1936 the employers of labour increased considerably, while the farmers working on their own tended to decrease. The probable explanation of this is the increased returns which were coming to farmers from improved farming and marketing methods, and the tendency for farmers to employ at least one hired hand and to relieve the wife from assisting in the sheds. Perhaps the most significant feature of the table is the relative steadiness of the number of farmers as between 1921 and 1936 (later figures are not available). The recession in 1926 is of considerable interest and appears through all the tables concerning farming population (for instance, in the table given previously it was shown that the total farming population fell from 131,000 to 120,000 between 1921 and 1926). It is very difficult to give a reason for this change, except to suggest that perhaps during this period some land which had been taken up in the earlier part of the decade was unsuitable for farming and had been allowed to go back. This, however, cannot account for the whole of the recession, and it is possible that the tendency to mechanization did result in some larger areas being absorbed and the falling-out of production of some of the smaller areas of an uneconomic size. The figures for 1936, however, are subject to the remarks made earlier concerning the effects of the depression. There was definitely a drift to rural occupations during the immediately preceding period. The marked increase in the number of employers of labour may be influenced by the tendency during that period to employ subsidized labour.

The following table gives some idea of the extent of hired labour on New Zealand farms. Hired female labour has always been of such relatively little importance that it is not mentioned here :—

Table No. 83.—Table showing the Number of Male Wage-earners on Farms in New Zealand from 1901 to 1936

Year.	Number.	Index No. of Wage-earners on Farms.	Index No. of Male Population.
1901	32,081	1000	1000
1906	35,778	1115	1160
1911	39,439	1229	1310
1916	39,600	1235	1359
1921	47,758	1487	1535
1926	47,279	1474	1691
1936	62,508	1948	1863

NOTE.—1945 figures not available.

This table shows a steady increase until 1921 in the amount of hired labour on dairy-farms. It does not show in such a marked fashion the recession between 1921 and 1926, which is seen in the figures concerning farmers employing labour and farmers working on their own account, as was shown in the previous table. When the figure for the later years is compared with the figure showing the increase in actual production during the period it suggests that the efficiency of farm labour was considerably increased as a result of the changes in farm management during the period. The very great increase in 1936 is another indication of the effects of the depression in redirecting population into rural pursuits. No figures are available for a date later than 1936, but if the figure given earlier, showing the increase in the total farming population of the period, is indicative of the general trend during the war, it is probable that the quantity of farm labour remained at a very high figure for the period between 1936 and 1945.

Although farming was not formally declared an essential industry during the war it was always treated as such. Farm workers could normally obtain a postponement in their calling up for military service, and they were always given some preference in release from the Forces. As a consequence, the numbers engaged in farm work did not fall at as great a rate as employees in other industries. In fact, there is, as stated above, some evidence that the numbers of farm workers increased during the war. This is quite apart from the arrangement during the latter part of the war whereby members of the Armed Forces assisted in harvesting and other seasonal work.

To sum up this analysis of the farm population situation, it can be said that during the period under review there was a steady increase in farming population until 1921. Between 1921 and 1926 farming population tended to decrease, probably as a result of increasing mechanization and the improvement in farm management techniques and as a result of certain lands going out of production. The movements between 1926 and 1945 have been caused by certain extraneous factors, as, for instance, the depression and the war. The previous analysis will show that there was no tendency to reduction in the size of farms or to any recession in farm-management techniques or in mechanization. If, in addition to this, the increased production is taken into account, it will be realized that, although the labour requirements per unit of production have fallen, labour has become more efficient.

Another view of this same problem can be seen from the following table :—

Table No. 84.—Table showing Numbers engaged in Farming per Occupied Holding from 1901 to 1945

1901	1·36	1921	1·44
1906	1·34	1926	1·57
1911	1·39	1936	1·71
1916	1·39	1945	1·78

NOTE.—The figure for 1945 must be taken with very great caution, for the reasons stated earlier, but in general it shows the trend.

The small increase up to 1921 is probably indicative of the growth of dairying and the relative decline of extensive pastoral farming. The increase in recent years is particularly interesting. It is probably indicative of the fact noted earlier—that with more intensive dairy farming, resulting in increased carrying-capacity as a result of mechanization and improved farming techniques—an important increase in the labour requirements of dairy-farms has occurred. For instance, in the early "twenties" the average dairy-farm would carry between forty and fifty cows per hundred acres. The carrying-capacity has probably increased 50 per cent., being sufficient to call for at least one further hand on the average dairy-farm.

The question of the future absorptive-capacity of agriculture arising from the above analysis will be discussed in a subsequent section.

X. OTHER PRIMARY PRODUCTION

A. COAL-MINING

Considerable evidence was adduced before the Committee in relation to the shortage of coal, and it was maintained that steps should be taken to encourage the immigration of persons prepared to work in the coal-mines. It is therefore of interest to examine the general personnel structure of coal-mining during the present century. The following table, taken from the respective censuses, gives the number of persons engaged in coal-mining from 1901 to 1936:—

Table No. 85.—Table showing the Number of Persons engaged in Coal-mining at the various Censuses from 1901 to 1936

Year.	Number.	Year.	Number.
1901	2,203	1921	4,789
1906	2,939	1926	4,950
1911	4,112	1936	5,255
1916	4,189		

It should be noted that the table shows the number of persons occupied, and not the wage-earners. It includes a small number of employers and owners working on their own account. The very steady rise from 1901 to 1911, and the lesser rise from that date, gives some indication of the expansion of coal-mining, and is definitely related to the increasing size of the population and the increase in industrial activity in the Dominion. No separate figures are available as at the census dates from 1901 to 1921 to show the number of wage-earners. The 1926 census shows 4,696 wage-earners, and the 1936 census 4,006 wage-earners, but also shows that, in addition, 1,929 coal-miners were wholly or partly unemployed.

Another approach to the same problem is given in the following table, which is compiled on a different basis:—

Table No. 86.—Table showing the Number of Persons employed above and below Ground in Coal-mines in New Zealand from 1932 to 1945

Year.	Number.	Year.	Number.
1932	4,636	1939	4,762
1933	4,386	1940	5,046
1934	4,478	1941	4,991
1935	4,231	1942	4,997
1936	4,257	1943	5,374
1937	4,417	1944	5,594
1938	4,563	1945	5,592

Omitting the depression period, throughout the whole period, with the exception of a very small recession in 1941 and 1942, the number of persons employed in coal-mining has steadily increased. Their output has also increased, as shown in the following table :—

Table No. 87.—Table showing Total Output, in Tons, from 1932 to 1945

Year.	Output (Tons).	Year.	Output (Tons).
1932	1,842,022	1939	2,342,639
1933	1,821,258	1940	2,516,099
1934	2,060,315	1941	2,639,507
1935	2,115,184	1942	2,680,041
1936	2,140,217	1943	2,787,868
1937	2,277,799	1944	2,805,970
1938	2,222,088	1945	2,833,576

The increasing population, and particularly the increasing industrialization of the population, requires increasing quantities of coal to enable it to function effectively. This is particularly true in certain fields, especially transport, where the demands due to war and post-war conditions have been so heavy as to place a tremendous burden on coal-production to maintain transport and other operations. In other words, the shortage of coal is a feature of the increase in population and the increase in the industrialization and the mobility of that population.

A further factor of considerable importance relative to the shortage of coal is the inability in recent years to import coal from Australia. Prior to the war considerable quantities of first-grade coal were imported from Newcastle. The absence of this coal to-day has placed an added strain on New Zealand production.

Several witnesses suggested that, owing to the necessity for more coal in the Dominion, steps should be taken to encourage miners to emigrate to New Zealand. There is obviously scope for more miners to-day, but whether miners are available overseas is open to question. This subject will be discussed later in the report.

B. GOLD-MINING

The following table shows the number of persons engaged in the gold-mining industry from 1901 to 1936.

Table No. 88.—Table showing the Number of Males engaged in the Gold-mining Industry at various Censuses from 1901 to 1936

Year.	Number.	Year.	Number.
1901	12,533*	1921	2,288
1906	9,077*	1926	1,790
1911	6,969	1936	4,869
1916	4,269		

* NOTE.—Figures for 1901 and 1906 are from Factory Production Statistics, and subsequent years from census figures.

The wide fluctuations in these figures are indicative of the varying fortunes of the gold-mining industry. By the outbreak of the last war, when New Zealand was still on the gold standard and the more profitable dredging ventures had become unprofitable, quartz-mining was still continuing, but dredging had practically ceased. This tendency continued right through the "twenties." However, with the final abandonment of the gold standard early in the depression and the rise in the price of gold, there was an added stimulus to all forms of gold-mining. Dredging again became important. In some areas quartz-mining became more important, and in general there was an upward swing, which to some extent has continued to the present time, although its relative importance is not so great as it was in previous years.

C. SAWMILLING

Adequate statistics for the purpose of this report are not available in a very satisfactory form. The following table gives the number of persons occupied, including employers and owners working on their own account, in the bush sawmilling industry from 1901 to 1936 :—

Table No. 89.—Table showing the Number of Persons (Males and Females) occupied in the Bush, Sawmilling, Forestry, and Related Industries at the various Censuses from 1901 to 1936

Year.	Number.	Year.	Number.
1901	8,311	1921	9,906
1906	8,800	1926	10,291
1911	9,666	1936	10,326
1916	8,150		

NOTE.—Figures include those engaged on bush-felling and scrub-cutting.

No figures are available over the whole period to show the number of wage-earners occupied in the sawmilling industry, but in 1926 there were 8,057 so employed ; in 1936 the figure had fallen to 6,765, plus 511 partly or wholly unemployed, making a total of 7,276. The balance is made up principally of those engaged in forestry, bush-clearing, and scrub-cutting, firewood-cutting, &c.

The following figures, taken from Factory Production Statistics, show the number engaged in sawmilling since 1933. The difference in the figures in this table, the details of which are taken from the Factory Production Statistics, from the census figures in the previous table is accounted for, for the most part, by the omission of afforestation, bush-clearing, and firewood-cutting from the census figures. Differences in method of collection also account for some of the variations.

Table No. 90.—Table showing Number of Persons engaged in Sawmilling from 1933 to 1944

Year.	Number.	Year.	Number.
1933–34	5,323	1939–40	8,487
1934–35	6,325	1940–41	8,421
1935–36	7,207	1941–42	8,061
1936–37	8,005	1942–43	7,574
1937–38	8,364	1943–44	7,806
1938–39	7,917		

These figures include both bush and town sawmilling (the latter includes timber-dressing employees). The increase in persons occupied in this industry until at least 1941 reflect in some measure the increased activity of the building industry, in particular housing construction. The falling off subsequent to that date is probably less than would be expected in view of the large number of operatives who were on war service. Defence construction works, however, were an essential industry and many operatives were retained, and other operatives directed into the industry.

Evidence was adduced to show that, despite the return of the servicemen, the industry was not receiving its proportionate quota of workers. There would appear to be a reluctance to return to the bushfelling and sawmilling industry on the part of many ex-servicemen formerly engaged therein. Some witnesses suggested that immigrants should be brought out to provide operatives. The production of timber is vital to an expansion of the building industry, and unless this occupation can be made more attractive by the provision of adequate housing and several other amenities in the milling areas, there appears to be no solution to the problem of timber shortage. The position is the more serious in that practically all reserve stocks of timber were exhausted during the period of defence construction works, particularly during 1942 and 1943, when a large proportion of those engaged in timber-felling and sawmilling were overseas.

D. FISHING

The following table shows the number of persons engaged in the fishing industry from 1901 to 1936 :—

Table No. 91.—Table showing the Number of Persons occupied in the Fishing Industry at various Censuses from 1901 to 1936

Year.	Number.	Year.	Number.
1901	718	1921	992
1906	959	1926	1,153
1911	925	1936	1,488
1916	922		

The table shows that between 1906 and 1921 the number engaged in the fishing industry tended to be fairly stable. From 1921, however, to 1936 there was a steady rise. A large proportion of the fishermen are persons who own their own launches, either individually or in co-operation with others. In 1926 there were only 349 wage-earners ; in 1936 there were 322 wage-earners, but 172 in addition were returned as being wholly or partly unemployed.

The fishing industry, although small, is quite important, in that in the last two or three years the products have been valued at over £500,000 per annum, of which, on the average, 20 per cent. has been exported, principally to Australia.

There is some evidence at the present time that there is an expansion of the fishing industry and that better techniques are being used.

E. TOTAL OTHER PRIMARY INDUSTRIES

In addition to mining, forestry, and fishing, there are a number of other relatively minor primary industries, and the following table gives the total of all industries classified in this report as "Other Primary," and includes mining, forestry, and fishing :—

Table No. 92.—Table showing the Total Number of Males employed in other Primary Industries from 1901 to 1945, together with an Index Number of the Development

Year.	Number in Thousands (Males).	Index No.
1901	22·7	1000
1906	27·0	1190
1911	26·9	1185
1916	21·1	930
1921	20·1	885
1926	21·5	947
1936	24·1	1062
1945	26·0	1146

The table itself masks the various individual fluctuations which were observed when dealing with coal, forestry, fishing, and gold-mining. If gold-mining had been omitted the general tendency of the index numbers would have been a steady and consistent rise over the whole period, but the heavy fall-off in gold-mining, at least in the middle years, seriously affects the final figures, and, despite the heavy rise in later years, the situation in 1945 is only 14 per cent. better than in 1901, which is very much less than the relative growth of the population.

No discussion has been given herein of the place of women in other primary industries. Their absolute number is very small and can be ignored in any population study.

XI. SECONDARY INDUSTRIES

A. GENERAL SURVEY

The term " secondary industries " is an unsatisfactory one in dealing with industrial development, as it is sometimes impossible to draw the line between primary and secondary industries. For the purpose of this discussion it is proposed to adopt the census definition of industry, which reads that industry includes " all manufacturing industries, including the treatment of raw materials, building and construction, and gas, water, and electricity production and supply."

From some points of view the production of such services as electricity may be considered to be a tertiary industry, but since by far the greatest amount of the electricity production is consumed in manufacturing industries it is convenient in this discussion to consider it in the secondary group.

As pointed out earlier, until practically the end of last century New Zealand was concerned almost wholly with agricultural production, and the servicing of such agricultural production. Only to a very minor extent was New Zealand engaged industrially. Such industries as were in existence were primarily of the locality and service type, always with the exception of food processing industries such as freezing-works and, to a limited extent, dairy factories.

Although there was some expansion in the size of industry, there was practically no real industrial development until after the 1914–18 war. Even then, during the third decade, which is marked predominantly by the expansion of the dairying industry, the emphasis was rather on the servicing type of industry, with the introduction at this stage of the servicing of motor transport and other machinery using internal-combustion engines, and the development of electricity.

By 1921 the industrial population was little greater than it was in 1911. The efficiency of that population, however, had considerably increased, consequent on the growing efficiency of the industries of the country. However, there has been a steady growth in the industrial population, a growth which was affected very much less than other economic activity by the depression of the early thirties.

The following table, extracted from the censuses, shows the number of persons engaged in secondary industry at various Censuses from 1901 to 1945 :—

Table No. 93.—Table showing the Number of Persons occupied in Secondary Industry at the various Censuses from 1901 to 1936 and an Estimate for 1945

Year.	Males.		Females.		Total.	Index No.
	Number.	Index No.	Number.	Index No.		
1901	70,800	1000	16,561	1000	87,361	1000
1906	84,751	1197	18,749	1132	103,500	1185
1911	93,640	1322	20,157	1217	113,797	1302
1916	83,831	1184	20,170	1218	104,001	1191
1921	98,613	1393	20,319	1227	118,932	1361
1926	113,372	1601	20,616	1245	133,988	1534
1936	129,146	1824	27,712	1673	156,858	1796
1945	134,000	1892	37,000	2235	171,000	1957

Generally, the development of industrial population in both males and females has kept steady pace with the growth of the population as a whole. If anything, the number of females engaged in manufacturing has, until 1945, tended to lag behind the growth of population. This is a particularly interesting phenomenon, as the general impression is that the industrial growth has been very rapid. The definition of industry adopted for this purpose, however, must be kept in mind, for at a later stage it will be shown that in the tertiary group, comprising principally servicing industries, the growth has

been very rapid. Although the number of persons engaged in industry has increased at about the same proportion as the population as a whole, the actual per-man efficiency has very greatly increased over the period under review.

The above figures are reduced to percentages of the total male occupied population in the next table :—

Table No. 94.—Table showing the Percentages of the Total Male occupied Population engaged in Secondary Industry at various Censuses from 1901 to 1936

Year.	Percentage.	Year.	Percentage.
1901 ..	.. 26·3	1921 ..	.. 24·6
1906 ..	.. 26·7	1926 ..	.. 25·8
1911 ..	.. 26·3	1936 ..	.. 25·5
1916 ..	.. 24·3		

These figures are particularly interesting because they show that over the whole period practically 25 per cent. of the occupied male population of the country has been engaged in secondary industry.

Figures calculated for another purpose and on another basis are given in the next table, showing the people engaged in factory production. The term "factory production" is not exactly equivalent to the term "industrial production" as used here, and hence the figures are not exactly comparable. The figures, however, in this table do show something of the trend over the period :—

Table No. 95.—Table showing the Number of Persons engaged in Factory Production from 1910–11 to 1943–44

Year.	Number of Persons engaged.	Year.	Number of Persons engaged.
1910–11 ..	.. 45,924*	1936–37 ..	.. 96,401
1915–16 ..	.. 48,744*	1937–38 ..	.. 102,344
1920–21 ..	.. 69,681	1938–39 ..	.. 102,535
1925–26 ..	.. 78,708	1939–40 ..	.. 108,722
1930–31 ..	.. 77,914	1940–41 ..	.. 113,999
1932–33 ..	.. 68,921	1941–42 ..	.. 117,214
1933–34 ..	.. 72,651	1942–43 ..	.. 114,590
1934–35 ..	.. 79,358	1943–44 ..	.. 117,864
1935–36 ..	.. 86,588		

* Productive employees. Subsequent figures are for total employees.

In the following discussion an attempt is made to analyse trends in industry. Since a marked change took place in industrial production in 1931 it will be convenient to discuss this development in two periods, the first from 1901 to 1931 and the second section from 1929 to the present date.

The factory production statistics include in the classification of "factory production" such processing of primary products as butter and cheese manufacture and meat freezing and preserving works. Apart from these semi-primary manufacturing industries, the remainder may be classified as true industrial production. The development of these two groups will be discussed separately. Since this study is concerned solely with the question of population it is not proposed to discuss either the value or the volume of the output of products, or similar questions which would be relevant in a study of industrial production *per se*. The question will be looked at purely from the point of view of the number engaged in a particular industry. This type of investigation may, however, hide certain real trends, particularly where there have been major advances in industrial techniques during the period, so that an industry employing fewer hands to-day may, in fact, be producing a much greater output than previously.

B. SEMI-PRIMARY INDUSTRIES

(1) The Period from 1901 to 1931

Dealing first with the period between 1901 and 1931, the following table classifies the various semi-primary industries as between those that are stable, expanding, and contracting :—

Table No. 96.—Table showing Number of Employees engaged in Semi-primary Industries 1900–01, 1920–21, and 1930–31

—	1900-01.	1920-21.	1930-31.
(1) Stable Industries			
Nil.			
(2) Expanding Industries			
Animal food—			
Meat freezing and preserving works	2,221	8,328	5,891
Ham and bacon curing	196	188	380
Butter, cheese, and condensed-milk manufacture	1,221	3,089	4,184
Vegetable food—			
Grain-milling	515	530	692
Vegetable produce for fodder—			
Grain-crushing	Not shown	45	87
(3) Contracting Industries			
Animal food—			
Fish curing and preserving	137	72	63
Harness, saddlery, and leatherware—			
Tanning, fellmongery, and woolscouring ..	1,963	1,069	Tanning, 439 ; fellmongery and woolscouring, 310
Working in wood—			
Sawmilling, sash and door making	6,812	8,385	6,390
Fibrous materials—			
Flaxmilling (phormium)	1,698	815	177

The term " stable " means that over the period under review the number of employees has remained relatively constant. The term " expanding " means that there has been some increase during the period in the number of employees, while the term " contracting " means that the number of employees has tended to fall.

During the period under review none of the semi-primary industries can be classified as stable. The outstanding case of expanding industries was the meat freezing and preserving works, which reflects the expansion in the sheep-grazing industry during the period, and particularly the development of fat-lamb production. The figure for 1920–21 was abnormally high. The quantity of frozen meat exported about that period was much higher than for more than a decade subsequently, and this is reflected in the number of operatives. As between 1924 and 1931 the average number of operatives per annum was 6,363 ; in fact, in 1927 there were only 5,428 employees. It can thus be seen that, although the above table shows a major fall in the employees in this industry as between 1921 and 1931, the real decline was very much less than would appear. During the " twenties " an average of about 8 per cent. of all employees in secondary industries was engaged in the meat freezing and preserving trade.

Ham and bacon curing also increased, reflecting really an increase in the keeping of pigs as a subsidiary line in the dairying industry. The major expansion of those engaged in butter, cheese, and condensed-milk manufacturing is merely an indication of the increasing importance of dairying during the period. The increases in the grain milling and grain crushing industry are probably merely related to increases in population. Flour is a basic item and is required in amounts proportionate to the size of the population.

In the contracting industries the major feature is the fall of tanning, fellmongery, and woolscouring, which is largely, but not wholly, due to changes in farming techniques, and perhaps to the relatively less importance of horse transport.

The heading "Sawmilling and Sash and Door Making" covers principally sawmilling, the numbers engaged in sash and door making being relatively small. Detailed figures for the years between 1921 and 1931 show that over the most of that period the number employed in the industry has steadily declined. The building trade was buoyant in the early years of the decade, but, as is well known, this industry was among the first to feel the effects of the trade recessions in the later years of the decade. The capital construction industries are always among the first to feel the effects of an economic decline. The effects of the depression in taking men away from that type of work have been very serious because, as shown in another part of this report, the tendency once such people had left the industry was for them to remain away.

An outstanding case of a contracting industry was the flaxmilling (phormium), which fell very seriously as between 1901 and 1921. This is probably a result of competition internationally in other fibres. The figure of 177 in 1930-31 is abnormally low, and is definitely the result of the depression.

(2) The Period from 1929 to 1944

Turning next to the second period, between 1929-30 and the present day, the following table gives a classification of the semi-primary industries, differentiating between stable, contracting, and expanding industries:

Table No. 97.—Table showing Employees engaged in Semi-primary Manufacturing Industries, 1929-30, 1937-38, 1942-43, and 1943-44

	1929-30.	1937-38.	1942-43.	1943-44.
(1) Stable Industries				
Vegetable food—				
Grain-milling	731	767	765	756
Vegetable products for fodder—				
Grain-crushing	88	69	79	76
(2) Expanding Industries				
Animal food—				
Meat freezing and preserving	6,139	7,835	10,137	10,186
Ham and bacon curing	396	521	576	719
Fish curing and preserving	78	113	128	143
Harness, saddlery, and leatherware—				
Tanning	449	497	869	949
Animal matters (not elsewhere included)—				
Fellmongering and woolscouring	390	379	664	607
Working in wood—				
Sawmilling, sash and door making	7,381	8,364	7,574	7,806
(3) Contracting Industries				
Animal food—				
Butter, cheese, and condensed-milk manufacture	4,228	4,128	3,983	3,900
Fibrous materials—				
Flaxmilling (phormium)	903	537	256	377

The period 1929–30 is taken as being more typical of normal conditions than the period 1930–31, since by 1931 the economic depression was well under way, and employment conditions were not normal.

Certain definite trends are observable during that period. The grain-milling and grain-crushing industries have been stable over the period. New Zealand normally does not produce wheat for export, but imports wheat, not flour. Consequently there is a relative stability in the grain-milling industry, the size of which is determined by the consumption of flour and related products in New Zealand. There has been a major expansion in the meat freezing and preserving industry from the low figure of 6,139 employees in 1929–30 to its peak in 1943–44, when 10,186 were so engaged. This figure is probably abnormally high because of the major food-production drive which was taking place as a result of the war. On the other hand, due to the international shortage of animal and other foods, it is possible that this figure will remain high for some time.

The expansion of the ham and bacon curing industry is merely a reflex of the growth of the dairying industry over the period. Pig-meats have become of very great importance, and particularly so during the time the American troops were in the South Pacific area.

There were interesting developments in the fish curing and preserving industry, in which small scale operations have commenced.

The increase in the tanning industry over the period is directly related to the war and to the inability to import leathers from abroad. There has been a substantial expansion of this industry during the war, and, other things being equal, this expansion will probably have permanent results. A similar explanation can be given for the major expansion of fellmongery and woolscouring. Recent tendencies, however, suggest that this industry may decline in importance. The expansion in the sawmilling and sash and door making industry (of which the sash and door making part is relatively unimportant) is closely related to the expansion of building programmes, while the fall during the war is related to the depletion of this industry for war purposes, a Forestry Unit being sent overseas early in the war.

Of the contracting industries the most important feature is the fall in the number engaged in butter, cheese, and condensed-milk manufacture. While some of the fall in later years was doubtless related to the war and to the fall in dairy production, the fall as between 1929–30 and 1937–38 is probably accounted for by the zoning of dairy-factory suppliers early in the fourth decade. As a result some superfluous factories were eliminated and the industry put on to a much more efficient basis.

The fall in the number of those engaged in phormium-flax milling is merely indicative of the decline in the flaxmilling industry. Strenuous steps were taken to revive the industry, but the onset of the war had some adverse effect in this regard.

Summing up the above discussion relating to semi-primary industries, it can be seen that in general there has been a fairly steady expansion over the period. With the exception of certain small industries this expansion has been closely related to the expansion of the agricultural industry, and calls for no important comments except to say that the relative position of these industries has declined. In the earlier days the semi-primary industries were all-important. To-day they have declined in relative importance due to the expansion of what might be more correctly called the secondary industries.

C. MANUFACTURING INDUSTRIES

A definite change took place in the development of secondary industries in New Zealand during and subsequent to the depression.

The real expansion of secondary production in New Zealand took place during and subsequent to the depression. Several factors are responsible for this development. During the ten years prior to the recent war international trade was seriously restricted,

largely because of the instability of the general international price levels, which has had a marked effect on foreign exchanges. The catastrophic fall in the prices received for New Zealand's primary produce considerably reduced the foreign exchange available to New Zealand for imports, and, as a consequence, resulted in reduced imports. On the other hand, the raising of the exchange rate in 1932 not only aided New Zealand farmers, but was, in effect, an added protection to New Zealand industry. Coupled with this was a definite tariff policy which was aimed at stimulating New Zealand industry with a view to the absorption of the surplus employable population in the country. At a later date, owing to the continued insecurity of the foreign-exchange position, the decision to license imports and to ration foreign exchange was a notable factor in encouraging secondary industries in the Dominion. In the operation of this latter policy a definite attempt was made to encourage certain secondary industries in the Dominion, particularly those using predominantly New Zealand raw materials. This had the effect of creating a demand for labour in the Dominion, and had quite a definite influence in the absorption of the unemployed. In a report such as this, which is concerned chiefly with population, it is not in place to discuss the financial details of the developments of the particular secondary industries. It should be mentioned, however, that marked development took place in the manufacturing of consumable goods in the country, particularly in the field of electrical appliances and radios. There was a marked expansion in the manufacturing of clothing for internal consumption, and in a number of other fields, particularly in the field of the assembly of motor-vehicles, the secondary industries expanded very considerably. This accounted for the large increase in the population concerned with secondary industries prior to the war. When war came and New Zealand was to all intents and purposes shut off from overseas trade, it became necessary to concentrate still further on the internal manufacture of as many commodities as possible. Coupled with this, the demands for the manufacture of munitions and other warlike equipment, including clothing for the troops, had a very marked effect on the industrial activity of the country. This development, which has resulted in the construction of large factories and the purchase of large amounts of industrial machinery, has given the basis on which the future industrial expansion of the country will take place. In many fields, particularly in the clothing field and in the field of the domestic electrical appliances, New Zealand now, to a very large extent, is entirely self-contained.

There are other developments taking place due largely to the relative change in the comparative cost structure as between New Zealand and the countries from which she previously imported her manufactured commodities. Rising wages and costs in Great Britain have placed New Zealand in a very advantageous position relative to the import of commodities from overseas. The stabilization policy pursued over the last few years has kept New Zealand's price-levels much more stable than in most other countries of the world, and the net effect has been that industries have not only been able to commence, but to maintain their position despite the potential emergence of overseas competition. One indication of this is the tendency for overseas firms to set up factories in New Zealand. Even since the war there is evidence to the effect that certain rubber concerns are proposing to make tires in New Zealand, some motor-manufacturing concerns are proposing to set up assembly depots in the country, and on all sides there are indications that an era of industrial expansion is bound to occur.

It will be of interest, however, to discuss the developments during the period up to 1931, when these industries were concerned largely with the production of the more directly consumable goods. At a later stage reference will be made to developments subsequent to the depression, when there was a greater expansion of the more truly manufacturing industries.

(1) THE PERIOD FROM 1901 TO 1931

The following table gives a picture of the development of secondary industries between 1901 and 1931, classified as between those that were relatively stable in the number of their employees, those that were expanding, and those that were contracting. This table is self-explanatory :—

Table No. 98.—Table showing the Number of Employees engaged in Secondary Industries 1900–01, 1920–21, 1930–31, differentiating between Stable, Expanding, and Contracting Industries

——	1900–01.	1920–21.	1930–31.
(1) RELATIVELY STABLE INDUSTRIES			
Drinks, narcotics, and stimulants—			
Brewing and malting	827	927	952
Processes relating to stone, glass, clay, &c.—			
Brick, tile, and pottery making	838	1,054	946
Ships, boats, and their equipment—			
Sail, tent, and oilskin making	231	272	212
Apparel—			
Boot and shoe making	2,696	2,103	2,364
(2) EXPANDING INDUSTRIES			
Vegetable food—			
Biscuit and confectionery making ..	972	1,529	2,716
Fruit preserving and jam making ..	172	280	352
Concentrated foods and essences manufacture (baking-powder manufacture prior to 1930)	29	Not available	149
Drinks, narcotics, and stimulants—			
Aerated water and cordial manufacture ..	452	404	601
Ice-cream making	5	Not available	157
Coffee and spice grading and preparing ..	78	51	97
Tobacco preparing and cigarette making ..	38	Not available	Not available
Sauce, pickle, and vinegar making ..	151	198	234
Animal matters (not otherwise classified)—			
Soap and candle making	232	314	438
Sausage-casing manufacture	98	359	406
Boiling-down, glue and manure manufacture	113	578	276
Working in wood—			
Coopering and casemaking	138	234	415
Woodware and turnery manufacture ..	156	891	880
Paper-manufactures—			
Paper bag and box making	81	175	378
Heat, light, and power—			
Gas making and supply	572	966	1,778
Electricity generation and supply ..	52	457	2,716
Electric tramways	..	1,080	2,915
(NOTE.—Not now shown under Factory Production Returns.)			
Processes relating to stone, glass, clay, &c.—			
Lime crushing or burning and cement making	184	715	912
Lead-light making and glass bevelling ..	16	143	357
Electro-plating	11	67	76
Concrete block or pipe and fibrous plaster making	Included in "Miscellaneous"	203	664
Metals, other than gold or silver—			
Tinned-plate and sheet-metal working ..	598	808	1,448
Engineering, iron and brass founding, boiler-making, &c.	3,397	3,774	4,226
Electrical engineering	Not available	255	265
Range-making	193	254	332
Wire-working	Included in "Miscellaneous"	122	171

Table No. 98—continued

——	1900–01.	1920–21.	1930–31.
(2) Expanding Industries—*continued*			
Books and publications—			
Printing, publishing, and book-binding ..	3,134	4,126	8,192
Ornaments and minor art products—			
Picture-frame making	22	46	44
Basket, perambulator, &c., making ..	118	215	217
Designs, medals, type, and dies—			
Engraving and stamp-making	3	27	162
Machines, tools, and implements—			
Agricultural and dairying machines and implement-making	586	914	850
Brush and broom making	128	182	223
Small machines and appliances, sports equipment, &c., making	Not available	Not available	118
Carriages and vehicles—			
Coachbuilding	1,185	1,102	1,385
Motor and cycle engineering	395	1,919	4,969
Harness, saddlery, and leatherware—			
Leather-goods making	22	209	232
Ships, boats, and their equipment—			
Ship and boat building	211	913	808
House furnishings—			
Furniture and cabinet making	1,310	2,066	2,378
Mattress-making	55	250	360
Chemicals and by-products—			
Chemical-manufacture	95	106	232
Chemical-fertilizer refining			657
Paint and varnish manufacture	31	24	111
Boot, floor, &c., polish manufacture ..	3	38	75
Patent medicines and preparations manufacture	Included in "Miscellaneous"	132	200
Textile fabrics—			
Woollen-milling	1,693	2,176	2,237
Flock-milling	10	24	63
Apparel—			
Tailoring	1,621	2,527	Not collected
Dress and millinery making	2,888	3,010	since 1920–21
Hosiery-making	282	205	736
Umbrella making	Included in "Miscellaneous"	32	56
Clothing-manufacture	3,299	6,270	7,690
Fibrous materials—			
Ropes and twine making	192	219	225
Bags and sack making	6	97	74
(3) Contracting Industries			
Precious metals—			
Jewellery and watch-making	Not available	254	192
Musical instruments—			
Piano, &c., making and repairing ..	11	86	23
Harness, saddlery, and leatherware—			
Saddlery and harness making	652	368	220
Home furnishings—			
Blindmaking	51	21	37
Miscellaneous	612	190	181

In view of subsequent developments, perhaps the most interesting factor is the stability of the boot and shoe making industry over the whole of the first three decades of this century. During this period there was no major expansion of the industry, while imports of footwear continued to be important. In the expanding group the development of biscuit and confectionery making is worthy of note, and this is closely related with the relative fall in imported commodities of this type, as is also the fruit-preserving and jam-making industry and the concentrated foods and essences manufacturing industry. Again of interest is the absolute unimportance during the period of the tobacco-preparing and cigarette-making industry, an industry which shows its major development subsequent to 1931.

Other industries which show an increase are the soap-and-candle making industry, the sausage-casing-manufacturing industry (a process which in early days was not undertaken to any extent in New Zealand), and particularly woodware and turnery manufacture and paper-bag and box making. As an indication of the social and economic development, the rapid expansion of gas making and supply, and especially of the electricity generation and supply group, are worthy of note.

One of the most interesting developments over the period has been the development of the group headed "Working in metals other than gold and silver." Tin-plate and sheet-metal working increased by nearly 200 per cent., and metal working by approximately 25 per cent.

Electrical engineering was relatively unimportant, as were rangemaking and wire-working. These last three have expanded since 1931.

The expansion of the printing industry is shown by the fact that employees increased from 3,000 to over 8,000 in the period under review.

In the field of agriculture and dairy machines the upward trend is indicative of the tendency for more and more of such machines to be manufactured in New Zealand, and consequently for fewer to be imported.

Coach building shows a similar increase. This is largely to be accounted for in the increase in motor-body building in the Dominion, but the real expansion of motor-body building did not take place till subsequent to 1931. The remarkable expansion of motor and cycle engineering is merely a result of the development of the internal-combustion engine.

Furniture and cabinet making shows a considerable increase, with a relative decline in the importance of imports. The increase in chemical-manufacture and chemical-fertilizer refining is accounted for largely by the growing use of phosphatic manures during the period.

Although the manufacture of woollen textiles increased over the period, the increase is relatively small, particularly in view of the availability of raw materials in the Dominion. New Zealand still at this time was dependent largely on imports for the provisions of its textiles. On the other hand, there was a fairly steady increase in the manufacture of clothing over the period, an increase which has continued to the present day. The clothing industry in this earlier period was concerned chiefly with the lower grades of products. The better grades were imported. Subsequent to 1931 New Zealand became more self-supporting in all types of clothing-manufacture.

Of the contracting industries, the most interesting feature is the decline in saddlery and harness making, which reflects the decline in the importance of the horse for transport purposes.

(2) *The Period from 1929 to 1944*

Turning next to the period subsequent to the depression, the following table gives the figures for 1929–30 for comparative purposes, and the figures for 1937–38, 1942–43, and 1943–44 :—

Table No. 99.—Table showing the Number of Employees engaged in Secondary Industries, 1929–30, 1937–38, 1942–43, and 1943–44, differentiating between Stable, Expanding, and Contracting Industries

——	1929–30.	1937–38.	1942–43.	1943–44.
(1) STABLE INDUSTRIES				
Vegetable food—				
Biscuit and confectionery making ..	2,719	3,208	3,111	2,812
Heat, light, and power—				
Gas making and supply	1,796	1,920	1,668	1,704 (1944–45=1,751)
Processes relating to stone, glass, clay, &c.—				
Brick, tile, and pottery making ..	1,156	909	1,076	1,133
Ornaments and minor art projects—				
Picture-frame making	52	41	47	61
Designs, medals, type, and dies—				
Engraving and stamp-making	161	189	149	151
House furnishings—				
Furniture and cabinet making	2,774	3,145	2,547	2,810
Chemicals and by-products—				
Chemical fertilizers	Chemical manufacturing, 199; chemical-fertilizer refining, 719	902	808	781 (1944–45=879)
Apparel—				
Fur coat and necklet making	379	581	427	389
Fibrous materials—				
Rope and twine making	219	240	Not shown, as only three establishments.	
(2) EXPANDING INDUSTRIES				
Vegetable food—				
Fruit-preserving and jam-making ..	208	449	1,031	1,028
Concentrated foods and essences manufacture	195	275	461	474
Drinks, narcotics, and stimulants—				
Brewing and malting	987	1,155	1,191	1,309 (1944–45=1,384)
Wine-making	40	70	67	57
Ice-cream making	164	218	284	328
Coffee and spice grinding and preparing ..	105	126	135	146
Tobacco-preparing and cigarette-making ..	Not available (but for 1931–32=542)	793	1,049	1,022
Sauce, pickle, and vinegar making ..	262	272	347	405
Animal matters (not elsewhere classed)—				
Soap and candle making	452	552	775	730
Boiling-down, glue and manure making ..	265	374	443	476
Working in wood—				
Coopering and casemaking	381	601	650	578
Woodware and turnery manufacture ..	1,112	1,150	1,911	1,896
Paper-manufacture—				
Paper-bag and box making	348	607	917	992
Heat, light, and power—				
Electricity generation and supply ..	2,459	3,427	3,694	3,721 (1944–45=3,860)
Processes relating to stone, glass, clay, &c.—				
Lime crushing and burning, and cement-making	928	1,050	1,276	1,355
Electroplating	67	164	135	121
Pumice-products preparation	Not available	91	55	77
Concrete block or pipe making	780*	950*	473	507
Wallboard and building sheet of plaster, cement, &c., manufacture			526	503
Metals, other than gold or silver—				
Tinned-plate or sheet-metal working ..	1,494	1,690	2,310	2,361
Engineering, iron and brass foundry, boiler-making, &c.	4,688	4,828	7,345	8,409
Nail-manufacture	Included under "Engineering"		87	119
Electrical engineering	235	855	1,353	1,395
Range-making	400	689	784	392
Wire-working	192	248	275	269
Precious metals—				
Jewellery and watchmaking	182	256	302	346
Rubber products—				
Rubber goods and vulcanizing	Included under "Coachbuilding and motor engineering, &c." and "Miscellaneous"		531	701

* These figures do not include wallboards or other building sheets, previously included in "Miscellaneous."

Table No. 99—continued

——	1929–30.	1937–38.	1942–43.	1943–44.
(2) EXPANDING INDUSTRIES—*continued*				
Machines, tools, and implements—				
Agricultural and dairying machinery, and implement-making	963	1,200	1,376	1,460
Brush and broom making	239	348	368	426
Small machines and appliances, sports equipment, &c., making	118	157	447	515
Radio apparatus making and assembly	Previously included in "Small machines, &c."	534	716	905
Carriages and machines—				
Coachbuilding, motor and cycle engineering, &c.	7,033	9,909 (1938–39=10,289)	5,864	6,190
Harness, saddlery, and leatherware—				
Leather-goods making	283	422	1,005	1,235
Tanning	449	497	869	949
Ships, boats, and their equipment—				
Ship and boat building	750	690	1,259	1,743
Sail, tent, and oilskin making	233	765	680	782
House furnishings—				
Rug and mat making	Not shown	Not shown	Not shown	38
Chemicals and by-products—				
Ink-manufacture	Not shown	Not shown	62	69
Paint and varnish manufacture	112	298	392	445
Boot, floor, &c., polish manufacture	76	91	113	116
Chemicals and patent medicines and preparations manufacture	201 as patent medicines and preparations manufacture	615	1,056	1,137
Cosmetics and toilet preparations	Nil	Nil	325	367
Textile fabrics—				
Woollen-milling	2,478	2,748	4,045	4,050
Apparel—				
Boot and shoe making	2,307	3,081	4,513	4,518 (1944–45=4,571)
Hosiery and knitted-goods manufacture	729 as hosiery-manufacture	1,298	2,105	2,182
Clothing-manufacture	7,852	12,916	13,828	13,279
Fibrous materials—				
Bag and sack making	92	271	362	363
Linen-flax processing	Nil	Nil	1,030	1,164
Industries for which the number of schedules received was less than four	1,296	993	2,980	3,167
Miscellaneous (not listed above)	193	518	997	1,113
(3) CONTRACTING INDUSTRIES				
Drinks, narcotics, and stimulants—				
Aerated water and cordial manufacture	697	609	487	513
Animal matters (not otherwise classed)—				
Sausage-casing manufacture	442	261	212	201
Processes relating to stone, glass, clay, &c.—				
Leadlight-making and glass-bevelling	423	264	197	205
Books and publications—				
Printing, publishing, and book-binding	8,255	8,153	6,278	6,095
Musical instruments—				
Piano, &c., making and repairing	36	Nil	Nil	Nil
Ornaments and minor art projects—				
Basket, perambulator, &c., making	250	190	127	115
Harness, saddlery, and leatherware—				
Saddlery and harness making	276	235	136	134
House furnishings—				
Blindmaking	39	35	23	23
Mattress-making	384	292	279	187
Textile fabrics—				
Flock-milling	69	170	25	28
Apparel—				
Umbrella-making	59	46	32	31

As stated earlier, a marked change developed in the character of secondary industries in New Zealand during and subsequent to the depression. This was due to a number of factors, including the increase in the protective character of tariffs, the raising of the exchange rate by 25 per cent., and the decision to ration imports and to control foreign exchange, all of which had a very definite effect in the stimulation of secondary industries in the Dominion. The table is relatively self-explanatory, but certain items are worth noting.

Gasmaking, which had increased steadily over the previous period, now tends to be relatively stable, due to the increased use of electricity. The fertilizer industry, which in normal times would have been expected to increase, in actual fact just maintained its position, with some decline during the war due to the absence of rock phosphate. The explanation probably is that the existing works are sufficient to cater for current demands. Admittedly, there is at the present moment a large unsatisfied demand for fertilizers. This, however, is due to the loss of supplies of rock phosphate during the war. When the present deficit is overtaken, however, it is probable that existing works will be able to satisfy the normal demands.

It is the expanding group, however, which gives a better indication of the trends at work. It must be remembered in discussing this group that, due to the war, the absence of foreign supplies, and the presence of large bodies of American troops in New Zealand or in the South Pacific, many industries were artificially stimulated, and while the immediate cause of the development was wartime demands, there is little doubt that many of them will remain as permanent features of our economy. Among such may be mentioned the fruit-preserving and jam-making industries, the engineering industries, to some extent the coach building and motor engineering industries, leather-goods manufacture and tanning industries, shipbuilding, and sail, tent, and oilskin making. Other industries, however, had shown remarkable expansion even prior to the war. In particular, mention should be made of the tobacco-preparing and cigarette-making industry. This was the result of a definite policy of the Government to encourage the utilization of locally-grown tobacco-leaf, and to obviate the necessity for the expenditure of large amounts of exchange on tobacco-preparations.

The expansion of the paper-bag and box-making industry is an illustration of recent industrial developments in the Dominion. In the engineering field there has been a remarkable expansion, and this is particularly true in the field of electrical engineering. The numbers engaged in electrical engineering have increased by some 600 per cent. over the period under review. The general engineering field also shows an increase of nearly 100 per cent.

The production of rubber goods, including vulcanizing, is a relatively new industry in the Dominion, and, although it shows considerably increased numbers in the period, there is evidence that work in this field will expand still further. Another interesting development is in the expansion of the radio industry, which had increased from practically nil in 1929–30 till to-day approximately one thousand people are engaged therein.

New Zealand is becoming more and more self-sufficient in paint and varnish manufacture. Woollen-milling has shown a remarkable increase, particularly during the war, and there are indications that this development will continue into the post-war days. There has been a considerable expansion in the boot and shoe making industry. New Zealand is to-day practically self-sufficient as far as many types of footwear are concerned.

In the fields of hosiery, knitted-goods manufacture, and clothing-manufacture there has been a substantial expansion, due largely to the demands of the war, but here again the experience gained and the capital equipment provided for war purposes will have important repercussions on post-war activity.

In general, it can be said that there is a remarkable expansion in industry in a number of fields where the products were previously imported. The policy by which a large proportion of motor bodies are built in the Dominion has created an important and flourishing industry. In the engineering fields developments have been rapid and important. This is particularly true in the field of electrical engineering. It would not be in place in a study such as this to analyse the effects of these recent developments on the structure of our imports; in fact, it would be extremely difficult to draw any firm conclusions from such an analysis, since the trends had not fully worked themselves out by the outbreak of the war in 1939, and the wartime imports are not a true indication of the effects of industrial expansion in the Dominion. The only important industry which shows any tendency to contract is in the field of printing, publishing, and bookbinding. The contraction here is largely due to the incidence of the war, and probably is not a true indication of the trends at work in the Dominion. Much of the printing work demanded during the war was of a non-essential character, and, as a consequence, employees tended to drift from the printing industry to other industries, and those who entered the Armed Forces were not replaced; in fact, in terms of demand and potential demand, the printing industry in New Zealand is remarkably buoyant. The tendency to reprint books in the Dominion rather than to import the finished product is growing rapidly, and all printing-works at the present day are very short of operatives, with a growing accumulation of unsatisfied work.

Summing up this discussion of secondary industries in the Dominion, the following general trends may be observed. There is no falling off in the absolute importance of what might be called the servicing and locality industries. They have, however, become of less relative importance. On the other hand, there is a very definite expansion of manufacturing industries, particularly since the depression—a tendency which was reinforced by wartime conditions, when it became impossible to import many of the desired commodities, and when it became necessary for New Zealand to satisfy within its own shores many of the demands which were previously satisfied with imports. There is little doubt that the policies adopted during the past decade and a half have stimulated secondary industries in the Dominion. As pointed out earlier, evidence was available to show that in terms of comparative costs New Zealand was to-day in a more favourable position than ever before in her history, and consequently the competitive position of New Zealand industries was stronger, at least in terms of internal demand. The net result of this situation is that, quite apart from increasing purchasing-power, which creates an increasing demand, New Zealand is within its own borders able to satisfy at a competitive cost the demand for many of the goods which were previously imported to this country. If to this monetary fact is added the fact that the purchasing-power of the community is very buoyant it can be seen that the immediate future for secondary industries in New Zealand is relatively bright. The evidence adduced before the Committee was to the effect that many new industries were proposing to start in the Dominion, and that the demand for employees was completely unsatisfied in practically all the manufacturing industries of the country. The Industries and Commerce Department in its evidence states—

"There are continuously under consideration with us at one time a number of proposals for the establishment of new industries or the expansion of existing ones, and no better illustration of the extent of the trend of industrial development is needed than in the fact that at this moment there are pending and potential proposals with us for twenty-three new industrial units with a following new employment potential—males, 3,473; females, 1,138: total, 4,611. The past figures of industrial population and the evident keenness and interest in industry, as shown by our own recent figures, are only too clear an indication of what might be expected in the future."

There was some suggestion that certain English firms which are considering setting up manufacturing institutions in New Zealand propose to bring their own employees from England because of the impossibility of securing adequate labour supplies in the Dominion.

If in the field of agriculture there is some evidence that the demand for agricultural labour has been satisfied, this cannot be said of the manufacturing field, where large unsatisfied demands exist at the present time. Some indication of the present unsatisfied demands of secondary industry for labour is given by the following figures of vacancies notified from secondary industries to the Director of Employment at the end of July, 1946 :—

Group.	Notified Vacancies.		
	Males.	Females.	Total.
Food, drink, and tobacco	310	676	986
Textiles, clothing, leather	494	6,029	6,523
Building materials and furnishings	501	89	590
Engineering and metals	2,193	267	2,460
Other secondary	410	1,049	1,459
Power and water supply	113	7	120
Totals	4,021	8,117	12,138

It is of importance to observe that the above table shows only notified vacancies. There can be little doubt that there are many more vacancies which are not advised to the Director of Employment, and that approximately only 50 per cent. of the actual total vacancies in secondary industries are included above. At a later stage the question of the satisfaction of this demand will be discussed in some detail, but at this stage it is worth pointing out that even if there were immigrants available to come to New Zealand to work in the manufacturing industries the problem of housing is such as to severely limit such a development in the immediate future. The problem of the location of industry has been discussed elsewhere.

D. POTENTIAL INDUSTRIAL POPULATION

In view of the above evidence of expanding industrial economy and an unsatisfied demand for labour within that industry it is important to examine the future possibilities of obtaining within the country recruits for industrial purposes. The key to this situation is found in the birth-rate. On the assumption that young people enter industry between the ages of fourteen and eighteen, then the birth-rate from fourteen to eighteen years* previously is the determining factor in estimating the number that will be available for industry at any given time. The following table, taken from the evidence submitted by the Industries and Commerce Department, sets out over a period of twenty years the juvenile population of New Zealand :—

Table No. 100.—Table showing Juvenile Population (aged Fourteen to Eighteen) of New Zealand from 1938 to 1956

(NOTE.—The numbers refer to those born from fourteen to eighteen years previously)

Year.	Juvenile Population.	Year.	Juvenile Population.
1938	144,375	1948	126,949
1939	142,607	1949	124,137
1940	141,613	1950	122,432
1941	140,488	1951	123,560
1942	139,721	1952	126,475
1943	138,454	1953	130,986
1944	137,088	1954	139,792
1945	135,237	1955	149,955
1946	132,240	1956	157,510
1947	129,374		

* The school leaving age is now fifteen years of age.

The remarkable feature of this table is the very heavy drop in entrants into industry, which will become critical in 1947, and will last till approximately 1953. The explanation of this drop, of course, is the very heavy fall in the birth-rate during the five or six years of the depression. This fall in the birth-rate will become very important in industry by 1947, and its influence will extend right through until 1953. In other words, if during the last few years there has been a dearth of young entrants into industry, that dearth will become accentuated in the next seven or eight years. This gap in the birth-rate has had, and will have, very important repercussions on New Zealand's economy. In another place in this report we discuss the influence of this trend on education policies. It will have an important effect upon the birth-rate from the "fifties" to the "seventies" of this century. For the present purposes the important thing to notice is that if the then available adolescent population could not supply the demands of industry in the last few years, then *a fortiori* the very greatly increased demands of industry in the next few years cannot be supplied from a smaller adolescent population. Commenting on this fact, the Industries and Commerce Department state :—

"The present immediate shortage of labour causes a natural question to arise, Do we stop encouraging industry when local available labour is fully utilized ? Reference to the statistics of juveniles given previously clearly shows the probability that the scarcity of juvenile entrants will continue, even on the present factory capacity, till 1954. If we were to defer further encouragement of industry until that time, then not only will we create an immediate cessation in industrial development, but we will at the same time remove the foundation of employment (through the medium of secondary industries) for that expansion in the labour force, which will commence in 1954 and for any additional such expansion which presumably is the objective of this inquiry."

The conclusion of the Industries and Commerce Department is that the demands for operatives for secondary industries in the Dominion in the immediate future can be satisfied only if a definite immigration policy is embarked upon. This contention is supported by the Employers' Federation and the Manufacturers' Federation. The Federation of Labour also argued that certain types of immigrants should be brought into New Zealand, provided always that immigration "should never be sufficient to create unemployment or other economic disruption." They state, "New Zealand's immediate needs . . . are for workers with particular skill to overcome production difficulties," and in this class specify timber-workers, coal-miners, skilled metal-workers, and women for employment in hospitals, factories, and domestic work. Evidence was forthcoming that in some of the clothing fields the dearth of employees, particularly female employees, was so serious as to involve a very heavy reduction in output. In this field again, however, we find ourselves up against the vicious circle of the shortage of labour and the shortage of houses. If it were possible to bring employees into the Dominion, and if there were houses available, then we would have no hesitation in recommending that an immediate immigration policy for staffing secondary industries should be undertaken. Consequently, our recommendations in this field, which are given later, must be greatly influenced by this housing situation.

XII. TERTIARY INDUSTRIES

In the Section dealing with occupational distribution of the population a definition was given of tertiary industries, and some account of the importance of these industries in a progressive society. It remains in this Section, therefore, to analyse the relative importance of the various groups included within the tertiary field.

The following table shows the total number employed in the tertiary industries at various censuses from 1901 to 1936, together with an estimate for 1945 :—

Table No. 101.—Table showing the Total Number of Males and Females engaged in the Tertiary Industries at various Censuses from 1901 to 1936, and also an Estimate for 1945

Year.	Males.	Females.	Total.
1901	76,475	42,574	119,049
1906	96,270	49,841	146,111
1911	118,013	59,977	177,990
1916	123,966	67,720	191,686
1921	149,914	78,115	228,029
1926	163,127	82,140	245,267
1936	185,162	98,535	283,697
1945	166,000	155,000	321,000*

* As stated earlier, the 1945 figures are not exactly comparable.

In the following table the relative growth of tertiary industries when compared with the total occupied population and with the total population is shown by a series of index numbers :—

Table No. 102.—Table showing Index Numbers of Persons employed in Tertiary Industries, Total Occupied Persons, and Total Population, distinguishing Male and Female, at various Census Dates from 1901 to 1936, and an Estimate for 1945

(1901 = 1000)

Year.	Males.			Females.			Total.		
	Tertiary Industries.	Occupied Males.	Total Males.	Tertiary Industries.	Occupied Females.	Total Females.	Tertiary Industries.	Total Occupied Persons.	Total Population.
1901 ..	1000	1000	1000	1000	1000	1000	1000	1000	1000
1906 ..	1259	1178	1160	1170	1143	1139	1219	1158	1149
1911 ..	1545	1318	1310	1409	1390	1299	1496	1332	1306
1916 ..	1620	1277	1359	1628	1545	1494	1611	1329	1424
1921 ..	1961	1488	1535	1835	1708	1628	1916	1531	1579
1926 ..	2132	1628	1691	1930	1686	1795	2061	1639	1742
1936 ..	2422	1879	1863	2312	2106	2004	2392	1923	1932
1945 ..	2156	1945	1928	3641	3221	2242	2698	2217	2077*

* As stated earlier, the 1945 figures are not exactly comparable.

The table shows in a marked fashion the development of these tertiary industries in the Dominion. Relative to the occupied males, the tertiary industries have increased to a very much greater extent, and much greater than the rate of population growth. The figures for 1945 must be treated with extreme caution. They are taken from tables calculated by the Employment Department, and are computed on a different basis from the census figures. They are included because there are no other figures available.

For analytical purposes it is advisable to split this tertiary group up into its component parts.

A. TRANSPORT AND COMMUNICATION

The next table shows the number of persons engaged in the transport and communications industry from 1901 to 1945. It should be noted that, in addition to persons engaged in the railways and other passenger and goods services, the tables include telegraph officers and also postal officers other than Savings-bank officers:—

Table No. 103.—Table showing Number of Males and Females engaged in the Transport and Communications Industry from 1901 to the Present Date

Year.	Males.	Females.	Total.
1901	21,265	485	21,750
1906	28,854	749	29,603
1911	35,975	1,221	37,196
1916	40,408	2,269	42,677
1921	52,665	2,670	55,335
1926	56,441	2,283	58,724
1936	60,022	2,328	62,350
1945	67,000	6,000	73,000*

* As stated earlier, the 1945 figures are not exactly comparable.

The very marked increase of the males so occupied is probably the outstanding feature of all the occupational figures in this report. It is indicative of the very extensive development which has taken place since the beginning of the century in the transport industry of New Zealand. From 1901 to 1936 the numbers engaged in this particular occupational group increased by nearly 200 per cent., from over 21,000 to over 60,000. Apart from the development of the railways, the development of motor transport has resulted in a very great increase in the number of persons engaged in this particular industry, and, as mentioned earlier in connection with agriculture, the mechanization of agriculture and the tendency for the manufacturing phases of the industry to be congregated in factories has resulted in a tendency for a decrease in the farm population and a corresponding increase in the servicing population, a part of which is reflected in these figures for transport. Relative to this subject of transport is the problem of the adequacy of the transport facilities in New Zealand at the present time. It is true that at the particular moment there is a considerable unsatisfied demand for transport, both for goods and passengers, and there is little doubt that if facilities were available a considerably increased amount of such transport would be utilized, but the lack is not so much in the field of physical equipment but rather in man-power and in the raw materials to run the machines. The Railways Department maintained that with certain duplications of their railway system, as, for instance, between Auckland and Frankton and between Wellington and Palmerston North, the system would be able, with practically no strain, if conditions were normal, to cater for all the present traffic and for potential traffic for some years to come. The provision of transport facilities, as, for instance, the provision of railroads and also the provision of satisfactory sealed highways, involves a very heavy cost factor. There is little doubt that there is still a good deal to be undertaken in the sealing of many more highways, but it is perhaps not too much to say that the back has been broken of this particular type of expenditure.

The following table shows the index numbers of the development in this industry and shows again, in a marked fashion, the increase which has taken place over the period. The index number has risen from 1000 in 1901, for males, to 3142 in 1945, and for females from 1000 to 13250. This latter figure, however, is probably considerably swollen on account of war conditions, and there may be some recession when transport conditions return to normal :—

Table No. 104.—Table showing Index Numbers of Workers engaged in the Transport Industry from 1901 to 1945

(1901 = 1000)

Year.	Males.	Females.	Total.
1901	1000	1000	1000
1906	1357	1545	1361
1911	1692	2518	1710
1916	1901	4678	1962
1921	2477	5505	2545
1926	2655	4708	2699
1936	2823	4803	2866
1945	3142	13250	3363

As showing the trends in one particular branch of the transport industry, the following table gives the total number of employees of the Railways Department over the past twenty years :—

Table No. 105.—Table showing the Total Number of Employees of the Railways Department from 1926 to 1945

1926	17,900	1936	17,073
1927	18,458	1937	19,113
1928	18,541	1938	21,954
1929	18,536	1939	24,342
1930	19,410	1940	25,710
1931	18,840	1941	24,502
1932	16,114	1942	23,352
1933	14,696	1943	22,237
1934	14,971	1944	23,422
1935	16,048	1945	24,002

The table displays two very interesting features. First, the very steady rise in the total number of employees in the Railways Department over the period from approximately 18,000 in 1926 to 24,000 in 1945. This rise is, without doubt, associated with the development of industry and population within the Dominion, and indicates the growing use being made of railway transport. The increase would to some extent be accounted for by the increased number of miles of line opened, but not all the increase can be accounted for in this way. To some extent the shortening of the working-week in the Railways Department will also demand an increased staff. Of recent years the Railways Department has taken over many road transport services with a corresponding increase in the staff required. Generally, however, the major portion of the increase can be accounted for by the increase in the volume of road and rail traffic which the Railways Department is called upon to handle.

The second important feature of the table is the very heavy recession during the depression years of 1930 to 1936. As pointed out earlier, the tertiary industries are among the first to suffer at any time of economic depression, and this is amply illustrated by the above table. In a report such as this, dealing with population, there is no value in analysing the actual traffic handled, but this would also bear out the above contentions.

B. COMMERCE AND FINANCE

The second branch of tertiary industries is that embraced under the generic title of "Commerce and Finance." As the title indicates, under this heading are included the employees of such institutions as banks, insurance companies, trustee companies, stock and station companies, grocers, fruiterers, hardware merchants, motor-dealers, drapers, and suchlike institutions, and generally the field which may be styled the field of commerce as distinct from the field of industry.

The following table gives the total numbers engaged in these particular occupations from 1901 to 1945 : —

Table No. 106.—Table showing the Number engaged in Commerce and Finance, distinguishing between Males and Females, as at the various Censuses from 1901 to 1936, together with an Estimate for 1945

Year.	Males.	Females.	Total.
1901	34,994	5,584	40,578
1906	44,982	8,744	53,726
1911	54,898	12,903	67,801
1916	51,248	16,907	68,155
1921	58,519	20,601	79,120
1926	64,295	19,493	83,788
1936	75,827	24,039	99,866
1945	42,000	42,000	84,000

NOTE.—The 1945 figures are not comparable with previous figures since the basis of collection is different.

The steady rise in both males and females is the outstanding feature of this table. The problem of distribution and finance has become all-important in modern society, and, as in all countries with western civilization, this section of the community has, over the past one hundred and fifty years, become more and more important. The manufacturing section of the community tends to become more distant economically from the consumer, and, consequently, the distribution trades more important. It is probably in this field of commerce and finance that the most difficult problems in modern society emerge. When the figures in the above table are compared with the figures of those engaged in industrial production, given earlier, the very great relative increase of those engaged in commerce and finance will be apparent. From 1901 to 1936 the males engaged in industrial production increased from 71,000 to approximately 129,000—that is, an increase of approximately 82 per cent. In the same period, in the commerce and finance field, however, the increase of occupied males has been nearly 117 per cent. As far as females are concerned, the increase from 1901 to 1936 of those engaged in industrial production was approximately 68 per cent., while over the same period, in the commerce and finance field, the occupied females increased by 330 per cent. This latter phenomenal increase is largely accounted for by the tendency for large numbers of women to be engaged in office work, a tendency which had not fully developed before the 1914–1918 war, but which was given a fillip during that period, and has continued ever since. The estimate for 1945 (the previous caution with regard to these estimates for 1945 should be borne in mind—namely, that they are compiled on a different basis, and are, therefore, not strictly comparable) shows some marked changes. The very heavy drop in males engaged in commerce and finance from approximately 76,000 to 42,000 is largely accounted for by war conditions. By far the largest number of these males would be in the Armed Forces. Some, no doubt, were engaged in civilian work either in the Government services or in manufacturing industries. The increase in the females from approximately 24,000 to 42,000 is of very great interest. Despite the relatively large increase of females engaged in industrial production, particularly that

directly connected with the war, the increase in commerce and finance is indicative of the trends during the period—namely, to replace males as far as possible by females. Large numbers of women, including married women, who prior to the war were engaged in domestic duties, during this period came out of their homes to fill places left vacant by males engaged in war service. In many offices there was a very large increase in the female staff, and, even making allowances for the difference in comparability of these figures, there is little doubt that the increase in females engaged in office work was very great. While a large number of these women will ultimately drift from this particular industry when the men return, the experience during and subsequent to the 1914–18 war would suggest that this tendency for females to be employed in office and related work will continue, and there is little doubt that the figure will not fall as low as previously.

For comparative purposes the following table reduces the crude figures to index numbers :—

Table No. 107.—Table showing Index Numbers of Persons engaged in Commerce and Finance, from 1901 to 1945

(1901 = 1000)

Year.	Males.	Females.	Total.
1901	1000	1000	1000
1906	1285	1603	1324
1911	1569	2311	1720
1916	1466	3011	1679
1921	1672	3690	1949
1926	1838	3490	2065
1936	2167	4305	2460
1945	1200	7521	2069

A careful study of these figures, when compared with the figures for total population and total occupied population, shows that the rate of growth of those occupied in the field of commerce and finance has been very much greater than the rate of growth of the total population or of the rate of growth of the occupied population. This again merely enforces the comment made above that modern society demands a considerably increased number of persons engaged in these fields in order to counteract the growing economic distance which is emerging between the producer and the consumer.

C. PUBLIC ADMINISTRATION AND PROFESSIONAL

The next census heading of those engaged or gainfully occupied is " Public Administration and Professional." It must be pointed out right at the commencement that this category is entirely different from those discussed in the chapter dealing with Government employees. As pointed out there, many Government employees are engaged in various phases of production, including primary production, secondary industries, and commerce and finance. Under this particular heading are included those engaged in general Government administration, local government administration, defence, the maintenance of law and order, religion and social welfare work, public health (including medical practitioners, dental practitioners, and the like), education (including private schools), entertainment, and generally in the professions such as public accountancy, architecture, music, and secretarial work. The heading can be, in very general terms, stated to include most of those engaged in professional services to the community, as opposed to those engaged in such physical work as transport and commerce and finance.

The following table gives some indication of the development of this type of employment in the Dominion over the past forty-five years :—

Table No. 108.—Table showing the Number engaged in Public Administration and Professional, at various Censuses from 1901 to 1936, and an Estimate for 1945

Year.	Males.	Females.	Total.
1901	13,674	8,653	22,327
1906	15,038	10,189	25,227
1911	18,233	12,555	30,788
1916	23,541	16,858	40,399
1921	29,803	22,082	51,885
1926	34,307	23,948	58,255
1936	37,050	27,686	64,736
1945	14,000	25,000	39,000

NOTE.—As stated on several occasions previously, the figures for 1945 are an estimate compiled on an entirely different basis. A very careful analysis of these figures suggests that the basis of compilation is so widely different from that utilized in the censuses that it is obvious that there is no comparability whatever, and hence no reliance at all can be placed on these particular figures.

As between 1901 and 1936 the number of males engaged in this category has increased by 170 per cent. When this is compared with the number of males engaged in secondary industries, which had increased by 82 per cent. over the same period, and the increase of 117 per cent. in the number of males engaged in commerce and finance over the same period, some idea of the increased importance of this service to the community can be estimated.

Over the same period the number of females increased by over 220 per cent., as compared with an increase of 68 per cent. in the secondary industries and 330 per cent. in the commerce and finance field. As pointed out elsewhere the service industries become more and more important as society develops, and probably at no period in human history has this development been so rapid as during the present century. The increase of females, both in this field and in the field of commerce and finance, is in itself an illustration of the growing realization of equality of status as between males and females in these particular branches of human endeavour. The entrance of women into professional life, and the increasing number of women engaged in important and responsible positions in the public services, are too well known to require any comment in a Report such as this.

The following table reduces the crude figures to index numbers to give a clearer picture of the development during the period under review :—

Table No. 109.—Table showing Index Numbers of Persons occupied in Public Administration and Professional Occupations at various Census Dates from 1901 to 1936

(1901 = 1000)

Year.	Males.	Females.	Totals.
1901	1000	1000	1000
1906	1100	1177	1130
1911	1333	1451	1379
1916	1722	1949	1809
1921	2180	2551	2324
1926	2509	2768	2609
1936	2710	3200	2900

NOTE.—The figures for 1945 are not included, because, as previously stated, they are too unreliable to give a true picture of the development.

D. DOMESTIC AND PERSONAL

Under this heading are included all those engaged in the paid domestic and personal services, including those engaged in hotels and restaurants, and those engaged in such occupations as hairdressing, laundries, office cleaning, and private domestic service.

The following table shows the numbers engaged in these particular categories between 1901 and 1945 :—

Table No. 110.—Table showing the Number engaged in Paid Domestic and Personal Services at the various Censuses between 1901 and 1936, together with an Estimate of those so engaged in 1945

Year.	Males.	Females.	Total.
1901	6,542	27,852	34,394
1906	7,396	30,159	37,555
1911	8,907	33,298	42,205
1916	8,769	31,686	40,455
1921	8,927	32,762	41,689
1926	8,084	36,416	44,500
1936	12,263	44,482	56,745
1945	42,000	82,000	126,000

NOTE —The estimate for 1945 is obviously compiled on an entirely different basis from that for previous years, and hence, for comparative purposes, can be completely ignored.

As far as males are concerned, between 1901 and 1921 the increase in the number employed in this particular type of occupation increased practically at the same rate as the population. There was a relative falling-off in this type of occupation between 1901 and 1926, but a very steep rise between 1926 and 1936. It is interesting, therefore, to trace out the reasons for this increase. In 1926 there were 875 males engaged in private domestic service, including indoor and outdoor occupations. This includes such occupations as domestic servants, cooks, motor-drivers, and suchlike. The figure for 1936 was 2,684. This increase is doubtless a reflex of the depression period, when, owing to the absence of other occupations, many persons turned to paid domestic employment as a means of livelihood. The figures for licensed hotels have remained fairly steady since the 1914–18 war, being 3,944 males in 1921, 3,873 in 1926, 4,070 in 1936. Private hotels fell fairly steadily from 1,009 in 1921 to 659 in 1926, but rose to 788 in 1936. This rise is probably accounted for by the same reason as the rise in domestic employment. The figure has probably fallen again since 1936, since the tendency to maintain private hotels and boardinghouses is fast dying out in favour of the practice of room-letting.

As showing one further development, the figures for males engaged in hairdressing and related occupations are of interest, having risen from 910 in 1921, to 1,743 in 1936.

A similar analysis of statistics for females shows that, while there were 20,621 engaged in private domestic service in 1921, this figure had risen to 32,064 in 1936. Those classified as domestic servants had risen over the same period from 15,559 to 29,262. The 1936 figure, however, is probably swollen on account of the previous economic depression which drove many women from factories and offices back into paid domestic service. Over the same period, however, the numbers of women engaged in licensed hotels had fallen from 4,107 to 3,308 ; in private hotels and boardinghouses from 4,627 to 3,259 ; in restaurants the number had risen from 2,200 to 2,982. Woman hairdressers had risen from 149 to 1,558. This rise is indicative of the change in hairdressing fashions among women.

The following table reduces the above figures to index numbers: —

Table No. 111.—Table showing Index Numbers of Persons engaged in Paid Domestic and Personal Service at various Census Dates from 1901 to 1936

Year.	Males.	Females.	Total.
1901	1000	1000	1000
1906	1131	1083	1091
1911	1361	1196	1228
1916	1341	1136	1179
1921	1365	1176	1213
1926	1236	1308	1294
1936	1878	1561	1650

This table shows in a marked way the drift back to paid domestic service during the depression. The trend in subsequent years has been all the other way. There is a general trend away from domestic service, and considerable evidence was adduced to show that there was a very acute shortage of domestic servants at the present time. The situation is very interesting. As society progresses there is a greater demand for assistance in the home and for such paid domestic services as assistants in hotels, but in actual fact the attraction to this work is very much less than the attraction into certain other types of occupation, and, in general, the remuneration is considerably lower on the average than in those other occupations. Hence the paradox arises that society in its progress is able to afford considerably increased domestic assistance, but the very fact of that social progress makes such domestic assistance less and less available.

XIII. GOVERNMENT EMPLOYEES

The importance of Government employment in New Zealand, whether in the central or the local Government, is well illustrated in the following tables. The first table shows the absolute number employed in the central Government services at the census dates in 1921, 1926, and 1936; the second table shows the local government employees at the same date, while the third table shows the total central and local Government employees as at the same dates:—

Table No. 112.—Table showing Employees of Central Government in 1921, 1926, and 1936, classified according to Type of Occupation

	1921.			1926.			1936.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1. Primary industry ..	1,552	70	1,622	1,514	45	1,559	2,468	95	2,563
2. Secondary industry ..	3,652	143	3,795	4,993	129	5,122	12,442	195	12,637
3. Tertiary industry—									
(*a*) Transport and communication	22,438	1,961	24,399	25,105	1,599	26,704	26,371	1,290	27,661
(*b*) Commerce and finance	1,018	283	1,301	1,074	295	1,369	1,596	458	2,054
(*c*) Public administration and professional	8,422	2,325	10,747	8,299	2,201	10,500	8,201	2,625	10,826
(*d*) Domestic and personal	151	252	403	23	128	151	151	302	453
(*e*) Total tertiary ..	32,029	4,821	36,850	34,501	4,223	37,724	36,319	4,675	40,994
4. Total	37,233	5,034	42,267	41,008	4,397	45,405	51,229	4,965	56,194

Table No. 113.—Table showing Employees of Local Government in 1921, 1926, and 1936, classified according to Type of Occupation

	1921.			1926.			1936.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1. Primary industry ..	251	..	251	353	1	354	395	2	397
2. Secondary industry ..	4,161	25	4,186	7,575	131	7,706	8,887	222	9,109
3. Tertiary industry—									
(*a*) Transport and communication	4,685	59	4,744	5,534	95	5,629	4,946	80	5,026
(*b*) Commerce and finance	54	9	63	117	14	131	143	9	152
(*c*) Public administration and professional	8,624	8,471	17,095	11,692	9,900	21,592	12,445	10,405	22,850
(*d*) Domestic andpersonal	92	8	100	30	28	58	13	8	21
(*e*) Total tertiary ..	13,455	8,547	22,002	17,373	10,837	27,410	17,547	10,502	28,049
4. Total	17,867	8,572	26,439	25,301	10,969	35,470	26,829	10,726	37,555

Table No. 114.—Table showing Employees of both Central and Local Government in 1921, 1926, and 1936, classified according to Type of Occupation

	1921.			1926.			1936.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1. Primary industry ..	1,803	70	1,873	1,867	46	1,913	2,863	97	2,960
2. Secondary industry ..	7,813	168	7,981	12,568	260	12,828	21,329	417	22,746
3. Tertiary industry—									
(*a*) Transport and communication	27,123	2,020	29,143	30,639	1,694	32,333	31,317	1,370	32,687
(*b*) Commerce and finance	1,072	292	1,364	1,191	309	1,500	1,739	467	2,206
(*c*) Public administration and professional	17,046	10,796	27,842	19,991	12,101	32,092	20,646	13,030	33,676
(*d*) Domestic and personal	245	260	505	53	156	209	164	310	474
(*e*) Total tertiary ..	45,484	13,368	58,852	51,874	14,260	66,134	53,866	15,177	69,043
4. Total	55,100	13,606	68,706	66,309	14,566	80,875	78,058	15,591	93,749

Unfortunately, comparable figures are not available subsequent to 1936. The figures for the industrial distribution of the population as at the 1945 census are not yet available.* The figures, however, show very interesting trends over the fifteen years under review. Admittedly, the figures for 1936 are seriously affected by the depression, which was in the course of lifting at this period. As between 1921 and 1936 there were 14,000 more males employed in the Government services, while the number of females was approximately the same. There were, therefore, 14,000 more, both males and females, employed in the central Government in 1936 than in 1921. The individual figures, however, are of considerably greater interest. Of males employed by the central Government in occupations connected with primary industries there were 900 more in 1936 than in 1921. In the secondary industries, which include the constructional industries, there was a very great increase during the period, largely due to very heavy road-construction programmes which were in the course of development in 1936. Under this heading of "Construction and Maintenance of Roads" there were approximately 6,000 persons engaged, other than administrative officers, in 1936, as compared with 760 in 1921. On the other hand, in the construction of railways, &c., there were 1,053 employees of the Government in 1921, while in 1936 there were only 159 so employed. One factor which to some extent destroys the comparability of these figures is the fact that in the 1921 census Government administrative officers do not appear to have been classified as engaged in the construction of roads, railways, and earthworks. The number of administrative officers so classified in 1936 was 1,692. There was a considerable expansion of the number

* At the end of this chapter is a short statement compiled from various official sources showing Government employees at a recent date.

engaged in transport and communication as between 1921 and 1936. Under this heading are comprised not only railway and similar transport workers, but also persons engaged in the Post and Telegraph Department. The increase of 3,300 over the period under review doubtless reflects the increased use of motor transport and the development of the railway services. The heading "Commerce and Finance" includes such institutions as the Public Trust, the State Insurance Offices, and the employment agencies of the Labour Department, and the increase of approximately 600 males and 170 females reflects particularly the expansion of the Public Trust Office, but also to some extent the expansion in the activities of the State Insurance Department and of the employment agencies.

The figure for those engaged in public administration and professional work, which includes, besides those specifically classified as engaged in public administration, those engaged in defence, law and order, religion and social welfare, health, and education, is more stable over the period. There was some wide internal fluctuations within this group, but generally the figure has remained very steady. This steadiness, however, is perhaps deceptive in that during the period between 1931 and 1936 there were very heavy retrenchments within the service, while the normal recruitment programme was not proceeded with. As a consequence, the figures for 1936 were abnormally low, and will show a very marked increase in 1945.

In the local government field the increase of approximately 11,000 as between 1921 and 1936 is due largely to a major increase in the number engaged on roadmaking and a very heavy increase in the number engaged in electric light and power work and supply. The roadmaking again reflects the employment-promotion policy of the time, while the increase in the electric-light field reflects the development of the Power Boards and the spread of electricity throughout the community. The fluctuations under the heading of "Transport and Communications" are relatively minor, although as between 1926 and 1936 there was a fall of over 600, probably as a result of the cutting-out of services due to the depression. Under the heading of "Public Administration and Professional" there was a steady and continuous increase of approximately 4,000 males and 2,000 females as between 1921 and 1936. Within the administrative field there was an increase of 1,700 male officers. Teachers are classified as employees of local bodies on the understanding that Education Boards are local bodies. There was an increase of 1,200 males and about 500 females in the teaching profession. There was an increase of over 2,000 in the female staffs of hospitals and 600 in the male staffs. The increase in the education and public-health activities of local bodies is indicative of the improved facilities which were made available in the period under review.

Of all Government employees the largest group is the group engaged in general administration, which absorbed approximately 36 per cent. of the total Government employees, both central and local, in 1936. The next largest group was the field of transport and communications which absorbed slightly less, about 35 per cent. It is particularly interesting to notice that in the public administration group there were only 2,000 less females than males employed in local bodies in 1936, the respective figures being 12,445 and 10,405.

Relevant to this question of Government employees is the proportion of the total occupied personnel which are engaged in Government services. Figures of these details are given in the next table:—

Table No. 115.—Table showing the Percentage of Government Employees (both Central and Local) to the Total Occupied Personnel in 1921, 1926, and 1936 respectively

Year.	Central Government.			Local Government.			Total.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
1921 ..	9·5	4·7	8·5	4·6	8·0	5·3	14·1	12·7	13·8
1926 ..	9·9	4·1	8·7	6·1	9·6	6·8	16·0	13·7	15·5
1936 ..	10·6	3·7	9·1	5·6	8·1	6·1	16·2	11·8	15·2

The table shows that in the central Government the proportion rose from 9·5 per cent. in 1921 to 10·6 per cent. in 1936, of males; females fell from 4·7 per cent. to 3·7 per cent., while the total employed by the central Government rose from 8·5 per cent. to 9·1 per cent. of the total occupied personnel. In the local government field, for males the figure rose from 4·6 per cent. in 1921 to 5·6 per cent. in 1936; for females, although there was a rise from 8 per cent. to 9·6 per cent. between 1921 and 1926, there was a fall from 9·6 per cent. to 8·1 per cent. between 1926 and 1936. The total figure for local Government employees rose from 5·3 per cent. to 6·1 per cent. of the total occupied personnel between 1921 and 1936. Taking both the central and local Government employees together, the male employees in 1921 represented 14·1 per cent. of the total occupied personnel in the community, or approximately one in seven, and had risen to 16·2 per cent. by 1936, or approximately one in six; for females the figure had fallen from 12·7 per cent. to 11·8 per cent., while the total figure for males and females rose from 13·8 per cent. in 1921 to 15·2 per cent. in 1936.

It must again be emphasized that these figures must be read with very great caution. The number of Government employees in 1936 was considerably below the normal complement, due to the depression, which had not properly passed by 1936, and the influx of Government employees had not recommenced by the time the census was taken. Subsequent figures would show a very great increase.

As stated earlier in this section, comparable figures for Government employees at a date later than 1936 are not available. However, statistics have been compiled from various departmental sources showing the total number of State employees for 1946. It needs to be remembered in dealing with these figures, however, that they are definitely not comparable with the figures given for earlier census dates, although taken together with those figures, they do give some indication of the trends.

Table No. 116.—Table showing the Number of Persons engaged by the Central Government in 1946

Public servants employed under the Public Service Commissioner—		
Permanent	12,614	
Temporary	17,565	
Casual	15,353	
On military leave (included above)	3,606	
Total		45,532
Railways Department—		
Permanent	12,587	
Casual	13,671	
On military leave	700	
Total		26,958
Post and Telegraph Department—		
Permanent	11,522	
Temporary	2,785	
Casual	1,440	
On military leave	920	
Total		16,667
NOTE.—This does not include persons engaged part time by the Post Office in such institutions as country stores, where the storekeeper acts as postmaster.		
Teachers		8,492*
Police		1,503
Grand total		99,152

* As at the end of 1945.

NOTE.—These figures do not include the permanent staff of the Army, Navy, or Air Force, employees of the Legislative Department, nor in certain small minor semi-public bodies. In particular, these figures do not include employees of the Bank of New Zealand, the Reserve Bank, the Waterfront Control Commission, Linen Flax Corporation, and others.

The following table, while not strictly comparable throughout at all periods, does give some idea of the growth of State employment over the past two decades :—

Table No. 117.—Table showing the Number of Employees of the Central Government at the Censuses 1921, 1926, and 1936, and an Estimate for the Employees at 1946

1921	42,267
1926	45,405
1936	56,194
1946	99,152

The very rapid increase in the number of public servants in the past decade is merely a reflex of the increased Government activity over the period. One has only to mention the inception of such Departments as the Social Security, Housing Construction, Hydro-electric Construction, Industries and Commerce (Ministry of Supply), and many others, including the Public Works Department, which will come easily to mind, to realize why the number of State employees has increased at such a rapid rate. Increased social services inevitably mean increased employees to administer those services. In view of the present shortage of staff, and possible further Government activity, there is little doubt that this number will increase in years to come.

In the local government field there has also been a very considerable increase. Apart from employees of Hospital Boards, including nurses and other professional servants, the total number employed by local bodies at the last available date, the 31st March, 1943, was 30,381, to which must be added 12,096 employees of Hospital Boards, making a grand total of 42,477. This figure has also shown a considerable increase over the period, as will be seen from the following table :—

Table No. 118.—Table showing the Number of Employees of Local Governing Bodies as at the various Censuses between 1921 and 1936, and also for 1943

Year.	Males.	Females.	Total.
1921	17,867	8,572	26,439
1926	25,301	10,169	35,470
1936	26,829	10,726	37,555
1943	(Not available)		42,477

NOTE.—The figures for 1943 are constructed on an entirely different basis from those for the censuses, and hence must be used with very great caution.

The very large increase in the number of employees of local bodies is due to some extent to the large increase in the staffs of hospitals and related institutions. No adequate figures are available to show the exact extent of the increase, but in passing it can be pointed out that, according to the census of 1936, there were nearly 6,000 employees of public hospitals, including Government hospitals, but not including mental hospitals. Although the figure has now risen to approximately 12,000, this includes elements not included in the census figures, and it would therefore probably be safe to say that the hospital staffs have increased by at least 50 per cent. during the period 1936 to 1942.

In 1945 approximately 13·6 per cent. of the occupied population were employed by the central Government, and 5·8 per cent. by the local governing authorities of the Dominion. The total employees of both central Government and local bodies amounted to approximately 19 per cent. of the total occupied population, as compared with 15·2 per cent in 1936.

PART II—CONCLUSIONS

I. NATURAL INCREASE

A. BIRTH-RATE

The purpose of any study of population development is to provide an indication of the trends at the present time. It is obvious that State policy in various fields must take account of population movements. Developments which would be justifiable with a rapidly increasing population would, other things being equal, be unwise if population were rapidly decreasing. It therefore becomes important, in view of the trends operating at the present time, to examine the population potential of New Zealand.

It has been shown previously that the birth-rate in 1880 was 40·78 per 1,000 of the population. This fell very rapidly until 1935, when it was 16·17 per 1,000. Since that date the general trend has been upwards, so that by 1945, when the birth-rate was 23·22 per 1,000, it was higher than at any time since 1921. The position in the early months of 1946 suggests that this higher birth-rate is being maintained. The question naturally arises as to whether this upward trend will continue or whether, as following the last war, it will tend to fall. After the last war, with the return of the troops, the birth-rate increased for a time, but within two years the previous falling tendency re-asserted itself. There is little doubt that the figures during the depression, which were between 16 and 17 per 1,000, were abnormally low. This was probably due to the prevailing economic insecurity of the period, and, therefore, the return of some degree of economic security did materially affect the birth-rate. The figures continued their upward trend in general during the war. There is little doubt that a sense of economic security has a definite effect on the birth-rate. No investigations have been made as to the possible effects of the provisions of the Social Security Act against sickness and unemployment. It is also too early to assess the probable effects of the family allowances in so far as these particular policies have promoted a sense of economic security and have assisted in raising the general standard of living. There is little doubt that they have removed one of the disincentives to the production of children. Leaving out of account for the moment the effects of family allowances, however, we are of opinion that the recent increases in the birth-rate are probably abnormally high. The long-term downward trend of the birth-rate, which has been in operation for many years not only in New Zealand, but in other countries with a western civilization, will probably re-assert itself, although the very low figures of the depression years will probably not be reached. On page 12 of this report we gave some figures of the net reproduction rate in New Zealand. It was there pointed out that potential population depends to a very large extent on the number of females born at any period. It was shown that when the net reproduction rate was lower than 1, population was not reproducing itself. With the birth-rate as low as it was in 1936 and 1937, the rate was just below 1, and, if this tendency had continued, in the course of a generation or so the aggregate size of the population would have tended to fall. Since 1938 the rate has been greater than 1, reaching a maximum of 1·274 in 1941. It would appear that, if we assume that the rate in 1936 is lower than normal and the rate in recent years, particularly 1945, is higher than normal, we would probably be justified in stating that in general the net reproduction rate will tend to be in the immediate future somewhat over 1, meaning that the population will gradually rise. It would be unwise to draw any sweeping deductions regarding the future from the present relatively favourable position. Our immediate pre-war position, however, though affording no grounds for complacency, compares quite well with the position in most European countries, including Great Britain, where they are faced with a population decline in the not too distant future. The present birth-rate, although higher than for many years previously, affords no grounds for satisfaction. A very close check should be kept in the years immediately ahead in order to attempt to isolate the effects of the family allowances on the size of families in the Dominion.

While admitting that economic considerations are very important in this regard, we do not ignore the fact that social considerations frequently tend to cause a limitation of families. The emancipation of women and the desire of women in general to take a larger part in the social and economic life of the community does definitely form a reason for the restriction in the size of families. Some witnesses suggested that the matter of domestic help was one of the reasons for family restrictions. We cannot think that this is a really important factor as far as the majority are concerned. Admittedly, in certain of the more well-to-do families the absence of domestic help is important, but domestic help has not been common in New Zealand as far as the rank and file of the community are concerned, and consequently its absence cannot materially affect the number of children.

B. THE MARRIAGE-RATE

There has been some suggestion that one of the causes of a declining population in New Zealand has been the tendency for the marriage-rate to decline. Statistics have been given to show that, at least from the end of the 1914–18 war onward, the rate has been remarkably steady, except that during the depression years of 1931, 1932, and 1933 it was very low, while during the years 1938, 1939, and 1940 it was very high. The explanation is probably simple, in that the depression did definitely restrict the possibility of marriage, while the returning prosperity in 1938 and 1939 did make it possible for more marriages to be consummated. The high figures in 1940 and again in 1944 and 1945 are probably due to causes related to the war. Actually there has been little change over a long period in average age of marriage. The tendency has been, if anything, downwards. The average age of mothers at the birth of their first child has been very steady for over thirty years, although there has been some tendency for the marriage to have been in existence longer before the first child was born. In 1914, 35·89 per cent. of the first births were to women between twenty and twenty-five years of age; in 1943, 42·53 per cent. of the first births were to women in this age-group. There was, however, a fairly substantial drop in the number of first births to women over thirty years of age. Hence, the reason for the decline in the birth-rate cannot be found in any tendency to postpone marriage or for a smaller proportion of the community to be married. The marriage-rate, which was 7·28 in 1900, was 7·85 in 1925, 6·81 in 1932, and had risen to 10·09 in 1938, and even during the war was 7·53 in 1943. Since there is no tendency for the marriage-rate to fall, but, rather, for it to increase, it is obvious that the fall in the birth-rate is to be explained in terms of the tendency to limit the size of families. No adequate statistics over a long period are available in this regard. It would seem, however, that the size of families has fallen from over 3 children just before the 1914–18 war, to under 2½ of recent years. The tendency since 1943, however, has been in an upward direction, for the reasons given earlier.

II. THE PROBLEM OF AGRICULTURAL DEVELOPMENT

In a previous section of this report it was pointed out that the scope for geographical expansion of agriculture in New Zealand was definitely limited. Practically all of the available and suitable land has been taken up. Figures supplied by the Lands and Survey Department give an estimate of 244,000 acres of new land only available for new settlement in the immediate future. The Rehabilitation Department in evidence stated that approximately 8,000 unit properties will be required to settle ex-servicemen who are or will be desirous of acquiring properties of their own. The Lands Department estimate that of this 8,000, some 3,000 men will establish themselves on farms with or without financial aid, presumably by buying existing farms. This category will not mean increased settlement. The balance, 5,000, will in part mean increased settlement. For this 5,000 the Lands Department estimate that it will have to provide 1,200,000 acres of land, either by acquisition of occupied holdings capable of subdivision or by the development of undeveloped Crown lands. The actual land purchased to 30th April, 1946, totals 277,000 acres, of which 100,000 acres has been settled. In addition, there are the land-

development blocks on which work was commenced in the "thirties." These blocks total 214,290 acres, but of this, 35,000 acres is considered as unsuitable for development and 69,000 acres capable of development but as yet completely unimproved. This leaves 100,000 acres capable of being farmed at the moment, but approximately 25,000 acres of this is required for base farms for the purpose of developing other lands. The balance available for early settlement (subject always to supplies of manure and other materials being available) could be put at 75,000 acres. It is estimated that there are not more than 100,000 acres of undeveloped Crown land capable of development. There are, thus, 169,000 acres of Crown land capable of development, but not developed; 75,000 acres of Crown land developed; and 177,000 acres of acquired land available for settlement. Summing up, there are approximately 250,000 acres available for settlement and 169,000 acres undeveloped but capable of development, a total of approximately 420,000 acres. As stated above, the requirements of 5,000 new settlers is 1,200,000 acres. Hence, some 800,000 acres of occupied land will need to be purchased.

The above argument has proceeded on the assumption that farm-management techniques will remain unaltered and hence that existing second- and third-grade land will remain second- and third-grade land respectively, and therefore will not be capable of closer settlement. This assumption is by no means proved, but it would be unwise to plan for closer settlement of these areas unless some radical changes in productive capacity were distinctly foreseen. Another possible development is the subdivision of existing farms so as to encourage further settlement. With increasing carrying-capacity, particularly on dairy-farms, there will be a tendency to reduce the size of the average farm. In view, however, of the existing structure of subdivisions this possibility is rather remote. No major immediate increase in land settlement can be looked for from this source.

The conclusion to be drawn from the above argument is that there is little possibility of a largely increased agricultural population in New Zealand. This is not to say that the actual agricultural production will not expand. The expansion of the last two decades has shown that, due to improved farm-management techniques and to the advance of mechanization, the volume of production, both in the aggregate and per unit of labour employed, has increased in a major degree. This tendency will, other things being equal, continue.

If the above argument is correct, then, apart from the 5,000 ex-servicemen to be settled on the land, there is no great scope for further agricultural population. From evidence produced by the Director of Employment it would appear that even at the present time there is no great demand for farm labour. The following table shows the notified male vacancies for labour in farming. Female vacancies are almost negligible :—

Table No. 119.—Table showing Male Vacancies for Farm Labour recorded by the Employment Department in 1946

Date.	Number.	Farming Vacancies as a Percentage of Total Male Recorded Vacancies.
31st January	280	4·9
28th February	281	4·1
31st March	259	3·6
30th April	167	2·4
31st May	235	3·2
30th June	304	3·8
31st July	364	4·5

Although approximately 30 per cent. of the male occupied population is engaged in the farming industry, only 4·5 per cent. of the current total of notified male vacancies in all industries relates to farming. The Director of Employment states :—

District Employment Officers in farming areas report that increasing difficulty is being experienced in placing workers on farms in view of the small number of openings and the lack of suitable accommodation for workers. At present in some districts there is actually more labour offering than can be absorbed.

It is true that housing and accommodation difficulties are preventing some married couples from undertaking farm work, and some men do actually leave farming on marriage due to the fact that houses are not available. This, however, is not a problem only of the recent war years, but has been existent for some years. The Director of Employment continues :—

> A consideration of the various points set out above leads to the conclusion that the supply of permanent farm labour is to-day very nearly equal with the demand. As soon as farm machinery becomes more fully available it is to be expected that further mechanization will take place, and this is likely to offset very largely any increase in demand for permanent labour resulting from further increase in the area under cultivation.

From the evidence available there is, therefore, no substantial case for the immigration of permanent farm hands in any number. As the Director of Employment states :—

> With the present overall shortage of labour, the provision of seasonal labour for farming is likely to present some difficulties, although the experience of the past season suggests that these will not be great. . . . No case can be held for the specific immigration of seasonal farm workers.

III. SECONDARY INDUSTRIES

The most important development which is taking place in New Zealand at the present time is the expansion of secondary industries. The absolute importance of agriculture has not declined, rather it has continued to expand, but the potential relative importance of secondary industries is much greater. As has been shown previously, this development cannot be accounted for by any single factor. World conditions during and subsequent to the depression, and later, the world war forced New Zealand to adopt certain measures to provide itself with the requisite industrial products. Particularly important in this regard has been the monetary and financial conditions existing in the world since about 1931. The instability of the foreign exchanges and the non-availability of overseas funds resulted in certain exchange adjustments, which resulted in some reduction of certain classes of imports. These facts, coupled with a positive tariff policy as from approximately 1933, together with the administration of the import rationing proposals as from the end of 1938, gave very material protection to many industries in the Dominion.

Even before the last war there was evidence of major expansion in certain directions, particularly in the metal-working, engineering, and clothing fields. The war introduced another important factor. The absolute non-availability of certain classes of goods forced New Zealand to invest considerable sums of money in heavy capital equipment, which, in the first place, was devoted entirely to war purposes, either directly for the supply of munitions and equipment of the Armed Forces, or to supply the civilian wartime requirements. Much of this capital equipment remains, and a good proportion of it can be turned to peacetime requirements. Among such developments can be mentioned the munition-making plants, the linen-flax plants, some dehydration plants, and the expansion of the textile and clothing industry.

Another very important factor has been the stabilization policy as pursued in New Zealand which has resulted in keeping down costs in New Zealand relative to the costs overseas. In England and America costs of all types have risen very considerably, with the result that the comparative cost structure in New Zealand is now definitely in favour of the New Zealand manufacturer, at least in many lines. There was some evidence before the Committee, for instance, that in certain commercial lines New Zealand was able to export manufactured goods, even to America, on a competitive basis.

The net effect of these various and interacting movements has been to stimulate manufacturing industries in the Dominion. Add to all these factors the world shortage in all types of consumable commodities, together with the very greatly increased purchasing-power in the hands of the public, and it can easily be seen why in New Zealand, as in most other countries, there is a tremendous shortage of all types of goods, including manufactured articles. Quite apart from any of these factors, however, this world shortage makes it physically impossible to supply from imports, even if they are available, the internal demands of this Dominion. The conclusions to be drawn from this brief summary, together with the statistical analysis given earlier, is that in the immediate future, if not in the long run, New Zealand will continue to develop its secondary industries.. At the present moment it has been shown there is a grave shortage of operatives for secondary industries. This shortage carries over into the tertiary industries. The major question which the Committee has to consider is as to what is the source from which the shortage of operatives in secondary industries can be satisfied. As far as new entrants into industries is concerned, the position for the next seven or eight years is extremely serious. This is largely due to the heavy fall in the birth-rate during the depression, a fall which is now beginning to have its influence on the number of adolescents available to enter the industrial field. This gap in the birth-rate will have important repercussions not only in the next seven or eight years, but for two or three decades, because a gap in the birth-rate cannot from internal sources be rectified. While improved methods of technical education and technological developments can improve the efficiency of the worker, and hence increase the output, in the short run at least the effect of this decline in the number of new operatives must affect the output. Various witnesses, including the Industries and Commerce Department, Manufacturers' Federation, the Federation of Labour, and suchlike institutions suggested that the remedy was to be found in bringing certain types of immigrants into the country. No first-hand information was available to us as to the possibility of finding such immigrants. An Australian Commission of Inquiry which recently reported to the Federal Government after an investigation in England and northern Europe suggested that there was little labour available from any of these countries for immigration to Australia. In general, their report may be summed up as stating that most northern European countries have so much leeway to make up in their own reconstruction work and in the development of their own industries that the Governments in these countries are unwilling to agree to any large-scale emigration policy. On the other hand, there was some suggestion from other quarters and from newspaper reports that there were some people in countries like Denmark and Holland, and possibly Poland, who were anxious to come to New Zealand. There is also some evidence that the New Zealand High Commissioner in London is receiving large numbers of applications from persons anxious to reside in this country. None of the evidence available to us, however, was sufficient for us to form a final conclusion on this matter. We will set out at a later stage in this report our view that a delegation should at an early date visit Great Britain and the northern European countries to ascertain at first hand if and where emigrants are available. Even if they are available, however, we find ourselves in the serious situation that at present shipping is not available to make any large-scale immigration plan feasible, and, further, the housing problem in New Zealand is so serious that even a few thousand immigrants would create a very serious internal housing problem. Our final conclusion on this matter, therefore, is that New Zealand cannot from its own man-power resources, either at present or in the immediate future, satisfy the demands of secondary industries. Unless those demands are satisfied, there will be some disincentive to continue industrial expansion in the Dominion, a factor which may have serious effects in the future. Even if in the immediate future it is impossible to bring all the immigrants desirable to the Dominion, steps should be taken straight away to make preparations, so that when it is possible in this country to house immigrants they can be immediately brought here.

IV. TERTIARY INDUSTRIES

The development of tertiary industries in the Dominion is a result of the development of agricultural and manufacturing industries. Any expansion of population, and all expansion of the agricultural and secondary industries, will, other things being equal, create a demand for the tertiary industries of the service type. The demand for transport, for instance, is definitely related not only to the size of the population, but to its economic activity. The growth in size of the public services has some connection with the prosperity of the country. The shortages now evident in these tertiary industries has quite definitely some relation to the dislocations which took place as a result of the war. While many improvements in existing facilities are desirable, yet from the evidence which we have received it would appear that no major capital works are immediately necessary to cope with potential demands in the immediate future in the tertiary field(1). It has been shown earlier that the Railways Department at least as far as the permanent way is concerned, is capable of coping with a considerable expansion of traffic with little extra capital expenditure in this direction. As far as rolling-stock is concerned, on the other hand, there may be some major expenditure involved. Although it was shown in evidence that there were some serious shortages of staff, the shortages in these industries are not so serious as the shortages in secondary industries, although undoubtedly if secondary industries were fully staffed, and if this activity was producing up to the full demands of the community as a whole, then there would require to be some major extensions of employment possibilities within the tertiary industries. This difficulty, however, has not emerged up to the present time, and we do not think there is any call at the moment to consider immigration to staff the tertiary industries.

V. RACIAL ABSORPTION

Several witnesses who appeared before the Committee, while admitting that the immigration of people of British stock was most desirable, submitted that it may not be possible at the present time to get a large number of such immigrants. They therefore suggested that steps should be taken to encourage other European immigrants to come to this country. On this subject the Committee made certain inquiries and heard evidence, particularly from departmental officers whose duties brought them into contact with aliens during the war. Evidence is not wanting to show that the Norwegian, Swedish, and Danish immigrants who arrived in New Zealand last century did make excellent settlers, and over the years have become almost completely absorbed into the New Zealand population. Practically no problems have arisen in connection with these types. On the other hand, there was some suggestion that certain southern European types have tended to remain segregated into groups, and have not become completely absorbed into New Zealand's population. We think it important to comment that, if it is proposed to encourage the immigration of other European types, they should be of such a character as will, within a relatively short time, become completely assimilated with the New Zealand population and have a distinctly New Zealand point of view. Quite apart from any questions of allegiance to the King's enemies, the emergence of racial islands in such a small country as New Zealand must inevitably lead to serious maladjustments. The southern European tends at times to be merely an itinerant settler in this country, and in many cases retains his roots in the country of his origin. There is some evidence that when such settlers have accumulated a certain amount of wealth they tend to return to the country of their origin, and have no intention whatever of ultimately becoming New Zealand citizens. This is quite apart altogether from any question of naturalization. In some cases naturalization has been obtained for purely selfish reasons without any real feeling of allegiance to this country. We therefore feel that if any positive steps are taken to encourage immigrants other than from Great Britain they should be found in northern European countries.

(1) Hydro-electric supply is classified as a secondary industry. Urgent expansion of output is necessary in this industry.

As stated earlier, there was evidence that some Danes and Hollanders were anxious to come to this country. When immigration is possible, and if sufficient numbers are not available from Great Britain, we think that steps should be taken to encourage such types rather than open the country to an indiscriminate immigration of other European types.

We have given considerable thought to the question of the immigration of Jewish refugees. The Jewish community in New Zealand gave evidence before us to the effect that a considerable number of Jewish people living in the Dominion had close relatives—parents, brothers, and sisters, and, in some cases, children—who were still living in impossible circumstances in Europe. In addition, it was pointed out that there were a large number of Jewish orphans, and the Jewish community in New Zealand was anxious to assist not only in the support of relatives of those already living in New Zealand, but also in connection with such orphans. Representations made to us on behalf of the Jewish community in New Zealand were to the effect that inquiries had been made covering the whole of the Jewish community in New Zealand as to the number of persons who would be involved in such proposals, and the present estimate is that the number is approximately 500. The submissions emphasized that such immigrants would not be a charge on the public purse, and that the present Jewish residents in New Zealand would accept all responsibility for their maintenance and for their housing. This latter point was emphasized. In cross-examination it was pointed out to the witnesses that the housing situation in New Zealand was so desperate as to make it impossible to recommend any immediate immigration policy which would have the effect of creating any extra demand for houses. The reply was that the Jewish community would accept full and complete responsibility for the housing of these people. In so far as parents were involved, it was pointed out that they were mostly aged people who would be cared for by their children and would not require separate housing. As far as the orphan children were concerned, it was proposed that these would be to all intents and purposes adopted by Jewish families in the Dominion.

No person who has followed the trials of the Jewish race over the past decade can but feel considerable sympathy for them. We have discussed this subject at some length and, in view of the fact that matters of high Government policy are concerned and that the Government has, over the years, particularly prior to the war, accepted a number of such Jewish refugees, we think that we will have fulfilled our responsibilities in this regard if we bring this matter to the notice of the Government. In view of the housing situation and of the demand at the present time for special types of workers, we doubt whether it is advisable to recommend any preferential treatment to any particular type of immigrant, although some obligation on New Zealand's part in connection with displaced people in Europe is inescapable.

VI. EDUCATIONAL PROBLEMS

Changes in the rate of population growth have an early effect on the administration of education. The Education Department comes into the picture at the point where teachers and school buildings must be provided for the child population. It can be assumed that, in spite of difficulties, the country can in normal times cope with the increased demands resulting solely from a rising birth-rate, since the Education authorities have at least four years' warning of any increase in the number of school entrants. The decision, however, to increase the child population by immigration raises major difficulties where the school system is geared to providing for the natural increase alone. Further sudden or marked changes in the natural increase may cause, in the short run, serious maladjustment between the supply of teachers and buildings and the school population. In the sequel it is proposed to deal separately with the question of (*a*) supply of school buildings, and (*b*) supply of teachers.

A. SUPPLY OF SCHOOL BUILDINGS

I. Present Position

A great many New Zealand schools, especially in the North Island, are at present full to overflowing, and there is an acute shortage of school buildings in many areas. The main reasons for this shortage are—

(*a*) *The Double Check to the School-building Programme that resulted from the Financial Depression and the War.*—Far from being in a strong position to meet new demands, the Education Department is still struggling to catch up arrears. The following table shows the position in terms of capital expenditure on schools between the years 1930 and 1945 :—

Table No. 120.—Table showing Capital Expenditure on School Buildings

Financial year ended—	Amount. £	Financial year ended—	Amount. £
31st March, 1930 ..	443,885	31st March, 1939 ..	727,078
31st March, 1931 ..	501,344	31st March, 1940 ..	851,726
31st March, 1932 ..	259,148	31st March, 1941 ..	555,572
31st March, 1933 ..	52,623	31st March, 1942 ..	465,686
31st March, 1934 ..	51,435	31st March, 1943 ..	207,391
31st March, 1935 ..	62,183	31st March, 1944 ..	236,137
31st March, 1936 ..	169,733	31st March, 1945 ..	477,393
31st March, 1937 ..	276,732	31st March, 1946 ..	1,187,546
31st March, 1938 ..	554,569		

(*b*) *The Increased Number of Births* in New Zealand within recent years. The following table gives the figures from 1930 to 1945 :—

Table No. 121.—Table showing the Number of Live Births each Year since 1930 (exclusive of Maoris)

Year.	Number of Births.	Year.	Number of Births.
1930	26,797	1938	27,249
1931	26,622	1939	28,833
1932	24,884	1940	32,771
1933	24,334	1941	35,100
1934	24,322	1942	33,574
1935	23,965	1943	30,311
1936	24,837	1944	33,599
1937	26,014	1945	37,007

It will be seen that the schools, which had become adapted to an intake of 24,000 to 26,000 pupils a year had, within a very short time, to cater for an intake of 35,000. The number of births in New Zealand rose by 46 per cent. between the years 1935 and 1941. The infant-rooms are this year trying to cope with the peak intake from the record number of births in 1941.

It should be noted, however, that even yet the total primary school roll (195,799 in 1944), although higher than the 191,662 for 1935, is still well below the peak figure of 213,048 for 1931. Much of the accommodation used in 1931, of course, is now obsolete or demolished, but much more has been rendered useless by the drift of population from the South to the North, and from the central city areas to the suburbs.

(*c*) *Movements of Population.*—The relatively rapid increase of population in the North Island has created school-building problems in some areas that are much greater than the gross figures for the Dominion would show. In the Auckland metropolitan area, for example, the increase in the number of births between 1935 and 1941 was 86 per cent., which means that in 1946 the Department has to provide in that area for 1,450 more entrants to the infant-schools than in 1940. The corresponding increase for Wellington City and the Hutt Valley was 67 per cent.

(*d*) *Housing Schemes.*—State housing schemes are developing whole new cities, for which a full range of school accommodation must be provided within a very short period. This is creating in such areas as the Hutt Valley and Tamaki school-building problems that are taxing to the limit the normal organization for the erecting of schools. It has been estimated that over the next two years the Department will have to erect 100 new class-rooms, plus all subsidiary accommodation, in the Hutt Valley alone.

(*e*) *The Return of the Five-year-olds to School in 1936.*—This resulted in a "wave" of school entrants that passed right through the primary school, creating accommodation problems as it went, and reached the post-primary school in 1944–45. Its influence will have passed in a year or two.

(*f*) *The raising of the School Age* to fifteen in 1944.

(*g*) *The Tendency of Parents in the Past Two or Three Years to keep their Children on longer at Post-primary School.*

(*h*) *A Reduction in the Size of Classes* introduced in 1946 in both primary and post-primary schools.

(*i*) *The Increase in the Native-school Population.*—In 1929 there were 132 Native schools with 6,951 children enrolled; in 1946 there are 158 schools and 12,060 pupils.

(*j*) *Obsolescence of many Schools* erected in the early days (1878 onwards) of the national school system. The life-cycle of the schools erected up to about 1890 is now complete or nearing completion.

II. Implications for the Future

Table No. 121 shows a double peak in the yearly number of births, one in 1941 and the other in 1945, which, if one may judge from the number of marriages, has probably not yet reached its highest point. The children born in 1940–41 would normally enter the infant-room in 1945–46, and will pass through the school system, creating pressure on accommodation at every stage. Since the curve does not drop very rapidly after 1941, the problems will be cumulative over a number of years. The Department must plan to have sufficient post-primary-school accommodation for this peak group by 1952–54. But it so happens that those are just the years when the Department will have to be prepared to accommodate the greatly increased numbers of infants born in 1945–46. In view of existing building difficulties, the task of meeting this double demand over the next five or six years will not be an easy one. Under present conditions it appears that any sudden marked increase in the school-building programme can take place only at the expense of other building works.

The degree of additional strain thrown on the school accommodation by any policy of large-scale immigration would depend in part upon the distribution throughout New Zealand of the immigrants. Any concentration in the cities, particularly those in the North Island, would create a very serious school problem. Since the demand for school accommodation is determined largely by the "peak load" much would depend also upon the rate of immigration. Intensive immigration over one or two years would create a demand much greater than the same intake spread over a longer period.

B. SUPPLY OF TEACHERS

The supply of teachers is at present short, in spite of the Education Department's having, over the past few years, trained some two hundred a year above normal requirements for replacements. The majority of the trainees were, during the war, necessarily women, and the rate of resignation owing to marriage has been very high. The staffing situation will improve somewhat when the returned soldier teachers all go back to work, but any excess will be immediately absorbed in what is recognized as the most pressing educational reform—the reduction in the size of classes. The four teachers' training colleges are full to capacity.

It takes at least three years to train a teacher. If increased school population were to demand a sudden increase in the number of teachers, it would be necessary to establish a fifth training college, since the existing four cannot be enlarged. Even if temporary accommodation were to be erected for the additional training college, it could not well be ready for use much before 1948. That means that the first group of teachers trained in it could not be in service before 1951.

C. SUMMARY

(1) Even for present needs the school-building programme is seriously in arrears, due to a combination of factors—the depression, the war, increased number of births, movements of population, the tendency of children to stay on longer at school, a reduction in the size of classes, and the obsolescence of many school buildings.

(2) State housing schemes have created, and will apparently continue to create, unusual demands for big school-building programmes in certain areas.

(3) Recent increases in the birth-rate indicate that for the next five or six years the main problem will be to provide increased primary-school accommodation. From 1952 onwards there will be simultaneous demands for considerable extra accommodation in both primary and post-primary schools. Preparations to meet these demands will have to begin at least three years before then.

(4) Under existing conditions it appears that the only way to step up the school-building programme is to make a corresponding reduction in other building programmes.

(5) If any immigration programme were to create a demand for a great increase in the number of teachers it would be necessary to give the education authorities at least four or five years' notice.

(6) From the foregoing it would appear that any immigration policy involving the entrance of great numbers of children into New Zealand over the next few years could be put into operation only by adopting some or all of the following measures :—

(*a*) Stepping up the school-building programme at the expense of other building programmes :

(*b*) Increasing the size of the classes :

(*c*) Adopting lower standards of accommodation for schools :

(*d*) Using untrained or partially trained teachers :

(*e*) Reducing the length of the school-life of the average child.

It may be that other factors, unrelated to education, should outweigh all that has been said about the difficulties of school staffing and accommodation that would result from a major and immediate immigration policy. It would appear that large-scale immigration involving children cannot be achieved within the next few years without a reduction in the standard of the education that is offered to children already in New Zealand.

VII. HOUSING

At every stage of our inquiries we were faced with the problem of the housing shortage. Decentralization of industry presents some difficulties because of the shortage of houses in secondary centres ; rural employment of further married couples will be difficult till houses are available ; immigration, even to satisfy urgent industrial demands, is undesirable until the needs of those living in New Zealand, particularly ex-servicemen, are satisfied. Because of the above facts, it becomes necessary to consider the housing problem as it affects potential increases in population.

The State Advances Corporation pointed out in evidence that there were 47,088 applications for State rental houses in March, 1946, of which 12,955 were by ex-servicemen and 34,133 by civilians. Of these applications, 18,807 were in the Auckland Province

(39·9 per cent. of the total applicatons), and 15,273 in the Wellington Province (32·4 per cent. of the total applications). Wellington and Auckland Provinces between them provided 72·3 per cent. of the applications. Auckland City applications were 17,259 (36·6 per cent. of the total applications) and Wellington City (including Lower Hutt and Petone), 12,265 (26·0 per cent. of the total applications). Wellington City and Auckland City provided between them 62·6 per cent. of the applications. In Christchurch City there were 3,752 applications (8 per cent. of the total applications), and in Dunedin City, 1,312 (2·8 per cent. of the total applications). The four main centres provided 73·4 per cent. or approximately three-quarters, of the total applications.

It is obvious that not all of the applications can be considered as urgent, and a reclassification last year revealed that of the 41,500 applications then filed, 19,200 (46·3 per cent.) represented applications from persons who were in premises which could not be classified as reasonably satisfactory. Returned servicemen applicants are entitled to 50 per cent. of the State rental houses, and this naturally limits the number of houses immediately available for civilian applicants. Taking all factors into consideration, the State Advances Corporation estimates that there is to-day a shortage of 25,000 houses. The State Advances Corporation also stated that a considerable number of families propose, when conditions are favourable, to build privately, and for this purpose many are approaching the Corporation for building loans.

The figure of 25,000, however, does not take into account either the fairly large numbers of servicemen yet to lodge applications who will require housing, or the marriages which are likely to take place in the future before the leeway is made up.

The Housing Construction Branch of the Ministry of Works stated that the 1936 census showed one house for every 4·19 people, while the 1945 census showed one house for every 3·96 people, so that, "in spite of the war, there has been an improvement as to numbers of approximately 5 per cent. in spite of the present clamour for houses . . . I do believe that if 22,000 extra houses could be thrown on the market immediately, so that there would be one house for every 3·7 persons, the rough edge at least would be taken off the problem."

The Director of Housing continues: "The next three years will probably require 7,000 to 8,000 houses per annum to take care of a normal growth, so that the aim should be in the next three years to build 45,000 houses" (that is, to take account of the normal growth of the population and to provide houses for persons not satisfactorily housed).

The bottle-neck in production is in materials and man-power. The main shortages, according to the Director of Housing Construction, are "cement, timber, and shipping." There is also a shortage of ferrous and non-ferrous metals. "It will probably be at least the end of the present year before overseas countries approach anything like normality, and on this account the present year is likely to be the most difficult that this country will experience, the war years not excepted."

As to man-power, the Director stresses the importance of Rehabilitation training courses. "The carpenters' training schools originally set up by the Department of Labour,(1) working in conjunction with this Department, have produced excellent results, and they provide a pattern on which similar establishments can be set up. Training establishments should be set up in all the main centres, and for trades other than carpentry."

The Director's conclusions may be summed up as follows: the failure to catch up with the demand for houses to-day is solely due to factors associated with the war. As far as general supplies other than timber and cement are concerned, the difficulties should be overcome by the end of this year. Man-power difficulties are serious, but considerable assistance should be forthcoming from the trade training schools of the Rehabilitation Department.

(1) Now administered by the Rehabilitation Department.

The following table, supplied by the Employment Department, shows the number of workmen employed in connection with the State Housing projects since March, 1939 :—

Table No. 122.—Table showing Number of Workmen employed either directly by, or under Contract to, the Housing Construction Department, from March, 1939, to March, 1946

March, 1939 ..	5,340	March, 1943 ..	1,089
September, 1939	4,385	September, 1943	2,180
March, 1940 ..	5,085	March, 1944 ..	3,192
September, 1940	4,420	September, 1944	4,009
March, 1941 ..	3,879	March, 1945 ..	3,645
September, 1941	3,478	September, 1945	4,026
March, 1942 ..	1,842	March, 1946 ..	4,742
September, 1942	873		

The table shows in marked fashion the falling-off of housing construction during the war, culminating in 1942, when defence construction works were at their height. The increase in numbers since that date is indicative of the increasing importance attached to housing. At the present moment (July, 1946) the number engaged in housing activities is approximately equal to that of March, 1940.

As to future demand for houses—assuming no immigration—this will depend largely on the number of marriages. This in turn is related to the birth-rate from twenty to thirty years previously. In other words, most people marrying in 1945 were born between 1916 and 1926. The following table is of interest in this regard :—

Table No. 123.—Table showing Number of Live Births from 1920 to 1935 (excluding Maoris)

Year of Birth.	Number.	Year of Birth.	Number.
1920	29,921	1928	27,200
1921	28,567	1929	26,747
1922	29,006	1930	26,797
1923	27,967	1931	26,622
1924	28,014	1932	24,884
1925	28,153	1933	24,334
1926	28,473	1934	24,322
1927	27,881	1935	23,965

It will be observed that in the ten years from 1925 to 1935 there is a gradual falling off in the number of births, indicating that in the next ten years a falling off in the number of marriages can be expected. While this falling off will give some relief to the potential housing demands, it will not give any relief to existing housing shortages.

Other things being equal, " It will be seen that any large-scale immigration policy, if implemented during the next two or three years, is likely to further embarrass the housing situation in this country. We must expect to provide, say, one house for every 3·7 immigrants, unless they are children who might be housed elsewhere." The Director continues : " At the point where the marriage-rate suddenly declines will approximately be the opportune time for bringing in further immigrants."

One further point in the evidence of the Director of Housing Construction is worthy of mention. He recommended that steps be taken to encourage the subdivision of large houses no longer fully occupied. Many such houses could be converted into two or more flats. We are not concerned to comment in detail on the financial aspects of the proposition, but, since we believe that adequate housing is a fundamental prerequisite of any policy to encourage a population increase, we think that every step possible should be taken to explore all available avenues for meeting the present shortage.

VIII. TOWN-PLANNING

The problem of housing an increasing population raises very large issues as to the distribution of that population. The State Advances Corporation in their evidence made the following important comment:

> In discussing a problem of this nature it is appropriate that reference should be made to the wider issues of developing a policy which will encourage and enable the better distribution of the population throughout the country, and prevent, if possible, any further trend towards the aggregation of population within the larger city areas. It is understood that schemes are already under consideration for decentralizing industry and the provision of housing for the personnel to be engaged in industries that are to be transferred to rural or semi-rural districts. That is a matter that can be materially assisted by the Government in arranging its housing schemes. It is necessary, of course, to synchronize the movement of industry with the establishment of new housing settlements, but with proper co-ordination of the activities of the Departments concerned this objective should be reasonably obtainable.

In another section of this report we have discussed at some length the problem of the growth of the larger cities of the Dominion. It has been further pointed out in the section dealing with housing that over 60 per cent. of the applications for State houses come from residents within the four main urban areas. The tendency for the growth of the Auckland Metropolitan Area and the Wellington Metropolitan Area respectively has already been commented on. As far as Wellington is concerned, a limit is being reached to the possible expansion. At the present time many people have to travel long distances to their work, and if many more large industries are located within the Wellington area there is little doubt that the potential residential areas will need to be pushed farther out. In Auckland the means of access between the various parts of the metropolitan area are perhaps rather simpler than in the Wellington area, but here again the growth of the metropolitan area is such as to give cause for serious concern as to the future general amenities of the district. Evidence has been forthcoming from a number of quarters that some industries, particularly of the lighter type, are concerned with the possibility of transferring at least some of their activities to the secondary towns. This tendency is in operation in Canterbury and Otago, where, we understand that some factories engaged in boot and clothing manufacturing have transferred a portion of their activities to small rural towns in order to tap the female labour available there. There is also evidence that some Wellington firms are considering transferring some of their activities to one of the Wairarapa towns, while in the Auckland district there has been some similar development in the Thames and Whangarei areas. The Planning Branch of the Ministry of Works makes this comment:—

> While . . . a national survey of resources would be of considerable assistance in assessing the principal shifts of population, no really accurate estimates of the progressive changes of population in particular areas could be made while industry which is foot-loose is free to establish itself where it chooses. Experience has shown, in fact, that when no effort is made to influence or guide the location of industry of this type it tends to cluster about existing main centres. This can be seen in the phenomenal growth of Auckland and Wellington in recent years. Whatever may be the sociological, cultural, and economic disadvantages of such a process, the town-planner is committed in those circumstances to give effect in as orderly a way as possible to influences which are largely unpredictable and work at haphazard. Other countries, particularly Britain and Australia, have announced an intention to take positive action to influence the growth of towns and to limit their size, and Britain has already taken certain legislative steps to that end. There is a general recognition of the fact that the key to rational urban development is guidance of the location of industry. Without some such guidance in New Zealand the present tendency for a disproportionately large part of new industry to be established in the main centres will, no doubt, continue, and if there were a substantial increase in population, whether from immigration or otherwise, there would be a similar disproportionate drift following industry. This tendency towards concentration of population, which has been condemned in Britain and Australia, is even more undesirable in New Zealand. The demand in this country for the individual house, set in its own garden, brought about very low average population densities in our cities. While this development avoids some of the evils inherent in the congested industrial towns of Britain, it raises other problems of equal complexity. For example, the convenient location of industry, shops, and recreation facilities is made much more difficult, and the cost of services is, by comparison, very high. . . . Owing to our sprawling type of development, the larger proportion of our workers are compelled to live at far too great a distance from their places of work. The resultant waste of time involved in transport alone is becoming an increasing drag as our main cities continue to sprawl out over the countryside. . . . Under an active policy of decentralization of industry to towns in the South Island and to such North Island towns as Hamilton, Palmerston North, New Plymouth, Napier, and Hastings, a substantial increase of population could be absorbed much more satisfactorily. . . . These districts would then retain much good human material which now tends to be exported to the main centres or overseas.

We have pointed out in another section of this report that over the past decade there has been a very steady advance in the development of new industries. Evidence which was placed before us suggests that this is merely the beginning of some major industrial developments. It therefore becomes of very great importance to consider the location of this industry, since the location of industry is basic to the distribution of the population. We do not consider it our function to comment at length on the economic factors which determine, other things being equal, the location of industry, but we are convinced that, leaving out of account the heavier industries where freight charges, both inwards and outwards, are a major factor in the costs, there is a great deal to be said for the planned redistribution of the lighter type of industry, so that not only may the secondary towns benefit from the establishment of industry within their borders, but that from the point of view of New Zealand as a whole some active steps may be taken to prevent the emergence of very large metropolitan areas with all the problems which such development entails to society as a whole. As far as the lighter industries are concerned, under normal circumstances transport charges do not loom very large in the ultimate cost of the commodity. Normally such industries are established where there is an available working population. This really boils down to the question of housing. The experience of the industries mentioned above which have gone in search of working population, particularly of female workers, suggests perhaps that if an adequate population were available in some of the smaller centres then such industries would be set up in those districts. We think it is questionable whether industry would be happy to go to some of these smaller towns unless they were guaranteed sufficient working population; and, conversely, working population would not be prepared to take the chance of getting employment in the smaller towns if housing accommodation for themselves and their families were not at least in prospect. This really leads to the conclusion that the policy of the Housing Construction Branch should definitely be very closely related to the problem of industrial distribution.

We are completely convinced of the tragic housing shortages, particularly in Auckland and Wellington, housing shortages which are not related directly to the development of new industries, but to conditions which operated during the depression and during the war. The very fact of this aggregation of population in the larger centres is in itself an attraction to industry to go to these areas. If, when the immediate shortages are caught up with, the policy of further construction of houses in the smaller centres were made a matter of urgent Government policy, then the problem of the distribution of industry would be relatively simple. The development of such a policy, however, is one which would take time, but we think that it is one which should have the urgent attention of the Government with a view to the long term planning which is required.

The development of housing is merely one phase of the social problem. In several areas in New Zealand the development of large housing estates has created problems of water-supply, drainage, and generally the provision of social amenities. The provision of these amenities should be planned at the same time as the planning of housing, and if, as we consider desirable, it is proposed that industry should be redistributed throughout the country, then steps should be taken at an early date to provide all the facilities as well as the houses, so that population could be attracted to these areas.

IX. THE FINANCIAL IMPLICATIONS OF CHANGES IN POPULATION

Certain types of public expenditure are definitely related to the size of the population. The expenditure on social security, for instance, is in this category. On the other hand, certain types of capital expenditure bear little relation, at least in the short run, to the size of the population. Expenditure on Government railways, for instance, while in the long run related to the size of the population and to its economic activity, yet in the short run does not bear any direct relation thereto. As far as the State and main highways

are concerned, for instance, a large proportion of the development has been completed and they are capable of carrying a much greater traffic than at the present moment. The community as a whole has to bear the interest and sinking-fund charges on the expenditure so undertaken. If the population were to increase by, say, 50 per cent., the per-head cost of such expenditure would be reduced by 33⅓ per cent. This is particularly true in relation to such directly unproductive expenditure as war loans. An increase in the population would reduce the burden per head of these loans in direct proportion to the increase in the population.

Some idea of the implications of this change in the population structure and size can be seen from the following analysis of the actual cost of old-age benefits to the people of New Zealand as a whole. It has been shown earlier that the population of New Zealand is definitely ageing, so that the population of this country is now approaching in age-structure the age-constitution of the older types of countries with western civilization. Unless this fact is kept in mind, completely erroneous conclusions may be drawn from the increase in the cost of such social services as old-age benefits. To say that the cost per head of the total population of New Zealand of old-age benefits has risen from 5s. 2d. in 1901 to £6 11s. 10d. in 1946 does not of itself reveal the whole story, since over the period the population has been definitely ageing, and to-day there is a very much larger proportion of old people than in 1901. In 1901, 6·76 per cent. of the population were over sixty years of age (1). The proportion of people over sixty years of age to-day is approximately double what it was in 1901, the figure as at the 31st December, 1944, being 13·57 per cent. In 1901, 12,405 people received old-age pensions of an annual value of £17 1s. 9d., representing a total annual value of £211,965. The average value of old-age pensions as at 31st March, 1946, was £105 6s. per annum. Assuming now that the average value of pensions had been at the same level in 1901 as was the case on the 31st March, 1946—namely £105 6s. per annum—the cost of these 12,405 pensions would have been £1,306,247, a figure which is approximately six times as high as the actual cost at 31st March, 1901. This illustrates the effect of the much more generous basis on which pensions are granted to-day than was the case in 1901. Now, if the age-constitution of the population had remained constant at the 1901 figure, then the number of persons over sixty years of age would have been 106,500 as at the 31st December, 1944, instead of 213,650 as it actually was. Hence, instead of 110,060 old-age beneficiaries in 1946, there would have been only 55,030, and therefore instead of £11,589,318 expenditure on old-age benefits the expenditure would have been £5,794,659. Thus the increase to-day in the proportion of persons within the age-grouping of sixty years or over, as compared with the proportion in 1901, has alone had the effect of adding approximately £5,794,659 to the annual cost of old-age pensions in 1946 as compared with the age-distribution position forty-five years previously.

Even in a much shorter period the ageing condition of New Zealand's population has had a very marked effect. In 1936 the proportion of persons sixty years of age and over was 10·43 per cent., as compared with 13·57 per cent. in 1944. If the age-distribution of the population had remained constant from 1936 to date, the number of persons over sixty years of age to-day would have been only 164,320 instead of 213,650, this representing an increase of 49,330 persons over the age of sixty. As at the 31st March, 1946, there were 110,060 old-age pensioners. If the age-distribution had remained constant at the 1936 figure, there would have been only 84,660 old-age beneficiaries. The total cost of old age benefits in 1946 was actually £11,589,318. If, on the above reasoning, the age-distribution had remained constant at the 1936 figure, and assuming the rate of benefit was the same right through the period, then the cost of old-age benefits in 1946 would have been only £8,914,698. Thus, taking a relatively short-range term from 1936 to the present time, the effect of the increase in proportion of the population falling in the age-group of sixty years of age and over has been to increase the cost to the community of £2,674,620.

(1) Pensions were not payable until sixty-five in 1901.

The question naturally arises as to whether this increase due to an ageing population will continue. The problem is very closely linked with the question of the birth and the death rates, and obviously any increase in the size of the population due to immigration. In regard to this last question, the age of immigrants will have a very material effect.

As stated earlier, however, New Zealand may be fast approaching a stage when its age-distribution will become relatively stable. The following table gives some idea of the percentage of the population, in various countries, of the age of sixty years and over :—

Table No. 124.—Table showing the Percentage of Population, in various Countries, over the Age of Sixty Years

New Zealand—		Italy	11·1
(*a*) 1944	13·6	Australia	9·9
(*b*) 1936	10·5	Finland	9·4
France	14·7	Canada	8·4
Sweden	13·2	United States of America	8·4
England and Wales ..	12·9	Yugoslavia	8·2
Scotland	12·3	*Union of South Africa ..	7·9
Switzerland	12·2	Poland	7·8
Norway	12·0	Japan	7·4
Denmark	11·2		

* European population only

Figures for New Zealand, 1936 and 1944. United States of America, Finland, and Japan, 1930. Canada, Poland, and Yugoslavia, 1931. Australia, 1933. Norway, Denmark, and France, 1935. England and Wales, Union of South Africa, Sweden, and Italy, 1936. Scotland and Switzerland, 1937.

The table illustrates to some extent the points made earlier—namely, that the proportion of persons over sixty years of age in New Zealand is more nearly equivalent to many of the older countries of the world than even such places as South Africa, Canada, or Australia. Very tentatively, therefore, we put forward the opinion that this problem of ageing population will be of less importance in the future than in the past. New Zealand has definitely passed the pioneering stage and is entering a more stable period of its population growth. If, however, the expectation of life in New Zealand, which is already the highest in the world, were to increase materially, this contention may be negatived.

Turning next to the problem of capital expenditure, the following table shows at various dates from 1900 to 1944 the total public debt and the indebtedness per head :—

Table No. 125.—Table showing Gross Indebtedness of General Government and Debt per Head as at various Dates from 1900 to 1944

As at 31st March,	Total.	Per Head of Population.
	£	£ s. d.
1900	47,874,452	59 19 2
1905	59,912,000	65 19 6
1910	74,890,645	72 6 10
1915	100,059,910	86 19 7
1920	201,170,755	162 12 9
1925	227,814,647	165 2 11
1930	267,383,343	179 11 0
1935	280,581,217	179 14 11
1939	303,970,272	187 1 10
1940	322,907,536	196 15 9
1944	566,494,017	344 12 1 (£N.Z.)

We do not desire to enter into discussion as to the relative burden of an internal as opposed to an external debt except to say that the real burden to a community of an internal debt is less heavy than that of an external debt. The figures, however, show in a marked fashion the influences of war expenditure on the public debt of the Dominion both as concerns the 1914–18 war and the recent war. Gross figures, however, of the public debt really mask certain of the facts concerning the real burden of such a debt on the Dominion. A proportion of the debt is directly reproductive. Such expenditure would include that on railways, telegraphs, and so on. Admittedly, at certain periods the railways have not been completely reproductive, but the general aim is that the railways shall be completely self-contained as far as expenditure is concerned. Other public debt has been of the investment type, and includes such things as advances to settlers, loans to local bodies, land purchase, and so on. Still other debt is indirectly reproductive in so far as it stimulates and assists in the economic development of the country. Such debt would include land improvement, including roads and bridges, immigration, and coal-mines. Unproductive debt, however, may be more in the nature of a real burden on the country. Hence, if we take the unproductive debt and analyse its development, we will get some idea of the burden of this debt on the community as a whole :—

Table No. 126.—Table showing an Estimate of the Unproductive Debt from 1901 to 1944

Date.	Total Unproductive Debt.	Percentage of Unproductive Debt to Total Debt.	Unproductive Debt per Head.
	£		£
1901	15,000,000	30	18·5
1911	20,000,000	24	19·1
1921	105,000,000	51	83·9
1936	88,000,000	31	56·2
1944	269,000,000	47	164·2

Although as between 1901 and 1944 the unproductive debt has increased by eighteen times, the unproductive debt per head has increased by only approximately nine times, or half the total amount. The above discussion is not given with a view to discussing the debt question, but merely to show the influence of an increasing population on the burden of debt per head. An increasing population normally means an increasing national income, and, provided the point of optimum population has not been passed, the rate of increase in the national income is usually greater than the increase in the size of the population. In view of the potentialities of the Dominion, there is little doubt that this country could absorb profitably over a period, other things being equal, a fairly large increase in population with definitely beneficial results to the national income of the community, or, conversely, without in any way reducing the average standard of life, but rather the reverse. Hence, if the population were to increase, then the taxation per head for debt purposes would tend to decrease. The same type of argument could be adduced to show the effects of developmental expenditure, but sufficient has been given to show that an increase in the population at least from this point of view is definitely desirable. More important, perhaps, the above discussion shows the serious effects which will accrue financially if population declines.

The whole of the above section has been given in order to show that the size of the population, its age-structure, and the size of the national income are very important factors as determining Government policy in relation to population development.

X. THE PROBLEM OF CULTURE

A very interesting and novel point of view on the population question was put forward by Dr. G. H. Scholefield and Mr. A. Mulgan, with whom was associated Mr. A. W. Reed.

Their thesis was that a vital factor in the social progress of a community was the development of its cultural activities. New Zealand, they said, was the smallest society of its kind in the world, except Newfoundland. "The countries nearest to it in population and culture combined are Denmark, Norway, and Finland, but these three European countries carry a much larger population than ours, and geographically they are in the midst of the European stream of culture, whereas we are at the other side of the world, the most remote of civilized societies. This remoteness is a factor in the development of a national culture, and has a bearing on the population problem." They continued by stating that New Zealand is attempting to carry out all that Great Britain is doing with a very much smaller population. "New Zealand is working an elaborate system of Government and cultural development on the model of Britain's with a population that is roughly only about one twenty-seventh of Britain's." They then asked whether our population is sufficient to carry this development; whether it can provide the ability required to man these various services and the talent and "audiences" which are necessary for the advancement of the arts. "It is a common argument on the economic side that we need more people to finance our large 'overhead' expenditure on public works. Much of the equipment we have built, so it is contended, would serve a larger population. It is submitted here that a similar argument arises on the cultural side, but with the difference that human personality enters into the situation. We need more people to take advantage of what has already been provided—to nourish the seed and extend the garden."

Many of the first-grade brains of the community trained in our own institutions are unable to find an outlet for their energies within the Dominion because of the smallness of our population. Much of our literary talent is stultified by the fact that there is no demand in such a small country for its product. New Zealand writers, despite the fact that often their product is acknowledged to be of a very high order, are unable to find publishers because there is no adequate sale for their writings.

Mr. Reed pointed out that because of the smallness of the reading public the cost of production of books in New Zealand is prohibitive. The same arguments may be adduced with regard to art, drama, and music. As a consequence, much of our best talent is lost to the country. Clearly these young people "would find it more attractive to stay here if the community were larger. As our activities increase there is more demand for their services, but demand is not the only factor. We could offer them higher salaries, but not so high as we could if we had a larger number of producers and taxpayers. Besides, salary is not the only attraction. Such young people seek contacts with a larger world, the stimulus of its special groups and the encouragement of its audiences. We would provide them with a measure of these things if we increased our population."

From the above arguments, the witnesses submitted that there was a scope for a liberal policy of regulated immigration. "We prefer that most of these immigrants should be of British stock, but we would not exclude foreigners. The success of Scandinavian settlers in New Zealand is a well-known historical fact. Industrially and culturally foreigners might be a valuable asset, as many of them have been in the past."

We desire to commend the point of view of these witnesses, which was certainly original and refreshing. Undoubtedly progress is not to be measured in terms of the multiplication of material commodities. The cultural life of the people is probably basic to all real progress, and in so far as a larger population will assist this progress we agree with the point of view put forward by the witnesses. On the other hand, in the short run the economic factors discussed elsewhere in this report must determine practical policies.

PART III.—RECOMMENDATIONS

1. THE BIRTH-RATE

Since we agree with the opinion of the Government Statistician that the very great upswing in the birth-rate over the last two to three years is probably a temporary phenomenon, we are inclined to think that within the next two to three years there will be some decline. We have shown in a previous discussion that, while the rate operating in 1939 was not alarming, it was seriously low, and certainly much lower than is desirable. Doubtless the primary explanation of the fall in the birth-rate has been a positive decision to limit the size of the families. This is definitely associated with the changed outlook of women and the social freedom and opportunity which they now enjoy. Modern life is such as to require considerable freedom from domestic ties. We do not think that the non-availability of domestic help is a very important question in limiting the size of the families, since by far the largest proportion of the community has never had domestic help. Admittedly, when children are very young such domestic help would be of great assistance, and the Government's policy of developing the Home Aid Service has much to commend it. The primary cause, however, of the low birth-rate can be attributed to the present-day outlook which in these matters is inclined to be selfish, if not cynical. Much of our educational effort in the past has been directed away from home life, and young people growing up have been encouraged to find their avenues of recreation outside the domestic circle. There would seem to be a deep problem of moral education involved before any fundamental change can be expected. We have no doubt that the family benefit provisions recently instituted will take away much of the economic stress which has been associated with the raising of a family and should do something towards preventing family limitation for purely economic reasons; but monetary incentives are not the whole answer to this question, nor do we think that mere nationalistic drives will in the long run have much effect. The experiences in continental Europe over the past two decades have proved conclusively that mere appeals to blind patriotism do not have permanent results. Some positive measures are desirable. The work of the Minister of Internal Affairs in fostering group travel for mothers, and of such institutions as the Women's Division of the Farmers' Union in providing Home Aids in needy cases and also recuperation centres, is worthy of encouragement, but until a proper appreciation of the importance of the home and of the privileges of family-raising are inculcated into a rising generation, we cannot expect to redirect a trend which has been in operation for so many decades. After all, immigration is only a palliative and cannot really attack the major problem of peopling this country. Our future generations must in the main be born within our own shores, and it is important that the people of New Zealand should recognize to the full their responsibilities in this regard.

We desire to make some comments on the question of motherhood, and the respect due to mothers. The strain of modern life and the social problems associated with the raising of a family place a very heavy strain on the mothers during the period when the family is being reared.

Most mothers are deprived of the possibilities of enjoying even many of the more simple forms of recreation. This is particularly true of women in rural areas. We think that if in many of the urban centres, and particularly in rural towns, proper nurseries were established staffed by capable and well-trained persons more freedom could be given to mothers to carry on their domestic shopping and to enjoy some of the social amenities associated with urban life. In addition to day nurseries, consideration should be given to the provision of similar institutions where children could be cared for during the period of a mother's illness, or absence, for longer holiday periods. While we have above commended the Government Home Aid Service, and the Home Aid Services provided by voluntary institutions, we feel that there is a very great scope for expansion in this direction. The need is particularly great in rural areas, and the knowledge that such assistance would be forthcoming in times of emergency would do much to relieve the mental stress associated with child-bearing.

The observer of modern manners cannot fail to notice the lack of respect which is emerging in relation to women. We feel that unless respect for motherhood is inculcated, particularly in the rising generation, there will be a definite disincentive to rear families. Even such small things as special carriages for women and children on our railways may reduce to some extent the strain of travelling with young children. The mothers of our country are entitled to the maximum respect. At the risk of repetition, we would emphasize also the necessity for providing adequate holiday homes for mothers with children where they can feel completely at home without the constant fear that the other guests are resenting their presence.

Some comments were made as to the necessity for sex education in schools. This is a very controversial question on which experts express differences of opinion. Primarily we feel that this is the responsibility of parents, but we are conscious of the fact that very many parents neglect this obvious parental duty. On the other hand, unless formal teaching of adolescents is in the hands of experts it tends to become crude and fails to fulfil the purpose for which it is designed. We are inclined to approve of the suggestion made by some witnesses that medical officers with special qualifications in this field should be made available to the senior scholars of secondary schools in the Dominion. It may be possible for this to be undertaken by School Medical Officers. We do not think that mere blunt information as to sex problems is all that is required. The problem of moral and spiritual education should be the fundamental motive in any approach that is made. Practically all witnesses who appeared before us, including witnesses representing the Christian churches, were agreed that the basic factor in the present lack of appreciation of national responsibilities was definitely associated with a lack of a proper appreciation of the place which the home and the family should have in the nation. We think the churches have their responsibilities as well as the educational authorities in the training of the young people of the nation. Undoubtedly a materialistic approach to life must essentially weaken the moral fibre. We therefore recommend that a definite educational approach be made to this very important national problem, not so much in the direction of a crude drive for more children, as in a training in the national and family responsibilities with a view to producing a better approach to this question.

II. AGRICULTURE

Our previous conclusions are that at the moment there would appear to be very little scope for any major expansion of the agricultural population of the Dominion.

We make this statement because we have shown in earlier sections of this report that there is very little land available and suitable for settlement remaining in the Dominion.(1) Further, there are applications from some eight thousand returned soldiers to settle on the land, and this will absorb considerably more than the present unoccupied and suitable land. On the other hand, as pointed out by the Department of Agriculture, there is some scope for the smaller type of truck farm in the production of the small fruits, vegetables, and suchlike commodities.

We were somewhat concerned with the statement by the Under-Secretary for Lands that a full and adequate knowledge of land which could be made available for settlement was not in the possession of the Department. We strongly commend the proposal by the Under-Secretary that an immediate survey should be made. The fact that for a very large proportion of the returned servicemen who propose to settle on the land existing farms will have to be bought does not mean any real increase in settlement, but rather the displacement of people already on the land. Some witnesses suggested that some second-class land could be made available for closer settlement, given proper cultivation and adequate scientific management. We are unable to comment satisfactorily on this proposition, but we think it is a matter which should give the Government very serious concern. It would appear that it is

(1) See Part 1, Chapter IX, pages 51–2.

very urgent that a detailed and comprehensive survey should be made of the land potential of the Dominion. From every point of view a virile agricultural population is vitally necessary.

While over the Dominion as a whole there has not been a decrease in agricultural population, yet in certain areas actual depopulation has commenced (1). The situation in Otago, where the rural population is over 13,000 less to-day than in 1936, is a cause for very serious alarm. The decline in population in Canterbury, Hawke's Bay, Nelson, and Taranaki is less than in Otago, but also very serious. New Zealand has not, up to the present, devoted much attention to the problem of rural sociology. We do not know the real facts behind this drift from the rural areas in these places. It is probable that the attractiveness of urban life and the better conditions which obtain in many secondary industries are the most important factors. The rural community are entitled to equal consideration in the matter of social amenities as the urban section. No hastily devised methods will adequately solve the problem. It is a question of long-term study. It is not a question merely of agricultural techniques and the application of science to agriculture, but a sociological question, and we recommend that the Government undertake at an early date a comprehensive and continuous survey of this important problem.

There was some evidence that the lack of adequate housing facilities in rural areas was one of the causes of the drift of married couples from rural areas to the towns. One witness stated that it was the usual thing when a farm worker was married for him to leave rural occupation and seek urban occupation because of the absence of housing. We recognize the steps which have been taken in this direction, and we desire to recommend that further urgent steps be taken.

For the reasons stated in several places in this report, it is obvious that we do not consider that there is any necessity at the moment to discuss the problem of bringing agriculturists or agricultural workers into this country. One witness suggested that there would be scope for European agriculturists used to working small holdings. This may be a very dangerous procedure, as it may lead to the development of peasant holdings on the European model, with all the undesirable features which such a development would cause. This is not an argument against small holdings, but against a depressed agricultural population.

The general problem of the future of agriculture, however, is one which should receive the urgent attention of the Government. The problems at issue are not merely the problems of the scientific improvement of agricultural techniques, and not merely the problems of markets, but, as stated above, the sociological questions of rural life, which have been extensively studied in other countries, and which require immediate study in the Dominion if the important place which agriculture has played in our Dominion is to continue.

III. SECONDARY INDUSTRIES

From all sides there was a consensus among the witnesses who appeared before us as to the acute shortages of labour in practically all secondary industries. This shortage was acute in the woollen-mill and clothing industry, particularly so far as female and juvenile labour is concerned. There were two principal causes for this shortage—the shortage of many consumable commodities, including clothing, is due largely to circumstances connected with the war and to the fact that many operatives were redirected from the production of civilian goods to the production of military requirements. This fact, coupled with the world-wide shortage in consumable goods, has created an immediate demand for increased production to catch up with the shortages. From this point of view, labour deficiencies may be looked on as a short-term problem.

The long-term problem is, however, more serious. Even before 1939 there was, for several causes, a major expansion of many secondary industries in the Dominion as a result of a deliberate policy to encourage secondary industrial development. This trend

(1) See page 38 for a discussion of the urban drift.

was emphasized during the war because of the physical impossibility of obtaining supplies from overseas, and as a consequence some large accretions of capital equipment were forthcoming. This increased capital equipment theoretically makes possible the supplying of a larger proportion of our own requirements from the products of these industries with a relative consequent decline of the imports of this type of commodity, although not necessarily a decline in total imports. But such increased capital equipment requires an increased number of operatives to maintain the output of which this equipment is capable. This phase of the shortage of labour is by far the most serious. This secular trend in industrial development really involves a fairly major potential redistribution of industrial population. It implies that there will be forthcoming for industry a larger adolescent population. The fall in the birth-rate during the depression in the early "thirties," however, is at the moment, and will for the next seven years, result in a declining number of adolescents available for industry. These factors of the increase in demand for labour which cannot at the moment be satisfied from our own population plus the decrease in the adolescent population reveal a serious situation as far as secondary industries are concerned, at least for the next seven or eight years.

In normal circumstances it would be possible to meet some of these shortages by a deliberate policy of immigration. This was the point of view put forward by practically all the institutions which appeared before us, including the Industries and Commerce Department, National Employment Service, the Federation of Labour, the Manufacturers' Federation, the Chambers of Commerce, and other witnesses. We are, however, convinced that any immediate immigration, except of single men and women selected for work in certain specified occupations, would create greater immediate problems, as far as housing is concerned, than they would solve. Provided labour and materials are available, it should be possible within the next few years to catch up with the housing shortage. At that stage very definite and urgent considerations should be given to the possibility of providing immigrants for industrial occupations. We would make the point, however, that the preliminary steps should be taken immediately. A definite immigration policy should be decided upon by the Government. We think that an investigation on the spot in England and in northern Europe should be undertaken immediately. The general conditions under which immigrants will be brought to the country, the transport arrangements, and the general housing problems should be considered straight away. There is some evidence that Australia and South Africa at least are working on this problem, although we understand that they are faced with the same housing problems as New Zealand. On the other hand, unless steps are taken to explore the possibilities and to make long-term plans, New Zealand may find itself in the position of being unable to get immigrants, or at least unable to get the better type of immigrants to suit our requirements.

IV. SEMI-PRIMARY INDUSTRIES

Evidence was forthcoming to show that there was an urgent demand for operatives in coal-mines and in the timber industry. The evidence showed that at least, in so far as house-building is concerned, the shortage of timber is a serious bottleneck to effective development. This is not to state, however, that labour shortages and other material shortages are not of very great importance. We were also informed that the shortages of cement, a vital building material, were due to some extent to the shortage of coal. An effective output from these two basic industries is fundamental to practically all phases of our economic life. Apart from their influence on the housing problem, the shortages of coal are seriously interfering with the transport problem in the Dominion, and several industries are detrimentally affected. The Australian investigation, concerning which we have commented earlier, suggested that very few coal-miners were available from Great Britain or northern Europe. We feel that this is a matter which should be closely investigated on behalf of New Zealand, and, as with the problem of the provision of operatives for secondary industries, should receive the immediate attention of the Government.

V. TERTIARY INDUSTRIES

We have previously pointed out that the shortage of operatives in tertiary industries is not in the aggregate so serious as the shortage of operatives in the secondary industries. In certain of the service groups, however, there were serious shortages particularly as far as hospital nurses are concerned and for domestic servants. We were pleased to learn from the Prime Minister during the course of our deliberations that the Government had arranged for certain officers of the National Service Department to visit England immediately with a view to arranging, if possible, for some immigration of workers in these classes. We were also informed by the General Manager of the Tourist Department that, provided hotel and other facilities were available, a large increase in our overseas tourist traffic could be anticipated in the relatively near future. This tourist traffic is a very important phase of our external trade, and we think should be encouraged. The need here, however, is primarily for further capital expenditure on hotel accommodation and at tourist resorts, although there will necessarily be a shortage of labour if any major capital developments of this character are undertaken. In any investigation overseas as to the possibility of bringing immigrants to this country the demands of these tertiary industries should obviously be considered. It would appear to us, however, that what is necessary is a statement of policy in regard to the developments of all the types discussed above in order that such an investigation may be as comprehensive as possible. It is obvious that within the next few years New Zealand is theoretically able to absorb effectively a very large increase in population. This does not mean that we think that wholesale immigration should be undertaken without a very close watch on the absorptive capacity of the Dominion for various types of labour required to meet the needs of our industry. At the present time the demands on labour are very heavy. World conditions suggest that the shortages of commodities of all types will continue for some considerable time. On the other hand, once the shortages of capital goods, including housing, are caught up with, there may be some recession in this particular field. In order to avoid potential unemployment, it is obvious that careful planning will be necessary. Planning involves not merely the planning in expenditure, but as to the long-term possibility of the absorptive capacity of the Dominion for labour of all types.

VI. LOCATION OF INDUSTRY

We have previously stated at length our views as to the desirability of the decentralization of certain types of industrial occupations to some of the secondary towns of the Dominion.

We have stated that this involves not only the encouragement of industrialists to set up their factories in these secondary towns, but it implies that housing developments will proceed *pari passu* with any such decentralization. We admit the urgent demands in the larger centres, but in long-term planning of housing development there should be a positive disincentive to certain types of industries congregating in the larger metropolitan areas, and positive incentives, including the provision of houses, together with adequate social amenities, for the working population to live in these other areas. With such an operation there would be a spread of industrial activity, and many of the obvious disadvantages of large, sprawling cities would be avoided.

VII. IMMIGRATION

The above discussion leads naturally to the conclusion that no policy of wholesale immigration should be embarked on by New Zealand at the present time or in the immediate future. We were pleased to learn during the course of our deliberations that the Government was taking immediate steps to secure from Great Britain single women for hospitals and for domestic service. The serious shortages in these occupations is creating a major social problem, and we wholeheartedly endorse the proposal to use every endeavour to secure these immigrants at the earliest possible date. The following discussion is on the assumption that this movement will be carried through.

Any immigration which is undertaken should be of the selective type. We have shown that at the moment there is little scope for the absorption of workers in agriculture, and we are inclined to think that, taking into account the number of returned servicemen proposing to enter this type of occupation, New Zealand will itself in the future provide sufficient operatives adequately to equip the agricultural industry. We do not wish this to be thought in any way as an opinion that the absolute importance of agriculture is declining or about to decline. The plain facts are that on present evidence there is less available suitable land on which new agricultural development can take place than is popularly assumed. Undoubtedly, farming will become more intensive, but the experience of the past two decades has suggested that mechanical and scientific improvements have been the basis of the greater intensity with which the land is farmed at the present moment, and as a consequence the available labour-power has a greater output per head than previously. In other words, if the scientific and mechanical improvements which have been going on, particularly over the past two decades, are continued, the available labour power will result in a greater output. For these reasons we cannot recommend any large-scale Government immigration for agricultural purposes.

While we have above commented that there is less suitable land available for settlement than is popularly imagined, we think that a comprehensive investigation of the possibility of utilizing some of the second-grade land of the Dominion for more intensive use should be made. The investigation we envisage should comprise not merely the economics of the situation, but also the possibility of the development of the scientific resources of the Dominion so as to make the land more fertile than it is at present. This may involve considerable expenditure for developmental purposes, but if more of this second-grade land is made available for intensive settlement the return to the Dominion as a whole will more than repay the expenditure involved.

It is obvious, however, that the shortages in secondary industries, and to a lesser extent, in tertiary industries cannot be made up in a short run from our own population. There is a great deal to be said for a carefully planned immigration policy. By planning we mean that the immigrants should be carefully selected for their occupational aptitudes. It is obvious, for instance, that we need coal-miners, sawmillers, and operatives for many of our growing secondary industries. We are not in a position to state what numbers are required, but we think this is a matter which should occupy the very close attention of the National Employment Service in co-operation with the Departments specifically charged with the supervision of particular activities. As far as secondary industries are concerned, the Industries and Commerce Department should work in close co-operation with the National Employment Service. Similarly with the Mines Department, the Forestry Department, and other Departments.

We have previously expressed the opinion that, if possible, immigrants of British stock from the British Isles would prove the most satisfactory in this country. We realize, however, the grave difficulties which face Great Britain at the present time. That country also has a serious shortage of certain types of labour, and, in view of the strenuous endeavours which are being made to recover the export trade and to rebuild the industrial structure of that country, Great Britain may not be happy at seeing a large number of the younger and more able-bodied men and women emigrating to New Zealand. The emigration of any considerable number of the younger generation from Great Britain would accentuate the present tendency in that country for the older section of the community to increase relatively, and would therefore be potentially a very dangerous procedure from the point of view of the motherland. We are also conscious of the fact that several other countries, including Australia and South Africa, are exploring the possibility of attracting immigrants from Great Britain. From whatever angle we examine this subject, we appreciate the fact that, even if it were possible to bring in immigrants to this country immediately, it may be difficult to find these immigrants in Great Britain.

After very careful consideration we are of opinion that some exploration should be undertaken of the possibilities of securing immigrants from certain northern European countries, in particular from Norway, Sweden, Denmark, and Holland. Such evidence as is available to us suggests that even from these countries there may be some difficulty in attracting sufficient immigrants to satisfy our demands. In these places, also, we are given to understand that certain other of the British Dominions are exploring the possibility of attracting immigrants to their shores.

This whole discussion of immigration, however, is conditioned by the fact that at the moment the grave housing shortages make it impossible to recommend that large-scale immigration should be embarked on immediately. It may be possible to begin at a fairly early date with the immigration of single young men and women carefully chosen because of their particular qualifications in industries which are short-staffed in the Dominion. The immigration of these single people would not create immediately the housing questions which an immigration policy which covered married men with wives and families. On the other hand, we recognize that it is necessary to consider the immigration of married persons with families, and, as we have stated before, we feel that an immediate investigation should be made of the immigration possibilities in Great Britain and northern Europe. Specific plans should be made as to their absorption in particular industries in the Dominion, and generally the Government should have long-term plans available which can be put into operation at the earliest possible date consistent with the supply of houses and the availability of transport.

Some witnesses discussed with us the question of bringing to New Zealand large numbers of war orphans from Great Britain and Northern Europe.

In the first place, we have no information as to the extent to which such orphans would be available for bringing to New Zealand. Before we could express an opinion as to the part New Zealand should play in the absorption of such orphans more information is necessary.

Further, the Director of Education has pointed out that the education system of the Dominion is strained to the limits at the present time. This fact would need to be taken into consideration in any plan for large-scale immigration of such children. Finally, the care of these children requires very considerable thought. No adequate solutions were suggested to us, and we have been unable adequately to investigate this problem.

In conclusion, we feel that New Zealand has some responsibility with regard to these children, but until the factors outlined above are properly investigated no positive commitments should be made.

Long-term planning in relation to immigration involves not merely the securing of the immigrants and the arrangements for their transport to the Dominion, and not merely the provision of houses, but also a definite direction as to industrial development not merely as to what industrial development is to take place, but also as to where it is to take place. We feel it important to reiterate that every stimulus should be given to industry to settle other than in the four main centres.

VIII. HOUSING AND TOWN-PLANNING

Throughout this report we have stressed from time to time that the provision of more houses is basic to an increase in the population, particularly from immigration. We recognize the strenuous efforts which are being made to catch up with the present deficiency. We also agree that the serious shortage of houses in the four main centres is of primary importance, but we feel that in the long-term planning of housing development more attention should be given to the provision of houses in the secondary centres. We think that this would tend to encourage the further geographical distribution of industry. Admittedly, it is not the only factor governing the location of industry, but it is an important factor.

In view of the potential industrial development in the Dominion, we think that urgent attention should be given to the problem of the proper layout of the new residential areas. Many of the municipalities in the Dominion are very lax in accepting their responsibilities in the preparation of an adequate town plan. We desire to commend the work of the Ministry of Works both in its Town-planning Division and in its Housing Division in this direction, but unless the local authorities also accept their responsibilities it is possible that the good work which is being done by the Ministry of Works may be negatived. In the report of the Local Government Committee presented to Parliament last year this point was emphasized, and we desire to again draw attention to the necessity for pushing on with this most necessary work.

IX. RESEARCH INTO POPULATION PROBLEMS

It became very evident during the course of our examination of various departmental witnesses that each Department was working to its own ideas of potential population development in the Dominion. Not only were there different concepts as to the ultimate total population, but generally there were different ideas as to the desirable internal distribution of the population and as to the general employment policies which should be adopted. For instance, in another Section of this report we discuss at some length the problem of decentralization, particularly of secondary industries. Such decentralization of industry implies, naturally, some decentralization of population, and this in turn involves long-term thinking in relation to housing policies, transport policies, public-works policies, and the like. The Employment Department presented some very adequate statistics as to present employment possibilities. It is obvious, however, that there will need to be a very close co-ordination between the Industries and Commerce Department, responsible as it is for industrial development, and the Employment Department. Both of these, in turn, will need adequate information regarding the financial structure as it affects overseas funds. In the matter of land-settlement, it is obvious that some detailed investigations are necessary as to the absorptive capacity of land in the Dominion in terms of agricultural population.

A careful study of our report will show that there is a vital need for a reliable and continuous overall study of population policies in the future. The Government should be in a position to inform all Departments as to what this policy is, particularly in regard to the development of the economic and social life of the Dominion. This naturally involves some definite views as to immigration. We therefore recommend that there be set up at an early date a small Secretariat attached directly to the Cabinet, charged with the continuous study of population problems with a view to devising a long-term overall policy for the guidance of Departments. There is an evident lack of co-ordination on many of these policies. While we mention particularly the problem of population, our investigations have shown that in several other fields Departments need some definite overall guidance as to certain fundamental factors of New Zealand's economy and as to policies which are to be adopted in the future. Departments should not be placed in the position of having to make guesses as to general trends. We do not think this function can be adequately performed by any one Department. What is needed is some small organization outside the normal departmental structure and attached to the Cabinet, through the Prime Minister, which would act as an Economic Secretariat.

APPENDIX A.—ABORTION

On the subject of abortion a number of witnesses appeared before the Committee. The witnesses included medical practitioners, officers of the Police Department, and representatives of the churches, as well as several other institutions and numbers of private persons. The general tenor of the evidence was to emphasize the seriousness of the problem of induced abortion, but from the evidence submitted it would be difficult to assess the actual extent of this social evil. The police statistics showed that the number of prosecutions in any one year was relatively very small, and it would appear that there is an obvious reluctance on the part of juries to convict. There was a general agreement that, despite the fact that strenuous endeavours have been made to check this crime, it still continues to be a serious evil. For a time the Health Department made use of some very satisfactory propaganda showing the possible effects of criminal abortion, and we have no hesitation in recommending that the use of this type of propaganda should be continued. The cause of the evil is doubtless to be found in the moral outlook of the community.

After careful consideration, we have come to the conclusion that no facts in relation to the abortion evil have been revealed to us beyond those which were reported on by the Committee of Inquiry into the various aspects of the problem of abortion in New Zealand which was appointed by the Right Hon. P. Fraser, when Minister of Health, in 1937. We therefore feel that we can wholeheartedly endorse the conclusions of the Committee above referred to, and accordingly we reproduce the summary and conclusions of that Committee.

SUMMARY AND CONCLUSIONS OF REPORT OF COMMITTEE OF INQUIRY INTO THE VARIOUS ASPECTS OF THE PROBLEM OF ABORTION IN NEW ZEALAND (McMILLAN REPORT).

SUMMARY AND CONCLUSIONS

I. The Committee is convinced that the induction of abortion is exceedingly common in New Zealand, and that it has definitely increased in recent years.

It has been estimated that at least one pregnancy in every five ends in abortion ; in other words, that some 6,000 abortions occur in New Zealand every year.

Of these, it is believed that 4,000, at a conservative estimate, are criminally induced either through the agency of criminal abortionists or by self-induction, either of which is equally dangerous.

It is clear that death from septic abortion occurs almost entirely in such cases.

Such deaths have greatly increased in recent years, and now constitute one-quarter of the total maternal mortality ; in some urban districts it amounts to nearly half of the total maternal mortality.

New Zealand has, according to comparative international statistics, one of the highest death-rates from abortion in the world.

II. The Committee, after taking evidence from witnesses representing all sections of the community, has formed the conclusion that the main causes for this resort to abortion are—(1) economic and domestic hardship ; (2) changes in social and moral outlook ; (3) pregnancy amongst the unmarried ; and (4) in a small proportion of cases, fears of childbirth.

These matters are fully discussed.

III. Consideration has been given to the possible remedying of these causes :—

(*a*) In so far as economic hardship is the primary factor, certain recommendations have been made regarding financial, domestic, and obstetrical help by the State :

(*b*) To lessen any fear of childbirth where this exists, it has been recommended that the public should be informed that New Zealand now has a very low death-rate in actual childbirth and that relief of pain in labour is largely used. At the same time the Committee has advocated that further efforts in the direction of pain relief should be explored :

(*c*) For dealing with the problem of the unmarried mother, the Committee considers that the attack must be along the lines of more careful education of the young in matters of sex, prohibition of the advertisement and sale of contraceptives to the young, and a more tolerant attitude on the part of society towards these girls and their children :

(*d*) The Committee believes, however, that the most important cause of all is a change in the outlook of women which expresses itself in a demand of the right to limit—or avoid—the family, coupled with a widespread half-knowledge and use of birth-control methods—often ineffective. These failing, the temptation to abortion follows.

The Committee can see only two directions in which abortion resulting from these tendencies can be controlled :—

(1) By the direction of birth-control knowledge through more responsible channels, where, while the methods would be more reliable, the responsibilities and privileges of motherhood, the advisability of self-discipline in certain directions, and other aspects of the matter would be discussed.

The Committee believes that it is through the agency of well-informed doctors and, to a certain extent, through clinics associated with our hospitals that this advice should be given.

It is not, however, considered that this is a matter for the State, except to a limited degree.

(2) To appeal to the womanhood of New Zealand, in so far as selfish and unworthy motives have entered into our family life, to consider the grave physical and moral dangers of race suicide which are involved.

This, it is considered, is a matter for all women's social organizations to take up seriously.

IV. Certain further measures of a more general nature came under the examination of the Committee.

The prohibition of the promiscuous advertisement of contraceptives, and of their sale to the young; the licensing of the importation of certain types of contraceptives; the restriction of the sale or distribution of contraceptives to practising chemists, doctors, hospitals, and clinics; the prohibition of the advertisement, or of the sale, except on medical prescription, of certain drugs and appliances which might be used for abortion purposes; these measures are recommended.

The specific legalization of therapeutic abortion (by doctors for health reasons) as a safeguard to doctors was fully examined, but is not recommended.

The Committee is satisfied that the present interpretation of the law is such that, where the reasons for the operation are valid, the doctor runs no risk of prosecution.

The risks of an alteration in the law are great.

Legalization of abortion for social and economic reasons were also put forward. The Committee has discussed the matter, and strongly condemns any countenancing of this measure.

Though it may be conceded that legalized performance of the operation by doctors in hospitals might reduce the incidence of surreptitious abortion and deaths from septic abortion, we do not accept this as any justification of a procedure which is associated with grave moral and physical dangers.

With regard to sterilization, the Committee adopts the same view as towards the specific legalization of therapeutic abortion.

It is believed that, where the reasons for the operation are in accord with generally accepted medical opinion, there is no bar to its performance.

We see, however, tendencies in the direction of extending this operation far beyond the bounds of this accepted medical opinion.

For this reason we do not recommend any alteration in the present position.

The failure to obtain the conviction of the criminal abortionist, even in cases where the guilt seems beyond all doubt, has been discussed as a matter of serious concern, and the Committee can only bring before the public its responsibility, as represented by members of juries, for the virtual encouragement of this evil practice.

Finally, the Committee, while fully conscious of its inability to place before you a complete and certain solution of this grave problem, or one which will satisfy all shades of opinion, believes that a definite service will have been done through this investigation if full publicity is given to the facts of the situation as here revealed, and if the public conscience is awakened to the fact that, although State aid and legal prohibitions may do something to remove causes and to deter crime, the ultimate issue rests with the attitude and action of the people themselves.

Since this report was presented in 1937 it becomes important to see how far the recommendations have been implemented. The 1937 Committee stated that one of the causes for induced abortion was the economic stress to which some mothers, both married and unmarried, are exposed. They therefore recommend that certain financial assistance should be given, including increased family allowances. The recent universal family allowance provisions go a long way to satisfying this particular recommendation. The 1937 Committee's recommendation regarding extra domestic assistance to young mothers has, to some extent, been met by the recent Home Aid Service under the ægis of the National Employment Service. The recommendation with regard to obstetrical aid being available has been met by the provision of maternity benefits as administered by the Health Department, which cover all necessary ante-natal and post-natal medical care, and medical and nursing assistance in connection with childbirth in public maternity hospitals,

and also meets to a large extent the charges made for confinements in private maternity hospitals. Steps have been taken to improve maternity bed accommodation throughout the Dominion, and Hospital Boards have been required to meet their obligations in this respect wherever the necessity has arisen. The problem of fear of childbirth as being one of the factors responsible for induced abortion was reported on by the 1937 Committee. Of recent years the Health Department has undertaken an educational programme by pamphlets, over the radio, and by newspaper advertisements. The fact that pregnancy and childbirth are normal physiological conditions, and provided the mother takes reasonable care there need be no fear of motherhood, has been stressed. Steps have also been taken to improve the equipment and conditions in both public and private maternity hospitals, and to require the observance of special techniques. The use of methods for the relief of pain during childbirth have greatly increased since the report was issued, and that use is now general. It may be said that, in St. Helens Hospitals, such relief is now available to every woman. The present Committee supports the view of the 1937 Committee that the family practitioner is the person best qualified to give advice on the spacing of families. The proposed setting-up of clinics associated with our hospitals to disseminate birth-control knowledge may cause certain undesirable results.

In the main body of their report the 1937 Committee expresses a tentative opinion that medical practitioners should be required to notify compulsorily to the Medical Officer of Health all abortions which come to their notice. The Health Department considers that this proposal would be quite ineffective. Septic abortions are already notifiable. The Department makes the comment :—

> There are doctors who are loath to notify these, and some fail to do so unless there is a possibility of the patient dying.

There are also many abortions in which no complications arise, and these are never seen by a medical practitioner.

With regard to the 1937 Committee's suggestion that there should be a prohibition on the sale, except by medical prescription, of certain drugs and appliances which might be used for abortion purposes, certain action has been taken under the Medical Advertisements Act, 1942, which prohibits any advertisement with respect to the following disorders : amenorrhœa and female irregularities and sexual weakness or impotence. This Act also requires the publication of the true name of the person or company responsible for publishing any medical advertisements, and this may have some deterrent effect on this unsavoury type of mail order business. Action was also taken by the Department to declare ergot and its preparations to be a prescription poison, which means that its sale is restricted to chemists and that every sale must be made pursuant to a written prescription. In the opinion of the Health Department, it is not practicable to make any additional effective action concerning abortifacients. The practice of abortion is illegal, the present law dealing with it is very drastic, and any person supplying any drug or instruments for this purpose would be guilty of aiding and abetting an offence. It is unlikely that articles for this purpose would be sold or forwarded by post in such a manner as would enable an offence to be detected. The drugs which might be used in an endeavour to induce abortion are commonly used for other purposes, and it would be impossible to say that any drug sold or detected in transit through the post was intended to be used for such a purpose.

" The Department knows of no special instrument which is used for the procuring of abortion, but, on the other hand, articles which have other legitimate uses—*e.g.*, a rubber catheter or bougie—may be misused to secure an abortion. The difficulty of defining what would be regarded as abortifacients seems to preclude action in this matter."

It can thus be seen that a number of the recommendations of the 1937 Committee have been already legislated for or otherwise provided for. Basically the problem is one of the moral standard of the community. In some cases the basic cause is to be found in the lack of moral restraint on the part of certain unmarried people ; in other

cases the explanation is to be found in the desire, from whatever cause, to be freed from the responsibilities of parenthood. Undoubtedly a better attitude towards parenthood and the raising of children would do much to counteract the tendency to resort to illegal methods of avoiding children. As we have stated earlier in this report, the whole question is undoubtedly bound up with the moral and spiritual standards of the community. If these can be raised, either by an active educational campaign, both with the young and the more mature, or by any other means whatever, the seriousness of this evil will decline. We desire to commend the strong stand of the churches of all denominations on this particular issue. We were impressed with the sincerity of the representatives of the various religious denominations who appeared before us. The Health Department in its active propaganda, and possibly in the future in co-operation with the Education Department, may be able further to impress upon the public the evils of this particular nefarious trade.

The present criminal legislation is, we think, sufficiently drastic to cope with the problem. The Police Department, which is charged with the prosecution of offenders, is under a very grave handicap in that it is frequently difficult to amass sufficient evidence to guarantee a conviction. In many cases the only evidence available is that of an accomplice, and juries in New Zealand, as in other parts of the world, are very loath to convict offenders on the evidence of an accomplice in the crime. An educational programme which tended to raise the moral tone of the community, and which aimed directly at emphasizing the moral, spiritual, and national evils of this practice, would of necessity have a very beneficial effect in raising the ethical standards of our people. This, in turn, would make itself apparent in the approach made by members of our juries to the deciding of cases involving charges of abortion. By such means we could reasonably expect an improved and much more effective enforcement of the law.

In conclusion, we desire to endorse in general the report and conclusions of the 1937 Committee.

APPENDIX B.—CONTRACEPTION

In Appendix A, dealing with abortion, we have reprinted the summary and conclusions of the 1937 Committee on the various aspects of the problem of abortion in New Zealand. Among those recommendations is one dealing with the prohibition of the promiscuous advertisement of contraceptives and their sale to the young. There was a further recommendation that there should be a restriction on the sale or advertisement of contraceptives to practising chemists, doctors, hospitals, and clinics. A final recommendation was in relation to the licensing of the importation of certain types of contraceptives. The opinion of those giving evidence before the Committee on this subject was that the use of contraceptives was very widespread. In particular, there was evidence that contraceptives could be obtained from very many undesirable sources. We are definitely of the opinion that some steps should be taken along the lines recommended by the 1937 Committee, in particular that the sale or distribution should be restricted to practising chemists, doctors, hospitals, or clinics.

The Pharmacy Board of New Zealand, in a written submission to the Committee, states that it should be an offence " for any person other than a medical practitioner or chemist to sell or possess for sale any contraceptives ; to sell any instruments or drugs which may be used for abortion or contraceptives to any unmarried person under twenty-one years of age ; and to publish in any advertisement the sale of contraceptives."

The Department of Health, commenting on the proposals of the 1937 Committee, and therefore on the proposals of the Pharmacy Board, make the statement :—

> The administration of a law prohibiting the sale of contraceptives to persons under, say, twenty-one years, would be extremely difficult and would be rendered more so by the necessity to devise means whereby supplies could be made available to married persons under that age . . . The advertising of contraceptives is now usually done in veiled fashion, under the cloak of " mail order agency " . . . In the event of a pamphlet or advertisement being couched in indecent terms it is practicable for action to be taken by the Police Department under the Indecent Publications Act, 1910. It may be pointed out that authority already exists under the Post and Telegraph Act, 1908, to prevent the transmission through the mails of contraceptives and abortifacients, so long as the articles are sent through packet-post. If they are sent as letters—that is, if letter-postage rate is paid for them—they cannot be interfered with.

The Department of Health suggests that it may be desirable to extend the law to enable such articles forwarded by letter-post as well as by packet-post to be detained, but it is pointed out that this may be unfair against persons living in country areas where access to a chemist is difficult. Such a law would probably prove exceedingly difficult to enforce satisfactorily. The Department further suggests that some improvement might also be effected by prohibiting the forwarding through the post of any advertising material, whether in letter or pamphlet form, concerning contraceptives. Most of the mail-order business in these lines is done by means of a newspaper advertisement, which in a veiled manner, invites inquiries concerning such articles, whereupon a comprehensive list of supplies is sent to the inquirer.

To safeguard the health of mothers and children it was contended by some witnesses that proper family planning was essential. As to the methods by which such family planning should be implemented, there are wide differences in public opinion. Certain groups favour the dissemination of artificial birth-control methods, including the use of contraceptives by married persons. Other influential sections of the community believe that the problem should be dealt with purely in terms of moral restraint. We do not desire to express an opinion one way or the other on this subject, and we are not prepared to recommend that the State should be directly involved in such an undertaking. After all, to reiterate a statement we have made on a number of occasions in this report, the basis of a sound and healthy nation is to be found in the moral and spiritual standards

of that nation. The use of contraceptives and other means of birth-control can become, if wrongly used, merely a means of demoralization, and could, if of wide extent, destroy the moral stamina of the nation. In other words, we are forced back to the problem of the upbuilding of the moral tone of the community. To be effective, this must start with our young people. It is not a short-term problem, but a problem which challenges not merely the politicians and the religious section of the community, but also every other person who has the well-being of this young nation at heart.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

1. BIRTH-RATE

If the very low birth-rate of between 16 and 17 per 1,000 which was in existence in 1936 had continued, then, apart from immigration possibilities, the population would in a relatively short time have tended to decline. The rate of over 23 per 1,000 in 1945 is abnormally high, and is probably due to conditions associated with the return of servicemen from overseas. Other things being equal, and excluding the possible beneficial effect of the universal family benefit, the rate is likely to stabilize somewhere between 18 and 21 per 1,000. At this rate, and providing the size of families remains constant, the population will slowly increase.

The heavy fall in the birth-rates during the depression, however, has created a gap in our population which it will be impossible to fill. This will create employment difficulties, particularly in the next six or seven years.

2. DEATH-RATE

Due to the fact that the age-structure of the population is now definitely that of a matured country, we cannot expect a continuation of the rate of fall in the death-rate which was in evidence over earlier periods of New Zealand's history. Of recent years the total death-rate has fallen largely because of a fall in the infantile death-rate. Since this is now the lowest in the world, a continuance in the rate of fall cannot be expected.

3. MAORI POPULATION

The very great increase of recent years in the Maori population is the outstanding fact in New Zealand's population development. The total Maori population increased by nearly 30 per cent. between 1926 and 1936. Approximately 97 per cent. of the Maori population live in the North Island.

The Maori death-rate, however, is considerably greater than the European death-rate, and this is particularly true of the Maori infantile death-rate, which, in 1944, was 102·26 per 1,000 Maori births, as compared with 30·12 per 1,000 non-Maori births.

4. EXPECTATION OF LIFE

The average expectation of life, which increased very considerably between 1891 and 1931, is still increasing, but at a slower rate. The average expectation of life for males is now 65·46 and for females 68·45. For Maoris the average expectation of life is 46·2 years for both sexes.

5. RACE-STRUCTURE

The population of New Zealand is predominantly European. At the present time 94·33 per cent. are of European extraction, 5·23 per cent. of Maori extraction, and only 0·44 per cent. of other than European or Maori extraction.

6. ALLEGIANCE STRUCTURE

Aliens owning allegiance to other than the British Crown represent only 0·4 per cent. of the population.

7. LOCATION OF POPULATION

Approximately two-thirds of the European population of New Zealand live in the North Island, and only one-third in the South Island. This reverses the position of eighty years ago.

Approximately 63 per cent. of the population live in urban areas and 37 per cent. in counties. The population movement to urban areas is continuing. This is due not so much to what is called a drift away from agricultural pursuits, as to technological changes in agriculture. Many of those engaged in the servicing of agriculture, who previously were resident in rural areas, are now classified as urban dwellers. Statistical changes also tend artificially to increase the number of urban dwellers.

The population of Canterbury, Otago, and Southland, and particularly of the latter two, shows a serious decline in the rural areas over the last ten years. There were approximately 13,000 less people living in rural districts in Otago and Southland in 1945 than in 1936. The decline in rural population in Canterbury, Nelson, and some of the other provinces, though not so great, is still serious. This problem calls for an early investigation.

The tendency for industry to congregate in the four main centres may create serious economic and social difficulties. From every point of view the decentralization of certain industries should be encouraged. Among the more positive incentives to this decentralization would be a decision to provide more housing in some of the smaller towns so that the working population would have adequate living accommodation. Certain of the lighter types of industry where transport costs are small compared with the total costs, would undoubtedly follow such population movements.

8. OCCUPATIONAL DISTRIBUTION OF THE POPULATION

The numbers engaged in agricultural pursuits have tended to increase at practically the same rate as the total occupied population of the Dominion. This means that the relative position of agriculture in the matter of employment opportunities has been maintained.

Contrary to general impression, the numbers engaged in secondary industries have, up to the moment, not increased at a greater rate than the numbers of total occupied personnel. The number engaged in tertiary industries, however, has tended to increase very steadily. Some of these trends have been affected by the recent war.

9. AGRICULTURE

There is relatively little land, available and suitable for settlement, at present unoccupied. The Lands and Survey Department estimates that to settle the returned servicemen desiring to take up agriculture it will be necessary to purchase up to 800,000 acres of land at present occupied.

The National Employment Service states that the demand for agricultural labour is falling off.

There is therefore no necessity for the State to organize the immigration of either agriculturalists or agricultural labourers into the Dominion.

10. COAL-MINING

Though the number engaged in coal-mining and the output have increased, coal-supplies are inadequate to meet our present needs. The explanation is to be found largely in the increased demand because of the increase in population, the increase in transport, the increase in industrial use, and the non-availability of imports. There is scope for the immigration of coal-miners.

11. SAWMILLING AND BUSH-FELLING

There was evidence of a shortage of personnel in the sawmilling and bush-felling industries. The suggestion was made that persons previously engaged in these industries were not returning thereto. Better housing and social amenities would undoubtedly attract further operatives into these occupations. There would appear to be scope for immigration, if men capable of work in this industry are procurable.

12. SECONDARY INDUSTRIES

A major advance in manufacturing production has taken place since 1931. The expansion has been most marked in the engineering field, particularly in the field of electrical engineering. There has also been an expansion in the clothing-manufacturing field and in the motor-body-building field. The impetus given to manufacturing during the war will have important repercussions in the post-war period. In practically every phase of secondary industrial production there was evidence of a shortage of operatives. The fall in the birth-rate during the depression period from 1930 to 1936 is at the present day resulting in a serious reduction in the number of adolescents available for industry. This shortage will continue for some six or seven years. There is a serious shortage of female operatives for hospital work and for many manufacturing industries, particularly the clothing industries, and for domestic work. We endorse the Government's action in endeavouring to arrange for the immigration of hospital nurses and workers and of domestic servants. If and when housing is available, steps should be taken to secure immigrants suitable for secondary industrial work. The shortage of houses may for a time seriously limit the number of married persons who can be brought into the country, but steps should be taken to have the machinery in operation and plans ready for the time when immigration will be possible.

13. TERTIARY INDUSTRIES

There has been a marked advance in practically all phases of the tertiary industries over the past few decades. Although there was no evidence of acute shortages of labour in the transport and communication field, there was proof that present services were being badly strained, and that any expansion of population or of industry would require an expansion of these services. A marked feature of the groups "Commerce and Finance" and "Public Administration and Professional" has been the large increase in the number of female workers involved. Women in substantial numbers have entered these fields during the war, and although there will be some recession in post-war years, yet they have proved themselves so satisfactory at this type of work that no doubt their numbers will continue to be relatively high.

14. GOVERNMENT EMPLOYEES

There has been a major expansion in the number of governmental employees, both central and local. The increase has been more than proportionate to the increase in population and is due to the extension of the field of Government activity.

15. EDUCATION

Due to the cessation of building activities during the depression and the recent war, there is a marked shortage of educational buildings. The raising of the school age to six years, and its subsequent lowering to five, created a

strain on the teachers available. This shortage of teachers and school buildings was not overtaken by 1939, when the war began. During the war, owing to the absence of many of the men with the fighting services, there has been a shortage of input of teachers. This shortage has been accentuated by the rising birth-rate from 1936 to the present date. The raising of the school leaving age to fifteen years will place a strain on the accommodation and teaching staff in secondary schools.

These educational problems must be given serious consideration when the question of the immigration of children is discussed. It is an important factor in connection with the proposals to bring war orphans in large numbers into the country.

The development of large housing estates, particularly in the Hutt Valley and in the Auckland area, has created serious and urgent problems, because this redistribution of available school population has necessitated the construction of many school buildings at a time when housing must receive a large priority. There is a close liaison between the Education Department and the Housing Department on this question.

16. HOUSING

At every stage of our inquiry into the possibility of arranging for immigration into the Dominion we were met by the fact that the housing shortages were so serious as to make it impossible for us to recommend an immediate commencement of large-scale immigration. At the present time returned servicemen are entitled to 50 per cent. of the available State houses, and, in addition, large numbers of civilians, particularly in the four main centres, are in need of satisfactory housing accommodation. The Director of Housing Construction states that 45,000 houses will be needed within the next three years to catch up with the deficiency and to take account of the normal annual requirements. Once the satisfaction of the internal demand for houses is in sight, immediate steps should be taken to secure immigrants for the purposes discussed earlier.

17. TOWN-PLANNING

In view of the increasing population of the Dominion and of the possibility within the next few years that a considerable number of immigrants will arrive, steps should be taken to see that new towns and suburbs are adequately laid out under modern town planning laws.

18. FINANCIAL IMPLICATIONS OF A CHANGING POPULATION

The fact that the population is steadily ageing has some very important results financially. It increases the burden of old-age benefits and increases the responsibility of the working community for the dependent sections of the community.

On the other hand, an increasing population will, other things being equal, result in a lowering of the burden of debt, particularly of the unproductive debt.

19. RESEARCH INTO POPULATION PROBLEMS

Our investigations have shown that proper attention has not been paid to the problem either of the absolute size of the population or of its internal distribution in the framing of departmental policies. We therefore recommend that a small secretariat should be attached directly to Cabinet charged with the continuous study of population movements, studies which can be made available to Departments in the framing of their own departmental policies.

20. ABORTION

The problem of induced abortion remains a serious one within the Dominion. We have formed the opinion that the present criminal law is sufficiently drastic to meet the situation. There is, however, evidence of a need for a deeper moral appreciation of the issues involved, in the community as a whole. The only approach which will produce any effective results is that of the raising of the moral and spiritual tone of the community. This is a responsibility not only of parents and religious leaders, but one to which every section of the community must contribute.

We endorse the report of the 1937 Committee of Inquiry into the various Aspects of the Problem of Abortion in New Zealand (usually known as the McMillan report), and have pointed out that a number of the recommendations of that Committee have already been implemented.

21. CONTRACEPTION

There was some suggestion of an increase in the use of contraceptives, particularly among unmarried people. We endorse the recommendation of the Pharmacy Board that the sale of contraceptives should be restricted to registered pharmacists. Here, again, the problem of the moral and spiritual education of the people is most important.

We endorse the remarks and most of the recommendations of the 1937 Committee of Inquiry into the various Aspects of the Problem of Abortion in New Zealand on this subject.

LIST OF PERSONS AND ORGANIZATIONS WHO APPEARED WITH PAPERS

Name.	Number of Submission.	Reference to Page in Volume of Verbatim Evidence.
Memorandum by Jewish Communities of New Zealand (Mr. Weinstein)	2, 2A	123
Dominion Population and Settlement Association (Mr. Leigh Hunt)	3	3, 270
The Future Population of New Zealand (G. N. Calvert) ..	4, 5	65
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Housing Construction Department (Mr. G. W. Albertson) ..	10	99
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New Zealand Manufacturers' Federation (Mr. J. Abel) ..	16	151
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Commissioner of Transport (Mr. G. L. Laurenson)	23	207
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Justice Department (Mr. B. L. Dallard)	25	222
Social Security Department (Mr. H. Digby-Smith)	26	229
Department of Agriculture (Mr. E. J. Fawcett)	27	233
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Education Department (Dr. C. E. Beeby)	29	244
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New Zealand Institute of Architects (Mr. W. J. McKeon) ..	36	277
Lands and Survey Department (Mr. D. M. Greig)	45	299
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LIST OF PERSONS AND ORGANIZATIONS WHO PROVIDED WRITTEN SUBMISSIONS BUT DID NOT MAKE A PERSONAL APPEARANCE

Name.	Number of Submission.
Mrs. Rita Minehan—	
New Zealand's Doom: Criminal Abortion	1
New Zealand's Doom: Decline in Family Life	17
Joan Rattray, Kingsley-Fairbridge Farm Schools	18
Mrs. R. C. Clark	35
D. B. Dallas	37
Women's Committee, New Zealand Communist Party	38
National Council of Churches in New Zealand	42, 42A
Plunket Society	43
Department of Tourist and Health Resorts	47
The Christian Pacifist Society of New Zealand	48
P. R. Potter	49
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Agnes F. R. McIntosh	51
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J. J. Lukats	53
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LIST OF WITNESSES WHO DID NOT PRODUCE PAPERS

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Mr. E. A. Dahl	126
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