



1974

*World Population Year*

**THE POPULATION  
OF  
NEW ZEALAND**

C.I.C.R.E.D. Series

**1974 WORLD POPULATION YEAR**

**THE POPULATION OF  
NEW ZEALAND**

**CICRED Series**



## PREFACE

This publication is one of a series of monographs prepared by different countries at the suggestion of the United Nations to commemorate World Population Year. Prepared according to a common plan, each monograph deals with the historical growth and development of the population of the subject country, its present characteristics and social conditions, and future trends.

This monograph dealing with the population of New Zealand, which was prepared by the Demographic Analysis Section of the Department of Statistics, is based mainly on data already available in various publications of the Department, especially on that derived from the five-yearly Censuses of Population and Dwellings. A bibliography is included at the back of the publication. The work was undertaken at the request of the Committee for International Co-ordination of National Research in Demography (CICRED), which has assumed responsibility for co-ordinating these national monographs on population.



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# **CHAPTER I**

## **POPULATION GROWTH**

### **1.1 INTRODUCTION**

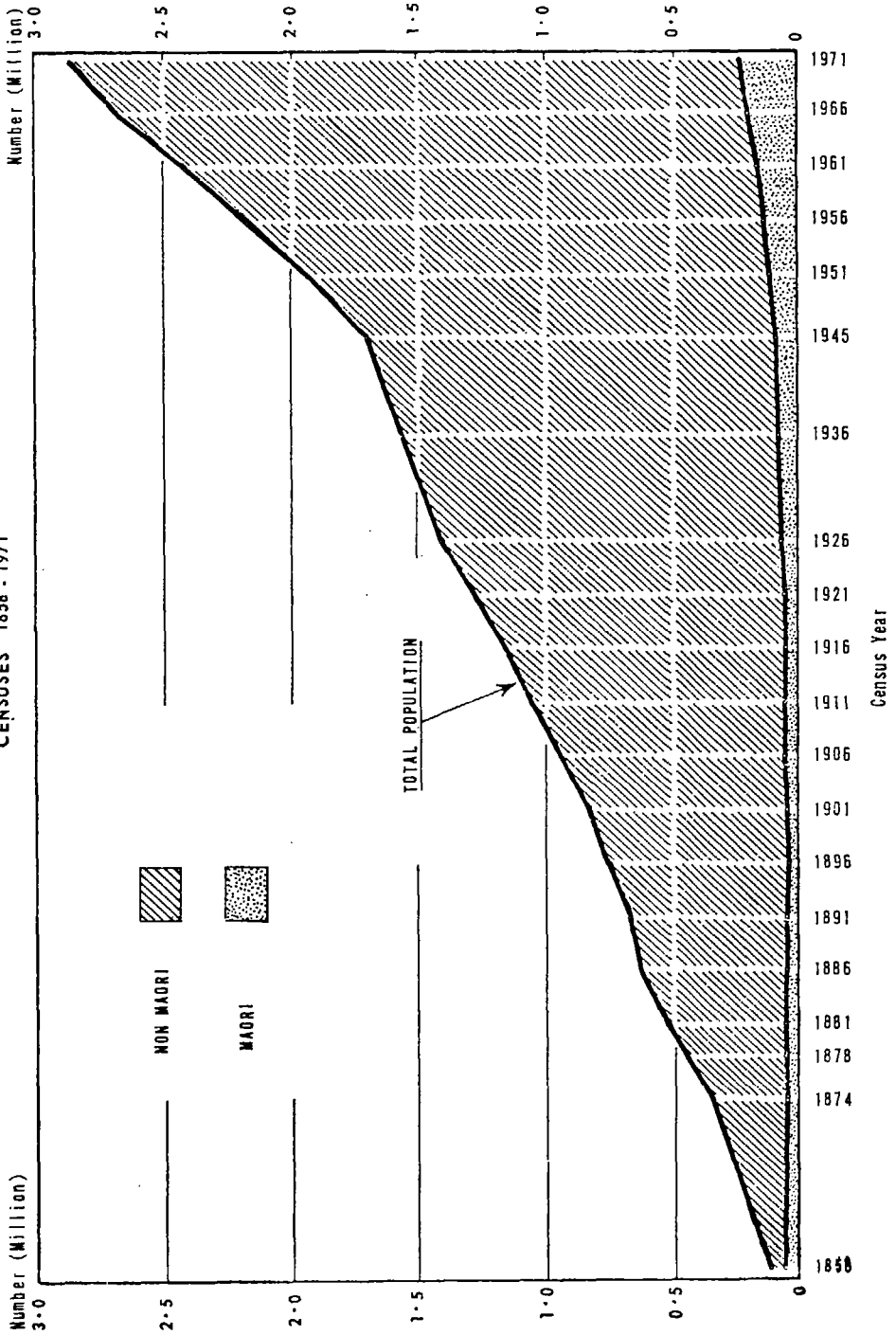
The total population of New Zealand at 31 March 1975 was estimated to be 3,105,400. This figure is over twenty-five times the population (115,462) recorded at the first Census of Population in 1858. The one million population level was reached in 1908. Forty-four years later, in 1952, the population had doubled to two million and by 1973 (in just over two decades) it had passed the three million mark. Figure 1.1 illustrates the historical growth pattern of the New Zealand population as recorded at successive Censuses from 1858 to 1971. New Zealand comprises two large islands (the North and South Islands) and several small islands. Its total area is 268,675 square kilometres. At the 1971 census, population density was 10.7 persons per square kilometre compared with 5.2 persons per square kilometre at the 1926 Census. Population densities are higher in the northern and generally warmer regions; the North Island, with 17.9 persons per square kilometre in 1971, has for many years been more densely populated than the South Island (5.3 persons per square kilometre in 1971). In New Zealand, distribution of the population is greatly affected by the nature of the land and climate. Mountains, lakes and rough hill country cover 75 percent of the country thus restricting settlement to about 25 percent of the land area. By world standards New Zealand's population is small and its population density is low. Although its current growth is higher than that of many European and North American countries, neither the rate of population increase nor the overall size of the population have yet imposed any serious impediments to economic and social development. However, since 1970 there have been signs of increasing pressure on resources arising from an acceleration in growth attributable to a rapid increase in the level of net immigration. There have also been problems associated with an increasingly uneven pattern of areal population distribution and with differential fertility rates among various ethnic and socio-economic groups in the community.

### **1.2 HISTORICAL GROWTH**

In New Zealand's early colonial years, the bulk of population increase was due to immigration of European settlers encouraged by better economic prospects, the discovery of gold, a new deal in labour relations and a vigorous public works policy. It was not until the late



FIGURE 1.1 GROWTH OF TOTAL NEW ZEALAND POPULATION  
CENSUSES 1858 - 1971



1870's that natural increase permanently displaced net immigration as the chief contributor to population growth. By the census of 1881, the proportion of the total population born in New Zealand and born overseas had become approximately equal (50.2 and 49.8 percent respectively). The depression of the late eighties and early nineties brought about a temporary cessation of the net gain from immigration (departures actually exceeding arrivals during the period 1886-1890).

As Table I.1 shows, population increase has been substantial in each intercensal period since 1858. However, since the end of the First World War, New Zealand's demographic experience has proved highly sensitive to economic and social factors and considerable variations in population growth rates have occurred. The decline in the growth rate experienced during the 1930's reflected the economic uncertainties of the period, while the post-World War II fertility boom, which was experienced by most developed western countries, contributed to the high growth rates experienced during the 1950's and early 1960's. A combination of sharply falling birth rates and lower than normal levels of immigration resulted in a significantly lower growth rate during 1966-71.

TABLE 1.1  
GROWTH OF NEW ZEALAND  
POPULATION, 1858-1971

Census Date	Total Population <sup>(1)</sup>	Increase Over Preceding Census		Average Annual Intercensal Rate of Increase
		Number	Rate	
		(Percent)		(Percent)
24 December, 1858	115,462	—	—	—
1 March, 1874	344,984	229,522	298.8	7.5
3 March, 1878	458,007	113,023	32.8	7.3
3 April, 1881	534,030	76,023	16.6	5.1
18 March, 1886	620,451	86,421	16.2	3.1
5 April, 1891	668,632	48,181	7.8	1.5
12 April, 1896	743,207	74,575	11.2	2.1
31 March, 1901	815,853	72,646	9.8	1.9
29 April, 1906	936,304	120,451	14.8	2.8
2 April, 1911	1,058,308	122,004	13.0	2.5
15 October, 1916	1,149,225	90,917	8.6	1.5
17 April, 1921	1,271,664	122,439	10.7	2.3
20 April, 1926	1,408,139	136,475	10.7	2.1
24 March, 1936	1,573,810	165,671	11.8	1.1
25 September, 1945	1,702,298	128,488	8.2	0.8
17 April, 1951	1,939,472	237,174	13.9	2.4
17 April, 1956	2,174,060	234,590	12.1	2.3
18 April, 1961	2,414,984	240,922	11.1	2.1
22 March, 1966	2,676,919	261,935	10.8	2.1
23 March, 1971	2,862,631	185,712	6.9	1.4

<sup>(1)</sup>Excludes members of the New Zealand Armed Forces overseas at census dates.

### 1.3 CONTRIBUTION OF NATURAL INCREASE AND MIGRATION TO POPULATION GROWTH

Figure 1.2 illustrates the relative contributions natural increase and net migration have made to population growth in New Zealand since 1921. Over this period, natural increase (number of live births minus number of deaths) has consistently been the chief contributor to population growth. However, external migration has continued to have a significant influence.

During the period since 1921 the crude death rate has remained relatively stable, varying from 11.05 per 1,000 of mean total population in 1942 (during World War II) to 8.35 per 1,000 of mean total population in 1933. Consequently, fluctuations in the rate of natural increase during this period have been largely due to changes in the crude birth rate. In the three intercensal periods after World War II average annual population growth rates of 2.4 percent, 2.3 percent and 2.1 percent were recorded. During this period of high fertility the relative contributions of natural increase and net immigration to growth were about 80 and 20 percent respectively.

Average annual growth in population fell sharply to 1.4 percent during 1966-71.

In addition to the decline in fertility which began in 1962, this latter fall in population growth was the result of population losses through net emigration suffered during the internal economic recession of 1968-69.

Large gains through net immigration during 1971-74 have been sufficient to offset the continuing decline in fertility and maintain the average annual rate of population growth of about 2 percent. During this period the relative contribution of net immigration to population growth was nearly 45 percent, the highest recorded since the 19th century.

FIGURE 1.2 POPULATION INCREASE, NATURAL INCREASE, AND INCREASE DUE TO NET MIGRATION OVER SUCCESSIVE FIVE YEAR PERIODS, 1921 - 1971

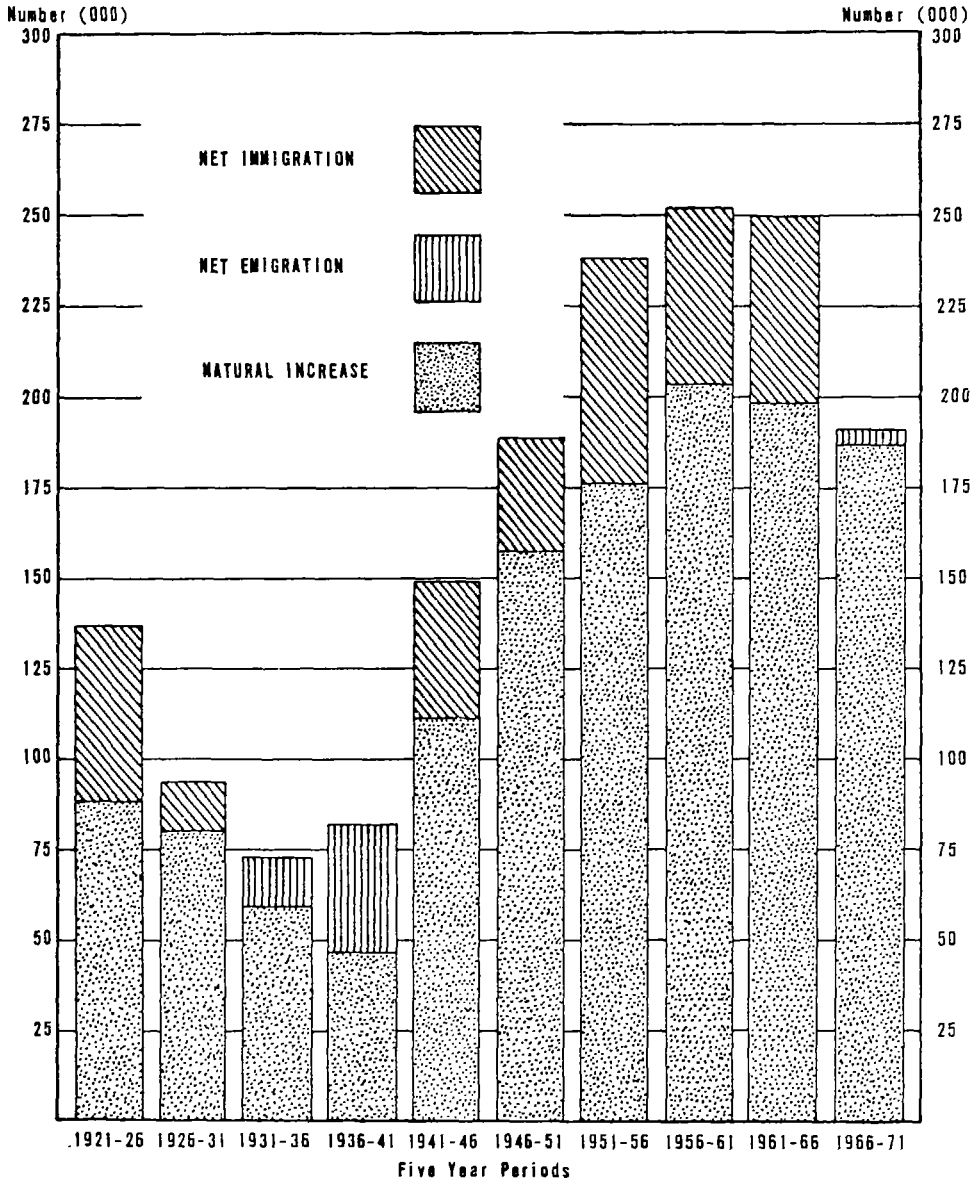


TABLE 1.2  
NEW ZEALAND: POPULATION INCREASE,  
NATURAL INCREASE AND INCREASE DUE TO  
NET MIGRATION, 1921-1974

Five Year Period Ended 31 December	Total Population at end of Period	Population Increase During Period	Natural Increase During Period	Increase Due to Net Immigration During Period <sup>(1)</sup>	Proportion of Population Increase Attributable To:	
					Natural Increase	Net Immigration <sup>(1)</sup>
		(Thousand)			(Percent)	
1926	1,429.7	136.8	88.7	48.1	64.9	35.1
1931	1,522.8	93.1	80.4	12.7	86.3	13.7
1936	1,584.6	61.9	70.0	- 8.2 <sup>(2)</sup>	113.2	- 13.2 <sup>(2)</sup>
1941	1,631.3	46.7	89.2	- 42.6 <sup>(2)</sup>	191.2	- 91.2 <sup>(2)</sup>
1946	1,781.2	149.9	112.4	37.6	74.9	25.1
1951	1,970.5	189.3	157.9	31.4	83.4	16.6
1956	2,209.1	238.6	175.2	63.4	73.4	26.6
1961	2,461.2	252.1	204.3	47.8	81.1	18.9
1966	2,711.3	250.1	198.5	51.6	79.4	20.6
1971	2,899.1	187.7	192.1	- 4.4 <sup>(2)</sup>	102.3	- 2.3 <sup>(2)</sup>
1974 <sup>(3)</sup>	3,094.7	195.6	107.9	87.7	55.2	44.8

(1) Difference between population increase and natural increase.

(2) Decrease due to net emigration.

(3) Three year period ended 31 December.

#### 1.4 IMMIGRATION AND EMIGRATION

New Zealand is one of the few countries of the world where international migration continues to exercise an important influence on population growth. Table 1.3 shows the recorded total arrivals, total departures and the net total migration (usually an excess of arrivals over departures) in successive five-year periods since 1901. These data reflect the close relationship which exists between net external migration levels and the economic situation prevailing at any given time in New Zealand and Australia, and in the United Kingdom and other traditional migrant "donor" countries.

With the exception of the period 1941-46, when net immigration was negligible because of World War II, periods of low net immigration or net emigration have coincided with times of economic recession.

Between 1961 and 1971 the average annual excess of arrivals over departures was 7,325 while annual experience varied from a net inflow of 18,832 in 1962 to a net outflow of 10,848 in 1969. These data indicate the susceptibility of external migration flows to economic cycles — net immigration which rose from 7,845 in 1971 to 10,851 in 1972, showed an even sharper rise to 33,576 in 1974, the highest figure recorded this century. Of the 2.3 percent overall population growth rate in that year, net immigration contributed 1.1 percent.

TABLE 1.3 EXTERNAL MIGRATION  
ARRIVALS, DEPARTURES AND EXCESS OF  
ARRIVALS OVER DEPARTURES, 1901-1975

Five Year Period Ended 31 March	Total Arrivals During Period <sup>(1)</sup>	Total Departures During Period <sup>(1)</sup>	Excess of Arrivals Over Departures During Period <sup>(1)</sup>
1906	155,468	107,760	47,708
1911	194,568	157,185	37,383
1916	190,445	153,719	36,726
1921	119,156	99,632	19,524
1926	196,150	150,091	46,059
1931	180,898	162,264	18,634
1936	108,128	120,494	-12,366 <sup>(3)</sup>
1941	158,302	144,564	13,738
1946	34,498	30,280	4,218
1951	199,972	171,595	28,377
1956	318,665	250,406	68,259
1961	434,984	393,259	41,725
1966	851,404	779,437	71,967
1971 <sup>(2)</sup>	1,411,224	1,409,942	1,282
1975 <sup>(2)</sup>	2,154,417	2,055,883	98,534

<sup>(1)</sup>Figures are exclusive of crews, through passengers, tourists on cruising liners and members of the armed forces.

<sup>(2)</sup>Four year period ended 31 March.

<sup>(3)</sup>Excess of Departures over arrivals.

1

# CHAPTER II

## COMPONENTS OF POPULATION GROWTH

### 2.1 INTRODUCTION

The growth of any population depends primarily on three processes, also called the dynamics of population growth, viz., fertility, mortality and migration. This chapter provides a comprehensive analysis of the differentials, patterns and trends in the three demographic processes in New Zealand during the present century. In presenting this analysis the primary objective was to cover the demographic experience of the total New Zealand population. But in some cases, owing either to the lack of historical data on Maori vital events or the defective nature of the available official data, the analysis had to be restricted to the European (non-Maori) experience only. It should, however, be emphasised that Maori births and deaths account for only a small proportion of all births and deaths in New Zealand in any year, and their numerical effect on the level and pattern of national fertility and mortality is essentially limited.

### 2.2 MORTALITY

Secular changes in the crude death rate (number of deaths per 1,000 mean population) in New Zealand during the 54-year period 1921-74, are illustrated graphically in Figure 2.1. With the exception of a temporary but significant rise during the 1930's and the early-World War II years, the general trend in the crude death rate was downwards over the period. The annual changes in rate, especially since the early-1950's, have been generally small and erratic. The crude death rate in 1974 was 8.30 per 1,000 mean population compared with 11.05 per 1,000 in 1942 or with the initial (1921) level of 9.00 deaths per 1,000 mean population.

Secular trends in the crude death rate are, however, affected by the contemporary changes in the age and sex structure of population. To allow for these factors, adjusted (or standardised) death rates were computed (the 1971 age and sex distribution of total New Zealand population was used as standard for this purpose), for selected years and these are compared with the corresponding crude rates in Table 2.1 below.



**FIGURE 2.1** CRUDE DEATH RATES (TOTAL POPULATION)  
1921 - 1974

Rates per 1,000 Mean Population

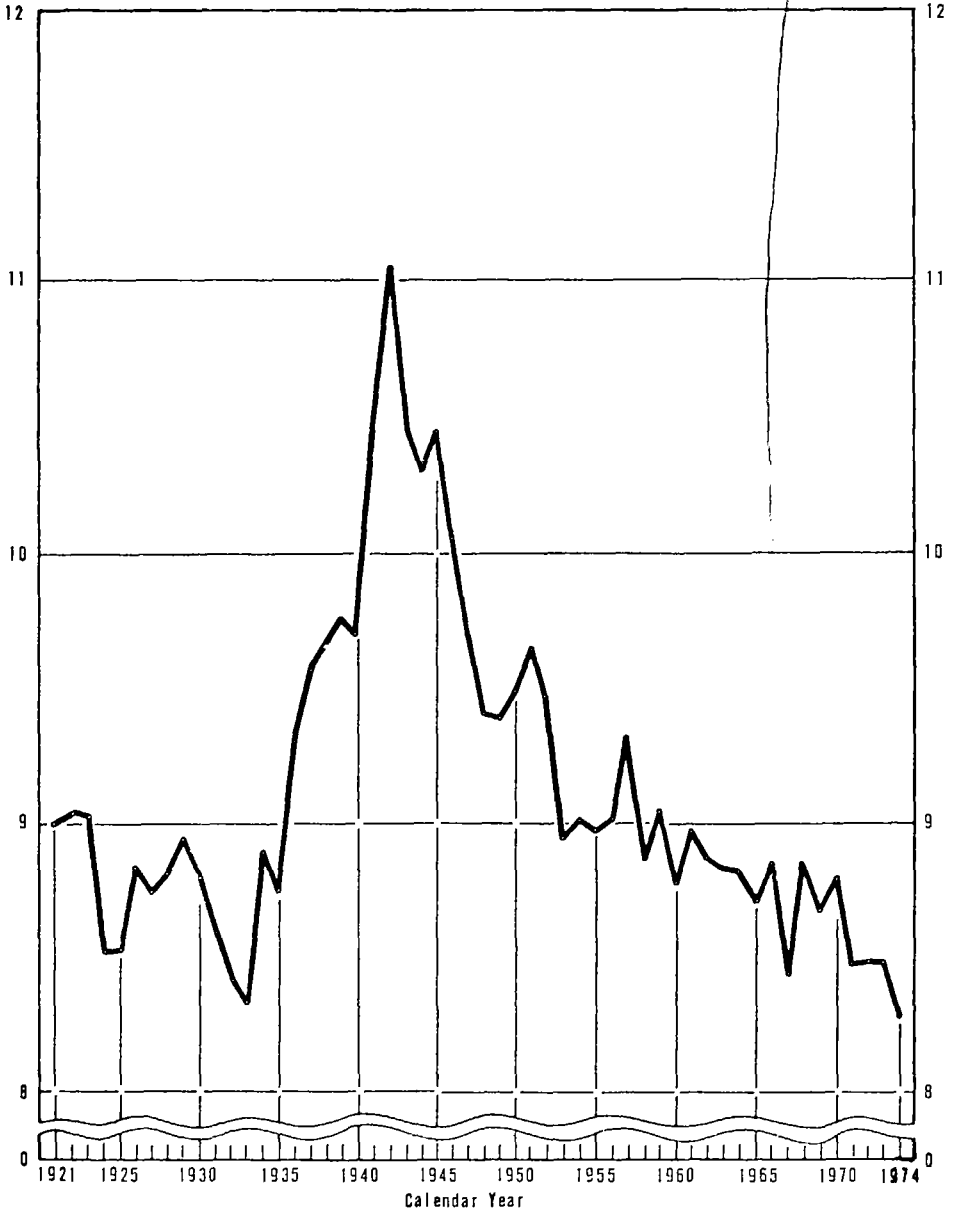


TABLE 2.1 CRUDE AND STANDARDISED <sup>(1)</sup>  
DEATH RATES FOR TOTAL  
NEW ZEALAND POPULATION, 1941-1971

Year	Standardised Death Rate <sup>(2)</sup>			Crude Death Rate <sup>(2)</sup> : Total Population
	Males	Females	Total Population	
1941	11.18	11.26	11.22	10.45
1951	9.59	9.26	9.42	9.67
1961	9.16	8.25	8.70	8.98
1966	9.72	8.03	8.88	8.86
1971	9.39	7.61	8.50	8.49

<sup>(1)</sup> Per 1,000 mean population.

<sup>(2)</sup> Rates were adjusted by the "Direct" method of standardisation using the 1971 age and sex distribution of total New Zealand population.

This comparison shows that the crude series understated the "real" level of, and the amount of decline in, mortality during the 1940's. Also, it masked the small but demographically, socially and medically important rise in mortality between 1961 and 1966. This rise, it should be noted, was due mainly to a rise in male mortality and led to the further widening of the male-female differential. In 1971, the female standardised death rate was 7.61 per 1,000 and the male standardised rate was 9.39 per 1,000 — a difference of 19 percent compared with a difference of only 3 percent in 1951.

### 2.2.1 Expectation of Life at Birth

The historical series on life expectancy at birth, presented in Table 2.2 confirm these broad mortality trends and differentials.

TABLE 2.2 EXPECTATION OF LIFE AT BIRTH, 1880-1972

Period of Life Table	Expectation of Life at Birth:					
	Non-Maori Population		Maori Population		Sex Differentials: (Females - Males)	
	Males	Females	Males	Females	Non-Maori	Maori
1880-92	54.44	57.26	...	...	2.82	...
1891-95	55.29	58.09	...	...	2.80	...
1896-1900	57.37	59.95	...	...	2.58	...
1901-05	58.09	60.55	...	...	2.46	...
1906-10	59.17	61.76	...	...	2.59	...
1911-15	60.96	63.48	...	...	2.52	...
1921-22	62.76	65.43	...	...	2.67	...
1925-27	63.99	66.57	...	...	2.58	...
1931	65.04	67.88	...	...	2.84	...
1934-38	65.46	68.45	...	...	2.99	...
1950-52	68.29	72.43	54.05	55.88	4.14	1.83
1955-57	68.88	73.88	57.23	58.68	5.00	1.45
1960-62	69.17	74.51	59.05	61.37	5.34	2.32
1965-67	68.67	74.84	61.44	64.78	6.17	3.34
1970-72	69.09	75.16	60.96	64.96	6.07	4.00

The long term trend since the last century has been generally that of a continuous but slowing improvement in longevity for both sexes. The only notable interruption in this trend was the small decrease in male life expectancy experienced between 1960-62 and 1965-67, which was due to the higher male mortality resulting from a higher incidence of organic diseases (mainly heart diseases and cancer) and accidents.

Between 1880-92 and 1970-72, the average non-Maori male life expectancy rose by 14.65 years from 54.44 years to 69.09 years, and the average non-Maori female life expectancy rose by 17.90 years from 57.26 years to 75.16 years. The gains in the last two decades have been essentially small: approximately one year for males and three years for females. Table 2.2 shows that the female advantage in average life expectancy increased from 2.52 years in 1911-15 to 4.14 years in 1950-52 and further to 6.07 years in 1970-72.

### 2.2.2 Trends in Mortality by Age

Table 2.3 summarises the levels and trends in death rates by age and sex since the beginning of the twentieth century. With few exceptions, there were significant improvements in mortality at all ages. In numerical terms the largest improvement took place in the risk of death in the first year of life: the infant mortality rate decreased from 71.40 deaths per 1,000 live births in 1901 to only 16.06 per 1,000 in 1973: the provisional figure for 1974 is only 15.54 per 1,000.

At the turn of the century, deaths in the first year of life accounted for almost 20 percent of the deaths at all ages: in 1974 the corresponding proportion was only 3.6 percent. Advances in medical knowledge and practice, improvement in ante-natal and post-natal care, the introduction of various public health measures, the expansion of health services, and the improvement in social and economic conditions and general standard of living contributed measurably to this end.

Beyond the first year of life, the relative improvement in death rates during the period (1901-74) has been successively smaller with the increase in age, ranging from 87 percent for pre-school children (1-4 years) to 18 percent for the oldest group (75 years and over). Moreover, with one exception, age by age, the improvement in mortality was substantially higher for females than for males. This is reflected in the widening of the male-female differentials in mortality.

In 1973, male death rates at various ages exceeded the female rates by 22-198 percent, with the largest difference being for ages 15-24 years, where accidents constitute the most common cause of death.

TABLE 2.3 MORTALITY RATES (TOTAL POPULATION)  
BY AGE AND SEX FOR SELECTED YEARS, 1901-1973

Year	Age Group									
	Under 1 <sup>(1)</sup>	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75 and Over
(Rates per 1,000 of mean population in each age group)										
<i>Males</i>										
1901 <sup>(2)</sup>	78.60	6.81	1.89	3.52	3.97	6.16	11.94	23.12	50.59	141.67
1911 <sup>(2)</sup>	63.48	5.36	1.91	2.42	3.87	6.27	11.02	20.83	53.22	130.58
1921 <sup>(2)</sup>	53.10	4.78	1.85	2.44	3.56	5.55	9.61	19.96	46.17	128.60
1931 <sup>(2)</sup>	38.21	2.83	1.35	2.28	2.77	4.64	8.69	18.25	44.18	130.57
1941	43.65	4.39	1.36	2.53	2.93	3.95	9.20	21.13	47.44	140.27
1951	31.69	1.87	0.75	1.82	1.95	3.15	7.57	20.46	47.52	121.86
1961	25.86	1.34	0.49	1.28	1.47	2.68	7.39	19.65	47.33	126.31
1971	17.91	1.07	0.46	1.44	1.33	2.89	7.34	20.69	48.39	137.67
1972	17.66	1.00	0.34	1.64	1.32	2.50	7.25	20.10	46.89	136.14
1973	19.00	1.06	0.50	1.82	1.36	2.71	7.53	20.59	49.17	134.87
1974	18.26	0.86	0.48	1.60	1.47	2.62	7.37	19.89	47.02	134.05
<i>Females</i>										
1901 <sup>(2)</sup>	63.87	5.50	1.64	3.58	4.72	6.70	10.62	19.44	43.32	127.98
1911 <sup>(2)</sup>	48.74	5.37	1.48	2.76	4.34	4.92	8.38	17.89	40.44	119.60
1921 <sup>(2)</sup>	42.31	4.49	1.31	2.34	3.38	4.46	8.00	14.88	36.81	120.23
1931 <sup>(2)</sup>	25.67	2.47	0.97	1.85	3.20	3.81	6.84	15.36	36.83	122.87
1941	37.75	3.84	1.20	1.94	2.44	3.50	6.90	15.04	38.60	118.92
1951	23.09	1.59	0.54	0.89	1.30	2.27	5.67	13.85	32.80	109.79
1961	19.50	1.16	0.35	0.53	0.87	1.95	4.59	11.22	29.89	104.74
1971	15.10	0.82	0.28	0.56	0.91	1.87	4.71	10.37	25.47	100.05
1972	13.83	0.95	0.36	0.62	0.74	1.87	4.44	10.71	27.73	104.43
1973	13.30	0.87	0.26	0.61	0.77	1.84	4.38	10.56	26.55	102.25
1974	12.66	0.80	0.33	0.61	0.70	2.07	4.78	10.85	26.36	99.20
<i>Both Sexes</i>										
1901 <sup>(2)</sup>	71.40	6.17	1.77	3.55	4.33	6.40	11.37	21.63	47.87	135.71
1911 <sup>(2)</sup>	56.31	5.36	1.70	2.58	4.09	5.64	9.82	19.55	47.74	126.13
1921 <sup>(2)</sup>	47.82	4.64	1.58	2.39	3.47	5.10	8.85	17.59	41.90	124.84
1931 <sup>(2)</sup>	32.15	2.65	1.17	2.07	2.98	4.22	7.80	16.88	40.56	126.87
1941	39.81	4.12	1.28	2.22	2.67	3.72	8.02	18.16	43.04	129.15
1951	27.54	1.73	0.65	1.36	1.63	2.71	6.67	17.03	39.93	115.26
1961	22.76	1.25	0.42	0.91	1.18	2.31	6.00	15.41	37.67	114.01
1971	16.54	0.95	0.37	1.01	1.12	2.39	6.02	15.43	35.94	113.96
1972	15.79	0.98	0.35	1.14	1.03	2.19	5.85	15.29	36.50	116.08
1973	16.22	0.96	0.38	1.23	1.07	2.28	5.97	15.43	36.92	114.18
1974	15.54	0.83	0.41	1.11	1.09	2.35	6.10	15.72	35.84	111.91

<sup>(1)</sup> Per 1,000 live births in this case.

<sup>(2)</sup> Non-Maori figures only as Maori deaths at ages not available for these years.

Recent developments in mortality trends have been far from encouraging. For many years until the end of World War II, New Zealand boasted of the lowest infant mortality in the world. Since then, however, it has lagged behind some other countries. There has also been a significant deceleration in the decline in mortality at younger ages. At ages 45 years and over, death rates have either levelled off or started to rise.

### 2.2.3 Maori — Non-Maori Differentials in Mortality

Mortality statistics in New Zealand have for many years pointed to the sharp differences between Maori and non-Maori mortality experiences. Crude death rates for Maoris are significantly lower than for non-Maoris (Table 2.4). However, this, as has been often pointed out, is due to the more youthful age structure of the Maori population. The death rates adjusted for the differences in age structures indicate that the true risk of death for Maoris is at least 70 percent higher (on the basis of 1970-72 experience) than for their non-Maori counterparts.

TABLE 2.4 CRUDE AND AGE-STANDARDISED<sup>(1)</sup> DEATH RATES<sup>(2)</sup>: (MAORI AND NON-MAORI POPULATIONS), 1961-1974

Calendar Year	Crude Death Rate		Age-Standardised <sup>(1)</sup> Death Rate	
	Maori Population	Non-Maori Population	Maori Population	Non-Maori Population
1961	8.3	9.0	15.8	8.7
1962	7.0	9.0	14.8	8.7
1963	6.6	9.0	14.9	8.7
1964	6.2	9.0	14.7	8.8
1965	6.2	8.9	14.7	8.7
1966	6.4	9.1	15.6	8.9
1967	5.9	8.6	13.5	8.5
1968	6.2	9.1	15.8	8.9
1969	6.1	8.9	15.7	8.7
1970	6.3	9.0	15.7	8.9
1971	6.2	8.7	15.2	8.4
1972	5.7	8.7	14.4	8.5
1973	5.7	8.7	...	...
1974	5.2	8.6	...	...

<sup>(1)</sup> The "Direct" method of standardisation was used, the standard population being the age-specific population as enumerated at the 1971 Census.

<sup>(2)</sup> Per 1,000 mean population.

Source: Department of Health

Table 2.2 shows that between 1950-52 and 1970-72, the average life expectancy for Maori males rose by about 6.91 years from 54.05 years to 60.96 years, and that for Maori females by 9.06 years from 55.88 years to 64.96 years. These gains, it should be noted, were considerably

larger than those recorded for non-Maoris, and as a result there was some narrowing of the Maori-non Maori differences in longevity over the years. Nevertheless, in 1970-72, a non-Maori male baby could expect to live about 8 years longer than a Maori male baby and a non-Maori female baby about 10 years longer than a Maori female baby. With expected improvement in Maori standards of living and increased access to medical and hospital services, Maori life expectancy at birth may improve significantly in the future.

### 2.2.4 Causes of Death

Table 2.5 shows trends in mortality for certain major causes of death since 1955. Because of the changes in diagnostic techniques and methods of certification, as well as the perennial revisions of the International Classification of diseases, which affect any long-term analysis of mortality by cause of death, this comparison is restricted to broad groups of diseases.

With the elimination of most of the infectious and parasitic diseases, further reduction of mortality in New Zealand now depends largely on greater control of the degenerative ailments (mainly cancer and the diseases of heart and circulatory system), and accidents.

TABLE 2.5 MORTALITY RATES<sup>(1)</sup> FOR SELECTED CAUSES<sup>(2)</sup> OF DEATH, 1955-1972

Year	Heart Disease <sup>(3)</sup>	Cancer	Cerebro-Vascular Disease	Pneumonia and Influenza	Bronchitis, Emphysema and Asthma	Accidents other than Motor Vehicle	Motor Vehicle Accidents	Diseases of the Arteries	Diabetes Mellitus
1955	307	148	109	32	32	31	17	18	10
1956	308	145	106	43	30	28	15	22	10
1957	311	144	113	52	34	33	18	20	13
1958	299	144	114	36	30	30	18	20	13
1959	310	143	110	55	33	29	16	18	10
1960	304	138	107	45	29	31	15	21	12
1961	310	146	113	47	34	30	17	18	12
1962	306	145	110	58	31	30	17	18	11
1963	313	148	109	47	33	28	17	18	12
1964	311	142	106	59	35	30	17	18	12
1965	308	145	109	47	34	31	21	22	10
1966	314	143	114	48	38	32	21	20	12
1967	304	141	104	40	34	30	23	20	11
1968	316	148	113	51	33	33	20	23	12
1969	302	149	110	51	34	27	21	22	15
1970	294	158	114	57	36	32	23	18	13
1971	292	157	116	43	34	31	24	20	13
1972	285	155	118	37	35	30	25	24	16

<sup>(1)</sup> Per 100,000 mean population.

<sup>(2)</sup> Deaths are classified in accordance with the 1965 (Eighth) Revision of the International Classification of Diseases.

<sup>(3)</sup> Includes all forms except congenital.

Source: Department of Health.

Diseases of the heart are the leading cause of death in New Zealand and in 1972 accounted for almost one-third of all deaths. Heart disease is predominantly a cause of death at the older ages (65 years and over) among both males and females, but is also a leading killer among males in the late-working ages (45-64 years). Between 1968 and 1972 there was a small (10 percent) improvement in the mortality rate for heart disease, from 316 to 285 per 100,000 mean population, which was due to an improvement in the mortality rates for rheumatic, hypertensive, valvular and symptomatic forms of the disease.

All forms of malignant neoplasm (cancer) are the second major cause of death, and in 1972 accounted for 18 percent of all deaths compared with 16 percent in 1955. Cancer is a major cause of death both at middle and old ages. Mortality due to cancer is higher among males than among females at all ages except the age group 25-44 years, where females have a higher cancer death rate because of a high incidence of breast and genito-urinary cancer.

Another 14 percent of all deaths are attributed to cerebrovascular disease, including conditions such as subarachnoid haemorrhage, embolism and thrombosis of the cerebral arteries, stroke, apoplexy and ischaemic cerebrovascular disease.

Influenza and pneumonia are the fourth most frequent cause of death, followed closely by a residual group of the diseases of the respiratory tract; bronchitis, emphysema and asthma. During 1970-72, 5 percent and 4 percent respectively of all deaths were due to these two groups.

Deaths due to accidents other than motor vehicle rank sixth and those due to motor vehicle accidents rank seventh among the causes of death. In 1972, the mortality rate from motor vehicle accidents was 25 per 100,000 mean population compared with 17 per 100,000 mean population in 1955.

Other significant causes of death are diseases of the arteries, diabetes mellitus and congenital anomalies in that order.

## 2.3 FERTILITY

In examining the historical changes in fertility in New Zealand, we have to rely heavily on non-Maori data. Until 1913, there were no registration data on Maori births available, and the data on ages, collected at the quinquennial censuses, which could afford some indirect estimates on the Maori fertility level, suffered from a substantial under-enumeration of children. The compulsory registration of Maori births was introduced in 1913, but until payment of family benefit, subject to birth registration became universal in 1946 reporting was considered incomplete. The official estimates of the Maori birth rate during this period are not consistent with the fertility levels suggested by the intercensal growth of Maori population.

The transition in non-Maori fertility from "large" to "small" families probably began during the 1870's. By 1913, when information on age of mother, facilitating the computation of more refined fertility measures, was first obtained on birth certificates, the crude birth rate (number of births per 1,000 mean population) had dropped from over 40 per 1,000 to about 25 per 1,000. Corresponding changes in the general fertility rate (number of births per 1,000 women aged 15-49 years), suggest that fertility actually fell by about one-half during this period.

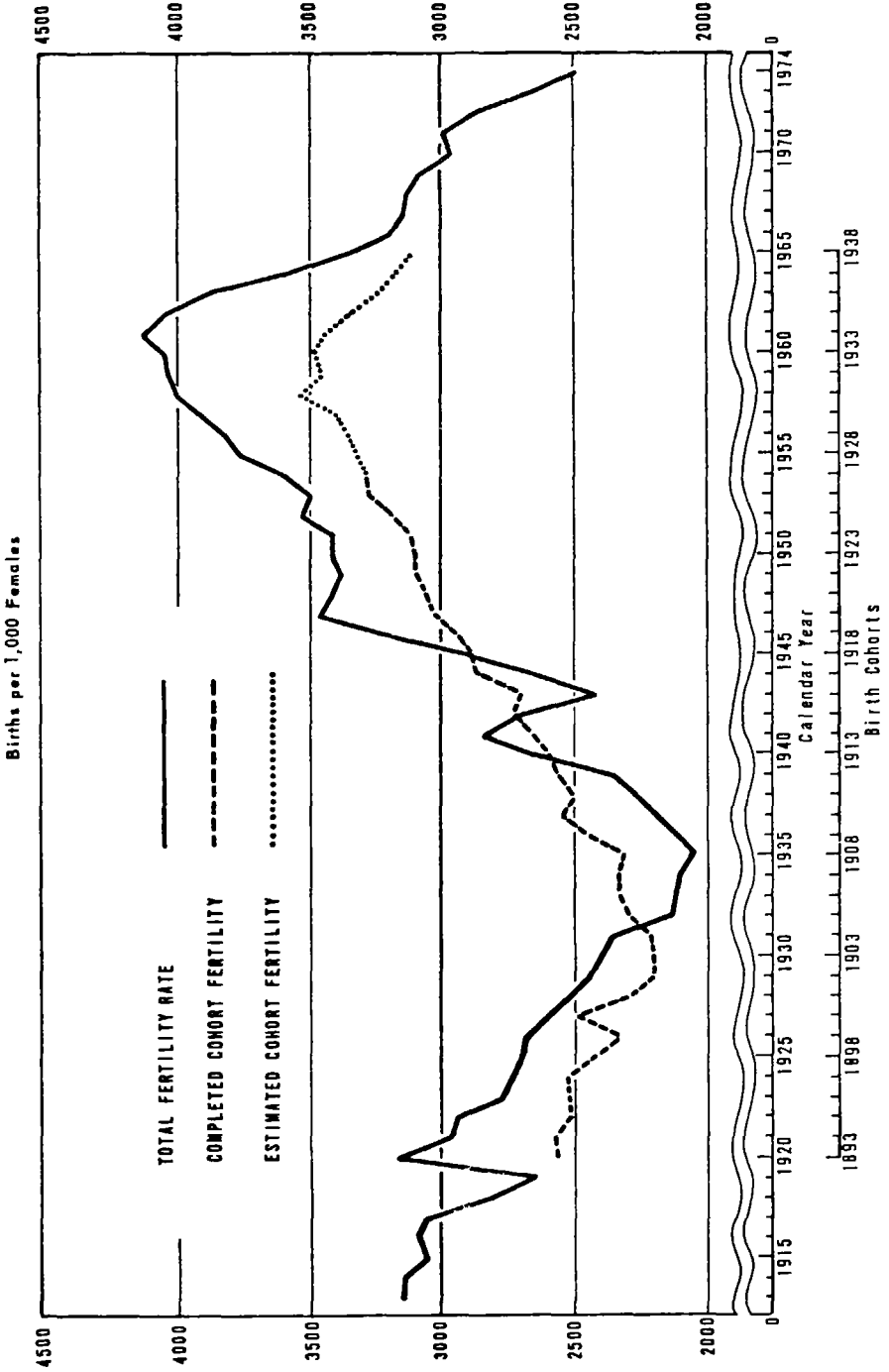
Changes in the crude birth rate understated the "real" decline in fertility, because of the favourable changes in the relative size and age structure of females in reproductive ages. Between 1874 and 1911, the general fertility rate, adjusted for these changes by the indirect method of standardisation, decreased by about 53 percent from 208.7 per 1,000 in 1874 to 99.0 per 1,000 in 1911.

Major trends in the total fertility rate (sum of age-specific fertility rates) since 1913 are illustrated in Figure 2.2. The total fertility rate gives the average number of births a group of women would have if they were subject to a given set of age-specific fertility rates throughout their reproductive span and none of them died during this period. In 1913, the total fertility rate was 3,166 births per 1,000 women. Following a brief but sharp rise at the end of World War I, the rate dropped steadily to 2,601 per 1,000 in 1927, then fell below "replacement level" during the economic depression, finally reaching its nadir (2,046 per 1,000) in 1935.

In common with many developed nations, New Zealand experienced a "baby boom" after World War II. The total fertility rate increased by about 72 percent from 2,408 in 1943 to 3,409 in 1950, and further to a new peak of 4,140 births per 1,000 in 1961. This peak rate was over twice the lowest "depression-time" rate and was also the highest post-war peak fertility rate among the countries of the developed world.



FIGURE 2.2 TOTAL FERTILITY RATES, 1913-1974 AND COMPLETED FERTILITY RATES FOR BIRTH COHORTS, 1893-1938 NON-MAORI FEMALE POPULATION



Source: M. A. Khawaja, 'Cohort Fertility in New Zealand', Proceedings of the First Annual Conference of New Zealand Demographic Society, 1975

Since 1962, the total fertility rate has dropped by nearly 37 percent, to 2,584 births per 1,000 in 1974, and at its present rate of decline may drop to, or even below, "replacement level" by 1980. Both in absolute and relative terms the recent decline in New Zealand's fertility has been greater than in any equivalent time interval during the present century.

### **2.3.1 Trends in Fertility by Age of Mother**

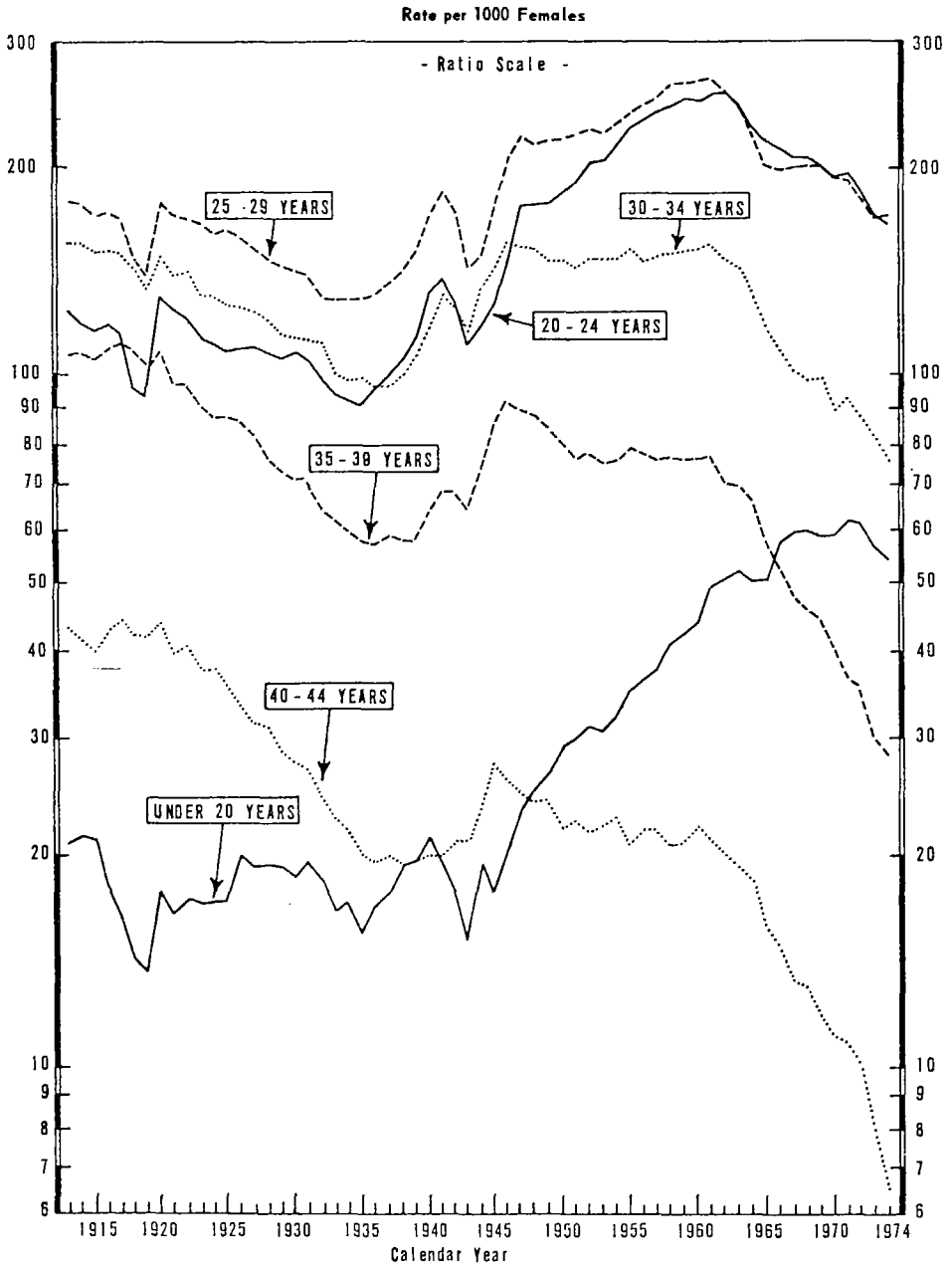
Trends in non-Maori fertility rates (age-of-mother-specific) during 1913-74 are shown in Figure 2.3. Fertility rates for all maternal ages decreased significantly during the first broad phase, 1913-35. In relative terms, the decline was successively larger with age: whereas the fertility rates for women below age 25 fell by 25 percent, those for women aged 40 years and over fell by more than 50 percent.

The recovery in fertility rates after the lows of the mid-1930's was also slower at maternal ages 30 and over, and only partial. Conversely, the fertility rates for younger women (below 30) recovered to their respective 1913 levels, by the early-1940's, and there were further large increases during the post-war years, resulting in a "baby boom". During this time, the number of births almost doubled from 32,949 in 1939 to 65,476 in 1961.

Between 1943 and 1961, the fertility rate for teenage non-Maori women more than tripled (from 15.3 to 49.2 per 1,000), that for women aged 20-24, more than doubled (from 111.5 to 255.8 per 1,000), and that for women 25-29, increased by 74 percent (from 152.8 to 267.1 per 1,000). These increases were probably due partly to marriages and births postponed during the war years and partly to a growing trend toward earlier marriage and child-bearing. This caused a remarkable shift in the age distribution of fertility: the proportion of total births attributable to women below 25 years, and below 30 years, climbed from 26.4 percent and 58.1 percent, respectively, in 1943, to 36.8 percent and 69.1 percent, respectively, in 1961. The average age at childbearing dropped from 29.3 years to 27.7 years over the same period.

Since 1962, the fertility rates for all non-Maori women, except teenagers, have recorded large decreases, ranging from 33 percent for women aged 20-24 years to 73 percent for the oldest women (aged 45-49 years). In 1974, women in only two maternal age groups — below 20 and 20-24 years — were reproducing above the levels recorded in 1913. The average age at childbearing had dropped further to 26.3 years, and more than three-quarters of all births were concentrated in the maternal ages below 30.

FIGURE 2.3 AGE OF MOTHER SPECIFIC BIRTH RATES (NON-MAORI POPULATION)  
1913 - 1974



Source : M. A. Khawaja, 'Cohort Fertility in New Zealand', *Proceedings of the First Annual Conference of the New Zealand Demographic Society*, 1975.

### 2.3.2 Period and Cohort Fertility

How far these lows and peaks in fertility reflected the real changes in non-Maori average family size, may be examined in Figure 2.2., which also compares these trends with those in the completed fertility of the birth cohorts of non-Maori women. The latter are independent of the direct influence of the shifts in the timing of births. (A birth cohort consists of girl babies born during a 12-month period). Figure 2.2 clearly suggests that period rates (total fertility rates) exaggerated the real movements in average family size over the years under analysis.

For example, unlike the period rates noted above, none of the birth cohorts, actually recorded a completed family size below the "replacement" level. Also, whereas a total fertility rate of over 3.5 children per woman was recorded in at least 13 years (from 1952 to 1964), only one cohort of women (those born in 1931) is expected to attain that figure.

### 2.3.3 Marriage and Fertility

In recent years, in New Zealand, ex-nuptial births have formed an increasing larger proportion of all births. However, a majority of children (84 percent in 1974) are born within wedlock and therefore, changes in marriage patterns and in the fertility of marriages play a predominant role in determining the level and pattern in fertility.

The 1960's were marked by a steady rise in the crude marriage rate (number of marriages per 1,000 mean population) — from 7.88 per 1,000 in 1962 to the unusually high level of 9.50 per 1,000 in 1971. The rise was due partly to a significant rise in the marriageable population (a direct consequence of the post-war "baby boom") and partly to a real increase in the incidence of marriage. There was also a continuation of the post-war trend toward earlier marriages. The median age at first marriage for women dropped from 22.54 years in 1962 to 21.19 years in 1971. The proportion of women married in the primary reproductive age-group (20-24 years) increased from 58.6 percent at the 1961 Census of Population to 62.4 percent at the 1971 Census of Population. (Variations in the proportions of women married at younger ages affect fertility by increasing or decreasing the probability of any woman bearing a child in any year.)

Paradoxically, as Table 2.6 below indicates, there have been large decreases in the nuptial fertility rates for women of all ages, including teenagers, during the past decade. This indicates that the rise in teenage fertility between 1961 and 1971, noted above, was caused by increases in extra-marital fertility.

TABLE 2.6 AGE-OF-MOTHER-SPECIFIC  
NUPTIAL BIRTH RATES FOR SELECTED  
PERIODS, 1962-1973

Maternal Age Group (Years)	Period			
	1962-64	1965-67	1968-70	1971-73
	<i>Birth Rate</i>			
16-19	0.55506	0.45723	0.43242	0.40460
20-24	0.38927	0.33746	0.32580	0.28632
25-29	0.27258	0.23623	0.22769	0.20749
30-34	0.15373	0.11988	0.10935	0.09665
35-39	0.07625	0.05898	0.04889	0.03878
40-44	0.02406	0.01863	0.01445	0.01107
45-49	0.00176	0.00158	0.00108	0.00088
	<i>Birth Rate Index</i> <sup>(1)</sup>			
16-19	100.0	82.4	77.9	72.9
20-24	100.0	86.7	83.7	73.6
25-29	100.0	86.7	83.5	76.1
30-34	100.0	78.0	71.1	62.9
35-39	100.0	77.4	64.1	50.9
40-44	100.0	77.4	60.1	46.0
45-49	100.0	89.8	61.4	50.0

<sup>(1)</sup> Base: 1962-64 = 100.0

In absolute terms, the greatest reductions took place in the fertility of women aged below 30 years, who contribute almost four-fifths of all nuptial births in any year. Between 1962-64 and 1971-73 nuptial birth rates for the 16-19, 20-24 and 25-29 age group fell by 150, 103 and 65 births per 1,000 mean total population "exposed to risk", respectively.

However, it was among the older maternal age groups (35-49 years), which account for only about 6 percent of all nuptial births, that the largest relative falls in fertility were recorded; birth rates for these groups being halved during 1962-73.

Two factors probably contributed to the occurrence of this phenomenon. Firstly, there is the increasing tendency towards formation of smaller families, and as high parity births generally occur to married women in the older maternal age group, the considerable rate of decline in nuptial birth rates for these age groups is consistent with this trend. Secondly, but of less significance in terms of total nuptial fertility, there is the general tendency towards childbearing earlier in a woman's reproductive life. In a large number of cases, couples now leave little family formation to take place in the older reproductive ages.

The introduction of the oral contraceptive pill in the early 1960's provided an effective means for regulating fertility and for preventing unwanted pregnancies and must be considered as a contributing factor. However, the role of the pill should not be over-emphasised. Fertility declined significantly during the great depression of the 1930's although no contraceptive as reliable as the pill was available during that period. It may therefore, be more appropriate to attribute the recent general decline in New Zealand nuptial fertility to social and economic factors. Contraception is only a "means to an end" in the demographic context and changing social attitudes to marriage, employment of women, and family formation, together with an increasing awareness of the economic and other advantages to be gained from limiting family size, may well be the main underlying factors.

### 2.3.4 Ex-nuptial Fertility

Table 2.7 reviews the recent changes in extra-marital fertility in New Zealand. The most commonly quoted measure of extra-marital fertility is the ex-nuptial ratio, which expresses ex-nuptial births as a percentage of all births in any year.

TABLE 2.7 EX-NUPTIAL RATIOS AND ACTUAL AND STANDARDISED EX-NUPTIAL BIRTH RATES, 1962-1973

Year	Ex-Nuptial Ratio		Actual Ex-Nuptial Rate		Standardised Ex-Nuptial Rate	
	Ratio (1)	Index <sup>(2)</sup>	Rate <sup>(3)</sup>	Index <sup>(2)</sup>	Rate <sup>(4)</sup>	Index <sup>(2)</sup>
1962	8.05	100.0	17.69	100.0	17.75	100.0
1963	8.80	109.3	18.72	105.8	18.85	106.2
1964	9.88	122.7	19.75	111.6	19.97	112.5
1965	10.88	135.2	20.40	115.3	20.41	115.0
1966	11.57	143.7	21.21	119.9	20.83	117.4
1967	12.72	158.0	23.17	131.0	22.56	127.1
1968	12.98	161.2	23.56	133.2	22.92	129.1
1969	13.00	161.5	23.22	131.3	22.50	126.8
1970	13.34	165.7	23.21	131.2	22.41	126.3
1971	13.93	173.0	24.86	140.5	24.24	136.6
1972	14.86	184.6	25.31	143.1	24.68	139.0
1973	15.16	188.3	24.12	136.3	23.34	131.5

(1) Ex-nuptial births as a percentage of total births.

(2) Base: 1962=100.

(3) Ex-nuptial births per 1,000 not-married women 10-49.

(4) Ex-nuptial birth rates were standardised by the "Direct Method" of standardisation. Age-specific data on the not-married female population from the 1966 Census of Population was used as the standard.

This ratio nearly doubled between 1962 and 1974, when over 15 percent of all children were born out-of-wedlock (Table 2.7). The ex-nuptial ratio, however, is directly subject to the contemporary changes in nuptial fertility. It may change not so much because of changing numbers of ex-nuptial births but because of variations in nuptial fertility experience as measured by nuptial birth numbers.

TABLE 2.8 NUPTIAL, EX-NUPTIAL AND TOTAL LIVE BIRTHS, 1962-1974

Calendar Year	Live Births During Year		
	Nuptial	Ex-Nuptial	Total
1962	59,787	5,227	65,014
1963	58,847	5,680	64,527
1964	56,148	6,154	62,302
1965	53,516	6,531	60,047
1966	53,063	6,940	60,003
1967	53,257	7,765	61,022
1968	54,052	8,060	62,112
1969	54,255	8,105	62,360
1970	53,774	8,276	62,050
1971	55,479	8,981	64,460
1972	53,821	9,394	63,215
1973	51,521	9,206	60,727
1974	49,966	9,370	59,336

This situation is well illustrated by the experience during 1962-74 when ex-nuptial births increased from 5,227 to 9,370, while nuptial births showed an overall fall from 59,787 to 49,966 (see Table 2.8 above). This, no doubt, resulted in the ex-nuptial ratio exaggerating the "real" rise in the extra-marital fertility level.

Table 2.7 shows that during the same period, the ex-nuptial birth rate, a more refined index of extra-marital fertility, which relates ex-nuptial births to unmarried women aged 15-49 years, increased by only 36.3 percent. If this rate is adjusted for the evolving age structure of unmarried women, the increase in ex-nuptial fertility is still smaller, only 31.5 percent. Moreover, whereas the ex-nuptial ratio showed a steady rise between 1962 and 1974, the adjusted ex-nuptial rate actually dropped between 1968 and 1970, and again between 1972 and 1973.

Here, special mention should be made of the considerable and increasing influence of teenagers (especially those aged 15-19 years) on ex-nuptial fertility. Although birth rates for not-married teenagers are well below those for their older counterparts (particularly those aged 20-34), teenagers now contribute over 40 percent of the total ex-nuptial

births in any year. This is due primarily to the large number of women "exposed-to-risk" in this group, about nine-tenths of all women aged 15-19 at the 1971 Census of Population being in the "not-married" category. Thus, almost half of the total increase of about 4,000 in ex-nuptial births during 1962-73 can be attributed to not-married teenage women.

### 2.3.5 The Transition in Maori Fertility

Until 1962, when information on age and other demographic characteristics of the mother was first collected for Maori births, the crude birth rate was the major source of information on Maori fertility trends. According to the official figures, between the mid-1930's and the early-1960's, the Maori crude birth rate varied only slightly around the 45 births per 1,000 mean population mark and showed no real tendency to decline. The year 1962 marked the beginning of the transition in Maori fertility, from a relatively high to a relatively low level. The average -family size, as implied by the total fertility rate, dropped steadily from 6.13 children per woman in 1962, to 5.40 in 1969, and even faster to 3.99 children per women in 1973.

TABLE 2.9 TOTAL FERTILITY  
RATES (MAORI, NON-MAORI AND  
TOTAL POPULATIONS), 1962-1973

Calendar Year	Total Fertility Rate		
	Maori Population	Non-Maori Population	Total Population
1962	6.19	4.01	4.15
1963	6.32	3.85	4.01
1964	5.97	3.61	3.77
1965	5.80	3.33	3.51
1966	5.59	3.23	3.40
1967	5.60	3.17	3.35
1968	5.37	3.15	3.32
1969	5.40	3.10	3.27
1970	5.20	2.99	3.16
1971	5.03	3.01	3.18
1972	4.49	2.87	3.00
1973	3.99	2.67	2.77
	<i>Change in Rate (percent)</i>		
1962-73	-35.5	-33.4	-33.3

The provisional figure for 1974 is 3.55 children per woman, giving an overall drop of 2.58 children per woman or 43 percent in 12 years (1962-74).

In 1962, the average Maori family size, was larger than the average non-Maori family size by 2.12 children (see Table 2.9). The difference widened to 2.36 children during 1966, but by 1973 had narrowed to 1.32 children.



## 2.4 MIGRATION

Net immigration has accounted for nearly one-quarter of the total growth of New Zealand population in this century. Table 2.10 summarises the historical data on external arrivals into, and departures from, New Zealand. During 1926-71, the net average gain from external migration was about 28,000 per quinquennium. Five-yearly migration levels, however, fluctuated from a net outflow of 2,400 during 1931-36 to a net inflow of 66,200 during 1951-56. The net immigration level for the four years ended March 1975 (98,600) is the highest ever recorded in New Zealand.

Since 1971, external migration has increased in relative importance as a contributor to population growth.

During the 12 months ended 31 March 1974, external arrivals exceeded the departures by 33,200, accounting for almost half of the total estimated growth (68,100) in population during that year. These relatively large gains from net immigration have placed special burdens on housing, social services and available employment. This led to the Government imposing a more restrictive migration policy early in 1974. The revised tenets within this new migration policy were the elimination of free entry rights for British citizens, and the prior requirement of entry permits. The present Government's policy is to cut down the net immigration even more severely, to a level of about 5,000 per annum. Immigrants are to be subjected to more strenuous selection criteria based on skills and qualifications, health, character, age and number of dependents. Prospective immigrants having family ties with New Zealand residents are expected to continue to receive preferential treatment.

### 2.4.1 Age and Sex Structure of Migration

Table 2.10 shows the number of arrivals and departures in various age and sex groups during 1926-71. Over the years, the age group 20-44 years has been the largest migrant group. Until 1961, net immigrants in this age-group made up more than half of all net immigrants. The net outflow during 1966-71 was also largest at these ages; although, overall, the country gained 1,300 people, it lost 5,800 males and 2,600 females aged 20-44 years.

TABLE 2.10 EXTERNAL MIGRATION – ARRIVALS,  
DEPARTURES, EXCESS OF ARRIVALS OVER  
DEPARTURES (BY AGE GROUPS AND SEX), 1926-1971

Five-Year Period Ended 31 March	0-4			5-19		
	Males	Females	Total	Males	Females	Total
<i>Arrivals (Thousand)</i>						
1926	..	..	..	..	..	..
1931	..	..	..	..	..	..
1936	..	..	..	..	..	..
1941	2.3	2.2	4.6	6.8	6.8	13.6
1946	1.2	1.2	2.4	2.1	2.3	4.3
1951	4.9	4.7	9.6	9.9	9.3	19.2
1956	7.3	6.8	14.1	17.1	16.8	33.9
1961	9.2	9.0	18.2	23.6	24.5	48.1
1966	18.0	17.0	35.1	48.0	52.7	100.7
1971	27.8	26.3	54.2	79.1	89.3	168.4
1975 <sup>(2)</sup>	40.2	38.3	78.6	134.2	150.2	284.4
<i>Departures (Thousand)</i>						
1926	..	..	..	..	..	..
1931	..	..	..	..	..	..
1936	..	..	..	..	..	..
1941	1.9	1.8	3.6	4.9	5.7	10.6
1946	1.1	1.1	2.2	1.6	1.6	3.1
1951	3.7	3.6	7.3	6.8	6.9	13.7
1956	4.8	4.4	9.2	9.7	10.6	20.4
1961	7.7	7.5	15.2	17.8	20.1	37.9
1966	13.7	13.0	26.7	38.9	45.8	84.8
1971	24.6	23.3	47.9	80.6	91.8	172.5
1975 <sup>(2)</sup>	35.0	33.5	68.5	120.5	139.1	259.6
<i>Excess of Arrivals Over Departures (Thousand)</i>						
1926	..	..	..	..	..	..
1931	..	..	..	..	..	..
1936	..	..	..	..	..	..
1941	0.5	0.5	0.9	1.9	1.2	3.0
1946	0.1	0.1	0.2	0.5	0.7	1.2
1951	1.2	1.1	2.3	3.1	2.4	5.5
1956	2.5	2.4	4.9	7.4	6.1	13.5
1961	1.5	1.5	3.0	5.8	4.4	10.3
1966	4.3	4.1	8.3	9.1	6.9	15.9
1971	3.2	3.1	6.3	- 1.5 <sup>(1)</sup>	- 2.6 <sup>(1)</sup>	- 4.0 <sup>(1)</sup>
1975 <sup>(2)</sup>	5.3	4.8	10.1	13.6	11.1	24.8

TABLE 2.10 — continued

Five-Year Period Ended 31 March	20-44			45-64		
	Males	Females	Total	Males	Females	Total
<i>Arrivals (Thousand)</i>						
1926	..	..	..	..	..	..
1931	..	..	..	..	..	..
1936	..	..	..	..	..	..
1941	40.9	39.9	80.8	23.5	24.4	47.8
1946	8.7	9.2	17.9	4.9	3.2	8.2
1951	52.9	47.3	100.2	27.2	28.0	55.2
1956	89.8	72.3	162.1	41.3	41.9	83.2
1961	118.9	87.2	206.1	62.7	59.7	122.4
1966	233.4	152.2	385.6	125.8	115.4	241.3
1971	372.5	261.7	634.2	216.6	205.8	422.4
1975 <sup>(2)</sup>	565.7	415.2	980.9	313.0	303.6	616.6
<i>Departures (Thousand)</i>						
1926	..	..	..	..	..	..
1931	..	..	..	..	..	..
1936	..	..	..	..	..	..
1941	36.1	36.9	73.1	22.6	23.6	46.2
1946	7.6	8.0	15.7	4.6	3.1	7.7
1951	41.6	41.0	82.6	26.0	26.7	52.8
1956	64.3	55.5	119.8	38.5	38.4	77.0
1961	106.3	76.4	182.7	61.1	57.6	118.6
1966	221.9	142.6	364.5	118.8	111.3	230.1
1971	378.3	264.3	624.6	214.9	202.9	417.8
1975 <sup>(2)</sup>	537.4	393.1	930.5	308.4	298.9	607.3
<i>Excess of Arrivals Over Departures (Thousand)</i>						
1926	..	..	..	..	..	..
1931	..	..	..	..	..	..
1936	..	..	..	..	..	..
1941	4.8	2.9	7.8	0.8	0.8	1.6
1946	1.1	1.2	2.3	0.4	0.1	0.5
1951	11.3	6.3	17.6	1.3	1.2	2.5
1956	25.6	16.7	42.3	2.8	3.4	6.2
1961	12.6	10.8	23.4	1.6	2.2	3.8
1966	11.5	9.6	21.1	7.1	4.1	11.2
1971	-5.8 <sup>(1)</sup>	-2.6 <sup>(1)</sup>	-8.4 <sup>(1)</sup>	1.8	2.8	4.6
1975 <sup>(2)</sup>	28.3	22.1	50.4	4.6	4.7	9.3

TABLE 2.10 — continued

Five-Year Period Ended 31 March	65 and Over			Total		
	Males	Females	Total	Males	Females	Total
<i>Arrivals (Thousand)</i>						
1926	..	..	..	106.5	89.7	196.2
1931	..	..	..	98.9	82.0	180.9
1936	..	..	..	55.5	52.6	108.1
1941	6.3	5.1	11.4	79.8	78.5	158.3
1946	0.9	0.8	1.7	17.8	16.7	34.5
1951	7.9	7.9	15.8	102.8	97.1	200.0
1956	12.7	12.7	25.4	168.3	150.4	318.7
1961	19.5	20.6	40.2	233.8	201.1	435.0
1966	41.3	47.5	88.7	466.5	384.9	851.4
1971	60.5	71.6	132.0	756.6	654.6	1,411.2
1975 <sup>(2)</sup>	87.4	106.5	193.9	1,140.5	1,013.9	2,154.4
<i>Departures (Thousand)</i>						
1926	..	..	..	82.1	67.9	150.1
1931	..	..	..	88.5	73.7	162.3
1936	..	..	..	62.8	57.7	120.5
1941	6.2	4.9	11.1	71.7	72.9	144.6
1946	0.9	0.8	1.6	15.7	14.6	30.3
1951	7.9	7.3	15.2	86.1	85.5	171.6
1956	12.2	11.9	24.0	129.5	120.9	250.4
1961	18.9	19.8	38.9	211.8	181.5	393.3
1966	34.0	39.3	73.3	427.3	352.1	779.4
1971	59.2	70.0	129.2	757.6	652.4	1,409.9
1975 <sup>(2)</sup>	85.4	104.5	189.9	1,086.7	969.1	2,055.8
<i>Excess of Arrivals Over Departures (Thousand)</i>						
1926	..	..	..	24.3	21.7	46.1
1931	..	..	..	10.3	8.3	18.6
1936	..	..	..	- 7.2 <sup>(1)</sup>	- 5.1 <sup>(1)</sup>	- 12.4 <sup>(1)</sup>
1941	0.1	0.2	0.3	8.2	5.6	13.7
1946	--	--	--	2.1	2.1	4.2
1951	0.1	0.6	0.6	16.8	11.6	28.4
1956	0.5	0.8	1.3	38.8	29.5	68.3
1961	0.5	0.7	1.3	22.1	19.7	41.7
1966	7.2	8.2	15.4	39.2	32.8	72.0
1971	1.3	1.6	2.9	- 1.0 <sup>(1)</sup>	2.3	1.3
1975 <sup>(2)</sup>	2.0	2.0	4.0	53.8	44.9	98.6

(1) Excess of departures over arrivals.

(2) Four-Year period ended 31 March.

NOTE: Figures are exclusive of crews, through passengers, tourists on cruising liners and members of the Armed Forces.

Migrants in the age interval 5-19 years constitute the next important group, followed by age group 45-64 and 65 years and over in that order.

According to Table 2.10 male net migration to New Zealand has generally exceeded the female net migration. This holds for all age groups except 65 years and over, where the reverse is true. During the 5-year period 1966-71, which was affected by an economic recession, male emigrants exceeded the male immigrants by 1,000 while, in contrast, there was a net immigration of 2,300 for females.

#### **2.4.2 Permanent and Long-term Migration**

In recent years, economic factors have played a major role in determining the volume and direction of net permanent and long-term migration to New Zealand. It is difficult to attempt a systematic analysis of migration trends in terms of the classical "push" and "pull" factors, but a study of the historical data suggests two relationships.

In economically "lean" periods in New Zealand, relative to donor countries, potential immigrants have generally been deterred from coming while New Zealand residents have emigrated to more economically viable areas. Conversely, periods of economic expansion have generally attracted considerable numbers of immigrants while residents have been content to remain in New Zealand. This has especially been the case when migrant donor countries have experienced economic downturns relative to the New Zealand situation.

Recent data on permanent and long-term arrivals and departures are presented in Table 2.11.

The trends evident in this table reflect economic conditions and official immigration policy which has tended to be contemporary to such conditions.

TABLE 2.11 PERMANENT AND LONG-TERM ARRIVALS AND DEPARTURES, 1967-1974

March Year	New Permanent Arrivals	Long-term Arrivals		Total	Permanent Departures of N.Z. Residents	Long-term Departures		Total	Excess of Total Arrivals over Total Departures
		N.Z. Residents Returning (2)	Long-term Visitors (2)			N.Z. Residents Departing (2)	Long-term Visitors Departing (2)		
1967-68	..	..	..	30,660	..	..	..	28,472	2,188
1968-69	..	..	..	23,225	..	..	..	29,802	-6,577 (1)
1969-70	..	..	..	26,825	..	..	..	29,882	-3,057 (1)
1970-71	17,735	12,236	9,406	39,377	11,234	22,235	4,696	38,162	1,215
1971-72	20,261	14,578	10,260	45,099	9,339	22,979	5,228	37,546	7,553
1972-73	26,666	16,694	11,291	54,651	7,818	21,858	5,807	35,483	19,168
1973-74	38,121	17,123	14,571	69,815	9,591	26,832	5,915	42,338	27,477
1974-75	34,142	17,566	14,192	65,900	9,050	27,639	6,772	49,461	22,439

.. not available.

(1) Excess of total departures over total arrivals.

(2) Arrivals: returning after absence of, or intending to stay, 12 months or more, respectively.  
Departures: intending to stay away for, or leaving after stay in New Zealand of, 12 months or more, respectively.

### 2.4.3 Ethnic Origin of Immigrants

Historically, immigrants to New Zealand have been predominantly of European descent. The major sources have been Commonwealth countries, particularly the United Kingdom and Australia. Table 2.12 below shows that during 1973-74, of the 69,800 persons intending permanent residence in New Zealand, 31,800 (or 45.6 percent) and 20,300 (or 29.1 percent) came from the United Kingdom and Australia, respectively. Another 6.4 percent were from Canada and the United States. Pacific Islanders (mainly from the Cook Island, Niue Island, Fiji and Western Samoa) made up another 5.9 percent of all migrants.

TABLE 2.12 ARRIVALS INTENDING PERMANENT OR LONG-TERM RESIDENCE BY COUNTRY OF LAST PERMANENT RESIDENCE, 1967-1974

Country	1967-68		1971-72		1973-74		Pro- portional Change 1967-68- 1973-74
	Number (000)	Pro- portion of Arrivals	Number (000)	Pro- portion of Arrivals	Number (000)	Pro- portion of Arrivals	
		(Percent)		(Percent)		(Percent)	(Percent)
United Kingdom	14.9	48.5	15.2	33.8	31.8	45.6	-2.9
Australia	8.3	27.0	16.1	35.8	20.3	29.1	2.1
United States	1.0	3.3	2.4	5.3	2.4	3.4	0.1
Cook Islands and Niue Island	0.6	2.0	1.2	2.7	2.3	3.3	1.3
Canada	0.7	2.3	2.1	4.7	2.1	3.0	0.7
Fiji <sup>(2)</sup>	0.5	1.6	0.8	1.8	1.2	1.7	0.1
South Africa	0.2	0.6	0.5	1.1	0.8	1.1	0.5
Netherlands	0.7	2.3	0.6	1.3	0.7	1.0	-1.3
Western Samoa <sup>(2)</sup>	0.2	0.7	0.4	0.9	0.6	0.9	0.2
All Others <sup>(2)</sup>	3.6	11.7	5.7	12.6	7.6	10.9	-0.8
Total <sup>(1)</sup>	30.7	100.0	45.0	100.0	69.8	100.0	

<sup>(1)</sup> Includes returning New Zealand Residents.

<sup>(2)</sup> Excludes Fijians, Tongans and Western Samoans who are admitted to New Zealand each year, initially on 6 month work permits and who later may qualify for permanent resident status.

### 2.4.4 Migration of Pacific Islanders

Since the end of World War II, there has been a large inflow of Pacific Islanders to New Zealand. Those born in the Cook, Niue and Tokelau Islands are New Zealand citizens and may enter at any time. Long-term arrangements have also been made with the independent Islands, notably Fiji, Tonga and Western Samoa, for sending their citizens to New Zealand to work on a temporary basis. At present, about 1,500 Western Samoans enter New Zealand on this basis every year.

### 2.4.5 Effect of Migration on The Labour Force

In periods of internal economic downturn (such as took place during the thirties and on a smaller scale during 1968-69) there is a tendency for many people to emigrate from New Zealand to other countries. This outflow generally affects the most skilled and qualified groups and particularly those in the younger working ages. However, there is also a considerable outflow, in normal times, of skilled, technical and professional people seeking better job opportunities overseas or wanting to enhance their experiences and gain higher qualifications. However, this is generally offset by an inflow of similar people from overseas.

The occupations of working persons in permanent and long-term arrivals and departures during the year ended March 1973 are given in Table 2.13.

TABLE 2.13 PERMANENT ARRIVALS AND DEPARTURES  
BY MAJOR OCCUPATION GROUP, 1972-1973

Major Occupation Group	Permanent Arrivals			Permanent Departures		
	Males	Females	Total	Males	Females	Total
Professional (including nurses and teachers)	3,863	3,369	7,232	2,773	3,330	6,103
Administrative and managerial	869	53	922	653	53	706
Clerical workers	1,487	4,581	6,068	1,107	4,108	5,215
Sales workers	1,418	597	2,015	925	408	1,333
Farmers and fishermen	973	40	1,013	828	50	878
Miners and quarrymen	111	—	111	54	—	54
Transport and communications workers	1,146	208	1,354	640	159	799
Tradesmen, factory workers, labourers	7,620	495	8,115	5,204	455	5,659
Personal, servicing	857	1,001	1,858	572	762	1,334
Not specified	396	21	417	420	43	463
Totals, actively engaged	18,740	10,365	29,105	13,176	9,368	22,544

During 1972-73 permanent migrants were mainly concentrated in three major occupational groups — tradesmen, factory workers and labourers, professionals and clerical workers, in that order. Tradesmen, factory workers and labourers constituted the highest proportion of both male arrivals and departures and accounted for 37.4 percent of the total net gain of male workers. The corresponding percentages for the professionals and the clerical workers were 17.2 and 13.0 percent, respectively. Among females, the clerical workers were the largest migrant group, accounting for 44.0 percent of the total net gain.



### 2.4.6 Assisted Immigrants

Two schemes providing financial assistance to immigrants through the New Zealand Government have been in operation in the past — the subsidy scheme, which involves a contribution by employers to immigrants' fares, and the assisted passage scheme. The subsidy scheme operates from Britain, the United States, France, Belgium, Switzerland, the Netherlands and West Germany and there is no quota involved. Employers wishing to take advantage of the scheme are obliged to provide employment, arrange housing in New Zealand, and meet one-quarter of the cost of immigrants' fares. The Government meets the remaining three-quarters of the fares. Single people and married men between the age of 18 and 45 years may be sponsored.

The assisted passage scheme, which began in 1947, operated only from Britain, and was limited to 500 immigrants a year. The scheme was terminated in April 1975 to reduce the strain on housing and other facilities brought about by the immigration boom. On occasions, refugees coming within the mandate of the United Nations High Commission for refugees, have also been accepted.

The number of assisted immigrants (excluding displaced persons, and Hungarian and Czech refugees) arriving between 1963 and 1973 are classified by nationality in Table 2.14 below.

TABLE 2.14 ASSISTED IMMIGRANTS BY NATIONALITY, 1963-1973

Year Ended 31 March	Nationality								Total
	British	Dutch	Austrian	German	Danish	Swiss	Greek	Other	
1963	4,283	42	33	27	—	—	137	10	4,532
1964	4,171	—	6	16	5	14	130	5	4,347
1965	4,300	—	9	12	5	11	29	34	4,400
1966	3,963	—	19	7	8	27	18	—	4,042
1967	4,020	—	9	9	10	36	11	2	4,097
1968	2,732	—	2	4	5	17	4	—	2,764
1969	485	—	—	2	—	2	1	—	490
1970	377	—	—	—	2	—	1	2	382
1971	532	—	—	—	4	3	—	—	539
1972	4,556	434	—	4	6	37	—	111	5,148
1973 <sup>(2)</sup>	3,459	550	—	14	4	37	—	74 <sup>(1)</sup>	4,148

<sup>(1)</sup> Includes 68 from the United States.

<sup>(2)</sup> Includes subsidy scheme migrants not shown prior to 1971-72; their total was 4,183 in 1971-72 and 3,632 in 1972-73.

# **CHAPTER III**

## **POPULATION COMPOSITION**

### **3.1 INTRODUCTION**

The size of a population and its distribution by age, sex and other demographic characteristics are vital elements in any demographic and social analysis. They are also important for determining the present and future needs and priorities of a country in social and economic areas such as education, employment, housing, health and retirement provisions. This chapter analyses the major changes in the composition of the New Zealand population during the present century. Besides the fundamental variables of age and sex, a number of other characteristics, notably, marital status, family and household structure, birthplace, ethnicity and literacy are examined.

### **3.2 SEX RATIOS**

Table 3.1 shows the number of males and females in the New Zealand population and the sex ratio (males per 100 females) at successive population censuses since 1956.

The population of New Zealand, though it has never been exactly equally balanced between males and females, has, in recent years, been close to parity. Between the 1956 and 1966 Censuses of Population, the sex ratio dropped from 101.1 to 100.8 males per 100 females. In 1971, a census of the New Zealand population for the first time (with the exception of the war-time Census of 1945) recorded a sex ratio below parity, the enumerated populations being 1,430,856 males and 1,431,775 females. This reversal in the familiar pattern was the result of the 1968-1969 economic recession, when a disproportionately large number of males left New Zealand.

Sex ratios for 5-yearly age groups at the 1956, 1961, 1966 and 1971 Censuses of Population are also given in Table 3.1. In populations closed to migration the age pattern of the sex ratio is determined by the variations in the sex ratio of births and the sex differences in mortality. Generally, annual variations in the sex ratio of births are small, and the sex ratio decreases gradually with increasing age. In a large number of

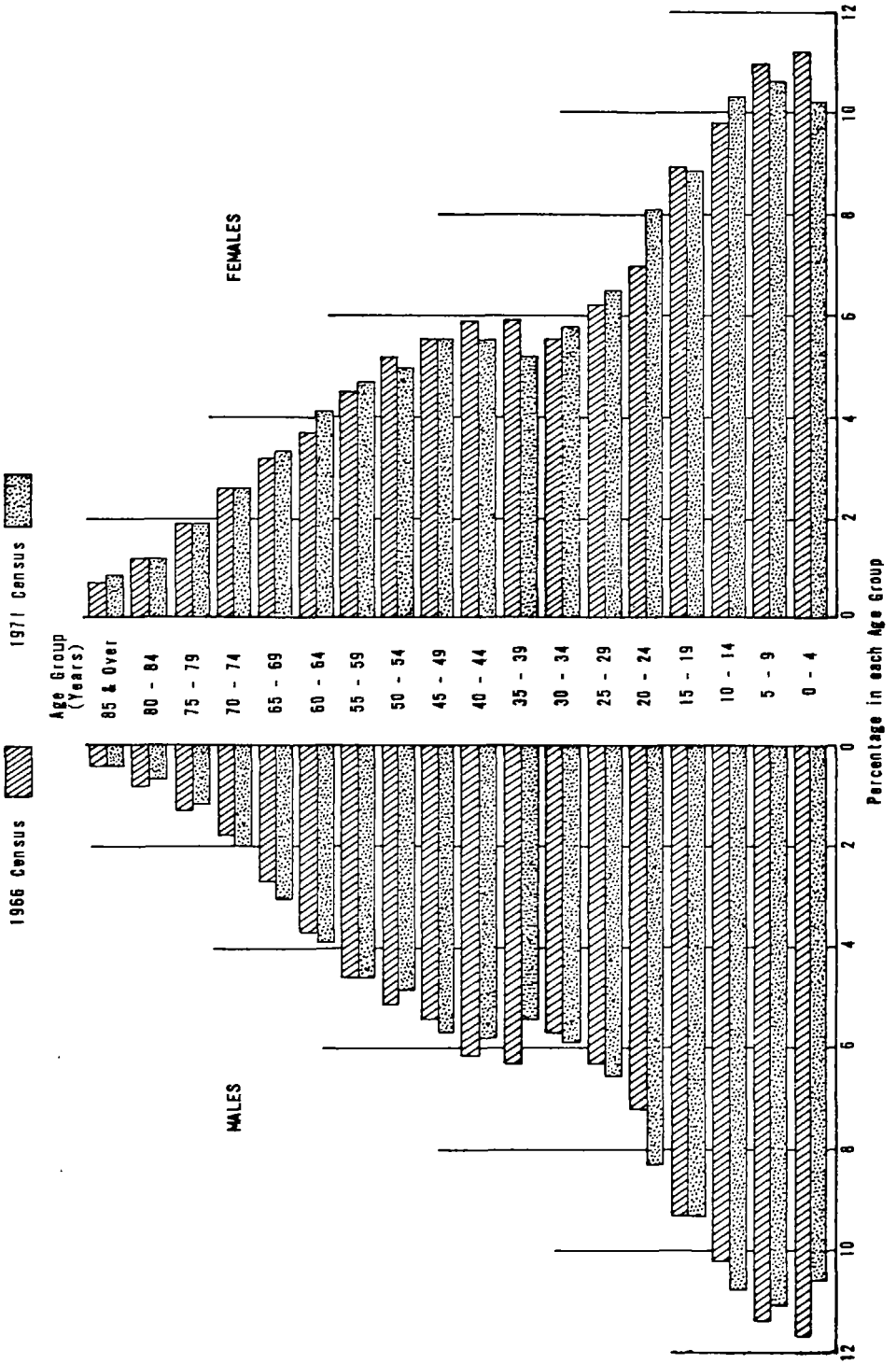
TABLE 3.1 TOTAL POPULATIONS (AGE AND SEX SPECIFIC), 1956-1971

Age Group (Years)	1956				1961				1966				1971					
	Males		Females		Sex Ratio (1)		Males		Females		Sex Ratio (1)		Males		Females		Sex Ratio (1)	
0 - 4	130,693	125,855	103.8	149,032	143,041	104.2	156,954	149,689	104.8	151,916	145,946	104.1						
5 - 9	123,145	117,438	104.8	133,880	127,821	104.7	152,816	146,441	104.4	158,310	151,494	104.5						
10 - 14	95,136	90,991	104.6	125,339	119,829	104.6	136,498	130,001	105.0	154,286	147,671	104.5						
15 - 19	78,985	76,660	103.0	95,324	90,895	104.9	125,326	120,041	104.4	133,116	127,673	104.3						
20 - 24	69,180	66,491	104.0	80,043	78,020	102.6	97,394	93,258	104.4	119,447	115,512	103.4						
25 - 29	79,523	73,502	106.2	73,600	70,173	104.9	84,927	82,319	103.2	94,622	92,690	102.1						
30 - 34	78,429	75,361	104.1	81,923	75,976	107.8	76,529	72,867	105.0	84,181	82,509	102.0						
35 - 39	70,913	72,441	97.9	81,024	77,846	104.1	84,911	78,978	107.5	76,997	74,192	103.8						
40 - 44	70,472	70,170	100.4	71,232	72,764	97.9	81,385	78,795	103.3	83,251	78,445	106.1						
45 - 49	66,502	63,246	105.1	71,203	70,290	101.3	72,272	73,516	98.3	80,879	78,488	103.0						
50 - 54	55,535	52,690	105.4	64,307	61,836	104.0	68,778	69,226	99.4	69,141	71,658	96.5						
55 - 59	46,654	47,398	98.4	53,424	51,258	104.2	61,438	60,316	101.9	65,264	66,919	97.5						
60 - 64	35,881	41,210	87.1	41,573	44,682	93.0	49,158	49,993	98.3	55,597	58,260	95.4						
65 - 69	33,116	37,918	87.3	31,396	39,413	79.6	36,468	42,961	84.9	42,700	47,914	89.1						
70 - 74	27,149	30,695	88.4	25,925	32,565	79.6	24,497	34,050	71.9	28,462	37,221	76.5						
75 - 79	18,420	21,462	85.8	19,054	23,855	79.9	18,045	25,503	70.8	16,754	26,612	63.0						
80 - 84	8,676	10,625	81.6	10,336	14,092	73.3	10,616	15,730	67.5	9,923	17,301	57.4						
85 and over	3,941	5,593	70.5	4,761	7,252	65.6	5,731	9,492	60.4	6,010	11,270	53.3						
All Ages	1,093,211	1,080,851	101.1	1,213,376	1,201,608	101.0	1,343,743	1,333,176	100.8	1,430,856	1,431,775	99.9						

(1) Number of males per 100 females.



FIGURE 3.1 AGE PYRAMID OF TOTAL NEW ZEALAND POPULATION



The small drop in the proportion between 1961 and 1971, reflects the rapid decline in fertility experienced since 1962, which has been offset, only partially, by the large increase in the numbers of women in the reproductive age-group during the period. The median age of the population dropped significantly from 30.3 years in 1945 to 27.3 years in 1961 and further to 25.6 years in 1971. The proportion of population in the lower to middle working age-group (15-44 years) fell from 43.7 percent in 1945 to 39.3 percent in 1961, but thereafter increased slightly to reach 40.6 percent, in 1971, as the "boom babies" started to enter the work force in increasing numbers. Persons in the middle to higher working ages (45-64) comprised 20.6 percent of the total population in 1945. The proportion dropped to about 19.1 percent in 1951, and since then has remained almost unchanged.

Post-war changes in the proportion of old people (65 years and over) in the total population, while generally small reflect the younger structure of the population. In 1971, only 8.5 percent of the population were in this age bracket, compared with 9.1 percent in 1956 and 8.7 percent in 1945.

Though not all persons in the working ages (15-64 years) are actively engaged in economic pursuits, and not all persons outside these ages are dependants, the ratio of children (below 15) and elderly people (65 years and over) to those in working ages provides a broad index of a population's dependency level. New Zealand's population had a dependency ratio (number of persons in the dependant age-groups — below 15 and 65 years and over — per 100 aged 15-64 years) of 56 in 1945, but this rose rapidly to 63 in 1956, and subsequently to 71 in 1961. This rise was due chiefly to the corresponding rise in the youth dependency ratio (i.e. the ratio of children under 15 to persons aged 15-64 years), which in turn resulted from a more youthful population. By 1971, the dependency ratio had fallen to 68 per 100 aged 15-64 years.

### **3.4 MARITAL STATUS**

In New Zealand, the minimum legal age for marriage is 16 years. At the 1971 census, of 932,318 males aged 16 years and over who specified their status, 26.9 percent were "never married", 67.8 percent were "married", 2.9 percent "widowed" and 2.4 percent were either "legally separated" or "divorced". Among females, aged 16 and over specifying their status, the proportion "married" was slightly smaller, but the proportion "widowed" more than three and a half times the corresponding proportion for males.



TABLE 3.4 – continued

Marital Status	1951	1956	1961	1966	1971	1951	1956	1961	1966	1971	
	(Percent)										
	35-44 Years					45-54 Years					
Never married	M	12.3	11.6	11.2	10.7	9.1	10.5	9.5	8.9	8.7	8.1
	F	11.1	9.1	7.4	6.1	5.1	11.0	10.7	8.9	7.2	5.8
Married	M	84.2	85.4	85.9	86.5	87.4	84.0	85.7	86.5	86.6	86.4
	F	83.2	85.8	87.9	89.2	89.1	77.2	79.2	81.1	82.6	83.4
Legally Separated	M	1.2	1.0	1.1	1.1	1.6	1.3	1.0	1.0	1.1	1.7
	F	1.5	1.2	1.3	1.4	2.0	1.4	1.1	1.2	1.3	1.7
Widowed	M	0.9	0.7	0.5	0.5	0.5	2.5	2.0	1.7	1.7	1.7
	F	2.6	2.3	2.0	1.9	2.0	7.7	7.0	6.7	6.7	6.6
Divorced	M	1.4	1.3	1.3	1.2	1.3	1.7	1.8	1.9	1.9	2.1
	F	1.6	1.6	1.4	1.4	1.8	1.9	2.0	2.1	2.2	2.4
Totals	M	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 3.4 – continued

Marital Status	1951	1956	1961	1966	1971	1951	1956	1961	1966	1971	
	(Percent)										
	55-64 Years					65 Years and over					
Never married	M	10.5	9.7	8.9	8.2	7.5	11.3	10.3	9.1	8.4	7.4
	F	12.4	11.8	10.9	9.7	8.0	13.3	12.9	12.4	11.8	10.7
Married	M	80.0	81.9	83.3	84.2	84.5	65.0	66.2	67.8	69.7	72.1
	F	64.4	66.1	67.3	69.0	70.3	39.2	38.7	37.3	36.9	38.0
Legally Separated	M	1.2	0.9	0.8	1.0	1.4	1.4	0.8	0.7	0.6	1.2
	F	1.3	0.9	0.9	0.9	1.2	1.0	0.6	0.5	0.5	0.7
Widowed	M	6.6	5.7	5.0	4.5	4.3	21.0	21.3	20.9	19.7	17.5
	F	20.2	19.3	18.8	18.1	17.8	45.6	46.6	48.6	49.4	48.8
Divorced	M	1.7	1.8	2.0	2.1	2.3	1.3	1.4	1.5	1.6	1.8
	F	1.7	1.9	2.1	2.3	2.7	0.9	1.2	1.2	1.4	1.8
Totals	M	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	F	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

These overall trends, however, mask the recent dramatic shifts in the marital status distribution of the young population. Table 3.4 presents the pattern of change, in the marital status distribution, of the male and female populations in selected 10-year age groups, between 1951 and 1971. Post-war trends towards earlier and more marriages have caused a steady and large increase in the proportions "married" at all ages below 45 years. This tendency has been relatively more pronounced among males than among females. For example, among males aged 25-34 years, the proportion "married" rose from 69.8



percent in 1951 to 80.2 percent in 1971, while the corresponding proportion for females only rose from 81.2 percent to 87.4 percent. These increases were also accompanied by small increases in the proportions of males and females classified as "legally separated". Conversely, Table 3.4 shows a steady drop in the proportion of males and females "widowed" at all ages below 65 years between 1951 and 1971. This is attributable to the post-war improvement in longevity, discussed in the previous chapter. At ages 65 years and over, the proportion "widowed" among males dropped from 21.0 percent in 1951 to 17.5 percent in 1971, but the corresponding proportion for females increased, from 45.6 percent to 48.8 percent, over the same period. These diametrically opposing trends reflect the widening gap in the life expectancies of the two sexes.

### **3.5 HOUSEHOLDS AND FAMILIES**

For census purposes a household is defined as "a person or group of persons living in an inhabited permanent private dwelling". "One-family-only households" include "complete-family-households" which consist of a husband and wife with or without unmarried children of any age and "incomplete-family-households" from which one parent or one or more children are missing on census night. Other types of households enumerated in the census include "extended-family-households", which contain extra-family persons, "non-family households" and "non-private households" (group living quarters).

The size, type and composition of households are influenced by the available stock of housing, by the levels of nuptiality, fertility, migration and mortality and by economic and social trends.

#### **3.5.1 Numbers and Types of Households**

At the 1971 Census of Population and Dwellings, there were 809,827 dwellings in New Zealand. Of these 801,686 (or 99.0 percent) were permanent private dwellings, 1,069 were mobile and temporary dwellings and 7,082 were non-private dwellings.

Table 3.5 sets out the numbers of private households in New Zealand and the average numbers of persons per household at each census since 1936. The number of permanent private households more than doubled between 1936 and 1971, while the average number of persons per household declined gradually from 3.9 in 1936 to 3.6 during the 1950's and further to 3.4 in 1971.

TABLE 3.5 TOTAL NUMBERS  
OF HOUSEHOLDS, 1936-1971

Census Year	Number of Households <sup>(1)</sup>	Average Number of Persons per Household
1936	349,905	3.9
1945	403,334	3.7
1951	494,012	3.6
1956	563,052	3.6
1961	633,707	3.6
1966	716,104	3.5
1971	801,686	3.4

<sup>(1)</sup>Inhabited Permanent Private Dwellings.

According to Table 3.6, which classifies the households into four different types, about 69.8 percent of the households at the 1971 census were in the "one-family-only" category. "One-person-households" increased as a proportion of all households between 1966 and 1971 from 12.4 percent to 14.1 percent, but there was a compensatory decrease in the proportions of households in the remaining two categories.

TABLE 3.6 NUMBERS OF HOUSEHOLDS BY  
TYPE, 1966 AND 1971

Type of Household	1966 Census		1971 Census	
	Number of Households	Proportion of all Households	Number of Households	Proportion of all Households
		(Percent)		(Percent)
One-family-only <sup>(1)</sup>	494,529	69.1	559,534	69.8
Extended family <sup>(1)</sup>	89,540	12.5	86,189	10.8
One-person	89,384	12.4	113,256	14.1
Other non-family	42,651	6.0	42,707	5.3
Total	716,104	100.0	801,686	100.0

<sup>(1)</sup>A household comprising a family or families with additional persons present.

### 3.5.2 Heads-of-Households

Table 3.7 shows the numbers and proportions of heads-of-households in each sex and marital-status group at the 1966 and 1971 censuses.

TABLE 3.7 NUMBERS AND DISTRIBUTION OF HOUSEHOLDS BY SEX AND MARITAL STATUS OF HEAD, 1966 AND 1971

Sex and Marital Status of Head-of-Household	1966 Census		1971 Census	
	Number	Proportion of Total Heads-of-Households	Number	Proportion of Total Heads-of-Households
		(Percent)		(Percent)
<i>Males</i>				
Never-married	30,367	4.2	37,703	4.7
Married	541,206	75.6	593,554	74.0
Widowed	16,443	2.3	17,158	2.1
Legally Separated	3,148	0.4	6,193	0.8
Divorced	4,452	0.6	6,363	0.8
<i>Females</i>				
Never-married	25,030	3.5	29,513	3.7
Married	17,711	2.5	20,418	2.5
Widowed	65,530	9.2	71,513	8.9
Legally Separated	5,492	0.8	9,270	1.2
Divorced	6,725	0.9	10,001	1.2
Total	716,104	100.0	801,686	100.0

In 1971, 74.0 percent of households were headed by married males while widows were the next most important group comprising 8.9 percent of all heads-of-households. "Never-married" males (4.7 percent) and "never-married" females (3.7 percent), in that order, were the next most important groups.

### 3.5.3 Dwelling Tenure

The proportion of householders at the 1971 census who either owned their own homes or were buying them on mortgage was 68.1 percent.

TABLE 3.8 TENURE OF INHABITED PERMANENT PRIVATE DWELLINGS IN NEW ZEALAND, 1951, 1961 AND 1971

Tenure	Proportion of Total Permanent Private Dwellings		
	1951	1961	1971
Renting or leasing	30.3	24.3	25.9
Rent free	8.3	6.8	6.0
Buying on mortgage	30.7	40.1	41.4
Owned without mortgage	30.7	28.8	26.7
Total	100.0	100.0	100.0

This was much the same as in 1961 but substantially higher than in 1951. The proportion of householders who were renting or leasing their homes dropped between 1951 and 1961 but increased slightly between 1961 and 1971.

### 3.6 BIRTH PLACE

Table 3.9 gives the number of persons born in New Zealand and those born overseas as recorded at successive censuses of the New Zealand population since 1878. Immigration played a major role in the population growth of New Zealand, in the early-colonial days. However, as fertility during that period was also quite high, as early as 1881 the population born in New Zealand (267,501) was greater than the overseas born population (265,696).

TABLE 3.9 NEW ZEALAND BORN AND OVERSEAS BORN POPULATIONS<sup>(1)</sup> 1878-1971

Census	Population		Proportion of Total Population	
	New Zealand Born	Overseas Born	New Zealand Born	Overseas Born
			(Percent)	
1878	217,721	239,338	47.6	52.4
1881	267,501	265,696	50.2	49.8
1886	342,159	276,263	55.3	44.7
1891	408,709	258,925	61.2	38.8
1896	481,515	261,095	64.8	35.2
1901	559,249	256,171	68.6	31.4
1906	653,978	281,859	69.9	30.1
1911	752,623	304,910	71.2	28.8
1916	843,915	303,702	73.5	26.5
1921	959,034	311,977	75.5	24.5
1926	1,054,966	323,955	76.5	23.5
1936	1,279,917	291,833	81.4	18.6
1945	1,456,067	245,183	85.6	14.4
1951	1,672,962	265,242	86.3	13.7
1956	1,863,344	309,547	85.8	14.2
1961	2,074,509	338,673	86.0	14.0
1966	2,279,994	394,943	85.2	14.8
1971	2,444,169	411,956	85.6	14.4

<sup>(1)</sup>Excludes cases where birthplace is not specified.

With natural increase (excess of births over deaths) continuing to be the chief contributor to New Zealand's population growth, the proportion of the total population born in New Zealand increased steadily throughout the remaining part of the 19th century and the first half of the 20th century — from 50.2 percent in 1881 to a peak of 86.3 percent in 1951.

The period under review was also characterised by two waves of emigration; the first during the 1890's and the second, during the depression of the 1930's and the subsequent war-years. Emigrants during these periods included many people born overseas and consequently the number of persons born overseas (245,183)

enumerated at the 1945 census was the lowest for any census since 1881. Substantial net external immigration experienced since the end of World War II has boosted the "overseas-born" population considerably and in 1971 persons born overseas numbered 411,956, an overall increase of 68.0 percent in a quarter of a century. Also, their proportion of the total population recovered from 13.7 percent in 1951 to 14.4 percent in 1971.

Table 3.10 classifies the New Zealand population according to country of birth. People from the United Kingdom, one of the traditional sources of migrants to New Zealand, constitute the largest single "overseas-born" group. At the 1971 census, they made up approximately three-fifths of the "overseas-born" population of 411,956.

TABLE 3.10 TOTAL POPULATION BY COUNTRY OF BIRTH, 1961-1971

Country of Birth	Census Population		
	1961	1966	1971
New Zealand (Excluding Cook Is. and Niue)	2,074,509	2,279,994	2,449,169
United Kingdom	218,649	244,601	247,952
Australia	35,412	43,374	44,084
Netherlands	17,844	20,461	20,471
Republic of Ireland	8,810	8,448	7,456
Pacific Islands -			
Cook Is. and Niue Is.	4,788	7,852	10,301
Fiji	3,038	5,384	5,274
Tonga	777	1,005	1,273
Tokelau Islands	..	..	950
Western Samoa	4,450	7,447	12,354
India	4,753	5,368	5,662
China (incl. Taiwan)	4,194	4,218	4,252
Canada	2,863	4,117	4,933
United States	2,797	4,306	6,133
Yugoslavia	3,534	3,874	3,779
Other countries and Born at Sea	28,566	36,470	43,588 <sup>(1)</sup>
Totals	2,414,984	2,676,919	2,862,631

(1) Includes cases where birthplace is not specified.

People born in Australia made up the next leading group, containing about 10.7 percent of the total, followed by the Pacific Islands (7.3 percent) and the Dutch born (5.0 percent).

During the 1960's there was a conspicuous rise in the number of Pacific Islanders (from the Cook Islands, Fiji, Niue Island, Western Samoa, Tonga and the Tokelau Islands), in New Zealand. Their number increased by 231 percent, from 13,053 in 1961 to 30,152 in 1971. There was also a large increase (95.5 percent) in the population born in Canada and the United States (from 5,660 to 11,066) during the period.

The age structure of the "overseas-born" population varies quite considerably according to birthplace, and also from the "New Zealand-born" pattern. The New Zealand-born population is younger than the overseas-born group; this is largely because immigrants generally tend to be concentrated more in the working and retirement age-groups.

### 3.7 ETHNIC ORIGIN

The New Zealand population can broadly be classified, according to ethnic origin, into three main groups: Europeans, Maoris and "others". Europeans include all persons of European origin, while the Maori population consists of all persons with half or more Maori ancestry. The residual "others" ethnic group consists largely of Asians and Pacific Islanders. Table 3.11 shows the broad ethnic composition of New Zealand population at each census since 1916. Europeans are by far the largest ethnic group in New Zealand. Their proportion of the total New Zealand population has been decreasing gradually since the 1916 Census, however. At the 1971 Census they comprised nearly 90.0 percent of the country's population of 2,862,631. Trends and patterns in fertility and mortality in New Zealand predominantly reflect the fertility and mortality experience of the European population. The changing ethnic distribution of the total New Zealand population is shown graphically in Figure 3.2.

TABLE 3.11 TOTAL POPULATION BY  
ETHNIC ORIGIN, 1916-1971

Census	Ethnic Group			Total
	Europeans <sup>(1)</sup>	Maoris <sup>(2)</sup>	Others	
<i>Population</i>				
1916	1,093,024	52,997	3,204	1,149,225
1921	1,209,243	56,987	5,438	1,271,668
1926	1,338,167	63,670	6,302	1,408,139
1936	1,484,510	82,326	6,976	1,573,812
1945	1,592,908	98,744	10,678	1,702,330
1951	1,809,441	115,676	14,355	1,939,472
1956	2,016,287	137,151	20,624	2,174,062
1961	2,216,886	167,086	31,012	2,414,984
1966	2,426,352	201,159	49,408	2,676,919
1971	2,561,280	227,414	73,937	2,862,631
<i>Proportion (Percent)</i>				
1916	95.1	4.6	0.3	100.0
1921	95.1	4.5	0.4	100.0
1926	95.0	4.5	0.4	100.0
1936	94.3	5.2	0.4	100.0
1945	93.6	5.8	0.6	100.0
1951	93.3	6.0	0.7	100.0
1956	92.7	6.3	0.9	100.0
1961	91.8	6.9	1.3	100.0
1966	90.6	7.5	1.8	100.0
1971	89.5	7.9	2.6	100.0

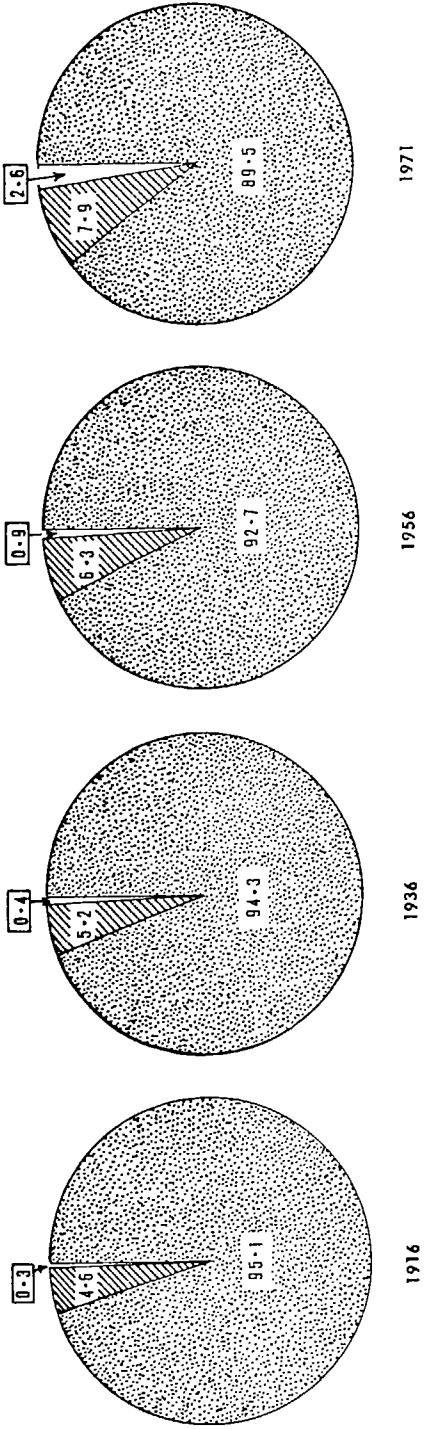
(1) Includes European - Maori - quarter castes.

(2) Half or more Maori blood.

FIGURE 3.2 DISTRIBUTION OF NEW ZEALAND POPULATION BY ETHNIC ORIGIN

CENSUSES 1916, 1936, 1956, 1971

- Percentages -



Maoris constitute the next major ethnic group, and in 1971, made up 7.9 percent of the total New Zealand population. The decline in the number of Maoris during the early years of European settlement and throughout the second half of the nineteenth century is now a matter of history. The present century has seen a demographic resurgence among the Maori people. There has been a three-fold increase in the Maori population during the last 45 years, from 52,997 in 1916 to 227,414 in 1971.

TABLE 3.12 SELECTED DEMOGRAPHIC FEATURES OF THE MAORI POPULATION, 1945-1971

Census Year	Population	Average Annual Rate of Growth	Sex Ratio <sup>(1)</sup>	Proportion of Maori Population in:	
				North Island	Defined Urban Areas
		(Percent)		(Percent)	
1945	98,744	—	103.7	96.5	17.3
1951	115,676	2.9	105.3	96.4	20.1
1956	137,151	3.5	104.5	96.2	23.9
1961	167,086	4.0	103.5	95.7	31.5
1966	201,159	3.8	103.1	94.7	43.6
1971	227,414	2.5	102.2	93.9	50.7

(1) Number of males per 100 females.

There are other remarkable differences between the Maori population and the other two racial groups as regards pattern of growth and population composition. Until recently Maoris were experiencing high fertility levels and a high rate of population growth. For example, during the intercensal period 1956-1961, the Maori population grew at an average annual rate of growth of 4.01 percent per annum (see Table 3.12). In recent years, the average annual growth rate of the Maori population has fallen substantially because of large decreases in fertility. However, it is still well above the average annual growth rate for the European population — 2.5 percent compared with 1.4 percent — during 1966-1971. It is important to note that whereas the growth of the “non-Maori” population (Europeans and others) is influenced considerably by external migration, the growth of the Maori population is predominantly a result of natural increase. To some degree it is also augmented by intermarriage between non-Maori and Maoris. Because a “Maori” is defined “as a person of half or more Maori descent”, when a full Maori marries a non-Maori the resulting progeny are regarded, for statistical purposes, as belonging to the Maori population.

One outstanding demographic characteristic of the Maori population is its youthfulness. In 1971, 49.1 percent of the Maori population was under 15 years of age compared with 30.3 percent of the non-Maori population.



In 1971 the average age of the Maori population was 20.7 years for males and 20.6 years for females: for the non-Maori population the corresponding figures were 30.5 years for males and 32.2 years for females. Moreover, whereas females outnumber males among the non-Maoris, the Maori population has a preponderance of males, the Maori sex ratio being 102.2 males per 100 females in 1971.

The third group, "others", consists largely of Pacific Islanders, Chinese, Indians, Syrians, Lebanese and Arabs (see Table 3.13). In 1971, this residual group contained 2.6 percent of the total New Zealand population compared with 0.6 percent in 1945.

TABLE 3.13 TOTAL POPULATIONS OF MINOR ETHNIC GROUPS (EXCLUDING EUROPEAN AND MAORI), 1961-1971

Ethnic Group	Census Population		
	1961	1966	1971
Pacific Islanders –			
Cook Island Maori	4,499	8,633	13,772
Samoan	6,481	11,842	22,198
Niuean and Tokelauan	1,728	2,846	5,459
Tongan	1,043	1,389	2,075
Other	589	1,531	1,909
Sub-Totals Pacific Islanders	14,340	26,271	45,413
Chinese	8,524	10,283	12,818
Indian	4,179	6,843	7,807
Fijian	746	1,323	2,021
Syrian, Lebanese and Arab	1,101	1,099	1,126
Other Ethnic Groups	2,122	3,589	4,752
Sub-Totals Others	16,672	23,137	28,524
Totals	31,012	49,408	73,937

Substantial immigration since World War II of Pacific Islanders, who now constitute approximately 1.5 percent of the total population, is the main reason for the growth of this group. At the 1936 census there were only 988 Pacific Islanders in New Zealand and there were only 2,159 in 1945. Their numbers had jumped to 14,340 by 1961, and by 1971 had more than tripled, to 45,413.

The Pacific Islanders residing in New Zealand are mostly Samoans, Cook Islanders, Niueans and Tongans. In ethnic origins they are, in varying degrees, akin to the New Zealand Maori population but despite this, are finding assimilation into New Zealand society more difficult than other ethnic groups. This problem can be partially explained by the fact that the majority of Polynesian immigrants are unskilled or semi-skilled workers, with limited education.

The Chinese and Indians are the next most important groups, providing 0.4 and 0.3 percent of the total population, respectively, in 1971. The Chinese were the earliest group of non-European immigrants to New Zealand, arriving as early as the 1850's from the coastal districts of Southern China, particularly from Canton. The Indian community, on the other hand, has been built up largely since World War I, most permanent residents being related Hindus from Bombay and its vicinity. The geographic distribution of these minority groups tends to be one of concentration in the larger urban areas. Most Pacific Islanders settle in the two principal urban centres: Auckland and Wellington.

### 3.8 RELIGIOUS DENOMINATIONS

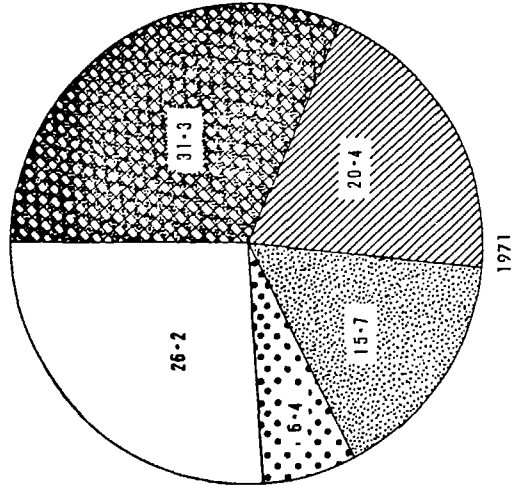
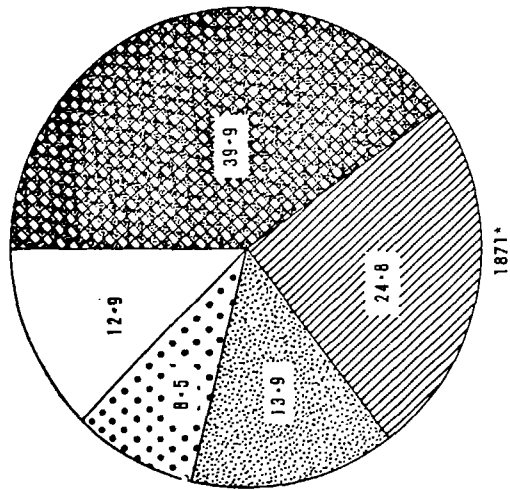
The parts played by certain churches in the early settlement of New Zealand, the loyalty of settlers to the faiths of their homelands and the subsequent loyalty of their descendants to these faiths, have led to four Christian denominations holding a predominant position in New Zealand since the early days of the colony. These four — in order of numbers of adherents — are the Anglican, Presbyterian, Roman Catholic and Methodist churches. Early statistics do not include Maoris, but of the 256,393 Europeans enumerated at the 1971 census, 87.1 percent belonged to one of these four churches. A century later, in 1971, the same four churches received the support of 73.8 percent of the New Zealand population.

Figure 3.3 compares the proportion of New Zealand's population within the major religious professions in 1871 and 1971. This diagram shows that the adherents to the Roman Catholic church increased slightly from 13.9 percent to 15.7 percent of the total population during the period. The corresponding decrease in the proportion of the total population belonging to the Anglican, Methodist and Presbyterian churches reflects the emergence of minority religious groups. Table 3.14 affords some evidence that a substantial part of the decrease in support for these other three main churches occurred during the 1960's.

FIGURE 3.3 PROPORTION OF ADHERENTS IN FOUR PRINCIPAL RELIGIOUS PROFESSIONS

CENSUSES 1871 AND 1971

- PERCENT -



\* European Population Only

TABLE 3.14 MAJOR RELIGIOUS PROFESSIONS:  
NUMBERS OF ADHERENTS, 1961-1971

Religious Profession:	Adherents at Census		
	1961	1966	1971
Anglican (Church of England)	835,434	901,701	895,839
Presbyterian	539,459	582,976	583,701
Roman Catholic (including Catholic undefined)	364,098	425,280	449,974
Methodist	173,838	186,260	182,727
Baptist	40,886	46,748	47,350
Protestant (undefined)	45,100	46,090	37,475
Christian (undefined)	12,130	21,548	33,187
Ratana	23,126	27,570	30,156
Latter Day Saints (Mormon)	17,978	25,564	29,785
Brethren	25,764	23,139	25,768
Salvation Army	15,454	17,737	19,371
Seventh Day Adventist	8,220	9,551	10,477
Jehovah's Witness	5,944	7,455	10,318
No religion (so returned)	17,486	32,780	57,485
Object to state	204,056	210,851	247,019
Others (incl. no specified)	86,011	111,669	201,999
<b>Totals</b>	<b>2,414,984</b>	<b>2,676,919</b>	<b>2,862,631</b>
	<i>Proportion of Total Population</i>		
	(Percent)		
Anglican (Church of England)	34.6	33.7	31.3
Presbyterian	22.3	21.8	20.4
Roman Catholic (including Catholic undefined)	15.1	15.9	15.7
Methodist	7.2	7.0	6.4
Baptist	1.7	1.7	1.7
Protestant (undefined)	1.9	1.7	1.3
Christian (undefined)	0.5	0.8	1.2
Ratana	1.0	1.0	1.1
Latter Day Saints (Mormon)	0.8	1.0	1.0
Brethren	1.1	0.9	0.9
Salvation Army	0.6	0.7	0.7
Seventh Day Adventist	0.3	0.4	0.4
Jehovah's Witness	0.2	0.3	0.4
No religion (so returned)	0.7	1.2	2.0
Object to state	8.4	7.9	8.6
Others (incl. no specified)	3.6	4.2	7.1
<b>Totals</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

NOTE: Where religious affiliation is clear, adherents using different descriptive terms are grouped together. For example, Anglican, Church of England, Anglo-Catholic, and Church of the Province of New Zealand are all among the recognised terms used by adherents of the Anglican Church.

While the numbers of Anglicans and Methodists decreased between the censuses of 1966 and 1971, none of the other nine churches with more than 10,000 adherents experienced similar declines in numbers of adherents. Relative support for all of the four main churches declined between 1966 and 1971. Together they claimed 73.8 percent of New Zealand's total population in 1971, compared with 78.4 percent in 1966

and 79.2 percent in 1961. Six of the seven other major churches maintained a constant proportion and one, the Ratana Church, increased its following from 1.0 percent in 1966 to 1.1 percent in 1971. This church has predominantly Maori adherents: 27,460 of its 30,156 members in 1971 coming from this group.

Some churches have their greatest numbers of adherents in certain geographical areas. This is primarily a reflection of the historical fact that certain areas of New Zealand were originally colonised as religious settlements: in some areas the missionaries of one particular church predominated. For example, the statistical areas of Canterbury, Marlborough, Nelson (South Island) and East Coast (North Island) are traditionally Anglican while Otago and Southland (South Island) are predominantly Presbyterian. The strongest Roman Catholic area is Westland (South Island), while Taranaki and Northland (North Island) are strong Methodist areas.

Two other religious professions — the Ratana church and the Latter Day Saints church — both have predominantly Maori support and this is reflected in the areal distribution of their members.

### 3.9 EDUCATION

Literacy is an almost universal characteristic of the New Zealand population as a result of education at all levels being available with generally equal opportunity. Education for all children between the ages of 5 and 15 years is compulsory and the Education Act 1964 provides for free secular education in state primary and secondary schools. Tertiary education is provided under the Universities Act 1961 with the government providing bursaries to students according to their secondary school qualifications. In New Zealand, the central administrative body directing education at all levels is the Department of Education.

The post-World War II years have seen rapid expansion within the education system. The rise in primary school rolls reflects population growth within the appropriate age groups. Large increases in secondary school and university rolls during the 1960's were also due in part to the movement of the 'baby boom' population cohorts into the appropriate age-groups. There was, however, a marked tendency for more pupils to remain longer at secondary school and, also, to subsequently undertake tertiary education.

In 1945, 328,407 students (19.3 percent of the total population) were enrolled at various educational institutions. By 1973 the population under tuition had increased to 923,062 or 31.0 percent of the total population. Associated with this increase in the population receiving education, there has been a significant development in educational facilities and the numbers and quality of teaching staff.

Expenditure on education increased from 6.0 percent of total government expenditure in 1945-46 to 17.8 percent in 1973-74. In absolute terms, this represented an increase from \$16.0 million to \$440.2 million during the period.

Table 3.15 summarises the numbers of students receiving instruction in various educational institutions for 1943-1973.

TABLE 3.15 STUDENTS RECEIVING INSTRUCTION  
IN EDUCATIONAL INSTITUTIONS, 1943-1973

Type of Institution	1943	1953	1963	1973
Pre-School (Playcentres and Kindergartens)	2,182	9,752	23,803	49,372
Primary	246,915	359,537	449,900	521,871
Secondary	38,810	67,478	149,063	202,876
Technical	11,859	30,637	69,980	101,686
Teachers Colleges	1,833	2,769	4,536	8,262
Universities	5,953	11,467	18,303	38,995
Total	307,552	481,640	715,585	923,062

An indication of the vocations likely to be followed by pupils leaving secondary schools is given by Table 3.16. In 1973, about 38 percent of those leaving secondary school planned to either continue their education or receive specialised training, 10 percent were destined for university, while another 9 percent planned to enrol at other full-time educational institutions, including teachers' colleges and technical schools. About 16 percent of all school leavers expected to become skilled trade apprentices, while 3 percent intended to take technical traineeships. The remainder of the prospective school leavers were planning immediate entry into the labour force.

TABLE 3.16 PROBABLE DESTINATION OF STATE  
AND PRIVATE SECONDARY SCHOOL PUPILS, 1972 AND 1973

Probable Destination	Boys	Girls	Total	Boys	Girls	Total
	1972			1973		
Full-time education at university	3,873	1,986	5,859	3,642	1,995	5,637
Further full-time education –						
Teachers college	380	1,435	1,815	398	1,424	1,822
Kindergarten T.C.	–	244	244	5	251	256
Technical training	729	510	1,239	801	560	1,361
Commercial training	144	1,323	1,467	154	1,341	1,495
Art	54	80	134	54	91	145
Technical traineeships –						
Draughting cadets	239	55	294	325	94	419
Technical trainees	813	258	1,071	979	310	1,289
Health services	107	3,101	3,208	106	3,192	3,298
Office –						
Government	668	1,163	1,831	676	1,411	2,087
Local authority	81	349	430	148	348	496
Private enterprise	1,429	4,980	6,409	1,351	5,617	6,968
Shop and warehouse assistant	1,421	2,682	4,103	1,444	2,816	4,260
Skilled trades –						
Government	727	113	840	791	93	884
Local authority	182	39	221	204	32	236
Private enterprise	6,032	785	6,817	7,250	910	8,160
Farming	3,034	254	3,288	3,072	311	3,383
Factory and clothing workers	1,231	1,509	2,740	1,756	1,824	3,580
Domestic work and home	124	1,477	1,601	113	1,394	1,507
Armed forces	614	73	687	687	90	777
Other	5,848	2,779	8,627	6,105	3,213	9,318
Totals	27,730	25,195	52,925	30,061	27,317	57,378

Source: Department of Education.

Table 3.17 gives details of the educational qualifications of males and females in the labour force and in the population aged 15 and over at the 1971 census, (the classification is by the highest qualification held). Those with secondary school and related education comprised about 38.5 percent of the total labour force and 20.7 percent of the population, while those with university qualifications accounted for 4.1 percent and 3.1 percent of the labour force and population respectively. The remaining members of the labour force and population have primary or no qualifications.

TABLE 3.17 EDUCATIONAL QUALIFICATIONS  
OF TOTAL LABOUR FORCE AND TOTAL  
POPULATION (AGED 15 YEARS AND OVER), 1971

Qualification	Males	Females	Total
<i>Total Labour Force</i>			
University –			
Degree	29,350	6,262	35,612
Diploma (1)	8,371	1,795	10,166
Secondary –			
Higher School Certificate (2)	8,524	4,268	12,792
University Entrance	48,862	25,407	74,269
School Certificate	67,149	51,244	118,393
Other (3)	168,724	56,866	225,590
Primary (4)	453,989	188,024	642,013
<b>Total</b>	<b>784,969</b>	<b>333,866</b>	<b>1,118,835</b>
<i>Total Population (15 years and over)</i>			
University –			
Degree	33,974	12,610	46,584
Diploma (1)	9,108	4,073	13,181
Secondary –			
Higher School Certificate (2)	16,533	11,015	27,548
University Entrance	61,938	54,118	116,056
School Certificate	81,343	97,565	178,908
Other (3)	38,128	43,056	81,184
Primary (4)	725,320	764,227	1,489,547
<b>Total</b>	<b>966,344</b>	<b>986,664</b>	<b>1,953,008</b>

(1) Includes other university qualifications.

(2) Includes equivalent university scholarships.

(3) Includes professional, trade and other certificates.

(4) Includes nil qualifications and not specified.





# **CHAPTER IV**

## **REGIONAL POPULATION GROWTH AND DISTRIBUTION**

### **4.1 INTRODUCTION**

Variations in population growth within the geographic areas of any country and its various types of communities (urban, metropolitan and rural) are due to differences in the components of growth viz., births, deaths and migration (both internal and external in the New Zealand context), experienced. These components in turn are influenced by various socio-economic, geographic, cultural and political factors. In this chapter an attempt has been made to investigate, briefly, sub-national variations in the growth and distribution of the New Zealand population over time and to describe these in terms of the above components. Special emphasis is given to the phenomenon of urbanisation and the settlement areas of external immigrants. The growing importance attached by New Zealand to regional development policies indicates the level of concern about regional population growth and distribution, and urbanisation.

### **4.2 TRENDS IN REGIONAL POPULATION DISTRIBUTION AND GROWTH**

In pre-European days and until 1860, the larger portion of New Zealand's population was in the North Island (one of the country's two main islands). The South Island was the more densely populated from 1860 until 1900 because the discovery of rich gold fields in Otago in the 1860's and the relatively easy availability of land led to considerable population inflows. After 1900, when the populations of the two islands were roughly equal, the North Island went ahead steadily. Many economic, social and political factors contributed to this change. Government opened up new lands in the North Island suitable for dairy farming and available in small lots. This in turn led to improved communications, including the completion of the main trunk railway line from Wellington to Auckland in 1908. On the other hand, the South Island suffered from both the exhaustion of its goldfields and from the development of industry in those North Island centres with large populations and easy access to world shipping routes.

By 1926, the proportion of New Zealand's population living in the North Island had increased to 63.4 percent, while that for the South Island had dropped to 36.6 percent. Since then the gap has widened further. Between 1926 and 1971 the population of the North Island increased by 130 percent, from 892,679 to 2,051,363, while that for the South Island increased by only 57 percent from 515,460 to 811,268 (see Table 4.1). The North Island not only had a higher rate of natural increase, and attracted a disproportionately large number of immigrants but it also gained substantially from the general drift of population from the South Island to the North Island. In 1971, 72 out of every 100 people in New Zealand were located in the North Island and only 28 out of every 100 in the South Island. Figure 4.1 provides a graphical indication of the changing geographical distribution of the New Zealand population.

The drift northward was complemented by a drift from rural areas and small population centres to the large urban centres (notably Auckland, Christchurch and Wellington) which provided better economic and employment opportunities. There is evidence that these phenomena occurred in both the North and South Islands as Tables 4.1, 4.2 and 4.3 illustrate. In the North Island, the relative increase in population in the northern part (which corresponds with the statistical areas of Northland, Central Auckland, South Auckland-Bay of Plenty and East Coast) during each intercensal period since the 1926 census, has been at least 50 percent higher than that in the southern part (see Table 4.1). Taking the 46-year period (1926-71) as a whole, the population of the northern half of the North Island grew by 169 percent, compared with a 86 percent increase in the population of the southern half of the North Island.

In 1971, the northern part contained 1,264,232 people or 61.6 percent of the total population of the North Island compared to 58.2 percent in 1956, and 52.6 percent in 1926. Its share of total New Zealand population increased from 37.7 percent in 1945 to 44.2 percent in 1971.

Similarly, in the South Island, during 1926-71, the overall population increase in the Marlborough, Nelson and Canterbury statistical areas exceeded that in Otago, Southland and Westland (see Table 4.1). In 1971 Canterbury statistical area alone contained 398,830 people or 49.2 percent of the total population of the South Island, compared with 46.1 percent in 1956 and 42.4 percent in 1926.

FIGURE 4.1 GEOGRAPHICAL DISTRIBUTION OF TOTAL POPULATION  
CENSUSES 1926, 1956 AND 1971

- PERCENT -

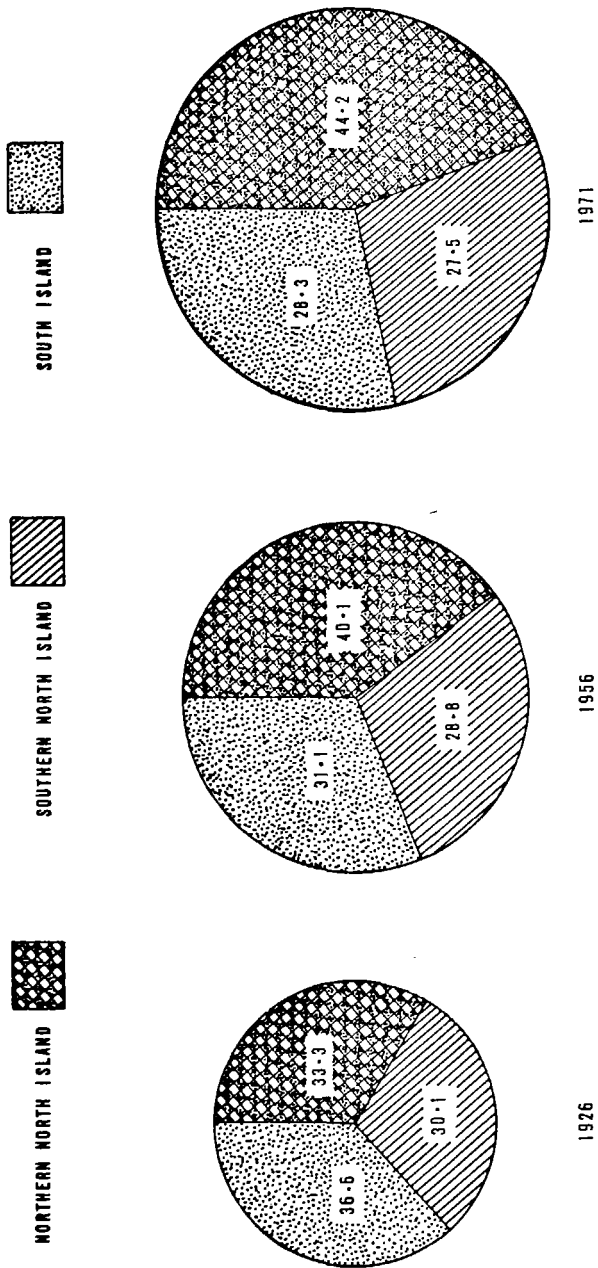


TABLE 4.1 POPULATIONS OF STATISTICAL AREAS AT SUCCESSIVE CENSUSES, 1926-1971

Statistical Area	Population Census									
	1926	1936	1945	1951	1956	1961	1966	1971		
Northland	54,449	64,625	66,448	75,261	83,330	86,391	93,514	96,191		
Central Auckland	236,274	265,996	331,944	382,014	441,069	514,507	613,671	698,400		
South Auckland-Bay of Plenty	145,108	179,260	204,810	246,480	302,304	349,624	389,334	422,299		
East Coast	33,627	37,089	37,769	41,344	45,042	46,478	46,988	47,342		
Totals, Northern North Island	469,458	546,970	640,971	745,099	871,745	997,000	1,143,507	1,264,232		
Hawke's Bay	70,353	76,968	79,084	91,205	102,326	114,470	124,960	133,250		
Taranaki	71,848	77,652	76,833	86,883	94,109	99,774	101,104	100,895		
Wellington	281,020	316,446	349,404	390,682	429,184	473,541	523,755	552,986		
Totals, Southern North Island	423,221	471,066	505,321	568,770	625,619	687,785	749,819	787,131		
Totals, North Island	892,679	1,018,036	1,146,292	1,313,869	1,497,364	1,684,785	1,893,326	2,051,363		
Marlborough	18,793	19,149	20,737	22,891	25,697	27,748	29,428	31,642		
Neelson	41,243	48,350	46,745	56,478	59,376	62,967	67,208	68,838		
Westland	21,413	25,774	23,896	25,403	25,584	24,841	24,353	22,861		
Canterbury	218,561	238,432	250,415	283,987	311,909	344,597	376,441	398,830		
Otago	149,921	151,213	144,035	159,231	168,861	176,325	183,477	182,749		
Southland	65,529	72,856	70,178	77,613	85,271	93,721	102,686	106,348		
Totals, South Island	515,460	555,774	556,006	625,603	676,698	730,199	783,593	811,268		
Totals N.Z.	1,408,139	1,573,810	1,702,298	1,939,472	2,174,062	2,414,984	2,676,919	2,862,631		

TABLE 4.1 - ctd.

Statistical Area	Population Increase or Decrease (Percent)									
	1926-1936	1936-1945	1945-1951	1951-1956	1956-1961	1961-1966	1966-1971	1926-1971		
Northland	18.7	2.8	13.3	10.7	3.7	8.2	2.9	76.6		
Central Auckland	12.6	24.8	15.1	15.5	16.6	19.3	13.8	195.5		
South Auckland-Bay of Plenty	23.5	14.3	20.3	22.6	15.7	11.4	8.5	191.0		
East Coast	10.3	1.8	9.5	8.9	3.2	1.1	0.8	40.8		
Totals, Northern North Island	16.5	17.2	16.2	17.0	14.4	14.7	10.6	169.3		
Hawke's Bay	9.4	2.7	15.3	12.2	11.9	9.2	6.6	89.4		
Taranaki	8.1	-1.1	13.1	8.3	6.0	1.3	-0.2	40.4		
Wellington	12.6	10.4	11.8	9.9	10.3	10.6	5.6	96.8		
Totals, Southern North Island	11.3	7.3	12.6	10.0	9.9	9.0	5.0	86.0		
Totals, North Island	14.0	12.6	14.6	14.0	12.5	12.4	8.4	129.8		
Marlborough	1.9	8.3	10.4	12.3	8.0	6.1	7.5	68.4		
Nelson	17.2	-3.3	20.8	5.1	6.0	6.7	2.4	66.9		
Westland	20.4	-7.3	6.3	0.7	-2.9	-2.0	-6.1	6.8		
Canterbury	9.1	5.0	13.4	9.8	10.5	9.0	6.0	82.5		
Otago	0.9	-4.7	10.6	6.0	4.4	4.1	-0.4	21.9		
Southland	11.2	-3.7	10.6	9.9	9.9	9.6	3.6	62.3		
Totals, South Island	7.8	...	12.5	8.2	7.9	7.3	3.5	57.4		
Totals N.Z.	11.8	8.2	13.9	12.1	11.1	10.8	6.9	103.3		



In 1926 the largest statistical areas, in terms of population size, were (in descending order) Wellington, Central Auckland, Canterbury, Otago and South Auckland-Bay of Plenty, all with populations of over 100,000 people. In the 45 years to 1971, Central Auckland statistical area displaced Wellington statistical area as the most populous and, at the 1971 Census, it contained 698,400 people or roughly one-quarter of the country's population of 2,862,600. In 1926, the corresponding figure was 16.8 percent. Similarly, the South Auckland-Bay of Plenty statistical area, which in 1971 contained 14.8 percent of the total New Zealand population compared with 10.3 percent in 1926, overtook both Canterbury and Otago in size. The overall increase in the population of these two statistical areas, Central Auckland and South Auckland-Bay of Plenty, during 1926-71 (over 190 percent) was more than twice that for any other statistical area. Finally, all but these two statistical areas recorded decreases in their proportions of total population between 1926 and 1971. Westland statistical area has shown an absolute decrease in its population since the 1956 census.

### **4.3 COMPONENTS OF REGIONAL POPULATION GROWTH**

The foregoing analysis has shown that the rates of population growth varied considerably among statistical areas, as well as within each statistical area, from one intercensal period to another. Their variations are the result of a complex interplay of a variety of demographic processes, such as the variations in the natural increase, changes in the level and direction of internal migration, and the direct and indirect effects of external migration. This section examines the individual roles of natural increase and net migration (both internal and external) in the regional growth and geographical redistribution of the New Zealand population between 1956 and 1971.

Table 4.4 shows large areal variations in the level of natural increase as well as in the levels and directions of net migration. During the intercensal period 1956-1961, for instance, the rate of natural increase varied markedly from 129.07 per 1,000 mean population in the South Auckland - Bay of Plenty statistical area to only 63.80 per 1,000 in Otago statistical area. It is notable that statistical areas like Northland, South Auckland - Bay of Plenty, East Coast and Southland — all with farming backgrounds and relatively large rural populations — had much higher fertility (and natural increase) than the remaining nine areas. These differences in fertility have somewhat narrowed in more recent years. This may be attributed to the decline in fertility during the 1960's, which was relatively larger in areas which initially had high levels.



TABLE 4.4 RATES OF NATURAL INCREASE, NET MIGRATION AND POPULATION INCREASE FOR STATISTICAL AREAS, 1966-1971  
(Rates Per 1,000 Mean Population For The Intercensal Period)

Statistical Area	1956-1961 Intercensal Period			1961-1966 Intercensal Period			1966-1971 Intercensal Period		
	Natural Increase	Net Migration	Population Increase	Natural Increase	Net Migration	Population Increase	Natural Increase	Net Migration	Population Increase
Northland	115.19	- 79.12	36.07	87.84	- 6.65	79.19	75.05	-46.83	28.22
Central Auckland	71.59	82.11	153.70	74.58	101.22	175.79	68.98	60.18	129.15
South Auckland-Bay of Plenty	129.07	16.10	145.17	105.52	1.95	107.48	90.46	9.23	81.23
East Coast	111.54	- 80.16	31.38	79.41	-68.50	10.91	72.26	-64.75	7.51
Totals, Northern North Island	97.56	36.49	134.05	86.59	50.30	136.89	76.83	23.46	100.28
Hawke's Bay	75.52	36.51	112.03	84.98	2.65	87.62	71.86	- 7.64	64.21
Taranaki	83.58	- 25.14	58.44	78.48	-65.23	13.24	66.38	-68.45	- 2.07
Wellington	77.33	20.95	98.27	79.43	21.27	100.70	68.73	-14.44	54.30
Totals, Southern North Island	77.95	16.71	94.66	80.22	6.08	86.30	68.95	-20.39	48.55
Totals, North Island	89.47	28.33	117.80	84.03	32.54	116.56	73.76	6.37	80.13
Marlborough	85.21	- 8.46	76.75	77.52	-18.75	58.77	69.92	2.59	72.51
Nelson	68.35	- 9.65	58.70	59.78	5.38	65.16	47.34	-23.37	23.96
Westland	77.74	-107.21	-29.47	63.22	-83.06	-19.84	46.17	-109.37	-63.20
Canterbury	67.44	32.14	99.58	61.04	27.29	88.33	53.58	4.18	57.76
Otago	63.80	- 20.55	43.25	58.85	-19.09	39.76	49.69	-53.67	- 3.98
Southland	98.05	3.63	94.42	88.82	2.47	91.29	75.61	-40.58	35.04
Totals, South Island	71.56	4.49	76.06	64.71	5.84	70.54	55.46	-20.74	34.71
Totals, N.Z.	83.98	21.02	105.00	78.28	24.60	102.88	68.49	- 1.44	67.05

(1) Number of births minus number of deaths.

(2) Total immigration minus total emigration.

In both the North and South Islands, and all statistical areas except Central Auckland and Westland, natural increase was the major contributor to population change during each of the three intercensal periods (1956-1961, 1961-1966 and 1966-1971) considered here. In the Central Auckland statistical area, net in-migration contributed roughly 55 percent of the total population growth during 1956-1971, and this large migration contribution helped produce a total rate of growth which was nearly double the next highest rate of growth, that for the Wellington statistical area. In Westland statistical area, on the other hand, net migration losses outweighed the natural increase during each of the three intercensal periods, causing a net population decline.

Recent data suggest that this declining trend might now have been halted. In another six statistical areas — Northland, East Coast, Taranaki, Marlborough, Otago and Southland — net migration made a negative but generally small contribution to population change during the intercensal periods 1956-1961 and 1961-1966. During the intercensal period 1966-1971, which was affected by the economic recession, all areas except Central Auckland, Canterbury and Marlborough experienced net migration losses. In the Taranaki and Otago statistical areas these outflows outweighed the natural growth, and they joined Westland in having a population decline during this period.

#### **4.4 REGIONAL POPULATION DENSITY**

The population density, or the relation of population to area, depends not only on the size of the population and on economic and social factors such as industrialisation, residential development, and communications, but on the relatively immutable elements of climate and geography. Changes in the density of New Zealand and its two main islands are set out in Table 4.5 below. The density of the New Zealand population doubled between 1874 and 1901, when a density of 3.0 persons per square kilometre was recorded. It doubled again to 6.3 persons per square kilometre in 1945, and had reached 10.7 persons per square kilometre by 1971.

Differences in population density within New Zealand are due partly to urbanisation, partly to the population drift from the South to the North Island and partly to natural increase rates. The greater population density of the North Island not only reflects its greater population but also its smaller area.

TABLE 4.5 GEOGRAPHICAL  
DENSITY OF POPULATION, 1901-1971

Census	Average Numbers of Persons per Square Kilometre		
	North Island	South Island	New Zealand
1901 <sup>(1)</sup>	3.8	2.5	3.0
1906	4.5	2.7	3.5
1911	5.3	2.9	3.9
1916 <sup>(1)</sup>	6.1	2.9	4.3
1921	6.9	3.1	4.7
1926	7.8	3.3	5.2
1936	8.9	3.6	5.9
1945 <sup>(1)</sup>	10.0	3.6	6.3
1951 <sup>(1)</sup>	11.5	4.1	7.2
1956 <sup>(1)</sup>	13.1	4.4	8.1
1961 <sup>(1)</sup>	14.7	4.7	9.0
1966 <sup>(1)</sup>	16.5	5.1	10.0
1971 <sup>(1)</sup>	17.9	5.3	10.7

<sup>(1)</sup>Members of the Armed Forces over-  
seas are excluded.

TABLE 4.6 POPULATION DENSITY BY STATISTICAL AREAS, 1926-1971

Statistical Area	Land Area	Population Density					
		1926	1945	1951	1961	1966	1971
	(Square Kilometres)	(Persons Per Square Kilometre)					
Northland	12,639	4.3	5.3	6.0	6.8	7.4	7.6
Central Auckland	5,569	42.4	59.6	68.6	92.4	110.2	125.4
Southern Auckland-Bay of Plenty	36,744	3.9	5.6	6.7	9.5	10.6	11.5
East Coast	10,878	3.1	3.5	3.8	4.3	4.3	4.4
Totals, Northern North Island	65,830	7.1	9.7	11.3	15.1	17.4	19.2
Hawke's Bay	11,033	6.4	7.2	8.3	10.4	11.3	12.1
Taranaki	9,713	7.4	7.9	8.9	10.3	10.4	10.4
Wellington	28,153	10.0	12.4	13.9	16.8	18.6	19.6
Totals, Southern North Island	48,899	8.7	10.3	11.6	14.1	15.3	16.1
Totals, North Island	114,729	7.8	10.0	11.5	14.7	16.5	17.9
Marlborough	10,930	1.7	1.9	2.1	2.5	2.7	2.9
Nelson	17,897	2.3	2.6	3.2	3.5	3.8	3.8
Westland	15,566	1.4	1.5	1.6	1.6	1.6	1.5
Canterbury	43,431	5.0	5.8	6.5	7.9	8.7	9.2
Otago	36,441	4.1	4.0	4.4	4.8	5.0	5.0
Southland	29,681	2.2	2.4	2.6	3.2	3.5	3.6
Totals, South Island	153,946	3.3	3.6	4.1	4.7	5.1	5.3
Totals, New Zealand	268,675	5.2	6.3	7.2	9.0	10.0	10.7

The North Island covers an area of 114,729 square kilometres or 43 percent of the total area of New Zealand (268,675 square kilometres) and the South Island, 153,946 square kilometres or 57 percent of the total area. In 1874, the two islands had almost the same population density but by the 1926 Census, the North Island had more than twice as many persons per square kilometre (7.8 persons) as the South Island (3.3 persons). In 1961, its density was three times the latter — 14.7 persons compared with 4.7 persons per square kilometre. Over the last ten years, the gap has widened further.

Table 4.6 shows the population density of New Zealand's statistical areas from 1926 to 1971. Central Auckland has the highest population density, and this has increased considerably over the period. Westland is the only statistical area to show a decrease in population density during this time.

#### 4.5 URBAN-RURAL POPULATION GROWTH AND DISTRIBUTION

New Zealand follows the pattern common to many countries of the world. The national population increases by about two percent a year, while the populations of most cities and sizeable towns increase at a much greater rate, and some of the smaller towns and rural areas lose population. This latter drift is not just a recent phenomenon. In fact, even as far back as 1916 there was a noticeable rural to urban drift. However, the economic depression checked the urbanisation trend from 1926 to 1936 when a lack of employment opportunities in towns deterred rural-urban flows and also some of the unemployed were sent to rural areas to do relief work. Table 4.7 shows the urban and rural populations at selected censuses, while Figure 4.2 illustrates, in graphical terms, the rural-urban drift.

TABLE 4.7 URBAN AND RURAL POPULATIONS,  
1926-1971

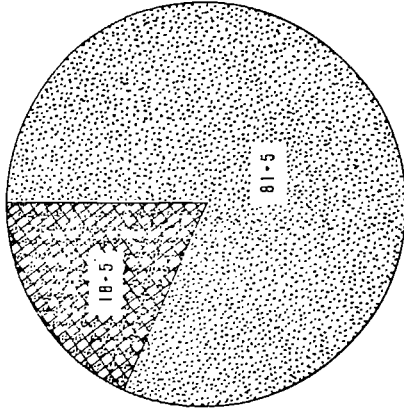
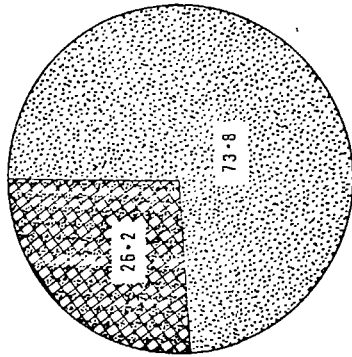
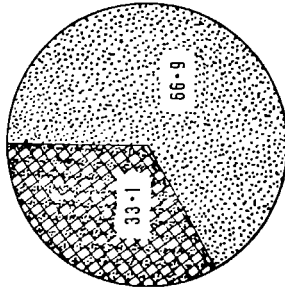
Census Year	Urban <sup>(1)</sup>		Rural <sup>(2)</sup>	
	Population	Proportion of Total Population	Population	Proportion of Total Population
		(Percent)		(Percent)
1926	937,304	66.9	464,370	33.1
1951	1,408,516	72.7	527,078	27.3
1956	1,600,808	73.8	568,806	26.2
1961	1,840,202	76.4	569,217	23.6
1966	2,119,085	79.3	553,023	20.7
1971	2,328,876	81.5	528,609	18.5

<sup>(1)</sup> Urban population has been defined as population in the 24 urban areas plus that of all boroughs, town districts, townships and country towns with populations of 1,000 or over not within the 24 urban areas.

<sup>(2)</sup> Rural population is the remainder of the population except persons on shipboard, who are omitted from the tabulation.

FIGURE 4.2 URBAN-RURAL DISTRIBUTION OF TOTAL POPULATION  
CENSUSES 1926, 1956 AND 1971

- PERCENT -



As can be seen from Figure 4.2, with 81.5 percent of the population living in urban areas in 1971, New Zealand is now a highly urbanised nation. Although the farming industry constitutes a very important segment of New Zealand's economy, greater mechanisation, more modern methods of farming, and the amalgamation of farms into larger, more economical units have enabled great increases in production to be achieved without increasing the farm labour force. Consequently, employment opportunities in rural areas or in small towns close to rural areas have remained essentially limited, forcing many young workers to go to larger urban centres to obtain jobs. As well as the attraction of better employment opportunities in the urban areas there is the attraction of better social and cultural facilities and, in particular, better opportunities for education. Also, with improved roads and other transport services, people can commute to the rural areas from towns and so enjoy rural recreational facilities while still working in urban areas.

Table 4.8 shows the distribution of the New Zealand population by size-group of centres (cities, boroughs, town districts and county towns are included), and illustrates the population shift from the smaller to larger centres. The reasons for the movement of population from small towns to the larger towns and cities are basically the same as those for the rural to urban shift. Also, because the larger centres offer a better selection of jobs and social and cultural facilities, the majority of overseas immigrants settle in larger cities in preference to the smaller townships.

TABLE 4.8  
DISTRIBUTION OF POPULATION  
BY SIZE-GROUP OF CENTRE, 1926-1971

Size-group of Urban Centre	Number of Centres				Proportion of Total Population			
	1926	1961	1966	1971	1926	1961	1966	1971
	(Percent)							
1,000 - 2,499	63	45	44	43	7.5	3.0	2.5	2.4
2,500 - 4,999	23	47	41	40	6.2	7.2	5.5	5.0
5,000 - 9,999	11	34	34	35	5.9	9.6	8.9	8.8
10,000 - 24,999	12	21	23	23	13.3	15.0	13.5	12.8
25,000 and over	4	12	19	22	24.1	32.5	40.9	44.6
Totals	113	159	161	163	57.0	67.3	71.3	73.6

As in other developed countries, the larger cities in New Zealand are experiencing "mushroom-type" population growth. Population increase in the outer suburban areas is generally high while in the very heart of the city either the population increase is very low or a population decline is being experienced.

Houses and flats in the central business districts are being replaced with shops, offices and other commercial and industrial buildings and consequently people are forced to live further from these areas. Auckland and Wellington are two prime examples of New Zealand cities where such transitions are occurring.

#### **4.5.1 Regional Trends In Urbanisation**

Substantial variations exist in the levels of urbanisation of the statistical areas of New Zealand. Central Auckland, with 95.9 percent of its population urban in 1971, is by far the most urbanised statistical area, resulting from the situation of the Auckland urban complex in this area. Wellington, with 89.6 percent of its population urban in 1971, and Canterbury, with an 84.1 percent urban population in 1971, are also highly urbanised, mainly due to the large population centres of Wellington, Lower Hutt and Upper Hutt in the Wellington statistical area, and of Christchurch in the Canterbury area. Although the proportion of its urban population has increased considerably in recent years, Northland with only 49.8 percent of the population urban in 1971, is the least urbanised of the various Statistical areas.

Recent trends in the urbanisation of each statistical area are shown in Table 4.9. The most spectacular transformation, from a predominantly rural to significantly urban population, took place in Northland where in the last 20 years the urban proportion of the population increased from 28.8 percent to 49.8 percent. The rapid urbanisation of Northland, especially during the period 1961-1966 when the urban population rose by 10.5 percent, can be attributed to the building of an oil refinery near Whangarei, and the development of associated industries. Another area to experience significant urbanisation was South Auckland-Bay of Plenty, where the population rose from 43.1 percent urban in 1951 to 68.2 percent urban in 1971. Much of this increase was due to the growth of the seaports — Tauranga and Mt. Maunganui — and the growth of Hamilton city, the major distribution and service centre for the Waikato farming area. During the entire period 1951-1971 the Central Auckland, Wellington and Canterbury statistical areas had higher levels of urbanisation than New Zealand as a whole, while Hawke's Bay had levels only slightly below the New Zealand level. In Westland, the "urban" population sector increased until 1961 but since then the proportion has been falling. The main explanation for regional variations in the degree of urbanisation will be found in the different land-use patterns, levels of industrial development and in associated economic opportunities in sub-national areas.

TABLE 4.9 REGIONAL DISTRIBUTION OF URBAN POPULATIONS, 1951-1971

Statistical Area	Proportion of Total Population in Statistical Area Classified as Urban <sup>(1)</sup>				
	1951	1956	1961	1966	1971
	(Percent)				
Northland	28.8	31.4	35.9	46.6	49.8
Central Auckland	88.5	88.6	89.6	95.3	95.9
South Auckland-Bay of Plenty	43.1	49.4	53.9	63.8	68.2
East Coast	47.8	50.2	53.9	60.0	63.8
Totals, Northern North Island	65.1	67.5	70.7	79.1	81.9
Hawke's Bay	67.5	68.8	70.7	77.8	80.5
Taranaki	51.1	52.6	55.9	62.2	64.8
Wellington	80.7	80.4	82.8	88.3	89.6
Totals, Southern North Island	74.1	74.3	77.0	83.0	85.0
Totals, North Island	69.0	70.4	73.3	80.7	83.1
Marlborough	44.8	54.4	56.3	59.1	61.2
Nelson	54.1	56.2	59.8	67.2	70.0
Westland	58.2	58.6	59.3	55.8	55.7
Canterbury	76.5	77.5	79.3	83.0	84.1
Otago	70.2	71.2	72.9	74.2	75.6
Southland	55.9	57.3	60.1	62.4	66.1
Totals, South Island	68.4	69.9	72.1	75.2	77.0
Totals, New Zealand	68.8	70.2	72.9	79.1	81.4

<sup>(1)</sup> For definition of "Urban" see footnote to Table 4.7.

#### 4.5.2 Components of Urban-Rural Population Growth

Adequate data are not available for analysing, in depth, the factors causing rural-urban growth differentials in the various regions and separating the components of growth during each intercensal period. The factors that affect rural and urban growth in any intercensal period include reclassification or extension of the boundaries of urban areas, natural increase in the areas classified as "urban" at successive censuses and the areas newly classified as "urban" and net migration (both rural-urban and external migration) in the areas which are "urban" at successive censuses and the areas newly classified as "urban". The process of reclassification has the effect of continuously depleting the rural population. The more rapidly a rural area grows, the greater the chances are that it will be reclassified as urban at the next census.



## **4.6 METROPOLITAN POPULATION GROWTH**

The dominant feature of urbanisation in New Zealand in recent years has been the rapid growth of populations in metropolitan centres known as "urban areas" and the development of new "urban areas".

In New Zealand an "urban area" consists of a central city or large borough together with the adjacent areas, such as neighbouring boroughs, town districts and parts of administrative counties, which are regarded as suburban and as belonging to that centre of population. They are non-administrative units, their purpose being to provide stable districts so that the expansion of the centres with more highly concentrated populations can be measured. First defined in 1917, their boundaries remained unaltered until a major revision was made in 1951 and the new areas were used in the census of that year. In most cases little alteration was necessary. However, the boundaries of the Auckland and Wellington urban areas were extended considerably, and Wellington was subdivided into the Wellington and Lower Hutt urban areas. For the 1961 census, three new urban areas — Whangarei, Tauranga, and Rotorua — were defined, bringing the total to 18. The boundaries were again revised prior to the 1971 census when the number of areas increased from 18 to 24 by the division of the Auckland metropolitan area into four urban areas, the creation of one additional area each from the Wellington and Hutt Valley metropolitan areas, and the inclusion of Masterton as an urban area.

The majority of the "urban" population of New Zealand currently lives in the 24 urban areas. In 1971, about 1,930,000 or 83 percent of the total urban population and 67.5 percent of the total New Zealand population resided in these 24 urban areas. Using comparable figures for 1926 (based on the urban areas as defined in 1971) we find that between 1926-1971 the population of the urban areas increased by 149 percent as compared with a 104 percent increase in the total population.

### **4.6.1 Regional Trends in Urban Area Growth**

Of the twenty-four urban areas in 1971, nine were in the northern part of North Island (including four in the Central Auckland and three in South Auckland-Bay of Plenty Statistical areas) and ten in the southern half (including seven in the Wellington statistical area). The remaining five were in the South Island (including two in the Canterbury statistical area).

In 1971, the nine urban areas in the northern part of the North Island had a population of 874,849 or 45.3 percent of the total population of the 24 urban areas in New Zealand, again illustrating the concentration of population in the north. Table 4.10 shows the populations and growth rates of all urban areas for intercensal periods since 1926. There have been considerable changes in the relative rankings of urban areas in terms of population size during these periods. In 1971, the four major urban areas were; Central Auckland (286,787), Christchurch (275,968), South Auckland (165,048) and Wellington (136,782). If the four Auckland urban areas are combined, and the four urban areas close to Wellington city (Wellington, Lower Hutt Valley, Upper Hutt Valley and Porirua Basin urban areas) are taken as an entity, the Auckland metropolitan area had a population of 649,746 (22.7 percent of the total New Zealand population) and Wellington a population of 307,629 (10.8 percent of the total New Zealand population).

Table 4.10 also shows that the Western Auckland urban area has been one of the six centres with highest population growth rates in every intercensal period since 1926. Although it had a slightly lower growth rate than other centres between 1945 and 1951, Southern Auckland has had the highest growth rate of all urban areas since 1961. Northern Auckland has also shown a rapid growth since 1961, the opening of the Auckland Harbour Bridge providing greater access to this area. Tauranga and Rotorua have also been represented in the six urban areas with highest growth rates in almost every intercensal period while Porirua Basin had the highest growth rate of all the urban areas during the 1945-61 intercensal period. Lower Hutt experienced a high but decreasing rate of growth between 1926 and 1951, while Upper Hutt's most rapid growth was between 1936 and 1961.

During the intercensal period 1966-71, the South Auckland urban area had the highest growth rate (32.2 percent), followed by the Porirua Basin (27.2 percent) and Northern Auckland (25.1 percent). Wanganui, the only urban area to record a loss in population, recorded a growth rate of - 0.5 percent.

TABLE 4.10 POPULATIONS OF URBAN AREAS AT SUCCESSIVE CENSUSES, 1926-1971

Urban Area	Census Population									
	1926	1936	1945	1951	1956	1961	1966	1971		
Whangarei	10,048	11,383	13,842	17,054	20,009	23,457	31,001	34,029		
Northern Auckland	23,538	26,601	34,770	43,807	53,201	64,278	86,297	107,965		
Western Auckland	9,373	12,794	17,008	23,230	36,029	55,217	75,792	89,946		
Central Auckland	164,863	175,458	216,389	235,568	254,667	269,315	281,192	286,787		
Southern Auckland	16,507	21,491	29,938	38,941	55,362	80,726	124,886	165,048		
Hamilton	19,325	23,052	30,474	36,643	45,322	55,277	68,485	80,812		
Tauranga	4,899	6,844	9,628	14,376	20,245	26,587	33,822	40,349		
Rotorua	5,892	9,169	10,756	15,046	19,371	25,564	33,613	39,752		
Gisborne	15,216	16,005	17,115	19,914	22,812	25,282	28,116	30,161		
Napier	18,632	19,209	20,794	24,600	27,582	32,793	38,382	43,601		
Hastings	16,124	19,633	22,179	26,012	30,231	35,622	40,655	45,512		
New Plymouth	16,533	18,891	21,417	25,813	28,699	32,822	35,680	38,780		
Wanganui	26,521	25,750	26,262	29,717	32,100	35,694	38,174	37,982		
Palmerston North	21,871	26,166	29,689	34,906	40,547	46,004	52,393	57,065		
Upper Hutt	3,928	4,847	8,478	11,700	16,844	22,666	27,398	30,986		
Lower Hutt	21,909	33,006	47,914	63,852	69,892	77,168	88,337	92,003		
Porirua Basin	3,151	4,064	6,048	9,415	16,820	27,720	37,624	47,858		
Wellington	101,222	118,613	127,255	125,088	122,679	124,398	132,005	136,782		
Masterton	9,608	10,570	10,884	12,890	14,641	16,944	19,116	20,147		
Nelson	13,687	15,618	19,212	23,947	26,633	30,692	34,459	37,994		
Christchurch	124,046	139,013	156,910	181,593	201,644	229,671	257,505	275,968		
Timaru	16,959	18,771	19,672	22,851	24,694	26,424	27,946	28,959		
Dunedin	88,882	85,630	87,613	95,486	99,402	105,038	108,779	111,059		
Invercargill	22,477	26,413	28,356	32,335	35,843	41,900	46,939	50,681		
Totals	775,111	868,991	1,012,603	1,164,784	1,315,269	1,511,259	1,748,596	1,930,226		

TABLE 4.10 - continued

Urban Area	Intercensal Rate of Population Increase							
	1926-36	1936-45	1945-51	1951-56	1956-61	1961-66	1966-71	
				(Percent)				
Whangarei	13.3	21.6	23.2	17.3	17.2	32.2	9.8	
Northern Auckland	13.0	30.7	26.0	21.4	20.8	34.3	25.1	
Western Auckland	36.5	32.9	36.6	55.1	53.3	37.3	18.7	
Central Auckland	6.4	23.3	8.9	8.1	5.8	4.4	2.0	
Southern Auckland	30.2	39.3	30.1	42.2	45.8	54.7	32.2	
Hamilton	19.3	32.2	20.2	23.7	22.0	23.9	18.0	
Tauranga	39.7	40.7	49.3	40.8	31.3	27.2	19.3	
Rotorua	55.6	17.3	39.9	28.7	32.0	31.5	18.3	
Gisborne	5.2	6.9	16.4	14.6	10.8	11.2	7.3	
Napier	3.1	8.3	18.3	12.1	18.9	17.0	13.6	
Hastings	21.8	13.0	17.3	16.2	17.8	14.1	11.9	
New Plymouth	14.3	13.4	18.2	13.4	14.4	8.7	8.7	
Wanganui	-2.9	2.0	13.2	8.0	11.2	6.9	-0.5	
Palmerston North	19.6	13.5	17.6	16.2	13.5	13.9	8.9	
Upper Hutt Valley	23.4	74.9	38.0	44.0	34.6	20.9	13.1	
Lower Hutt Valley	50.6	45.2	33.3	9.5	10.4	14.5	4.1	
Porirua Basin	29.0	48.8	55.7	78.7	64.8	35.7	27.2	
Wellington	17.3	7.3	-1.7	-1.9	1.4	6.1	3.6	
Masterton	10.0	3.0	18.4	13.6	15.7	12.8	5.4	
Nelson	14.1	23.0	24.6	11.2	15.2	12.3	10.3	
Christchurch	12.1	12.9	15.7	11.0	13.9	12.1	7.2	
Timaru	10.7	4.8	16.2	8.1	7.0	5.8	3.6	
Dunedin	-3.7	2.3	9.0	4.1	5.7	3.6	2.1	
Invercargill	17.5	7.4	14.0	10.8	16.9	12.0	8.0	
Totals	12.1	16.5	15.0	13.0	14.9	15.7	10.4	

TABLE 4.11  
 RATES OF NATURAL INCREASE, NET MIGRATION, AND  
 POPULATION INCREASE FOR URBAN AREAS, 1956-1971  
 (Rates Per 1,000 Mean Population For The Intercensal Period)

Urban Area	1956-1961 Intercensal Period			1961-1966 Intercensal Period			1966-1971 Intercensal Period		
	Natural Increase	Net Migration	Population Increase	Natural Increase	Net Migration	Population Increase	Natural Increase	Net Migration	Population Increase
Whangarei	79.8	84.8	158.7	85.0	192.0	277.1	76.7	16.5	93.1
North Auckland	64.4	124.2	188.6	67.7	224.8	292.5	65.2	157.9	223.1
West Auckland	72.6	347.9	420.6	80.9	233.2	314.1	90.6	79.2	170.8
Central Auckland	60.5	-4.6	55.9	61.7	-18.5	43.1	39.9	-20.2	19.7
South Auckland	72.6	300.2	372.8	82.3	347.3	429.5	115.5	161.5	277.0
Hamilton	76.4	121.6	197.9	76.0	137.5	213.4	75.2	89.9	165.1
Tauranga	72.9	197.9	270.8	81.5	158.0	239.5	52.3	123.7	176.0
Rotorua	145.2	130.4	275.6	136.0	136.0	272.0	100.5	66.9	167.4
Gisborne	91.5	11.2	102.7	68.1	38.0	106.1	56.2	13.9	70.2
Napier	65.6	107.1	172.6	68.1	88.9	157.0	55.2	72.2	127.3
Hastings	79.8	84.0	163.7	76.9	55.0	132.0	62.6	50.2	112.7
New Plymouth	60.0	74.0	134.0	50.5	33.0	83.4	39.7	43.5	83.3
Wanganui	59.0	47.0	106.0	58.7	8.4	67.1	39.0	-44.1	-5.0
Palmerston North	76.9	49.2	126.1	68.6	61.2	129.9	57.3	28.1	85.4
Upper Hutt Valley	108.4	186.3	294.7	91.0	98.0	189.0	107.0	15.9	122.9
Lower Hutt Valley	84.6	14.4	99.0	83.7	51.3	135.0	74.8	-34.1	40.7
Porirua Basin	121.7	367.7	489.4	93.6	209.5	303.1	109.8	129.6	239.4
Wellington	67.1	-53.1	14.9	70.1	-10.8	59.3	56.1	-20.6	35.5
Masterton	89.8	56.0	145.8	80.9	39.5	120.5	63.3	-10.7	52.5
Nelson	53.2	88.4	141.6	47.5	68.2	115.6	33.0	64.5	97.6
Christchurch	59.9	70.0	130.0	56.1	58.2	114.3	49.6	19.6	69.2
Timaru	49.7	18.0	66.7	43.7	12.2	56.0	34.3	1.3	35.6
Dunedin	56.8	-1.7	55.1	53.1	-18.1	35.0	44.5	-23.8	20.7
Invercargill	85.0	70.8	155.8	82.5	30.9	113.4	67.5	9.2	76.7
Northern North Island	70.3	100.9	171.2	73.7	124.3	198.0	70.1	66.3	136.3
Southern North Island	76.4	45.2	121.6	73.5	47.0	120.5	64.9	12.4	77.2
North Island	72.9	77.2	150.1	73.6	92.7	166.3	68.1	45.1	113.1
South Island	60.4	50.3	110.7	56.6	35.5	92.2	48.1	11.1	59.2
New Zealand	69.3	69.4	138.7	68.9	76.7	145.6	64.9	33.9	96.7

#### **4.6.2 Components of Urban Area Population Growth**

Although, as previously noted, data for analysing the various components of urban and rural population growth are not available, the components of growth (natural increase and net migration) in the 24 urban areas can be quantified and are shown in Table 4.11. In a large number of urban areas net migration (including both internal and external migration) has been the dominant contributor to population growth. During the 1956-61 intercensal period, 14 of the 24 urban areas had higher net migration rates than natural increase rates but only 11 urban areas had a similar experience during the 1961-66 intercensal period. The low levels of net external immigration generally experienced during the late 1960's reduced this number to 9 during the 1966-71 intercensal period.

Porirua Basin, West Auckland, and South Auckland had the highest net migration rates of any urban areas during the three intercensal periods under review. Conversely, the Wellington and Dunedin urban areas experienced net out-migration during each of the intercensal periods but this was not large enough to offset the natural increase. The only urban area to lose population during 1956-71 was Wanganui, which recorded a population decline during the intercensal period 1966-71, when the net out-migration outweighed natural increase.

### **4.7 CHARACTERISTICS OF URBAN-RURAL POPULATIONS**

The remaining section of this chapter discusses the geographical distribution of the New Zealand population according to age, sex, race and marital status.

#### **4.7.1 Distribution by Age**

Table 4.12 records the size and age distribution of the urban male, female populations in urban and rural areas at the 1971 census. Persons under 20 years of age at the 1971 Census accounted for 44.4 percent of the total rural population, but only 40.1 percent of the urban residents. Between the ages of 20-39 years, the age structures were very similar, but for the age groups in the 40 years and over range, the position was reversed, the proportions of the total urban population in these age groups becoming increasingly higher relative to the corresponding rural proportions.

TABLE 4.12  
DISTRIBUTION OF URBAN AND  
RURAL POPULATIONS BY AGE GROUPS, 1971

Age Group (Years)	Urban			Rural		
	Males	Females	Total	Males	Females	Total
	<i>Population</i>					
Under 10	243,942	233,763	477,705	66,271	63,668	129,939
10 - 19	229,463	227,736	457,199	57,328	47,604	104,932
20 - 29	172,669	173,714	346,383	39,439	34,440	73,879
30 - 39	127,888	127,093	254,981	32,227	29,578	61,805
40 - 49	131,977	129,258	261,235	31,369	27,654	59,023
50 - 59	108,077	116,042	224,119	25,899	22,518	48,417
60 and over	132,268	174,510	306,778	27,036	24,054	51,090
Totals	1,146,284	1,182,116	2,328,400	279,569	249,516	529,085
	<i>Proportion in Age-Group (Percent)</i>					
Under 10	21.3	19.8	20.5	23.7	25.5	24.6
10 - 19	20.0	19.3	19.6	20.5	19.1	19.8
20 - 29	15.1	14.7	14.9	14.1	13.8	14.0
30 - 39	11.2	10.7	11.0	11.5	11.9	11.7
40 - 49	11.5	10.9	11.2	11.2	11.1	11.1
50 - 59	9.4	9.8	9.6	9.3	9.0	9.1
60 and over	11.5	14.8	13.2	9.7	9.6	9.7
Totals	100.0	100.0	100.0	100.0	100.0	100.0

NOTE: The "urban" population includes the population in New Zealand's 24 urban areas together with the population of other boroughs, town districts and county towns having 1,000 or more inhabitants. The "rural" population is the balance of the population living in counties, including unincorporated townships, and adjacent islands. Persons on board ships are omitted.

The availability of higher education facilities, better employment opportunities and better servicing facilities are factors which attract both working-age and retired people to the urban environment.

Rural birth rates are generally higher than urban rates and this, together with the net migration of adults to the urban centres, explains the higher proportion of young people in rural areas.

#### 4.7.2 Distribution by Sex

There are marked differences in the sex distribution of the population in different parts of New Zealand, depending largely on educational and employment opportunities. (See Table 4.13).

TABLE 4.13: DISTRIBUTION OF POPULATION  
BY SEX IN STATISTICAL AREAS, 1971

Statistical Area	Females per 1,000 Males	Statistical Area	Females per 1,000 Males
Hawke's Bay	1,029	Taranaki	988
Central Auckland	1,021	South Auckland-Bay of Plenty	974
Otago	1,019	Northland	967
Canterbury	1,014	Marlborough	959
Nelson	1,004	Westland	945
East Coast	1,000	Southland	942
Wellington	998		

Generally, rural areas, where there are fewer jobs for women, have a significant preponderance of males. In 1966, New Zealand cities and boroughs contained 104.2 females per 100 males, compared with only 90.4 females per 100 males in counties.

The following table (Table 4.14) gives sex ratios — the number of females per 1,000 males — in the 24 urban areas at the 1971 census.

TABLE 4.14 DISTRIBUTION OF POPULATION  
BY SEX IN URBAN AREAS, 1971

Urban Area	Females per 1,000 Males	Urban Area	Females per 1,000 Males
Timaru	1,102	Tauranga	1,044
Hastings	1,077	Northern Auckland	1,044
Wanganui	1,074	Whangarei	1,040
Gisborne	1,070	Porirua Basin	1,023
Dunedin	1,067	Masterton	1,021
Central Auckland	1,062	Wellington	1,016
Napier	1,062	Invercargill	1,014
New Plymouth	1,055	Rotorua	1,013
Nelson	1,055	Lower Hutt Valley	1,009
Palmerston North	1,048	Southern Auckland	1,001
Hamilton	1,047	Western Auckland	984
Christchurch	1,045	Upper Hutt Valley	915

All urban areas except Western Auckland and Upper Hutt Valley show a significant predominance of females. The reason for the male predominance in the Upper Hutt Valley urban area is the presence of an Army Camp, a prison, a police school, some special hostels, and a large boys' boarding school. Similarly, Western Auckland contains a large Air Force Station.



### 4.7.3 Distribution by Marital Status

The marital status composition of the rural and urban populations, as recorded at the 1971 census, is shown in Table 4.15. As compared with the urban population, the rural population contains a higher proportion of unmarried males and a lower proportion of unmarried females. The relatively scarce job opportunities for women mainly account for the lower proportions of single, widowed and divorced women in the country areas.

TABLE 4.15 URBAN AND RURAL POPULATIONS BY MARITAL STATUS, 1971<sup>(1)</sup>

Marital Status	Urban Population <sup>(2)</sup>			Rural Population <sup>(3)</sup>		
	Males	Females	Total	Males	Females	Total
Never Married	199,145	165,265	364,410	49,648	21,346	70,994
Married	513,487	521,688	1,035,175	117,395	116,155	233,550
Legally Separated	10,039	13,150	23,189	1,500	986	2,486
Widowed	22,000	93,132	115,132	4,775	11,400	16,175
Divorced	9,890	13,792	23,682	1,484	916	2,400
Not specified	3,099	1,216	4,315	508	202	710
Totals	757,660	808,243	1,565,903	175,310	151,005	326,315
<i>Proportion of Total (Specified) Population (Percent)</i>						
Never Married	26.4	20.5	23.3	28.4	14.2	21.8
Married	68.1	64.6	66.3	67.2	77.0	71.7
Legally Separated	1.3	1.6	1.5	0.9	0.7	0.8
Widowed	2.9	11.5	7.4	2.7	7.6	5.0
Divorced	1.3	1.7	1.5	0.8	0.6	0.7
Totals	100.0	100.0	100.0	100.0	100.0	100.0

(1) Excludes persons on shipboard.

(2) The "urban" population is defined as all persons in the 24 urban areas together with the populations of other boroughs, town districts and county towns having 1,000 or more inhabitants.

(3) The "rural" population includes the balance of the population living in counties, including unincorporated townships and adjacent islands.

## 4.8 REGIONAL DISTRIBUTION OF THE LABOUR FORCE

At the 1971 census the New Zealand labour force comprised 784,969 males and 333,866 females, a total of 1,118,835 persons or 39.1 percent of the total population. The North Island contained 72.3 percent of the total labour force and the South Island 27.7 percent at this time. In recent years the North Island has increased its share of the total labour force, the proportions in 1961 and 1966 being 70.3 percent and 71.7 percent respectively. These increases, as was stated in the last chapter, are consistent with the increase in the proportion of the total New Zealand population residing in the North Island.

TABLE 4.16  
DISTRIBUTION OF LABOUR FORCE  
AND TOTAL POPULATION AGED 15-64 YEARS  
BY STATISTICAL AREAS, 1971

Statistical Area	Total Labour Force		Total Population Aged 15-64 Years	
	Number	Percent	Number	Percent
Northland	34,230	3.1	54,045	3.2
Central Auckland	286,397	25.6	424,058	24.8
South Auckland-Bay of Plenty	154,081	13.8	241,810	14.2
East Coast	16,754	1.5	26,124	1.5
Hawke's Bay	48,916	4.4	76,084	4.5
Taranaki	37,842	3.4	58,125	3.4
Wellington	229,549	20.5	336,911	19.7
Total North Island	807,769	72.2	1,217,157	71.2
Marlborough	11,760	1.1	18,744	1.1
Nelson	25,619	2.3	41,017	2.4
Westland	8,893	0.8	13,986	0.8
Canterbury	154,979	13.9	243,726	14.3
Otago	68,955	6.2	111,181	6.5
Southland	40,860	3.7	63,030	3.7
Total South Island	311,066	27.8	491,684	28.8
Total New Zealand	1,118,835	100.0	1,708,841	100.0

Table 4.16 gives the proportions of the total New Zealand labour force and population aged 15-64 years in each statistical area in 1971. At this time, about three-quarters of the New Zealand labour force was concentrated in only four of the thirteen statistical areas. The Central Auckland statistical area contained 25.6 percent of the labour force, Wellington 20.5 percent while another 13.8 percent and 13.9 percent were concentrated in the South Auckland-Bay of Plenty and Canterbury statistical areas, respectively.

In 1971, 72.2 percent of the total New Zealand labour force and 71.2 percent of the total working age (15-64 years) population were located in the North Island. Corresponding figures for the South Island that year were 27.8 percent and 28.8 percent. These differences probably reflect relative employment opportunities in the two main Islands. In 11 of the 13 statistical areas the share of the total New Zealand labour force was either equal to or below the share of working age population. The exceptions were the Central Auckland and Wellington statistical areas where greater employment opportunities exist.

#### 4.9 REGIONAL DISTRIBUTION OF POPULATION BY ETHNIC GROUP

Some of the most interesting demographic phenomena experienced in New Zealand since World War II have resulted in changes in the ethnic compositions of sub-national populations. These changes together with the regional distribution patterns of various ethnic groups in the population are discussed below.

TABLE 4.17 REGIONAL DISTRIBUTION OF POPULATION BY ETHNIC ORIGIN, 1971

Statistical Area	Population in Ethnic Group				Proportion of New Zealand Population in Group			
	Europeans	Maoris	Others	Total	Europeans	Maoris	Others	Total
	(Percent)							
Northland	75,111	20,456	624	96,191	2.9	9.0	0.8	3.4
Central Auckland	609,503	50,958	37,939	698,400	23.8	22.4	51.3	24.4
South Auckland-Bay of Plenty	346,522	69,179	6,598	422,299	13.5	30.4	8.9	14.8
East Coast	32,852	14,091	399	47,342	1.3	6.2	0.5	1.7
Hawke's Bay	114,291	17,123	1,836	133,250	4.5	7.5	2.5	4.7
Taranaki	93,083	7,208	604	100,895	3.6	3.2	0.8	3.5
Wellington	500,659	34,562	17,765	552,986	19.5	15.2	24.0	19.3
North Island	1,772,021	213,577	65,765	2,051,363	69.2	93.9	88.9	71.7
Marlborough	30,680	821	141	31,642	1.2	0.4	0.2	1.1
Nelson	66,956	1,389	493	68,838	2.6	0.6	0.7	2.4
Westland	22,346	445	70	22,861	0.9	0.2	0.1	0.8
Canterbury	388,428	6,309	4,093	398,830	15.2	2.8	5.5	13.9
Otago	178,229	1,866	2,654	182,749	7.0	0.8	3.6	6.4
Southland	102,620	3,007	721	106,348	4.0	1.3	1.0	3.7
South Island	789,259	13,837	8,172	811,268	30.8	6.1	11.1	28.3
New Zealand	2,561,280	227,414	73,937	2,862,631	100.0	100.0	100.0	100.0

Table 4.17 shows the regional distributions of major ethnic groups within the New Zealand population at the 1971 census. While the greatest numbers of each of the three major ethnic groups — Europeans, Maoris and “Others” — live in the North Island, there is a greater proportion of Europeans in the South Island than the corresponding proportions for the other defined ethnic groups. Certain areas in the North Island — notably Northland, South Auckland-Bay of Plenty and East Coast — have traditionally been the major residential areas for Maoris while economic opportunity has led

to the migration of Maoris to the Central Auckland and Wellington statistical areas since World War II. Over three quarters of the population within the "others" ethnic groups — comprised largely of Polynesians — live in the Central Auckland and Wellington statistical areas where there are greater employment opportunities for unskilled labour.

In the South Island, the Canterbury statistical area contains the greatest proportions of each of the three major ethnic groups that live in that island.

#### **4.9.1 The Non-Maori Population**

The location and growth of the non-Maori population — which includes Europeans and minor ethnic groups within the "others" category — is shown in Table 4.18. Of the 2,635,217 non-Maoris enumerated at the 1971 census, 1,837,786 or 69.7 percent lived in the North Island. In 1971, over 4 out of every 10 non-Maoris lived in the four statistical areas — Northland, Central Auckland, South Auckland and East Coast — which are in the northern half of the North Island. The two largest statistical areas in terms of population — Central Auckland and Wellington — contained 44.2 percent of the non-Maori population of New Zealand in 1971. While these two areas have contained the largest numbers of non-Maoris since early this century, their relative share of the non-Maori population has also increased significantly since 1926 when they contained 37.7 percent of the total non-Maori population. The Central Auckland and South Auckland-Bay of Plenty statistical areas have consistently been the fastest growing non-Maori population areas since 1926. Canterbury has generally been the fastest growing area in the South Island during the period, its rate of non-Maori population growth being of a similar order to that of Wellington.

Less urbanised statistical areas — including East Coast, Taranaki and West Coast — have generally experienced low growth rates in their non-Maori populations since 1926 and, in some instances, population declines.

A high proportion of the non-Maori population has traditionally lived in urban areas since their inception in 1917. As early as 1921, 49.4 percent of all non-Maoris were residing in the fourteen major urban centres. By 1971, the proportion of non-Maoris living in urban areas had risen to 68.9 percent. There is every indication that urbanization of the non-Maori population will continue in the short term at least. The reasons for this continuing trend towards greater urbanisation of non-Maoris are largely economic.

TABLE 4.18 REGIONAL GROWTH OF NON-MAORI POPULATION, 1926-1971

Statistical Area	Total Non-Maori <sup>(1)</sup> Population at Census									
	1926	1936	1945	1951	1956	1961	1966	1971		
Northland	40,028	46,229	46,247	53,743	61,240	64,764	72,280	75,735		
Central Auckland	233,322	261,910	323,757	370,663	425,293	489,209	574,208	647,442		
South Auckland-Bay of Plenty	124,835	152,225	172,179	208,141	254,735	292,013	324,422	353,120		
East Coast	26,346	27,391	26,536	28,784	31,111	31,692	32,584	33,251		
Hawke's Bay	65,620	70,335	71,721	82,338	92,006	102,051	109,892	116,127		
Taranaki	68,162	73,372	72,105	81,334	87,791	92,321	93,771	93,687		
Wellington	273,500	307,477	338,439	377,354	413,294	452,789	495,645	518,424		
Totals, North Island	831,813	938,939	1,050,984	1,202,357	1,365,470	1,524,839	1,702,802	1,837,786		
Marlborough	18,317	18,563	20,068	22,242	25,031	27,054	28,618	30,821		
Nelson	41,046	48,116	46,471	55,840	58,527	61,948	65,930	67,449		
Westland	21,279	25,622	23,722	25,165	25,335	24,558	24,029	22,416		
Canterbury	217,371	237,021	248,909	282,290	309,815	341,560	371,875	392,521		
Otago	149,522	150,800	143,652	158,766	168,295	175,502	181,998	180,883		
Southland	65,121	72,423	69,748	77,136	84,438	92,437	100,508	103,341		
Totals, South Island	512,656	552,545	552,570	621,439	671,441	723,059	772,958	797,431		
Totals, New Zealand	1,344,469	1,491,484	1,603,554	1,823,796	2,036,911	2,247,898	2,475,760	2,635,217		

(1) Includes European and "Others" Ethnic Groups.

TABLE 4.18 - continued

Statistical Area	Increase or Decrease in Population (percent)							
	1926-36	1936-45	1945-51	1951-56	1956-61	1961-66	1966-71	
Northland	15.5	0.0	16.2	13.9	5.8	11.6	4.8	
Central Auckland	12.3	23.6	14.5	14.7	15.0	17.4	12.8	
South Auckland-Bay of Plenty	21.9	13.1	20.9	22.4	14.6	11.1	8.8	
East Coast	4.0	-3.1	8.5	8.1	1.8	2.8	2.0	
Hawke's Bay	7.2	2.0	14.8	11.7	10.9	7.7	5.7	
Taranaki	7.6	-1.7	12.8	7.9	5.2	1.6	-0.1	
Wellington	12.4	10.1	11.5	9.5	9.6	9.5	4.6	
Totals, North Island	12.9	11.9	14.4	13.6	11.7	11.7	7.9	
Marlborough	1.3	8.1	10.8	12.5	8.1	5.8	7.7	
Nelson	17.2	-3.4	20.2	4.8	5.8	6.4	2.3	
Westland	20.4	-7.4	6.1	0.7	-3.1	-2.2	-6.7	
Canterbury	9.0	5.0	13.4	9.8	10.2	8.9	5.6	
Otago	0.9	-4.7	10.5	6.0	4.3	3.7	-0.6	
Southland	11.2	-3.7	10.6	9.5	9.5	8.7	2.8	
Totals, South Island	7.8	0.0	12.5	8.0	7.7	6.9	3.2	
Totals, New Zealand	10.9	7.5	13.7	11.7	10.4	10.1	6.4	

TABLE 4.19 NON-MAORI  
POPULATION IN DEFINED  
URBAN AREAS, 1936-1971

Census Year	Non-Maori <sup>(1)</sup> Population in Urban Areas	Proportion of Total Non-Maori <sup>(1)</sup> Population
		(Percent)
1936	859,819	57.6
1945	995,513	62.1
1951	1,141,587	62.6
1956	1,282,516	63.0
1961	1,458,682	64.9
1966	1,660,802	67.1
1971	1,815,010	68.9

<sup>(1)</sup>Includes Europeans and "Others" ethnic groups.

Urbanisation has been facilitated by increased efficiency in New Zealand agriculture and other primary industries together with the development of secondary, and some heavy, industries. Table 4.19 above shows the increasing urbanisation of the non-Maori population during 1936-71.

#### 4.9.2 The Maori Population

Table 4.20 shows the location and growth of the Maori population by statistical areas. Of the 227,414 Maoris enumerated at the 1971 census, 213,577 or 93.9 percent lived in the North Island. Almost 7 out of every 10 Maoris lived in the four statistical areas — Northland, Central Auckland, South Auckland-Bay of Plenty and East Coast — which lie in the northern half of the North Island. Although the South Auckland-Bay of Plenty statistical area still contains the largest number of Maoris (69,179 in 1971), the Central Auckland statistical area experienced the greatest increase in Maori population between 1961 and 1971 (from 25,298 to 50,958). Three statistical areas (Northland, East Coast and Taranaki) showed a loss of Maori population during 1961-71, the result of migration to larger urban centres. Of further interest is the steady increase in the Maori population of the South Island: from 2,804 in 1926, to 7,140 in 1961 and to 13,837 in 1971.

TABLE 4.20 REGIONAL GROWTH OF MAORI POPULATION (1), 1926-1971

Statistical Area	Population at Census										Increase or Decrease					
	1926	1936	1945	1951	1956	1961	1966	1971	1926-36	1936-45	1945-51	1951-56	1956-61	1961-66	1966-71	
											(Percent)					
Northland	14,421	18,396	20,201	21,518	22,090	21,627	21,294	20,456	27.6	9.8	6.5	2.7	-2.1	-1.8	-3.7	
Central Auckland	2,952	4,086	8,187	11,351	15,776	25,298	39,463	50,958	38.4	100.4	38.6	39.0	60.4	56.0	29.1	
South Auckland- Bay of Plenty	20,273	27,035	32,631	38,339	47,569	57,611	64,912	69,179	33.4	20.7	17.5	24.1	21.1	12.7	6.6	
East Coast	7,281	9,698	11,233	12,560	13,931	14,786	14,404	14,091	33.2	15.8	11.8	10.9	6.1	-2.6	-2.2	
Hawke's Bay	4,733	6,633	7,363	8,867	10,320	12,419	15,068	17,123	40.1	11.0	20.4	16.4	20.3	21.3	13.6	
Taranaki	3,686	4,280	4,728	5,549	6,318	7,453	7,333	7,208	16.1	10.5	17.4	13.9	18.0	-1.6	-1.7	
Wellington	7,520	8,969	10,965	13,328	15,890	20,752	28,110	34,562	19.3	22.3	21.6	19.2	30.6	35.5	23.0	
Totals, North Island	60,866	79,097	95,308	111,512	131,894	159,946	190,624	219,577	30.0	20.5	17.0	18.3	21.3	19.1	12.1	
Marlborough	476	586	669	649	666	694	810	821	23.1	14.2	-3.0	2.6	4.2	16.7	1.4	
Nelson	197	234	274	638	849	1,019	1,278	1,389	18.8	17.1	132.9	33.1	20.0	25.4	8.7	
Westland	134	152	174	238	249	283	324	445	13.4	14.5	36.8	4.6	13.7	14.5	37.4	
Canterbury	1,190	1,411	1,506	1,697	2,094	3,037	4,566	6,309	18.6	6.7	12.7	23.4	45.0	50.3	38.2	
Otago	399	413	383	465	566	823	1,479	1,866	3.5	-7.3	21.4	21.7	45.4	79.7	26.2	
Southland	408	433	430	477	833	1,284	2,178	3,007	6.1	-0.7	10.9	74.6	54.1	69.6	38.1	
Totals, South Island	2,804	3,229	3,436	4,164	5,257	7,140	10,635	13,837	15.2	6.4	21.2	26.3	35.8	48.9	30.1	
Totals, New Zealand	63,670	82,326	98,744	115,676	137,151	167,086	201,159	227,414	29.3	19.9	17.2	18.6	21.8	20.4	13.1	

(1) Persons of half or more Maori descent.



The indigenous Maori population has traditionally lived in rural areas. In 1926, when the Maori population in urban and non-urban areas was first determined, only 8.0 percent of Maoris were living in the defined urban areas. It is, however, generally acknowledged that by 1926 the movement of the Maori population from their rural homelands to more urbanised districts in search of better employment opportunities was already under way. The 1930-34 depression and the land development schemes undertaken by the Government during the middle and the late 1930's may have checked — or, at least, slowed down — this movement, but the manpower demands of wartime industries in and around the main centres gave a new impetus to the rural-urban drift of Maoris. During the nine years between the censuses of 1936 and 1945 the number of Maoris in the defined urban areas virtually doubled (see Table 4.21), although the total Maori population increased by only about 20 percent. Figure 4.3 shows the urban-rural distribution of the Maori population since 1926.

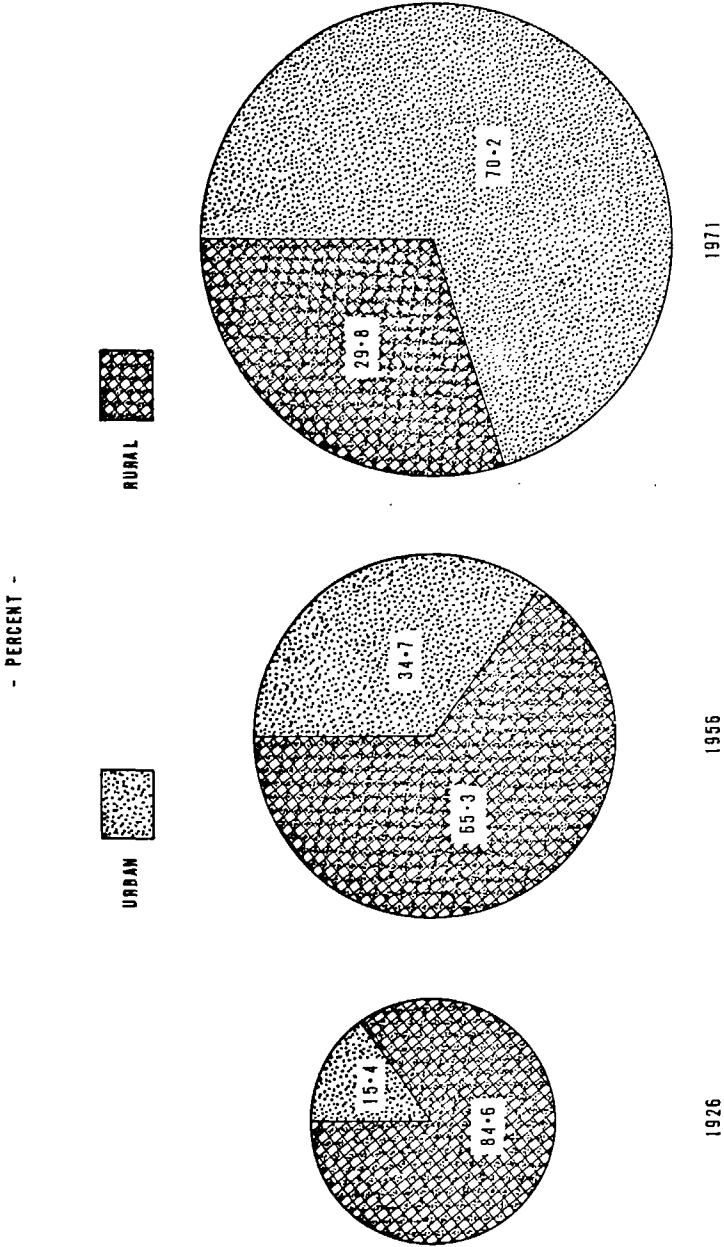
TABLE 4.21 MAORI  
POPULATION<sup>(1)</sup> IN DEFINED  
URBAN AREAS, 1936-1971

Census Year	Maori Population in Urban Areas	Proportion of Total Maori Population
		(Percent)
1936	9,172	11.1
1945	17,090	17.3
1951	23,197	20.1
1956	32,753	23.9
1961	52,577	31.5
1966	87,794	43.6
1971	115,216	50.7

<sup>(1)</sup> Persons of half or more Maori descent.

In the post-war years, new opportunities for employment have increasingly been provided by the secondary and tertiary sectors of the economy rather than by the primary industry while employment opportunities in rural areas have remained essentially limited. For many young Maori workers, therefore, migration from the rural districts to the major urban areas, where secondary industries are largely based, became an economic necessity. This was recognised by the Department of Maori and Island Affairs, which in 1960 inaugurated a relocation programme to encourage rural families to move to urban centres by providing them with accommodation and employment in the towns. In 1971, 50.7 percent of Maoris were living in defined urban areas compared with 31.5 percent in 1961 and only 17.3 percent in 1945. Of all Maori workers aged 16-19 years and 20-24 years, 58.2 percent and 59.3 percent respectively were living in urban areas in 1971.

FIGURE 4.3 URBAN-RURAL DISTRIBUTION OF MAORI POPULATION  
CENSUSES 1926, 1956 AND 1971



### 4.9.3 Minor Ethnic Groups

The regional distribution of the minor ethnic groups within the New Zealand population, which make up the "others" category, is given in Table 4.22. While populations in all of the minor ethnic groups — Polynesians, Chinese, Indians, Syrians, Lebanese and Arabs, and the remainder — are all mainly resident in the North Island, there are considerable differences in areal distribution among these groups.

The largest groups within the "others" category — Polynesians — are heavily concentrated in the Central Auckland and Wellington statistical areas of the North Island. There are also high, but varying, concentrations of all other minor ethnic groups in these two areas.

Other statistical areas which contain significant concentrations of the minor ethnic groups are: South Auckland-Bay of Plenty, which contains 14.2 percent of the Indian population; Canterbury, which contains 9.8 percent of the Chinese population and 9.7 percent of the "remainder" groups; and Otago, which contains 9.5 percent of the Chinese and 22.1 percent of the "Syrians, Lebanese and Arabs" group.

TABLE 4.22 REGIONAL DISTRIBUTION OF POPULATIONS IN MINOR ETHNIC GROUPS, 1971

Statistical Area	Distribution of Ethnic Groups					Total (1)
	Polynesians	Chinese	Indians	Syrians, Lebanese and Arabs	Remainder	
	(Percent)					
Northland	0.7	0.9	0.5	0.5	2.0	3.4
Central Auckland	60.8	31.7	41.9	24.2	38.0	24.4
South Auckland-Bay of Plenty	8.9	5.8	14.2	7.7	8.9	14.8
East Coast	0.2	1.9	0.4	0.6	0.4	1.7
Hawke's Bay	2.1	4.5	1.4	2.7	2.3	4.7
Taranaki	0.3	0.8	2.5	6.2	2.2	3.5
Wellington	20.5	33.3	29.5	28.2	23.8	19.3
North Island	993.5	79.0	90.5	70.2	77.7	71.7
Marlborough	0.1	0.2	0.2	0.2	0.6	1.1
Nelson	0.3	0.6	1.2	1.4	2.2	2.4
Westland	0.1	0.1	0.1	0.5	0.3	0.8
Canterbury	3.7	9.8	5.0	5.0	9.7	13.9
Otago	1.3	9.5	2.4	22.1	8.4	6.4
Southland	1.0	0.9	0.7	0.6	1.1	3.7
South Island	6.5	21.0	9.5	29.8	22.3	28.3
New Zealand	100.0	100.0	100.0	100.0	100.0	100.0

(1) "Others" ethnic group.

# CHAPTER V

## THE LABOUR FORCE

### 5.1 INTRODUCTION

The size of the labour force in relation to the total population is affected by various demographic and social factors, including changes in the birth rate, changes in the school-leaving age and attitudes to tertiary education and by the changing proportion of married women seeking work. Net external migration generally has only a secondary effect on the work force (except in times of economic recession) even though a large proportion of migrants are in the working age-group. There is a relatively greater participation within the 15-24 year age group of the labour force as the majority of females are "actively engaged" during this period of their lives before taking on home-making responsibilities. (The term "actively engaged" is applied to those who are normally engaged in gainful occupations and as such it includes the temporarily unemployed. Those "not actively engaged" — in economic terms — are mainly housewives, children, retired persons and full-time students).

### 5.2 TRENDS IN THE LABOUR FORCE

As at 1 April 1975, the New Zealand labour force numbered approximately 1,207,700 or 38.9 percent of the country's estimated population of 3,105,400. By comparison, in 1936, the labour force although much smaller in numbers (669,423 — of which some 38,000 were unemployed), represented a peak figure of 42.5 percent of the total population (see Table 5.1). Between 1936 and 1961, the proportion actively engaged dropped gradually from 42.5 percent to 37.1 percent. This significant decrease is partly attributed to the substantial increase in the proportion of the population under 15 years of age, which was caused by the post-war "baby boom". The introduction of a comprehensive pension scheme enabling elderly workers to retire was another contributing factor. Also, the raising of the school-leaving age to 15 years in 1944 and expansions of secondary and university education helped to delay the entry of young people into the labour force.

Despite the fact that New Zealand lost some of its workers to Australia and other countries during the economic recession of 1968-69, the size of the labour force increased by 25 percent between 1961 and 1971, from 895,363 to 1,118,835. The corresponding increase in the total population was slightly smaller, 19 percent. Consequently,

TABLE 5.1                      ACTIVELY ENGAGED AND NOT  
   ACTIVELY ENGAGED POPULATIONS, 1936-1971

Census Year	Males		Females		Total	
	Actively Engaged	Not Actively Engaged	Actively Engaged	Not Actively Engaged	Actively Engaged	Not Actively Engaged
	<i>Population</i>					
1936	527,461	271,628	141,952	632,759	669,423	904,387
1945	495,477	337,400	167,263	702,158	662,740	1,039,558
1951	568,963	105,005	171,533	793,971	740,496	1,198,976
1956	622,758	470,453	194,094	886,757	816,852	1,357,210
1961	670,506	542,870	224,857	976,751	895,363	1,519,621
1966	745,595	598,148	280,444	1,052,732	1,026,039	1,650,880
1971	784,969	645,887	333,866	1,097,909	1,118,835	1,743,796
	<i>Proportions (Percent)</i>					
1936	66.0	34.0	18.3	81.7	42.5	57.5
1945	59.5	40.5	19.2	80.8	38.9	61.1
1951	58.4	41.6	17.8	82.2	38.2	61.8
1956	57.0	43.0	18.0	82.0	37.6	62.4
1961	55.3	44.7	18.7	81.3	37.1	62.9
1966	55.5	44.5	21.0	79.0	38.3	61.7
1971	54.9	45.1	23.3	76.7	39.1	60.9

the proportion of population actively engaged increased from 37.1 percent to 39.1 percent between 1961 and 1971. This increase partly reflects the dampening effect that the downturn in fertility, which began in 1962, had on the proportion of children in the total population. Also, in recent years, the "boom babies" have been entering the labour force in increasing numbers. The number of married women returning to work, for economic reasons, and because of changing social patterns, has also increased. Other significant factors include the continuing drift of the Maori population from rural to urban areas, where work opportunities are greater, and the increased settlement of Pacific Islanders in New Zealand.

### 5.2.1 Sex Patterns of Labour Force Growth

Annual changes in the labour force as a whole generally reflect changes in the male labour force, since there are more than twice as many men as women in industry. The patterns of male and female employment have differed significantly since 1936 (see Table 5.1). From its peak figure of 66 percent in 1936, the proportion of the male population "actively engaged" dropped gradually to 55.3 percent in 1961, recovered marginally to 55.5 percent in 1966, but fell again to 54.9 percent in 1971.

Since the proportion of females in the working age group (15-64 years) fell during 1946-61 at much the same rate as the proportion of males, the proportion of females actively engaged might also have

been expected to drop, but the only fall in female participation was that recorded between 1945 and 1951 (which presumably reflects the post-war withdrawal of many women from the labour force to undertake family formation). The proportion of females actively engaged has increased significantly over the last two decades; it was 17.8 percent in 1951, 18.7 percent in 1961, and 23.3 percent in 1971, the highest level ever recorded at a census in New Zealand. The rise in participation was much greater for married women. Between 1956 and 1974 the proportion of married women working increased from 12.9 percent to 26.1 percent.

### 5.2.2 Age Structure of the Labour Force

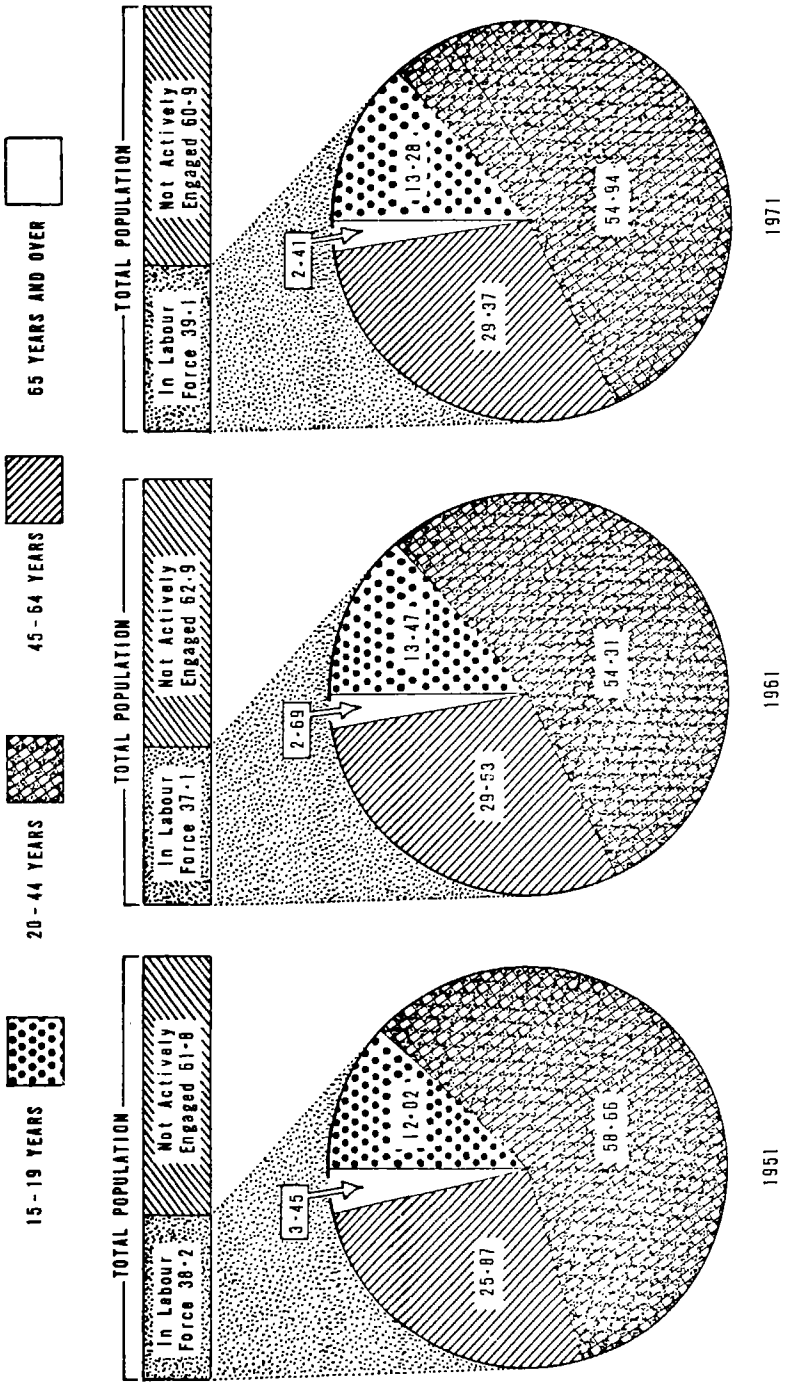
Figure 5.1 and Table 5.2 illustrate the post-war changes in the age structure of the labour force. These data suggest that a narrowing of the working age group in the population has taken place. Table 5.2 shows that the numbers in, as well as the proportions of, both the "under 16 years" and the "65 years and over" groups of the labour force have declined significantly since 1936. The total number of workers under 16 years of age decreased from 15,462 in 1936 to 9,469 in 1966 and to 8,469 in 1971.

TABLE 5.2 TOTAL LABOUR FORCE BY AGE GROUPS, 1936 AND 1961 - 1971

Age Group (Years)		Census			
		1936	1961	1966	1971
Under 16	M	10,266	5,034	4,679	4,099
	F	5,196	5,333	4,790	4,370
16 - 20	M	64,017	74,708	93,198	93,121
	F	37,764	65,429	83,936	84,588
21 - 44	M	275,997	361,155	395,556	421,181
	F	74,867	95,249	118,373	155,900
45 - 64	M	155,726	209,456	229,693	244,476
	F	21,410	54,938	68,608	84,098
65 and over	M	20,639	20,153	22,469	22,092
	F	2,539	3,908	4,737	4,910
Not specified	M	816	-	-	-
	F	186	-	-	-
Totals	M	527,461	670,506	745,595	784,969
	F	141,962	224,857	280,444	333,866
		<i>Percentages</i>			
Under 16	M	2.0	0.8	0.6	0.5
	F	3.7	2.4	1.7	1.3
16 - 20	M	12.1	11.1	12.5	11.9
	F	26.6	29.1	29.9	25.3
21 - 44	M	52.3	53.9	53.1	53.7
	F	52.7	42.4	42.2	46.7
45 - 64	M	29.5	31.2	30.8	31.1
	F	15.1	24.4	24.5	25.2
65 and over	M	3.9	3.0	3.0	2.8
	F	1.8	1.7	1.7	1.5
Not specified	M	0.2	-	-	-
	F	0.1	-	-	-
Totals	M	100.0	100.0	100.0	100.0
	F	100.0	100.0	100.0	100.0

FIGURE 5.1 AGE STRUCTURE OF THE LABOUR FORCE  
CENSUSES 1951, 1961 AND 1971

- PERCENT -



Male workers aged below 16 years declined from 2.0 percent of the male labour force in 1936 to 0.5 percent in 1971, while female workers in the same age group dropped from 3.7 percent of the female labour force in 1936 to 1.3 percent in 1971. These declines are attributed to the larger proportions of younger persons remaining at secondary schools and subsequently undertaking tertiary education.

Workers in the 16 to 64 years age group increased from 629,781 or 94.1 percent of the total labour force in 1936 to 1,083,364 or 96.8 percent of the total labour force in 1971. Within the smaller age classes of this broad age group the proportions of male and female workers differ appreciably, reflecting the withdrawal of women from the labour force following marriage or for childbearing. At the 1971 Census 25.3 percent of the female labour force was contained in the 16-20 age group compared with 11.9 percent of the male labour force.

In contrast, the 21-44 year age group (the major labour force age group) contained only 46.7 percent of the total female labour force but 53.7 percent of the male labour force, while the 45-64 year age group contains 25.2 percent of the female labour force and 31.1 percent of the male labour force (see Table 5.2).

During the period 1936-71 New Zealand emerged from the grip of the depression of the 1930's to a period of general prosperity and higher living standards. This era saw the introduction of old-age pensions and superannuation schemes. In 1936, 23.7 percent of the population in the "65 years and over" age group were actively engaged. By 1951 this proportion had declined to 14.4 percent and by 1971 had reached its lowest level at 11.1 percent. This change is reflected in the proportion of males aged "65 years and over" in the total male labour force which declined from 3.9 percent in 1936 to 2.8 percent in 1971 while the proportion of females in the same age group declined from 1.8 percent to 1.5 percent of the total female labour force between 1936 and 1971.

### 5.3 EMPLOYMENT STRUCTURE

The growth of population in New Zealand has been accompanied by a changing emphasis in employment. In the nineteenth century the then major employment activities of farming, mining, and lumbering began to give place to manufacturing industries and to commercial and professional occupations. In 1881, 11.2 percent of the total population



was engaged in agriculture, 13.1 percent in industries, which included mining, and 6.6 percent in commercial and professional occupations. By 1901 the proportion in tertiary activities and farming had increased while that in secondary industries had remained constant and mining had declined relatively in importance. The proportions of the total population employed were then 14.5 percent in farming, 13.1 percent in industry and 11 percent in services.

### 5.3.1 Industrial Structure of Employment

The more recent rapid development of larger urban centres has been associated with a trend away from primary into secondary industries, a trend which developed noticeably after the depression of the 1930's and which was given marked impetus by the war. The broad changes in the economy since 1936 are indicated by the following table.

TABLE 5.3 DISTRIBUTION OF TOTAL  
LABOUR FORCE BY MAJOR INDUSTRIAL  
GROUPS - 1936, 1961 AND 1971

Major Group	Proportion of Labour Force		
	1936	1961	1971
	(Percent)		
Primary Production <sup>(1)</sup>	27.1	15.2	12.0
Secondary Industry <sup>(2)</sup>	24.2	35.8	34.7
Services <sup>(3)</sup>	48.7	49.0	53.3
Totals	100.0	100.0	100.0

<sup>(1)</sup> Includes the industrial divisions of agriculture and hunting; forestry and fishing; mining and quarrying.

<sup>(2)</sup> Includes the industrial divisions of manufacturing and electricity; gas and water; construction.

<sup>(3)</sup> Includes the industrial divisions of transport, storage and communications; finance, insurance, real estate and business services; community, social and personal services. Activities not adequately defined are also ascribed to this broad group.

Decreases in the proportion of the labour force engaged in primary production are typical of advanced economies, although it has to be noted that the farming community makes considerable use of the services sector in the development of farm productivity. In 1971, the services group contained more than half of the labour force, and the primary industries less than one-eighth. Significant expansion of the

services group took place during 1961-71 at the expense of both the primary and secondary industry sectors. The continuing movement of the rural labour force to urban areas, including the rapid urban drift of the young Maori workers during the 1960's was probably a major underlying factor in this expansion. There has also been a significant increase in employment in the government servicing departments.

### 5.3.2 Industrial Structure of Employment

The industry classifications used in recent New Zealand censuses were based on the International Standard Industrial Classification of Economic Activities (I.S.I.C.), prepared by the United Nations in 1948 and adapted to suit New Zealand requirements. In 1968, the Statistical Office of the United Nations revised its I.S.I.C. classification and the Department of Statistics, in conjunction with other interested departments, issued a New Zealand Standard Industrial Classification (N.Z.S.I.C.) in 1970, based on this I.S.I.C. revision. As a result, comparisons between the industrial structure of the 1971 census and that of previous censuses are limited. Consequently, the following analysis of the industrial distribution of the labour force in New Zealand derives mainly from the 1971 census results.

Table 5.4 shows the numbers and proportions of people employed in each of the ten major industrial divisions of the labour force. The largest number of workers were employed in the Manufacturing division, where there were 281,110 persons or 25.1 percent of the total labour force. The above division contained 207,088 males (almost 90,000 more than any other division).

The only other major division employing more than 200,000 workers at the 1971 census was the newly-classified grouping of Community, Social and Personal Services with 216,527 persons or 19.4 percent of the labour force.

The major division of Wholesale and Retail Trade, Restaurants and Hotels, was the third largest and employed 198,315 persons. Agriculture, Hunting, Forestry and Fishing had 128,894 employees or 11.5 percent of those actively engaged. Transport, Storage and Communications workers comprised 9.2 percent of the labour force and were slightly more numerous than the Construction major division which contained 8.4 percent of the labour force.

	Labour Force			Proportion of Total Population			Proportion of Actively Engaged Population		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
	(Percent)								
Agriculture, hunting forestry and fishing	110,665	18,229	128,894	7.7	1.3	4.5	14.1	5.5	11.5
Mining and Quarrying	5,088	177	5,265	0.4	—	0.2	0.6	0.1	0.5
Manufacturing	207,088	74,022	281,110	14.5	5.2	9.8	26.4	22.2	25.1
Electricity, gas and water	12,105	1,168	13,273	0.8	0.1	0.5	1.5	0.3	1.2
Construction	90,671	3,017	93,688	6.3	0.2	3.3	11.6	0.9	8.4
Wholesale and retail trade and restaurants and hotels	117,237	81,078	198,315	8.2	5.7	6.9	14.9	24.3	17.7
Transport, storage and communications	84,861	18,320	103,181	5.9	1.3	3.6	10.8	5.5	9.2
Financing, insurance, real estate and business services	37,811	26,963	64,774	2.6	1.9	2.3	4.8	8.1	5.8
Community, social and personal services	110,887	105,640	216,527	7.7	7.4	7.6	14.1	31.6	19.4
Activities not adequately defined	8,556	5,252	13,808	0.6	0.4	0.5	1.1	1.6	1.2
Totals	784,969	333,866	1,118,835	54.9	23.3	39.1	100.0	100.0	100.0

FIGURE 5.2 INDUSTRIAL DISTRIBUTION OF LABOUR FORCE - 1971  
 PERCENTAGES OF MALE AND FEMALE WORKERS IN EACH INDUSTRY MAJOR DIVISION

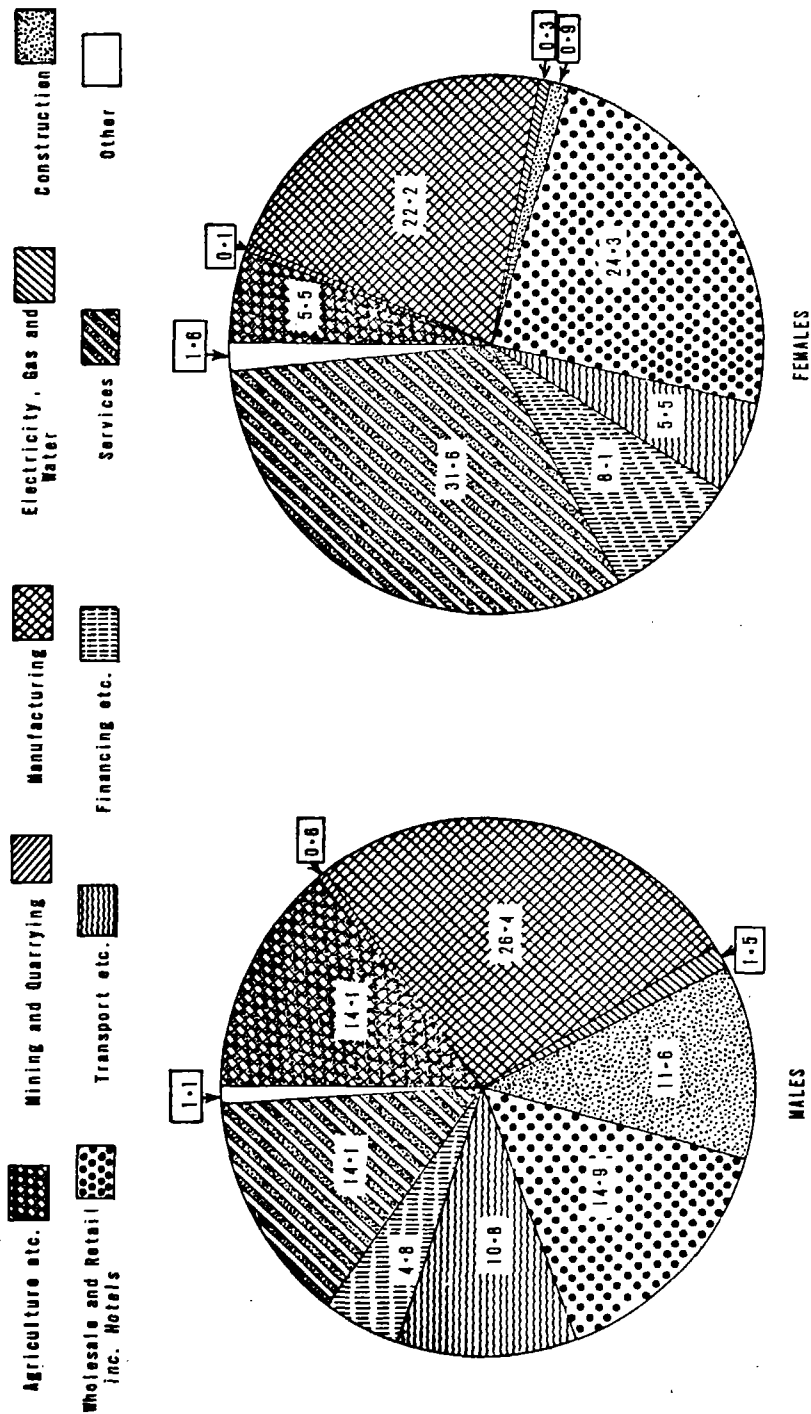


Figure 5.2 gives a pictorial representation of the industrial distribution of male and female workers in 1971. As one would expect, there are essential sex differentials in the industrial distribution. Approximately four-fifths of female workers were concentrated in only three major industrial divisions: 32 percent being in community, social and personal services; 24 percent in wholesale and retail trade and restaurant and hotels; and 22 percent in manufacturing. Conversely, male workers were more widely distributed, with the largest group — the manufacturing division — containing only 26 percent of the total male labour force. Another 43 percent were divided almost equally between agriculture, forestry and fishing, wholesale and retail trade, and community services. Approximately another 12 percent were construction workers, and 11 percent were in the transport, storage and communication division. In contrast, less than 1 percent of female workers were in the construction division and under 6 percent in the transport storage and communications division.

### **5.3.3 Occupational Structure of Employment**

Analysis of the historical changes in the occupational structure of the New Zealand labour force is also affected by the changes in the I.S.I.C. classification introduced in 1970. Therefore, as in the case of the industrial modified distribution, the following study of the occupational structure is based solely on 1971 census data.

Persons actively engaged and employed in the 9 major occupational groups at the 1971 census by sex and as a proportion of the total and actively engaged populations are shown in Table 5.5. The largest proportion of those actively engaged were in the following classifications; production, transport equipment operators and labourers (37.9 percent), clerical and related workers (16.1 percent), professional and technical workers (12.5 percent) and agriculture, forestry, fishermen etc. (11.6 percent).

The individual patterns of male and female occupational distribution differed significantly from one another and from that of the total actively engaged population. About half of the males but only one-sixth of the females were in the broad group "production and related workers". Conversely, about one-third of females but less than one-tenth of males, were clerical and related workers. Among females,

TABLE 5.5 OCCUPATIONAL STRUCTURE OF TOTAL LABOUR FORCE, 1971

Occupation Major Group	Number of Persons in Occupation Group			Proportion of Total Population			Proportion of Actively Engaged Population		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
	(Percent)								
Professional, technical	81,950	57,440	139,390	5.7	4.0	4.9	10.4	17.2	12.5
Administrative and managerial workers	27,348	1,055	28,403	1.9	0.1	1.0	3.5	0.3	2.5
Clerical	70,034	110,347	180,381	4.9	7.7	6.3	3.5	33.1	16.1
Sales workers	76,543	38,683	115,226	5.3	2.7	4.0	9.8	11.6	10.3
Service workers	31,679	45,702	77,381	2.2	3.2	2.7	4.0	13.7	6.9
Agriculture, animal husbandry and forestry workers, fishermen and hunters	112,415	17,235	129,650	7.9	1.2	4.5	14.3	5.2	11.6
Production, transport equipment operators and labourers	366,168	57,959	424,127	25.6	4.0	14.8	46.6	17.4	37.9
Workers not classifiable by occupation	8,026	4,784	12,810	0.6	0.3	0.4	1.0	1.4	1.1
Armed Forces	10,806	661	11,467	0.8	—	0.4	1.4	0.2	1.0
Totals, actively engaged	784,969	333,866	1,118,835	54.9	23.3	39.1	100.0	100.0	100.0

another one-sixth were professional, technical and related workers, and about one-quarter were either sales workers or service workers. Among males, only one-tenth were professional, technical and related workers and less than one-fifth were sales or service workers.

More specifically, the largest minor occupation groups within the major groupings are listed in Table 5.6. For males, farming was the most common occupation engaging 58,829 men, while the main occupation for females was clerical work (not elsewhere classified), employing 45,645 women.

TABLE 5.6 ACTIVELY ENGAGED POPULATION (SEX SPECIFIC)  
BY MINOR OCCUPATION GROUPS, 1971

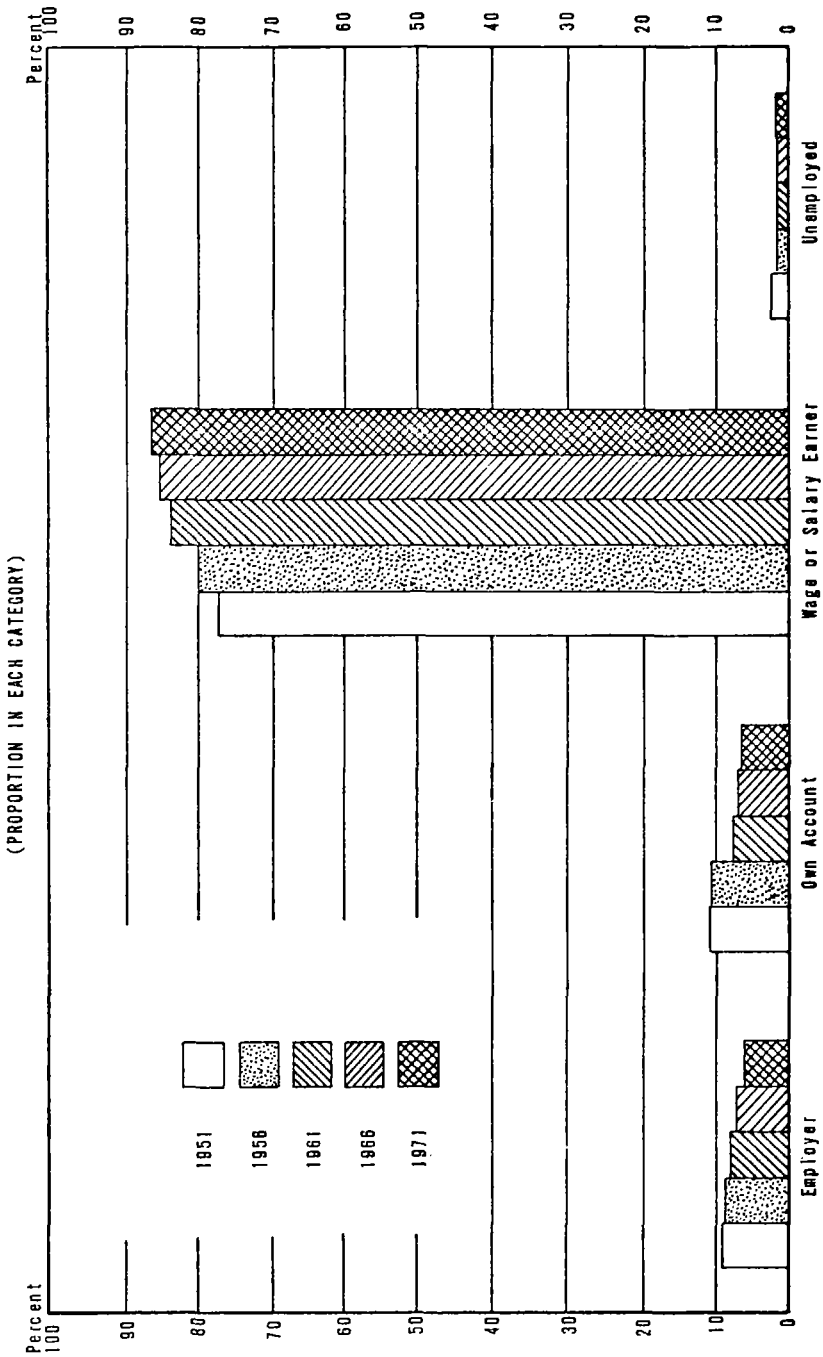
Occupation Minor Group	Males Engaged	Occupation Minor Group	Females Engaged
Farmers	58,829	Clerical (1) n.e.c.	45,645
Machinery fitters, machine assemblers and precision instrument makers (except electrical)	46,445	Stenographers, typists and card and tape punching machine operators	33,866
Bricklayers, carpenters and other construction workers	44,275	Salesmen, shop assistants (1)	30,702
Transport equipment operators	41,178	Teachers	25,834
Agricultural and animal husbandry workers	39,058	Medical, dental, veterinary (1)	22,254
Material handling and related equipment operators, dockers and freight handlers	37,975	Tailors, dressmakers, sewers, upholsterers (1)	21,016
Food and beverage processors	36,770	Cooks, waiters, bartenders (1)	12,474
Clerical (1) n.e.c.	36,280	Bookkeepers, cashiers (1)	16,172
Managers (excl. those in wholesale and retail trade, catering and lodging services and in farming)	26,724	Agricultural and animal husbandry workers	10,628
Labourers n.e.c.	24,934	Maids and related house-keeping service workers n.e.c.	9,049
Electrical fitters and related electrical and electronics workers	23,285	Material handling and related equipment operators, dockers and freight handlers	7,805
Architects, engineers and related technicians	22,639	Computing machine operators	6,733
Plumbers, welders, sheet metal and structural metal preparers and erectors	22,467	Farmers	6,456
Salesmen, shop assistants (1)	21,331	Service workers n.e.c.	5,899

(1) Includes related workers

#### 5.4 OCCUPATIONAL STATUS

Figure 5.3 shows the distribution of the actively engaged population by occupational status recorded at various censuses since 1951. The opposite movements in the proportions of employers and self-employed persons and proportions of wage and salary earners are immediately noticeable. Whereas at the 1951 census employers comprised 9.4 percent of the actively engaged population, by 1961 they

FIGURE 5.3 OCCUPATIONAL STATUS OF LABOUR FORCE  
CENSUSES 1951, 1956, 1961, 1966 AND 1971



Note: Persons assisting relatives and not receiving wages (0.1% in 1966 and 1971) or of unspecified occupational status are omitted.



had fallen to 7.5 percent and by 1971, to 6.1 percent. Likewise the self-employed dropped from 10.7 percent of the actively engaged population in 1951 to 7.6 percent in 1961 and to 6.5 percent in 1971 (see Table 5.7).

Conversely, there has been a steady rise in the proportion of wage and salary earners in the labour force. In 1951 they comprised 78.0 percent, in 1961 83.9 percent, and in 1971, 85.9 percent of the total actively engaged population.

TABLE 5.7 OCCUPATIONAL STATUS OF TOTAL LABOUR FORCE, 1971

Occupational Status	Number of Persons in Category			Proportion of Total Population			Proportion of Actively Engaged		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
	(Percent)								
Employer On Own Account	59,815	8,103	67,918	4.2	0.6	2.4	7.6	2.4	6.1
On Wages and Salary	62,185	10,101	72,286	4.4	0.7	2.5	7.9	3.0	6.5
Unemployed Relative	651,499	307,064	958,563	45.6	21.5	33.5	83.3	92.2	85.9
Assisting	8,757	7,411	16,168	0.6	0.5	0.6	1.1	2.2	1.4
Totals, Actively Engaged (1)	250	353	603	..	..	..	..	0.1	0.1
	782,506	333,032	1,115,538	54.8	23.3	39.0	100.0	100.0	100.0

(1)Excludes cases of not specified.

Among the reasons for this decline in the proportions of employers and self-employed to wage-earners in countries at a certain stage of industrial development is the tendency for the economy to become organised into larger units of production. These large scale units are better able to provide (or obtain) the larger amounts of capital necessary to finance expansion and development. Also, they are better equipped to withstand the impact of economic cycles and of keener competition. Small independent businesses, small farms and small shops diminished, and owner-managers are replaced by salaried employees. The annual factory census of the Department of Statistics shows that in 1960-61, New Zealand factories averaged 20.7 persons per establishment, but by 1970-71 this average had risen to 23.7 (twenty years earlier, in 1951, it had been 17.1).

Other circumstances which have probably a strong bearing on recent trends include: the comparative youthfulness of the labour force as a result of the high post-war birth rate (young workers will, in the main, tend to be wage-earners rather than employers or self-employed); the growing re-entry of married women into the labour force, mainly as wage-earners; and immigration (relatively few immigrants are likely to be employers or to set up in business on their own account in the short term).

Moreover, as was also noted in the previous sections, there has been a continuing redistribution of the labour force away from the primary industries and into secondary and service industries. The ratio of employees to employers is much higher in most of these latter industries.

Within the primary industries the high ratio of employers and self-employed persons has been maintained. Of every 100 persons engaged in agricultural and livestock production in 1971, 26 were employers, 31 were self-employed and 43 were wage or salary earners. (However, in the farming industry in recent years a considerable number of farmers have converted their farms into companies or trusts, with their own role changed from that of employer to that of employee (as manager) to the company or trust.)

Within the combined major divisions of wholesale and retail trade (including hotels and restaurants) and of financing, insurance, real estate and business services (which together employed 263,089 persons) 7.4 percent were employers, 4.4 percent were working on their own account and 87.3 percent were salary or wage earners.

In the major division of community, social and personal services employing 216,527 persons, the percentage of wage and salary earners was higher — 93.6 percent — while 3.0 percent were employers and 2.5 percent worked on their own account.

The largest major division, that of manufacturing, which employed 281,110 persons, had the highest proportion of wage and salary earners (96.7 percent of the total labour force in the division). The employers and self-employed in manufacturing were 1.2 percent and 1.3 percent respectively.

### 5.5 REGIONAL DISTRIBUTION OF THE LABOUR FORCE

The broad features of the regional distribution of the labour force in New Zealand are strikingly similar to the regional distribution of total population. At the 1971 Census, 72.2 percent of the labour force was located in the North Island (see Table 5.8 below), compared with 71.1 percent in 1966 and 70.3 percent in 1961. The increase primarily reflects the corresponding increase in the proportion of the total population in the North Island.

TABLE 5.8 TOTAL LABOUR FORCE BY STATISTICAL AREA, 1971

Statistical Area	Persons Actively Engaged		Statistical Area	Persons Actively Engaged	
	Number	Proportion (Percent)		Number	Proportion (Percent)
Northland	34,230	3.1	Marlborough	11,760	1.1
Central Auckland	286,397	25.6	Nelson	25,619	2.3
South Auckland-Bay of Plenty	154,081	13.8	Westland	8,893	0.8
East Coast	16,754	1.5	Canterbury	154,979	13.9
Hawke's Bay	48,916	4.4	Otago	68,955	6.2
Taranaki	37,842	3.4	Southland	40,860	3.7
Wellington	229,549	20.5	Total South Island	311,066	27.8
Total North Island	807,769	72.2	Total New Zealand	1,118,835	100.0

Within the North Island, three statistical areas — Central Auckland, South Auckland-Bay of Plenty and Wellington — contained 670,027 actively engaged persons, more than three-quarters of the North Island labour force (see Table 5.8). In the South Island almost half of the labour force is concentrated in the Canterbury statistical area alone. Together these four areas contained roughly three-quarters of the total labour force of New Zealand. The largest concentration of actively engaged persons is in the major metropolitan areas of Auckland, Wellington and Christchurch, where employment opportunities are greatest. The proportion actively engaged is much lower in rural areas and in areas containing popular retirement centres.

Sex specific labour force participation rates for each statistical area at the 1961, 1966 and 1971 population censuses are given in Table 5.9. The national trend over this period has been a slight decrease in labour force participation for males, an increase for females and an overall increase for the population as a whole. The only exception to these trends was experienced by the Northland statistical area in which the male labour force participation rate rose between the censuses of 1961 and 1966 and then declined between 1966 and 1971.

Between 1961 and 1971, the North Island continued to experience generally higher male, female and total labour force participation rates than the South Island, and the gap widened somewhat during this period. At all three censuses, the highest participation rates for males occurred in Southland (97.1 percent, 96.9 percent and 95.4 percent in 1961, 1966 and 1971 respectively), for females in Central Auckland (38.1 percent, 41.0 percent and 44.2 percent respectively) and for the total population in Wellington (66.8 percent, 67.8 percent and 68.1 percent).

The lowest rates, on the other hand, were experienced by different regions over the ten year period. At the 1971 Census the lowest labour force participation rate for males was in Otago (86.7 percent), while Southland had the lowest female labour force participation rate (30.8 percent).

TABLE 5.9 TOTAL LABOUR FORCE PARTICIPATION RATES <sup>(1)</sup>  
(POPULATION AGED 15-64 YEARS) BY STATISTICAL AREA, 1961-1971

Statistical Area	1961			1966			1971		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
	(Percent)								
Northland	92.4	24.0	59.0	93.2	28.7	62.1	91.5	34.0	63.3
Central Auckland	93.9	38.1	65.9	93.3	41.0	67.0	91.1	44.2	67.5
South Auckland									
Bay of Plenty	94.3	26.6	61.7	93.3	30.5	62.7	91.7	34.8	63.7
East Coast	94.5	27.7	61.3	93.7	31.6	62.9	92.7	35.2	64.1
Hawke's Bay	95.3	28.8	62.1	94.4	32.4	63.4	93.5	35.6	64.3
Taranaki	94.9	27.4	61.7	93.7	31.2	63.0	92.8	36.2	65.1
Wellington	95.1	37.2	66.8	93.5	40.7	67.8	91.5	44.1	68.1
Total, North Island	94.4	33.5	64.4	93.4	37.1	65.6	91.6	40.8	66.4
Marlborough	95.4	25.7	61.7	94.6	29.3	63.1	92.2	31.1	62.7
Nelson	91.3	28.4	60.0	91.1	33.5	62.4	89.5	35.2	62.5
Westland	94.0	24.8	61.6	93.7	29.6	63.4	91.3	32.9	63.6
Canterbury	92.3	31.6	62.0	91.1	34.7	63.1	89.0	37.7	63.6
Otago	91.7	31.3	61.7	89.8	34.4	62.3	36.7	37.1	62.0
Southland	97.1	25.0	63.2	96.9	28.5	65.0	95.4	30.8	64.8
Total, South Island	92.9	30.1	61.9	91.8	33.4	63.1	89.6	36.1	63.3

<sup>(1)</sup> Ratio of the number of persons actively engaged in the labour force to the number of persons in the population aged 15-64 years.

## 5.6 EMPLOYMENT TRENDS

Table 5.10 contains recent data on the average monthly numbers of notified job vacancies, placements in jobs, and registered unemployed persons as recorded by the Department of Labour.

In the post-war years up to 1967 the labour situation was generally characterised by overfull employment and a high number of vacancies in industry.

### 5.6.1 Unemployment

In 1967, following deflationary measures, there was a sharp rise in the number of unemployed persons. By the middle of that year, when seasonal workers found difficulty in obtaining off-season jobs, the number of unemployed rose to over 6,000 or about 0.6 percent of the labour force.

TABLE 5.10 NOTIFIED AVERAGE MONTHLY JOB VACANCIES, PLACEMENTS AND REGISTERED UNEMPLOYED PERSONS, 1964-1975

Year	Average Notified Vacancies at End of Each Month			Average Placements During Each Month			Average Registered Unemployed Persons at End of Each Month		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
1964	4,847	1,776	6,613	788	392	1,180	511	139	650
1965	6,000	1,936	7,936	722	379	1,101	385	128	513
1966	5,550	2,203	7,753	674	337	1,011	332	131	463
1967	2,682	1,445	4,127	1,376	407	1,783	3,267	585	3,852
1968	1,852	828	2,680	1,821	542	2,363	5,272	1,609	6,881
1969	2,977	1,190	4,167	1,162	378	1,540	2,191	735	2,926
1970	3,794	1,451	5,245	796	290	1,086	1,225	375	1,600
1971	2,207	950	3,157	946	337	1,283	2,555	560	3,115
1972	1,790	857	2,647	1,529	396	1,925	4,368	1,316	5,684
1973	2,626	912	3,538	1,312	394	1,706	1,591	730	2,321
1974	3,386	1,170	4,556	1,067	345	1,412	607	348	955
1975	1,640	411	2,051	2,023	543	2,566	2,713	1,453	4,166

Source: Department of Labour

Unemployment remained at about 6,000 until the autumn of 1968, when it rose further to 8,500 and remained about this figure during the following winter. From a peak of 8,560 in July 1968 the number fell generally, except for occasional monthly increases, to under 1,200 in March 1971. The number of unemployed rose again to average 5,684 for 1972, subsequently dropped to an average of 955 for 1974. Job vacancies which moved from a general level of about 8,000 to a level between 2,000 and 4,000 during 1967 and 1968, increased to approximately 6,000 in late 1969, and averaged 3,538 in 1973 and 4,556 in 1974.

In addition to a half-yearly survey of the employment position, the Department of Labour maintains a weekly record of registered unemployed persons and a half-monthly record of job vacancies and job placements. Table 5.10 is derived from their records and hence summarises the department's operations as an employment service.

Registered unemployed, job vacancies, and job placements are classified by occupational group in Table 5.11 on the basis of monthly averages. The greatest unemployment during 1972-73 occurred in the manufacturing and trades, labouring and service groups, in that order.

TABLE 5.11 AVERAGE MONTHLY REGISTERED UNEMPLOYED, JOB VACANCIES AND PLACEMENTS BY OCCUPATION, 1972-1973

Occupation Group	Registered Unemployed (Monthly Average)		Vacancies (Monthly Average)		Placements (Monthly Average)	
	1972	1973	1972	1973	1972	1973
Professional, technical, and clerical	352	169	442	315	60	71
Sales	274	127	120	113	52	45
Farming, fishing, logging	391	182	35	53	237	230
Transport and communications	257	86	508	80	34	43
Manufacturing and trades	1,794	637	986	1,640	390	387
Service	535	275	120	209	122	129
Labouring	1,622	582	116	291	972	702
All other occupations	459	263	320	837	58	99
All occupations	5,684	2,321	2,647	3,538	1,925	1,706

Source: Department of Labour.

### 5.6.2 Part-time Employment

People aged 15 years and over who are gainfully employed in part-time work (less than 20 hours per week) make a substantial and growing contribution to the nation's production. This group, which is not included in the actively engaged population (as defined for statistical purposes) totalled 56,478 (8,659 males and 47,819 females) in 1971, a considerable increase over the 31,903 (4,651 males and 27,252 females) so employed in 1966.

The 56,478 part-time workers in 1971 worked a total of 598,349 hours weekly, an average of 10.6 hours per person. Of these part-time workers the largest number, 10,040 worked 10 hours per week while 8,480 persons worked 15 hours per week.

Of the 1971 total the largest number, 15,217 or 27.0 percent, were service workers including 5,765 (839 males and 4,926 females) caretakers, cleaners, etc., 3,707 maids and related housekeeping workers and 3,558 who were cooks, waiters, bartenders etc. Part-time clerical workers numbered 13,108 or 23.2 percent of the part-time labour force and there were 8,128 persons or 14.4 percent in the professional and technical group, including 4,074 teachers and 2,043 workers in the medical field. Sales staff included 8,050 part-time workers or 14.3 percent of the total, and factory workers included 6,739 persons (11.9 percent) employed on a part-time basis.

### 5.6.3 Employment of Women

The ratio of females to males in the labour force has shown a steady increase since World War II. From 26.9 females per 100 males in 1936 the ratio rose to 42.5 females per 100 males in 1971. Females comprised only about 21 percent of the labour force in 1936, but by 1971 this proportion had increased to almost 30 percent (see figure 5.4). During this period, the female labour force increased by 135.2 percent compared with a 48.8 percent increase in the male work force.

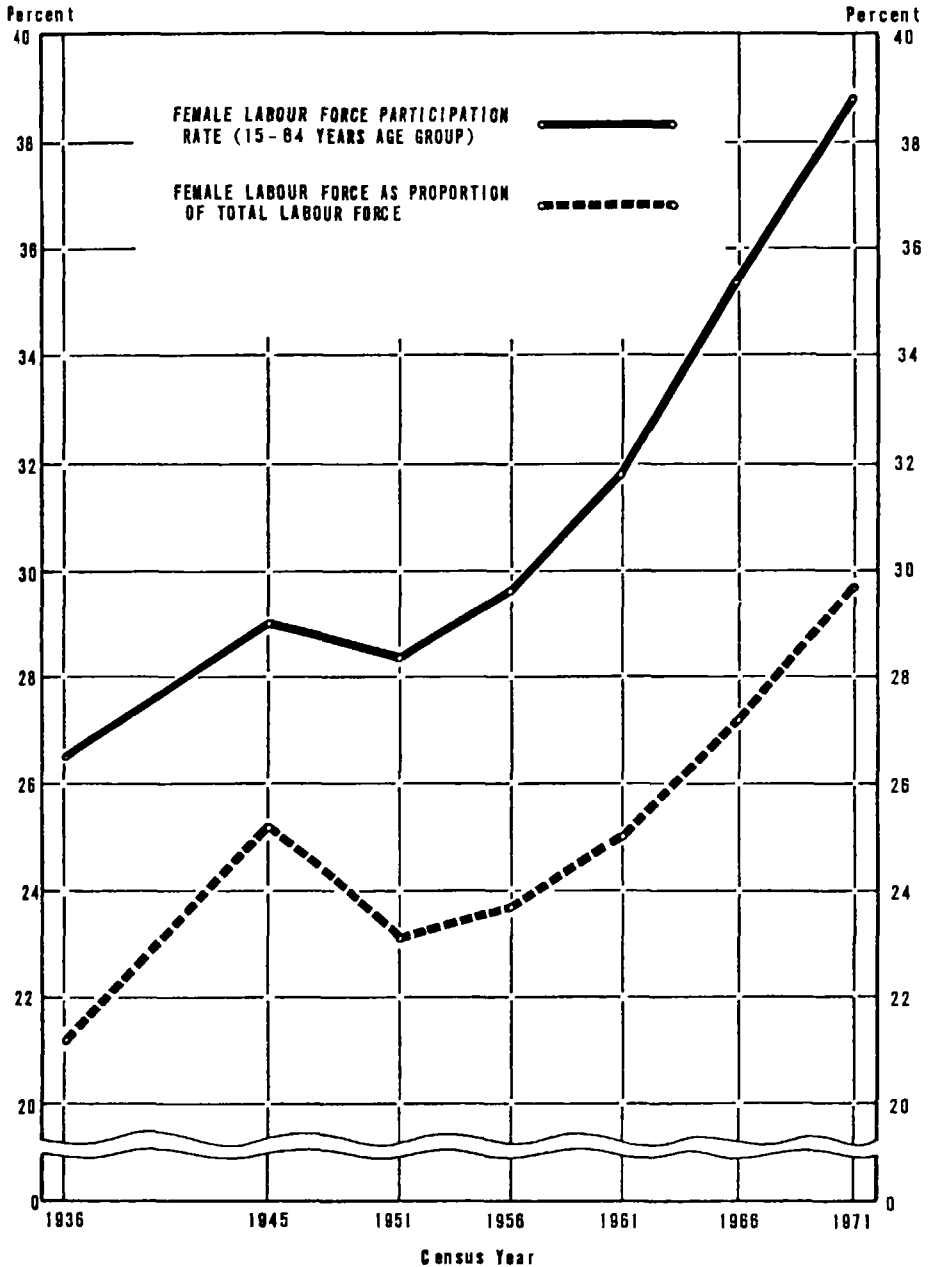
Labour force participation rates for women aged 15 to 64 years are also shown in figure 5.4. This rate, which was 26.5 per 1,000 in 1961, had reached a high of 38.9 per 1,000 in 1971. However, despite this marked increase the New Zealand female labour force participation rate is still lower than that for many developed countries. (For example, in 1970, Japan, the United States and Sweden recorded rates of 54.4, 46.0 and 45.5 per 1,000, respectively).

The continual growth in recent years in the proportion of females in the labour force has been largely due to the increasing tendency for women to continue in employment after marriage until commencing family formation and to re-enter the labour force as family responsibilities lessen. This trend has been augmented by a combination of factors including the progressively younger ages at marriage (and consequent earlier completion of child-bearing), changing social attitudes particularly toward the role of married women, in society, greater awareness and readier acceptance of family planning and improved methods of contraception.

### 5.6.4 Married Women in the Labour Force

Prior to World War II, married women did not have a significant role in the labour force. In 1936 only 8.2 percent of the "non-Maori" female labour force over the age of 16 years was married. This position changed markedly with the demands made for maintenance of production during the war when a large proportion of the male labour force was serving overseas with the Armed Forces. By the 1945 census the number of "non-Maori" women in the labour force had doubled and married women accounted for 17.5 percent of the "non-Maori" female labour force at that time. This trend continued. By 1961 the proportion of married women within the total female labour force reached 38.5 percent and by 1971 it had reached the highest recorded level at 50.5 percent (see Table 5.12).

FIGURE 5.4 FEMALE LABOUR FORCE PARTICIPATION  
CENSUSES 1936 - 1971





Of the 166,472 married women actively engaged in 1971, 28,080 (16.9 percent) were under 25 years of age, 79,918 (48.0 percent) were in the 25-44 years group, 57,179 (34.3 percent) were in the 45-64 years group and 1,295 (0.8 percent) were aged 65 years and over.

The majority of the women in the labour force are wage or salary earners and the proportion of women in this status group is higher than that for males. In 1971, 92.2 percent of the women actively engaged were wage or salary earners while 83.3 percent of males were in this category. Women made up 11.9 percent of all employers and 14.0 percent of all those classified as "self employed".

Of the 166,472 married women in the labour force at the 1971 census, 6,425 were employers and 7,991 were self-employed. Together they represented 8.7 percent of the total married women workers. Of the remaining 152,056 married women, almost all were receiving wages or salaries.

TABLE 5.12 MARITAL STATUS OF FEMALE  
LABOUR FORCE (AGED 16 YEARS AND OVER), 1966 AND 1971

Marital Status	1966 Census		1971 Census	
	Numbers	Proportion (Percent)	Numbers	Proportion (Percent)
Never married	137,529	49.9	135,052	41.0
Married	116,314	42.2	166,472	50.5
Legally separated	4,619	1.7	7,406	2.2
Widowed	10,772	3.9	11,802	3.6
Divorced	6,188	2.2	8,018	2.4
Not specified	232	0.1	746	0.2
Totals	275,654	100.0	329,496	100.0

# **CHAPTER VI**

## **POPULATION PROJECTIONS FOR NEW ZEALAND, 1976-2001**

### **6.1 INTRODUCTION**

This chapter contains alternative series of projections of the total population of New Zealand for the period 1976-2001 prepared by the Department of Statistics. These projections were produced using the "component method" and incorporate a range of alternative assumptions concerning future levels of fertility and migration. They have as a base the estimated total New Zealand population, analysed by sex and five-year age groups, as at 31 March 1974. It should be emphasised that these projections are not strict "forecasts" or "targets" but "conditional forecasts" based on the stated assumptions.

### **6.2 ASSUMPTIONS EMPLOYED IN PROJECTIONS**

#### **6.2.1 Fertility**

Of the various components of population growth which determine the population size in future years, projection of fertility involves the greatest degree of uncertainty. In the past the Department of Statistics has used varying methodological procedures in attempting to improve the projection of future birth numbers. Recently, the department has completed a detailed historical analysis of the reproductive behaviour of successive birth cohorts of non-Maori women in New Zealand. However, no attempt has yet been made to project future fertility using the cohort approach.

The fertility assumptions employed in these projections were arrived at using a cross-sectional analysis of fertility trends and patterns during 1962-73. Three alternative variants were selected, namely, "low", "medium" and "high". In general, the "low" assumption is based on a continuation of the 1962-73 trend from 1974 to 1979 with an extension of this trend, somewhat flattened, until 1984 and a further extension, even more flattened until 1989. The "high" and "medium" assumptions were then derived relative to the "low" assumption using generally less extreme declining trends with the further condition that the "medium" birth rate values were the average of the "high" and "low" values at any projection time-point. In the "under 20" maternal age group the "high" assumption was used as the bench-mark, and the "medium" and "low" assumptions were derived relative to this variant. Because of the

uncertainty in projecting fertility experience for longer than 15-20 years ahead, projected age-specific-birth rates which make up the above fertility assumptions have been kept constant from 1990 until 2001, at the levels projected for 1989.

Projected decreases in the net reproduction rate implied by these alternative assumptions are summarised in Table 6.1 below.

TABLE 6.1 PROJECTED NET REPRODUCTION RATES, 1974-1989

Year Ending 31 March	Projected Net Reproduction Rate Given Fertility Designated As:-		
	"Low"	"Medium"	"High"
1974 (Base)	1.31	1.31	1.31
1979	1.02	1.14	1.26
1984	0.89	1.06	1.23
1989	0.82	1.02	1.22

Given the "medium" variant, fertility will drop to the "replacement level" by 1989 and given the "low" variant early in the 1980's. This is the first time since the downturn in New Zealand fertility began in 1962, that official population projections have incorporated fertility alternatives which predict that future reproduction could fall below "replacement level".

### 6.2.2 Mortality

The projections assume that mortality will remain constant at the 1970-72 level, during the projection period, 1976-2001. Survivorship rates for each sex and five-year age groups were derived from the 1970-72 New Zealand Life Tables (Total Population). These assumptions imply an expectation of life at birth of 68.55 years for males and 74.60 years for females.

### 6.2.3 Migration

Three assumptions with regard to future net annual immigration experience have been incorporated in these projections. It is assumed that there will be, alternatively, levels of 5,000, 10,000 and 15,000 net annual immigration throughout the projection period. These levels are well below the net inflow recorded in very recent years. (For example, during the three-year period 1973-75 the average net annual inflow was nearly 29,000). However, it is widely acknowledged that such high net migration inflow cannot continue in the long-term. The government's immigration policy approximates to a net immigration gain of 5,000 per annum.

The age-sex structure of net external migration employed in these projections was derived from experience over the period 1 April 1961 to 31 March 1971 (with the recession period — from 1 April 1967 to 31 March 1970 — being excluded as it is unrepresentative).

### 6.3 PROJECTION RESULTS

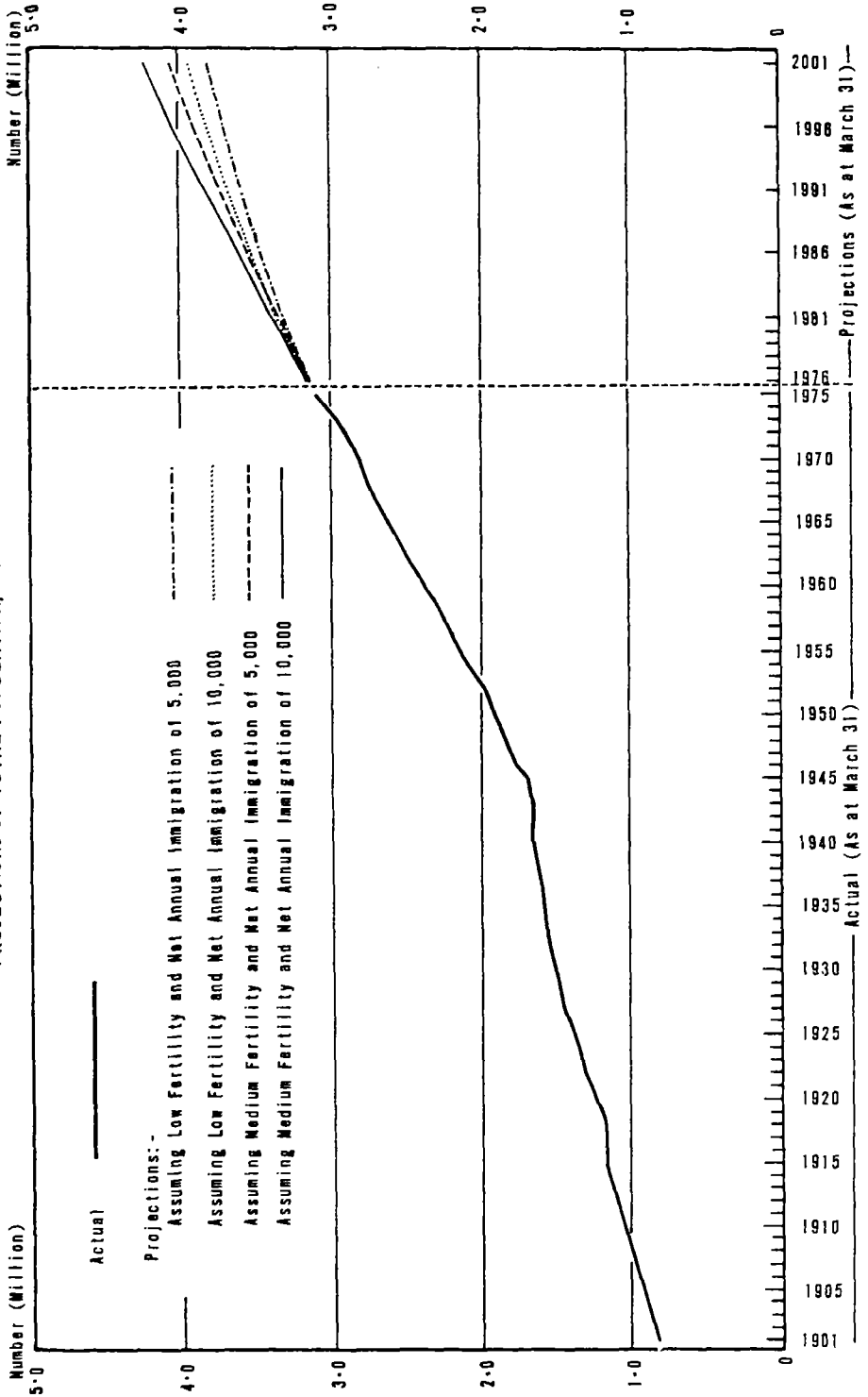
Projections of the total New Zealand population for selected years between 1976 and 2001 are presented in Table 6.2.

TABLE 6.2 PROJECTED TOTAL  
NEW ZEALAND POPULATION, 1976-2001

As At 31 March	Projected Total Population Assuming Net Annual Immigration of:		
	5,000	10,000	15,000
	(Thousands)		
1974(Base)	3,043	3,043	3,043
	"High" Fertility Assumption		
1976	3,127	3,137	3,148
1981	3,354	3,391	3,428
1986	3,599	3,665	3,730
1991	3,847	3,942	4,037
1996	4,090	4,216	4,343
2001	4,334	4,493	4,653
	"Medium" Fertility Assumption		
1976	3,124	3,134	3,144
1981	3,322	3,359	3,396
1986	3,520	3,584	3,649
1991	3,708	3,801	3,895
1996	3,887	4,010	4,132
2001	4,056	4,209	4,362
	"Low" Fertility Assumption		
1976	3,120	3,130	3,140
1981	3,291	3,328	3,364
1986	3,441	3,505	3,568
1991	3,571	3,662	3,753
1996	3,687	3,806	3,925
2001	3,784	3,931	4,079

Given the extreme "low" projection, based on "low" fertility and 5,000 net annual immigration the population of New Zealand would grow from 3,043,000 in 1974 to 3,784,000 in 2001, an increase of 24 percent. Alternatively, given the extreme "high" projection, the population will grow by 53 percent, to reach 4,653,000 by 2001.

FIGURE 6.1 ACTUAL TOTAL POPULATION, 1901-1975 AND ALTERNATIVE PROJECTIONS OF TOTAL POPULATION, 1976-2001



#### 6.4 FORECASTING POPULATION GROWTH

Because of the considerable uncertainty regarding New Zealand's future fertility and net annual migration, it is difficult to give a clear indication as to which of the alternative projection series, contained in Table 6.2 above, is most likely to describe future population growth.

Since these projections were produced there has been a steady and significant decrease in age-of-mother-specific birth rates for both the "non-Maori" and "Maori" populations of New Zealand. Available evidence indicates that the fertility of the population as a whole will fall below the "replacement level" in the near future. The higher current fertility levels for Maoris and other ethnic groups (notably Polynesians) relative to the European population may delay this process, but only briefly. For short-term forecasting, therefore, the "low" fertility variant is probably the most appropriate choice.

How long will this downward trend in New Zealand fertility continue and to what level will fertility fall? These are two questions which have to be answered before long-term forecasting of population growth can be undertaken. Unfortunately, the available historical fertility data for New Zealand and other developed countries do not necessarily provide satisfactory answers. For a number of reasons — including varying ethnic compositions, social attitudes and economic conditions — overseas experience is not a fool proof guide for predicting the future New Zealand situation as regards fertility. The general reduction in New Zealand fertility levels, which began in 1962, coincided with changing social attitudes towards family size and women in the work force and was made possible by improved contraceptive devices. Also, economic factors — there have been two recessions since 1962 — may well be playing a significant role in decision making on desirable family size.

In the absence of conclusive evidence on future fertility trends the "medium" fertility variant — which implies that fertility will not fall below the "replacement level" for any great length of time — appears to be the most appropriate for long-term forecasting. Forecasting future migration levels also involves considerable uncertainty. While the average net annual immigration experienced during the fifteen years ended 31 March 1973 was about 8,500, net immigration during the years years ended 31 March 1974 and 1975 amounted to 33,600 and 29,600, respectively. This immigration "boom" imposes strains on the economic and social systems of New Zealand and led to the introduction of a restricted immigration policy. When the alternative population projections were produced (about two years ago), it was

confidently expected that this "boom" would not continue if the new policy measures proved effective. According to provisional migration statistics, recently released, net immigration for the year ended 31 March 1976 was only 9,993. The present government is committed to reducing the level of immigration to about 5,000 per annum on economic and social grounds. Therefore, it is recommended that a net immigration level of 5,000 be adopted for short-term and medium-term forecasting.

Long term forecasting of population growth is more hazardous. But if historical evidence, which includes periods of low and high economic activity, is accepted then an annual net immigration level nearer to 10,000 might well be more appropriate.

## APPENDIX

### THE COLLECTION AND COMPILATION OF POPULATION STATISTICS IN NEW ZEALAND

Population statistics in New Zealand are collected from three main official sources; the quinquennial census of population and dwellings, the vital registration system and migration records collected at ports of entry into, and exit from, the country.

The first general census of the New Zealand population was held in 1851. Early censuses, however, lacked reliability — mainly because of the problems in enumerating the Maori population on a single night — and were held at irregular intervals. The Census Act of 1868 provided for a general census to be held every five years. The population census has been held every fifth year since 1871 in years ending “1” and “6”, except in 1931, 1941 and 1946. The census due to be held in 1931 was postponed for economic reasons and subsequently taken in 1936, while the one due in 1941 was postponed because of war conditions and held in 1945. From 1951, the “1” and “6” yearly pattern was resumed.

The census enumeration has always been of the de facto type, counting those persons actually in the country regardless of origin or future intention to travel. Months of the year and days of the week on which the census has been held have varied from census to census. For reasons given in the various census reports (chiefly the chance of finding people at their usual residence) the census has, since 1926, been held on a week night, whereas from 1901 to 1921 it was held on a Sunday night. The 1976 census of Population and Dwellings was held on Tuesday 23 March.

The information provided by the census includes data on location of population, age, sex, marital status, education, race, religious profession, industry and occupation, income, birth place, dwellings and households. An inquiry on mobility was instituted in 1971, when a question on usual place of residence one year earlier and five years earlier was asked.

Registration of births, deaths and marriages is compulsory in New Zealand and in the case of the non-Maori (European) population, dates back to 1855. However, until 1962 Maori vital events were recorded in separate registers, which did not make provisions for as many particulars as was the case with the European births and deaths. Since 1973 separate vital statistics for New Zealand residents of Pacific Islands origin have also been available.



Particulars required in the registration of a birth include date and place of the birth, sex of child, name, age, occupation and birth place of father, name, age and birth place of mother, date and place of marriage of parents, their usual place of residence, number of children born previously to this marriage and the ethnic origin of the father and mother. The death registration form requires information on the date and place of death, name, age, sex, marital status, occupation, birth place, and the ethnic origin of the deceased. Copies of the registration forms completed for each vital event are forwarded by the Registrars of Births, Deaths and Marriages to the Department of Statistics. Statistics on divorces are provided to the Department of Statistics by the Department of Justice.

The Department of Statistics compiles and analyses these vital statistics data which are published in the department's "Annual Report on Vital Statistics". Statistics on causes of death are compiled and published by the National Health Statistics Centre, Department of Health.

Migration statistics are compiled from migration cards obtained by Customs authorities from each person arriving in, or departing from, New Zealand. The cards contain information on age, sex, date and place of birth, marital status, purpose of visit or purpose of journey overseas, occupation, nationality and ethnic origin of the migrant. Along with other demographic data, migration statistics are compiled and analysed by the Department of Statistics and published in the annual report on "Population and Migration".



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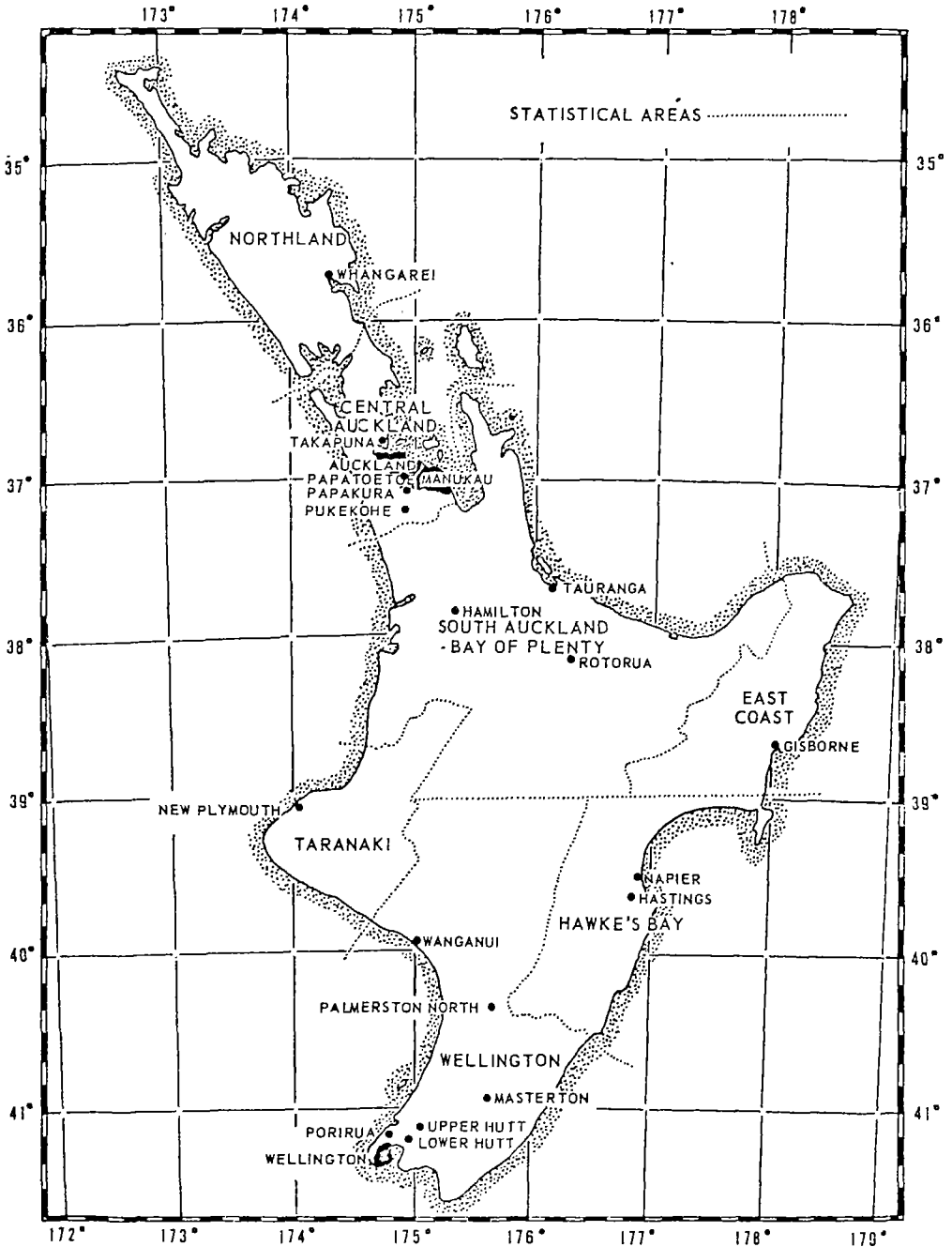
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C. MAPS

NEW ZEALAND

- NORTH ISLAND -



## NEW ZEALAND

- SOUTH ISLAND -

