WEALTH AND INCOME IN NEW ZEALAND

c. 1870 to c. 1939

MARGARET NELL GALT

Submitted for the degree of Doctor of Philosophy in
Economic History at Victoria University of Wellington,
February 1985

ABSTRACT

This thesis examines the level and distribution of wealth and income in New Zealand between about 1870 and 1939. To do so it draws upon the available aggregate statistics on wealth and income, and it uses a sample of wealth holders especially constructed to alleviate the data deficiencies which have arisen through New Zealand not having a wealth census.

The evidence available suggests that New Zealand was correctly portrayed as having a high level of wealth with an egalitarian distribution. In 1893, the first year in which average wealth could be estimated, New Zealand was definitely wealthier than Victoria. This wealth was not evenly distributed but the gini coefficient of about 0.75 suggested that New Zealand was an egalitarian economy compared to the United States, Britain, or even Australia.

Over the period to 1939 the average level of wealth increased by about 100 percent. Most of this increase took place between 1900 and 1922; the late 1920's and 1930's were periods of slow growth. But this increase was not sufficient to maintain New Zealand's high position relative to Australia, and probably to other countries.

The growth of real wealth was accompanied by a redistribution of wealth and by the 1930's, the gini coefficient was only about 0.73. Most of this decline was due to the declining assets held by the very rich. In 1890 to 1895 the top one percent of wealth holders owned 55 - 60 percent of all assets, but by 1935 to 1939 this had fallen to 25 - 30 percent.

The very rich had, in fact, never been rich by international standards. The case studies in the thesis did not include one millionaire. As a rule they were first generation wealthy men who came from a well-to-do background, who had superior education, but who had to achieve being wealthy through their own efforts. There were few women among the top wealth holders, and those who did appear inherited their wealth from their father or

or husband.

The wealthy did not show signs of being a closed elite.
There was a considerable amount of upward mobility in the group,
and the Scots especially tended to come from poor backgrounds.
The practise of equal inheritance among all the children meant
that few families remained very wealthy for more than one gener-
ation.   The same social and occupational mobility was clear
among our sample of estate holders.   Only 50 percent of sons
had the same social status as their fathers.   The remaining
sons were fairly evenly divided between those who rose and those
who fell in status.

The sample, which was constructed from probate valuations
and death certificate records, suggests some of the factors
which assisted and hindered upward mobility.   Being born female
at a time when women did not pursue careers, or own family
property obviously influenced the wealth holdings of a consider-
able proportion of the population.   For men, the place of their
birth proved to be significant.   The Scottish showed a marked
tendency to be upwardly mobile, while being Irish or New Zealand
born was a definite handicap.

Those who were born overseas did better if they arrived as
young adults between 1860 and 1880.   Assisted migrants produced
proportionately less probatable estates, but those who did had
about the same estates as those not assisted.   Wealth was con-
centrated among those involved in farming, trading and the pro-
fessions throughout most of our period, but over time agricul-
tural wealth showed signs of being replaced by industrial for-
tunes.   The professions had the advantage of a comparatively
high income which enabled people to accumulate fortunes.   Life-
time income undoubtedly had the major influence on wealth at
death.

The level of average income increased probably three-fold in
the period.   Again most of this rise came between 1900 and 1920.
It is probable that the distribution also became more equal,
through the reduced incomes to the top earners.   There was a
strong trend for margins for skill to decline over time, even
though they were already small relative to those found in the
United States.   The exception to this was teachers' salaries,
which showed a marked rise as the occupation became more pro-
fessional.   The rise of teachers' wages, shop work and clerical
jobs all changed the employment structure for women, which was

reflected in a changed attitude towards higher education.

The 1930's saw a reduction in incomes largely through un-employment and short-time. However, the reduction was heaviest among those in the top 10 percent. The depression had mixed effects on production levels, prices and wages, but only one of our three sample industries, butter and cheese making, showed strong evidence of wage overhang.

In 1939 New Zealand was still a wealthy nation, though probably she would not have ranked as highly on an international scale as in 1890. The distribution of both wealth and income had changed over our period to being substantially more egali-tarian.

CONTENTS

TABLES

GRAPHS

MAPS

ACKNOWLEDGEMENTS

many errors from being included in the final work.

I have received much help and intellectual stimulation from fellow researchers. Professor J.D. Gould acted as a supervisor until his retirement in 1983, and was always ready to discuss issues. I am, however, most deeply indebted to my main supervisor, Professor G.R. Hawke, for his willingness to discuss problems, his encouragement through the difficult and time consuming portions of work, and his constructive criticisms at each stage of the final work.

CHAPTER 1

INTRODUCTION

The level and distribution of wealth and income is one of
the leading factors determining the well-being of the inhabitants
of a nation.   While it is true that increases in both suffer
from diminishing marginal utility as the base level rises, it
is rare for any group in society to refuse more income or
wealth.   The only factor that mitigates against increases in
income or wealth is leisure preference.   More income for more
work is only welcomed sometimes while more income for the same
work is always wanted.

Income can be loosely defined as the flow of resources for
consumption and saving available to a person in a particular
period of time.   In its broadest sense this includes resources
made available due to fluctuations in the value of the person's
wealth.   In this thesis we have been forced by data constraints
to look solely at earned income.   Fluctuations in the level of
savings and capital assets could not be measured from the
statistics available on income, and so are solely dealt with
under wealth.   We also do not have information available on
investment income, so that for the most part we have been res-
tricted to changing trends in wages and salaries.

The lack of good information sources has meant that many of
the interesting questions on how particular groups fared have
remained unanswered.   Chapters 15 to 18 which deal with income
trends do so only at a highly aggregated level.   The analysis
has concentrated solely on broad trends, and how these related
to the income growth of particular industrial sub-groups.   For
more detailed studies it would have been necessary to know the

incomes of specific individuals so that this could be related
to their general characteristics. Unfortunately, except for
the civil servants' lists, income information was not published
at such a disaggregated level. The original income tax
schedules, if they still exist (which is doubtful) are held
behind a very tight barrier of legal secrecy.[1]

Fortunately this problem did not hamper our study on
wealth. The probate valuations, which were carried out for
each estate over £100 in value, were for most of our period
freely available. This meant that we could find a measure of
the wealth of each individual at one point, which we could
compare with their characteristics.

Our definition of wealth was therefore constrained by our
source of information. The law was based upon obtaining a
market value for the assets owned by the individual, but as we
will discuss in Chapter 2, this valuation was not ideal in all
ways. Cultural and tax considerations influence ownership
patterns, and dealing with people as individuals at the point
of their death may not be the best measure of their material
well-being during their lives. This was particularly clearly
demonstrated in the case of married women, who appeared to have
a very poor level of assets because assets were held in their
husband's name, for cultural reasons.

The study of wealth in this thesis has been heavily in-
fluenced by the revival of academic interest in the topic since
the 1970's. The work of A.B. Atkinson and the Royal Commission
on Wealth and Income in Great Britain has produced a number of
books which have refined considerably the statistical analysis
of wealth distributions. These studies have tended to concen-
trate on aggregate statistical series, and Chapters 2 and 3 of
this thesis have used their methodology. The thesis does, how-
ever, go further than the aggregate statistics to develop a data
base which would enable the effect to be determined of particu-
lar characteristics on the final wealth of the individual.

The choice of characteristics was largely determined by
the sources available. Unfortunately New Zealand did not

---

1. An approach to the Inland Revenue Department for informa-
   tion for the study was unsuccessful.

follow the precedent of either Australia or the United States, and hold a wealth census. It was necessary therefore, to construct a sample of individuals, and the size of the problem limited the number of sources which could be used. Two sources were in the end matched to provide a data base for our analysis. These were the probate valuations for wealth, and the death certificate for the general characteristics of the individual. The death certificate provided information on the family and cultural background of the individual and their own working and family life. These provide the source for the analysis of the factors influencing wealth discussed in Chapters 4 to 12. The analysis and the discussion draws upon much of the work done based upon the United States' census manuscripts by Lee Soltow and others.

The final chapter on wealth, Chapter 13, is based upon a wider range of sources of information. It concentrates on the very wealthy because those people had more economic power than most to influence the nation's consumption and investment patterns. They are also a significant group because in our period they were generally the first generation of their family to be very wealthy. Therefore they point to those risky ventures which were successful and provided high economic rewards to both the individual and the nation. The very wealthy have tended to attract the most attention in detailed studies overseas, and so the literature is more extensive. The work which has influenced this thesis most has been the studies on the wealthy in Britain and Australia produced by W.D. Rubinstein.

The introduction has placed the work of the thesis in the context of overseas research because so little has been done on this topic in New Zealand. J.D. Gould did pioneering work on large landowners and their demise, upon which I draw heavily in the chapter on the very wealthy.[2] His work was extended by Claire Toynbee in her analysis of the landowners listed in the Return of Freeholders in New Zealand in 1882.[3] The relation-

---

2. J.D. Gould 'The Twilight of the Estates, 1891-1910'. Australian Economic History Review, X (1970) pp. 1-26.

3. Claire Toynbee, 'Class and Mobility in 19th Century Wellington Province: an exploratory study of immigrants arriving 1840-1880'. (Wellington, V.U.W. M.A. Thesis 1979) Appendix II.

ship between land ownership and wealth is explored in Chapter 10. Ms Toynbee's work on mobility also formed part of a small literature on this subject.

The one book directly on the topic of wealth and income in New Zealand dealt however, with the post World War II period that is not covered by our time span. Brian Easton's [4] work does however enable the previous period to be placed in context. The period 1870 to 1939 was chosen because it enabled a broad study to be undertaken of the growth of the New Zealand economy once it was established. The information on which a study could be based was not available until at least 1870, and frequently not until considerably later than this date. The coming of the Second World War appeared to be an appropriate ending point, especially since some research had already been completed on the post-war period. The study has been intended to be a survey of the major trends in wealth and income in New Zealand between about 1870 and 1939.

---

4. B. Easton, Income Distribution in New Zealand. New Zealand Institute of Economic Research, Research Paper 28. 1983.

CHAPTER 2.

THE AVERAGE WEALTH OF NEW ZEALANDERS,

1890 to 1939

There is no reliable source of information on the wealth of New Zealand residents in the period 1870 to 1939. The government, content with the knowledge that New Zealanders were not poor, did not see any need to inquire into their assets in any of the quinquennial censuses. And as taxation was based on either land holdings or income levels, (except for a brief period of property taxes in the 1880's), the government was not inclined to require the individual to divulge information on other aspects of their affairs. We have therefore, only isolated statistics on property holdings, other than land, for the total population. However, there were two occasions on which a person was required to list all their wealth to the government officials : on bankruptcy and on death. The records created by this are the best source of information available, though obviously only a small proportion of the population was being dealt with at any point in time. Bankruptcy is obviously not the best occasion on which to judge the material well-being of any person, and so the valuations of estates for death duties is the most promising source of information on the wealth of the New Zealand population.

Estate valuations have been widely used in other countries to determine changes in the distribution of wealth. The problems associated with using them have therefore been fully discussed in the literature, the best summary being by the English scholars A.B. Atkinson and A.J. Harrison.[1] Briefly,

_____

1. "Wealth and Personal Incomes" Review of United Kingdom Statistical Sources Vol. VI Chapters 1-7.

the two sources of problems are the inclusion of only the
dead in the valuations, and the actual method by which bureau-
crats valued items.

The use of estate valuations as a source of information
on the wealth of the population is effectively the use of a
sample, where inclusion in the sample is determined by whether
each individual dies in the time period. This is not random
sampling, since random sampling requires that each individual
has an equal chance of inclusion but death visits the elderly,
unhealthy and those unable to receive high quality health
care disproportionately. The estate valuation sample will
therefore include a disproportionate number of the aged, in-
firm, and those too poor to afford good health care. The
aged tend to have more wealth than the average, and the infirm
and poor less. We have therefore a biased sample. This
bias could theoretically, be eliminated by weighting each
estate, so that it is in proportion to the number of similar
people in the total population. But it is very difficult to
determine the proper weights for any of the variables other
than age.[2] In this chapter, we will confine ourselves to
correcting our series for the excessive number of elderly
people. Not only are the problems associated with determin-
ing the other weights too great for a definitive result to be
attained, but also our basic information is too sparse for
such reweighting to be applied. Indeed, until the figures
for 1913, it has not been possible to correct for even the
excess numbers of elderly, as this was the first year that
estate values were broken down by age-group.

The second category of problems associated with the
estate valuations were created by the methods used by the
governments' officials to value the estate. The state was
valuing the estate in order to levy death and succession
duties. There was therefore considerable pressure on the
administrators of the estate to ensure the valuation was con-
servative. Valuations could be appealed, and to eliminate

---

2.   See A.B. Atkinson and A.J. Harrison The Distribution of
      Personal Wealth in Britian (Cambridge; University
      Press, 1978) Chapter 3.

doubts, the Stamp Duties Department, which did the valuation, used standard and conservative valuations. Land was valued at the government valuation, although this was known to lag behind market values especially in times of rising prices, and furniture and other personal effects were usually given a nominal value of around £15. Ongoing business ventures were notoriously difficult to value, and tended to be heavily undervalued. The only assets whose market value was guaranteed to be used were cash and financial assets for which unassailable values were available. We, unfortunately, do not know the distribution of the various assets in our period,[3] however, the assets which were likely to be fully valued traditionally form a high proportion of the small estates, and those which tended to be undervalued, were held disproportionately by the rich. Our estimates, therefore will be biased downwards both for the average value of wealth, and for the level of inequality in the wealth-holding.

The lack of any information on the type of assets involved means that we cannot exclude assets that are attributable to the person's death, such as life insurance. Obviously life insurance payouts on death are an asset in which the living do not share, and as we wish to use the probate valuations to tell us about the wealth of the living, we would prefer to have figures which do not include them. This was however, not possible, and this would upwardly bias the results. Fortunately, pension schemes were very uncommon in our period and so the problems associated with this income which only accrues to the living, are not significant in our period.

It is unlikely that the valuations of estate were substantially reduced by attempts to evade death duties. Throughout our period, the level of death duties was light, with most estates paying only 2 per cent (See table 2.1).

---

3. The Estate Duties Section of the Stamp Duties Department was amalgamated into the Inland Revenue Department in 1951, and the records that were created as public documents in our period are now bound by the Inland Revenue Acts' very tight secrecy provisions. A request to the Commissioner of Inland Revenue for access to the asset-breakdown information was denied. (Letter dated October 1981)

TABLE 2.1

DEATH DUTY RATES ON SELECTED ESTATES
(Percentages)

Size (in Pounds)	1885	1909	1921
0	Nil	Nil	Nil
100	Nil	Nil	Nil
500	2.00	1.00	Nil
1,000	2.25	2.00	1.00
5,000	3.25	3.67	4.00
10,000	5.13	5.33	7.00
15,000	5.75	6.00	8.00
20,000	6.06	7.00	9.00
50,000	8.43	8.65	15.00
100,000	9.21	12.00	20.00

Sources: Deceased Persons' Estate Duties Act 1881.
                  Amendment Act 1885
             Death Duties Act 1909
             Death Duties Act 1921.

Even the largest estates were levied death duties at a maxi-
mum rate of 20 per cent.   The incentive for evasion was
lacking, and the penalties, both imposed by the courts and
by a tightly knit community, would have discouraged most
potential offenders.   But the valuations of estates were re-
duced by exemptions allowed.   For most of our period, estates
passing to a surviving spouse were not subject to death duties
for the first £1,000.   While it is not clearly stated, it
would seem probable that the statistics on estate valuations
published in the New Zealand Official Yearbook, were net of
this deduction.   As we do not know the number or value of
estates passing to surviving spouses, we cannot correct for
this omission.   However, it is possible to make an allowance
for the general exemption given to all estates.   Those estates
under £100 from 1866 to 1920, or £500 from 1921 to 1923, or
£1,000 from 1924 onwards, did not have to pay any death or
succession duties, and as a result did not have to be valued.
It is possible to estimate the number of such estates belong-
ing to those over 15 by comparing the number of deaths in

TABLE 2.2

ESTATES AS A PROPORTION OF DEATHS OVER THE AGE OF 15.

Year	Proportion	Year	Proportion	Year	Proportion	Year	Proportion
1893	13.87	1910	32.90	1920	70.03	1930	53.28
1894	13.44	1911	37.69	1921	67.11	1931	49.22
1895	17.62	1912	41.57	1922	57.49	1932	49.98
1896	20.05	1913	37.64	1923	54.44	1933	48.75
1897	24.74	1914	35.71	1924	56.29	1934	46.01
1898	25.66	1915	37.44	1925	53.62	1935	47.61
1899	26.64	1916	40.01	1926	50.54	1936	54.48
1900	27.02	1917	47.30	1927	53.26	1937	46.67
1901	22.75	1918	31.32	1928	53.13	1938	50.02
1902	25.13	1919	59.46	1929	53.35	1939	53.79
1903	28.83						

Sources: Estate numbers: New Zealand Official Year Book
                                1895-1942.
            Deaths: Statistics of New Zealand

that year.[4]   The proportion of estates valued to deaths is shown in Table 2.2.   At the beginning of the series only a relatively small proportion of estates were valued for death duties.   However, the proportion increased markedly over time, varying with the limit changes in 1921 and 1924, and with economic conditions.

We know that the estates that were not valued had a range of net assets that was comparatively small.   The maximum they could be was the legal exemption limit, and the minimum value was zero (as benefactories cannot be made to pay if debts exceed assets).[5]   We can therefore construct an upper

---

4.   The majority of estates published in the Mercantile Gazette of New Zealand as having been valued, appeared within 9 months of death.   The death registrations will therefore provide a guide as to the number of estates being left.

5.   This is another way in which the sample varies from the population, as living people can owe more than they own.   However, as most people with negative balances quickly go bankrupt (the legal way of bringing the net estate to zero), the number of people with negative assets at any particular time is small.

estimate of wealth by assuming everyone had the maximum
estate, and a lower estimate by assuming that all those who
were not valued had no estate. Both of these are of course
extremes, and unlikely to be the correct level of assets,
but they are interesting because they give the total range
in which possible estimates could lie. As Table 2.3 shows
this range is not great relative to the absolute size of the
average estate. In 1893 the difference was 22 per cent of
the lower bound figure, and in 1939 it was still only about
33 per cent.

A reasonable estimate of where the average value of
estate lay within this range can be constructed using the
information which is available on the proportion of estates
excluded and the maximum level of the exemption. It would
seem reasonable to expect that if the proportion of estates
which were omitted became higher, that their average value
would fall: more people were obviously poor, and therefore
on average they would be poorer. If we assume this relation-
ship was linear, then a reasonable estimate of the average
value of the unvalued estates can be constructed using the
relationship:

$$A = E \times (1 - P)$$

where A = average value of unvalued estates

E = the exemption level

P = proportion of estates not valued.

The values given by this equation will vary in a reasonable
manner with the average values of estates, and so capture the
tax trap effect of a stable exemption limit on a wealth dis-
tribution being moved by either economic progress or price
changes. It is better therefore than assuming a fixed
average value.

The resulting series is presented in Table 2.3. The
medium series is nearer the low series at the beginning be-
cause of the high proportion of estates which were exempt.
It grows faster than the two extreme series as the steady
decrease in the proportion of exempt estates implied an in-
crease in the average value of these estates.

The values shown in Table 2.3 cannot be taken at face
value as representing the average assets held by the popula-
tion. There has been no correction for the excessive number

TABLE 2.3

AVERAGE WEALTH IN NEW ZEALAND, 1893-1939

(Pounds)

Year	High	Medium	Low	Year	High	Medium	Low
1893	476.69	402.51	390.56	1917	1453.29	1314.40	1189.76
1894	355.92	289.99	269.36	1918	1153.00	916.31	808.98
1895	441.66	373.79	359.28	1919	1663.71	1581.01	1460.48
1896	588.00	524.00	508.06	1920	1697.68	1652.78	1547.84
1897	509.73	453.09	434.47	1921	1923.37	1869.30	1758.94
1898	529.16	473.90	454.82	1922	2109.50	1968.75	1684.35
1899	479.00	425.18	405.64	1923	2196.92	1989.33	1741.30
1900	466.90	415.64	393.92	1924	2242.61	2051.53	1805.48
1901	444.63	384.96	367.38	1925	2082.75	1867.64	1618.95
1902	548.89	492.84	474.02	1926	1983.57	1738.98	1489.01
1903	608.06	550.04		1927	2215.58	2027.65	1778.71
1904		N.A.		1928	1954.39	1734.67	1485.65
1905		N.A.		1929	2232.64	2015.04	1766.17
1906		N.A.		1930	2062.29	1844.00	1595.08
1907		N.A.		1931	1719.48	1461.59	1211.65
1908		N.A.		1932	1825.50	1575.26	1325.26
1909		N.A.		1933	1926.68	1663.99	1414.15
1910	1061.52	836.41	726.02	1934	1942.77	1651.29	1402.88
1911	1071.09	877.08	759.56	1935	2010.80	1736.34	1486.91
1912	1128.70	957.98	836.54	1936	1840.31	1636.54	1392.64
1913	1302.53	1108.07	990.71	1937	1779.59	1495.20	1246.31
1914	1245.30	1038.61	923.82	1938	1794.20	1544.38	1294.38
1915	1441.06	1245.39	1128.28	1939	1876.85	1663.27	1414.71
1916	1276.28	1096.37	976.36				

Note: There is no correction for the age structure of
         deaths.
         The high series assumes non-valued estates all had
         wealth at the legal exemption level. The low
         series assumes all non-valued estates had no assets.
         The medium estate uses the technique described in
         the text.

Source: New Zealand Official Year Books 1893- 1939.

of elderly people, and as these people have in general more
assets than the population, the estimates are too high.
However, the low series presented in the table provides an
opportunity for comparing New Zealand's wealth with the es-
timates of Victorian wealth produced by W.D. Rubinstein
using the same method.   The comparative figures, shown in
real prices based on 1911 prices, are given in Table 2.4.
The comparison suggests that the two colonies had a very
similar wealth level throughout, but that from the 1920's

TABLE 2.4

NEW ZEALAND AND VICTORIAN ESTATES, 1880-1939

(Pounds, 1911 Prices)

Year	New Zealand All Estates	Victoria Males	Females
1880		473	74
1893	451		
1908-09		885	256
1910	732		
1923-24[1]	1031	1412	640
1938-39[1]	1294	1514	826

[1] 1923 and 1938 respectively for New Zealand.

Sources: New Zealand: Table 2.3 Low series, corrected
to 1911 prices using the price index from
M.N. Arnold 'Consumer Prices, 1870 to 1919'
Victoria University of Wellington, Economics
Department, Discussion Paper No. 12 May 1982
p.28 and Department of Statistics Miscellan-
eous Statistics 1940, p.9.

Victoria: W.D. Rubinstein 'The Distribution
of Personal Wealth in Victoria, 1860 to 1974'.
Australian Economic History Review XIX No.1
March 1979 p.35

onwards, New Zealand was slipping behind relatively to the
level of wealth in Victoria.

From 1908 onwards the figures published in the New
Zealand Official Year Book were improved by the inclusion of
a table giving the number and total value of estate left by
people who died in each five-yearly age group.   Unfortunately
the table was presented as an accumulation of four or five
years of probates, but by subtracting one table from another
it was possible to separate most years from 1913 to 1930.[6]

The added information enabled us to do two important re-
finements to our figures : the correction for non-valued es-
tates could be done for each five-yearly age-group, and the
average value of estates could be weighted so that the pre-

---

[6]   Unfortunately the Department of Statistics could not
locate the original tables.

dominance of elderly people was corrected. The correction for non-valued estates by age-group was significant because the age-groups were not equally represented in the estates. The estates of young people were much less likely to be probated than those over 40, and a peak of almost 60 per cent of deaths being accounted for with valuations was recorded for the 60 to 75 year olds. Correcting by age-group gave therefore a more precise estimate of the average value of missing estates, and of the average value of estates in each age-group.[7] But the reweighting of the figures is more important still, as the tendency of wealth to increase with age meant that the estimates of average value of estates given in Table 2.3 severely over estimated the average wealth of the population. The average value for each five yearly age-group was therefore weighted by that age-group's proportion in the total population to produce a more reliable estimate.

From 1927 onwards the Official Year Book again changed its table to one of age by wealth group. This was used in the same manner, estimating the average wealth in each wealth group from the total figures for all age-groups. This procedure tended to over estimate the wealth of the younger age-groups and, because these were heavily weighted in the population, produced higher overall estimates. It was however, the best use of the available information. The results of these two series can be seen in Table 2.5.

Again it is possible to compare New Zealand's wealth level with that in Australia. In 1915 the Australians, as part of their 1915 census, asked all those over 18 to give the value of their wealth. The average for each state is shown in Table 2.6. The New Zealand figure for all estates over the age of 15 in 1914 of £421.6 is slightly lower than that in Australia. However, as the inclusion of 15 to 17 year olds could be expected to lower average wealth, it would seem likely that the New Zealand wealth level was higher than the lowest Australian estates (Queensland and Western Australia) though not at the level of New South Wales or Victoria.

7. The ten per cent allowance for missing estates included in the original Official Year Book figures was subtracted for this analysis.

TABLE 2.5

AVERAGE VALUE OF ESTATES,
CORRECTED FOR AGE DIFFERENCES.
(Pounds)

	(1) Total Population	(1) Over Age 15		(1) All	(2) All	(1) Over 15	(2) Over 15
1913	290.4	426.96	1927	591.1	596.8	835.8	1177.83
1914	284.9	421.6	1928	595.6	519.1	876.2	1064.62
1915			1929	592.7		899.1	
1916			1930	644.6		801.9	
1917	565.0	765.5	1931				
1918			1932				
1919			1933		425.9		939.7
1920	564.1	824.4	1934				
1921	600.9	865.8	1935				
1922	563.5	856.9	1936				
1923	592.8	875.1	1937		441.8		953.67
1924	661.3	940.0	1938		443.1		957.9
1925	607.2	844.13	1939				
1926	625.8	844.1					

(1)   Using the age-group table
(2)   Using the age by wealth group table.

Note: The medium assumption was used to calculate all
estates not valued.

Source: See text.

TABLE 2.6

AVERAGE WEALTH IN AUSTRALIA, 1915.
(Pounds)

	Men	Women	Total
Australia	665	367	555
New South Wales	691	398	592
Victoria	729	370	574
Queensland	524	295	446
South Australia	744	359	594
West Australia	498	342	457
Tasmania	531	358	471

Source: L. Soltow 'The Census of Wealth of Men in
Australia in 1915 and in the United States in
1860 and 1870' Australian Econimic History Review
XII No. 2, 1972 p.133

The trends in the value of wealth, corrected for price changes, is shown in Table 2.7. The move to real wealth did not change the basic pattern of growth. Over the period as a whole, wealth doubled. However, this growth was concentrated in the period 1901 to 1924, with the exception of the war years when price rises exceeded increases in wealth. The period prior to 1901 is too short to display much trend, and the period after 1924 shows a downward but fluctuating trend. In this latter period the decline is more pronounced in the series which is corrected for age structure, suggesting that the younger age-groups were adversely affected by the economic problems of the period to a greater extent than the elderly people.

TABLE 2.7

REAL AVERAGE WEALTH

(Pounds, 1901 Prices)

Year	Series Uncorrected	Corrected	Year	Uncorrected	Corrected
1893	424.63		1917	917.24	534.19
1894	302.63		1918	573.12	-
1895	407.67		1919	899.43	-
1896	551.52		1920	841.52	419.75
1897	478.80		1921	937.96	434.43
1898	496.96		1922	1072.95	467.00
1899	461.35		1923	1076.25	473.44
1900	441.37				
1901	384.96		1924	1081.70	495.68
1902	481.67		1925	965.13	436.20
1903	-		1926	893.30	433.61
1904	-		1927	1050.96	309.33
1905	-		1928	894.63	267.72
1906	-		1929	1041.30	-
1907	-		1930	975.25	-
1908	-		1931	836.99	-
1909	-		1932	975.29	-
1910	769.96		1933	1085.95	277.95
1911	801.35		1934	1060.32	-
1912	850.10		1935	1076.30	-
1913	957.05	368.72	1936	982.74	-
1914	883.40	358.60	1937	840.47	248.34
1915	1013.83	-	1938	842.56	241.74
1916	-	-	1939	863.82	

Sources: Wealth: Uncorrected for age structure, Medium Series, Table 2.3
Corrected for age structure, Series (1) Table 2.5
Prices: As for Table 2.4

It is not easy to see from the figures in Table 2.7 what were the major influences at the general level of wealth. A regression analysis also only shows a few broad trends. The main variables affecting the accumulation of wealth are shown in Table 2.8 below. A large part of the rise in wealth

TABLE 2.8

REGRESSION EQUATION ON AVERAGE ESTATE

	value	t-test
n = 35		
F. ratio 140.38		
R-squared 0.96		
Intercept	-3987.22	(-4.51)
M2	-0.006	(-1.00)
Mortgages	-3.96	(-0.92)
C.P.I.	11.71	(3.43)
Land prices	8.60	(0.43)
Age	63.90	(4.48)

Sources: Wealth and CPI Table 3.1
Mortgages and Land prices : M. Arnold 'The Market for Finance in Late Nineteenth Century New Zealand' (M.A. Thesis, Victoria University of Wellington, 1982) Chapters 2 and 6.
Age: Average age from census data, linearly interpolated.
M2:   Bank current accounts and term deposits G.R. Hawke. 'Towards a Reappraisal of the 'Long Depression' in New Zealand 1879-95. (Unpublished seminar paper delivered at Dept. of Economics, University of Auckland, 1975.) and 'Monetary Aspects of the Upswing 1896-1914 (Wellington : Unpublished typescript, n.d).

can be attributed to the general rise in prices experienced from 1896 onwards. However this effect is less than that attributable to the gradual aging of the population. In 1893 the population was still a youthful one as a result of the age structure of migrants. Over our period a more normal age structure developed and the aging this implied was a factor influencing wealth levels. Older people have had more time to accumulate or inherit wealth, and so tend to be more wealthy.

The changing values of the major investment assets do
not appear to have been a significant factor. The coefficients
on money supply (M2, by the current Reserve Bank definitions),
and mortgages are both negative, but not statistically differ-
ent from zero. Land prices had a positive coefficient but
again were indistinguishable from zero. The age structure of
the population, and general price level changes were therefore
the main influences on wealth levels.

CHAPTER 3.

THE DISTRIBUTION OF WEALTH IN NEW ZEALAND
1893 to 1939

The colony of New Zealand was perceived by many observers to have a level of equality not achieved by the Old World. Governor Grey has been quoted as having said:

> "In fact society in a Colony, though divided into sets which refuse to associate with each other, is chiefly remarkable for the absence of any order which is an object of respect: - a fact racily expressed in a vulgar saying that 'every man is not only as good as his neighbour, but a good deal better'."[1]

To many outside observers, this social equality was transferred into economic equality, largely through the absence of abject poverty. The lack of beggars, unemployed men, and workhouses was sufficient for many to claim New Zealand to be a land of equal opportunity, if not complete equality. The wealth of the country was not, however equally distributed. In 1914, when the average adult was worth about £420 in net assets, the largest estate of our period was valued for death duties at £796,446, while in the same year almost 36 per cent of those over 15 years old who died left less than £100, and so did not have their estate valued at all. However, though these figures indicate that wealth was distributed unequally, they give no measure which would enable comparisons across time, or with other countries.

There is no statistic of inequality which is generally accepted as impartially measuring the distribution of wealth. As A.B. Atkinson has ably shown all of the measures of inequality make some assumption about the kind of distribution

---

1.   Quoted in K. Sinclair <u>A History of New Zealand</u> (London; Allen Lane, Rev. ed. 1980) p.98

of wealth which is undesirable. In particular, the most common measure of inequality, the gini coefficient, places less weight on the distribution at the extremes than at the middle.[2] This is unfortunate for our purposes, as it is the lack of extremes in wealth which observers noted as the characteristic putting New Zealand apart from the Old World. However, because it is a commonly used summary statistic, we will use the gini coefficient as one method of measuring the distribution of wealth, and we will look at the top and bottom of our distribution separately. For the purposes of con- structing a long-term series, we will be using the medium series used in Table 2.3. It should be noted that no correction has been made in this series for the unduly high porportion of elderly people included in the probate sample, and that, because these people tend to be wealthier, this will make the series look more equal than the population as a whole.

The gini coefficient for the years in our period is given in Table 3.1. As is typical of wealth distributions, the measure is greater than 0.5 - that is it is nearer to the per- fect inequality measure of 1 than the perfect equality measure of 0. However over the period as a whole there is a reduct- ion in inequality, most of which came in the 1930's, after a slight tendency of inequality to rise in the 1920's. The depression of the 1930's appears to have hit the very rich particularly hard, probably because they held a higher prop- ortion of their assets in shares, business assets and mortgages, all of which lost capital value during the depression. As graph 3.1 shows this trend continued in the 1950's and 1960's.

On an international scale, the New Zealand gini coeffic- ients were not very high. Historical gini coefficients are rare, even though this is the most common measure used, but the available figures are given in Table 3.2. The Victorian figures are based on the extreme assumption that those deaths not accounted for by estate valuations had no net assets. This would have increased the apparent level of inequality how- ever, even taking this into account, New Zealand had a more

2. A.B. Atkinson and A.J. Harrison The Distribution of Personal Wealth in Britain (Cambridge; University Press, 1978) Appendix IV

GRAPH 3.1

GINI COEFFICIENTS

20

U.S.A

U.K.

New Zealand

Key

New Zealand
United Kingdom
United States

1880   1890   1900   1910   1920   1930   1940   1950   1960   1970

1
0.8
0.6
0.4
0.2
0
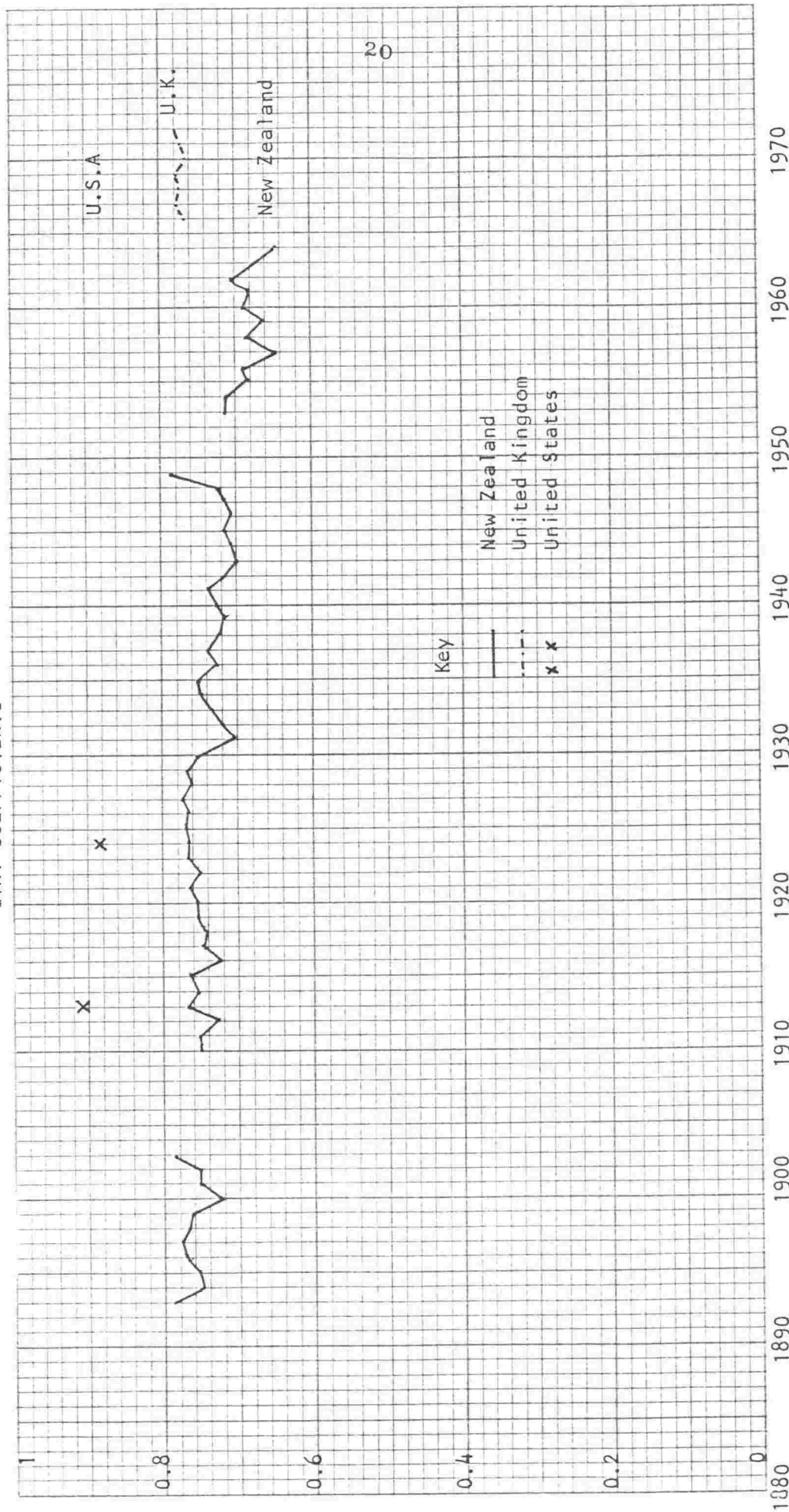
Sources: New Zealand Table 3.1
U.S.A.: Williamson & Lindert "American Inequality" P.50

United Kingdom: Atkinson & Harrison 'Distribution of Personal Wealth" P.123

TABLE 3.1
GINI COEFFICIENTS : NEW ZEALAND WEALTH

Year	Gini	Year	Gini	Year	Gini	Year	Gini
1893	0.788	1917	0.750	1936	0.724	1955	0.681
1894	0.749	1918	0.749	1937	0.743	1956	0.686
1895	0.757	1919	0.758	1938	0.726	1957	0.645
1896	0.777	1920	0.759	1939	0.720	1958	0.683
1897	0.779	1921	0.767	1940	0.736	1959	0.675
1898	0.763	1922	0.757	1941	0.741	1960	0.688
1899	0.762	1923	0.767	1942	0.719	1961	0.680
1900	0.727	1924	0.766	1943	0.702	1962	0.707
1901	0.759	1925	0.768	1944	0.712	1963	0.678
1902	0.758	1926	0.768	1945	0.717	1964	0.648
1903	0.785	1927	0.775	1946	0.704		
		1928	0.750	1947	0.712		
1910	0.753	1929	0.773	1948	0.730		
1911	0.756	1930	0.753	1949	0.784		
1912	0.728	1931	0.706	1950	n.a.		
1913	0.777	1932	0.728	1951	n.a.		
1914	0.759	1933	0.739	1952	n.a.		
1915	0.767	1934	0.744	1953	0.722		
1916	0.731	1935	0.759	1954	0.722		

Notes: (1) deaths without estate valuations were assigned an average wealth using the medium assumption outlined in Chapter 2.

(2) There is no correction for age-structure.

(3) To 1917, the actual value of the largest estate probated was used as the upper bound. From 1918 onwards this information was not available so an assumed level was used. The calculation of the gini was not very sensitive to the upper bound.

Source: See text.

equal distribution of wealth through to 1962-63. The United States had a more extreme measure of inequality still, despite the inclusion of some allowance for unaccounted for deaths. The three figures from the only common year, 1923, are sufficiently different for the hierarchy to be established beyond doubt; and compared to these other parts of the New World, New Zealand was indeed a land of equality.

A second measure of the distribution of wealth is the proportion of assets held by various subgroups in the wealth hierarchy. This measure complements the gini coefficient

TABLE 3.2

INTERNATIONAL GINI COEFFICIENTS

| Place | International Figures | | N.Z. Comparison[3] | |
	Year	Gini	Year	Gini
Victoria[1]	1880	0.957	1893	0.788
	1908-09	0.904	1910	0.753
	1923-24	0.871	1923	0.767
	1938-39	0.867	1938	0.726
	1953-54	0.816	1953	0.722
	1962-63	0.769	1962	0.707
U.S.A.[2]	1912	0.925	1912	0.728
	1923	0.899	1923	0.767

Notes: (1) Men only. Estates not valued are assumed
to have zero wealth.

(2) All estates : Estates not valued assumed to
have c$100.

(3) Assumes unvalued estates have a medium level
of wealth. (See text)

Sources: Victoria: W.D. Rubinstein Op cit p.35
U.S.A. : J.G. Williamson and P.H. Lindert
American Inequality (New York:
Academic Press, 1980) p.50

because it concentrates on the extremes of the distribution,
especially the very wealthy. The percentage of assets held
by various proportions of the population is given in Table 3.3.
The dominance of the wealthy in asset holding is clear. Only
a minor proportion of assets were held by the bottom 50 per
cent, and though this increased almost four times in our
period, they still did not own 15 per cent of the available
assets in 1939. The fall in the gini coefficient is apparent
in the table in the dramatic decline in the fortunes of the
top 20 per cent in the period.

The proportion of assets held by the top one per cent of
the population in England and Wales and the United States is
shown on Graph 3.2. The proportion of assets held by the
New Zealand top one per cent was about half that found in
England in the 1920's and 1930's. The common impression then
that the colony was much more equal than the home country
is definitely confirmed. The difference between New Zealand
and the United States is much less pronounced, especially

23

GRAPH 3.2

PROPORTION OF WEALTH HELD

TOP 1% POPULATION

Percent

England and
Wales

United States
-
New Zealand
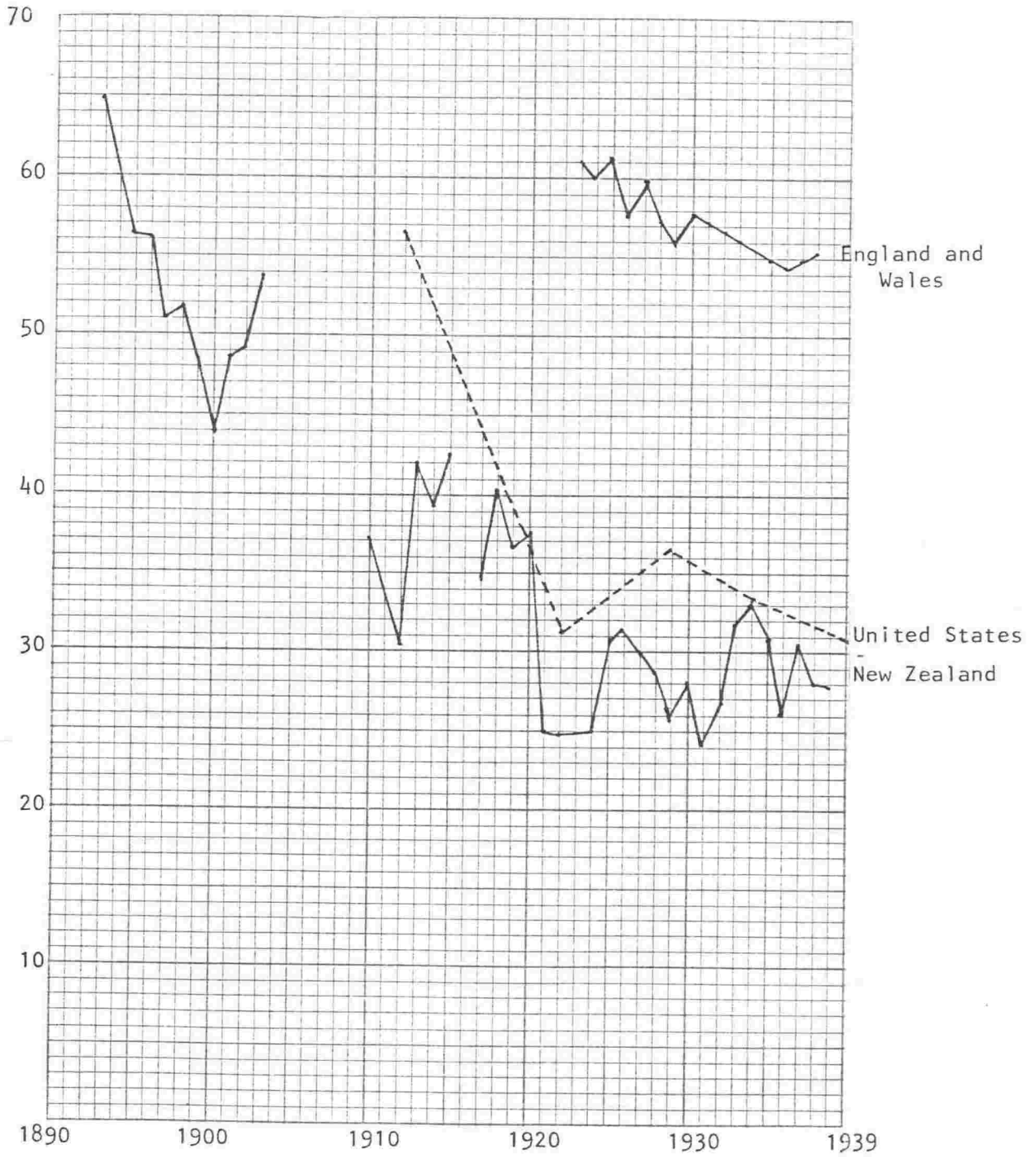
Sources: Williamson, ibid p.52, 54
Atkinson ibid, p. 159

TABLE 3.3

DISTRIBUTION OF WEALTH

Proportion of Wealth held by:

	Top 0.1%	Top 1%	Top 5%	Top 10%	Top 20%	Bottom 50%
1893	30.02	64.85	88.70	92.99	93.77	3.89
1894	15.71	60.82	85.55	90.07	91.17	5.52
1895	13.25	56.00	82.66	90.79	91.81	5.12
1896	10.47	58.78	83.19	91.43	92.38	4.76
1897	13.23	50.70	80.02	89.78	90.92	5.68
1898	12.74	51.53	76.97	87.62	90.77	5.77
1899	11.78	48.62	76.64	87.13	89.53	6.54
1900	8.35	43.42	72.10	84.87	89.23	6.73
1901	11.18	48.16	79.07	89.08	90.29	6.07
1902	8.18	48.99	77.59	88.04	91.35	5.40
1903	9.65	53.33	81.37	90.56	92.73	4.51
1904						
1905						
1906						
1907						
1908						
1909						
1910	5.13	37.04	65.15	75.75	83.41	10.37
1911	5.65	36.54	62.85	73.55	82.53	10.92
1912	3.79	30.01	59.52	69.61	81.50	10.72
1913	6.08	42.17	66.48	77.12	86.07	8.70
1914	5.27	39.44	65.60	76.12	85.51	8.94
1915	4.99	42.31	67.44	77.68	86.38	7.83
1916	4.07	33.55	61.07	72.94	83.22	9.52
1917	3.68	34.53	61.04	73.16	83.18	8.93
1918	5.30	40.15	67.43	77.14	85.08	9.32
1919	3.68	36.71	61.71	71.16	75.80	8.86
1920	3.72	37.19	61.85	73.35	83.73	7.85
1921	2.48	24.83	57.35	71.07	82.88	7.13
1922	2.48	24.75	54.62	62.74	78.46	12.28
1923	2.42	24.18	57.11	69.48	79.92	11.67
1924	2.48	24.82	56.92	69.13	79.64	11.46
1925	3.03	30.32	56.61	69.01	79.29	12.27
1926	3.16	31.65	56.62	69.12	79.32	12.66
1927	2.93	29.26	58.67	70.41	80.46	11.38
1928	2.85	28.48	53.88	66.79	77.58	13.27
1929	2.53	25.35	58.61	70.40	80.43	11.45
1930	2.79	27.91	55.14	67.78	78.26	12.65
1931	2.65	23.74	48.84	62.13	74.26	15.46
1932	2.76	26.86	51.77	64.68	76.05	14.45
1933	3.34	31.98	54.83	66.65	77.25	13.72
1934	3.27	32.49	56.02	67.86	78.56	13.23
1935	3.10	30.95	57.91	69.25	79.20	12.78
1936	2.59	25.92	52.80	66.31	75.72	14.71
1937	3.37	30.91	54.90	66.43	76.78	14.51
1938	3.13	27.45	51.38	64.11	75.60	14.72
1939	2.71	25.34	49.69	63.36	75.19	14.19

Note: Assumes medium wealth distribution.
Source: See text

TABLE 3.4

PROPORTION OF ASSETS HELD BY WEALTH GROUPS

(Percentages)

Year	Top 0.1%	Top 0.2 – 1%	Top 1 – 5%	Top 5 – 10%	Top 10 – 20%	Top 20 – 50%	Bottom 50%
1893	30.02	34.83	23.85	4.29	0.78	2.34	3.89
1894	15.71	45.11	24.73	4.52	1.10	3.31	5.52
1895	13.25	42.75	26.66	8.13	1.02	3.07	5.12
1896	10.47	48.31	24.41	8.24	0.95	2.86	4.76
1897	13.23	37.47	29.32	9.76	1.14	3.40	5.68
1898	12.74	38.79	25.44	10.65	3.15	3.46	5.77
1899	11.78	36.84	28.02	10.49	2.40	3.93	6.54
1900	8.35	35.07	28.68	12.77	4.36	4.04	6.73
1901	11.18	36.98	30.91	10.01	1.21	3.64	6.07
1902	8.18	40.81	28.60	10.45	3.31	3.25	5.40
1903	9.65	43.68	28.04	9.19	2.17	2.76	4.51
1910	5.13	31.91	28.11	10.60	7.66	6.22	10.37
1911	5.65	30.89	26.31	10.70	8.98	6.55	10.92
1912	3.79	26.22	29.51	10.12	11.86	7.78	10.72
1913	6.08	36.09	24.31	10.64	8.95	5.23	8.70
1914	5.27	34.17	26.16	10.52	9.39	5.55	8.94
1915	4.99	37.32	25.13	10.24	8.70	5.79	7.83
1916	4.07	29.48	25.00	9.45	7.94	4.64	8.86
1917	3.68	30.85	26.51	12.12	10.02	7.89	8.93
1918	5.30	34.85	27.28	9.71	7.94	5.60	9.32
1919	3.68	33.03	25.00	9.45	4.64	15.34	8.86
1920	3.72	33.47	24.66	11.50	10.38	8.42	7.85
1921	2.48	22.35	32.52	13.72	11.81	9.99	7.13
1922	2.48	22.27	29.87	8.12	15.72	9.26	12.28
1923	2.42	21.76	32.93	12.37	10.44	8.41	11.67
1924	2.48	22.34	32.10	12.21	10.51	8.90	11.46
1925	3.03	27.29	26.29	12.40	10.28	8.44	12.27
1926	3.16	28.49	24.97	12.50	10.20	8.02	12.66
1927	2.93	26.33	29.41	11.74	10.05	8.16	11.38
1928	2.85	25.63	25.40	12.91	10.79	9.15	13.27
1929	2.53	22.82	33.26	11.79	10.03	8.12	11.45
1930	2.79	22.12	30.23	12.64	10.48	9.09	12.65
1931	2.65	21.09	25.10	13.29	12.13	10.28	15.46
1932	2.76	24.10	24.91	12.91	11.37	9.50	14.45
1933	3.34	28.64	22.85	11.82	10.60	9.03	13.72
1934	3.27	29.22	23.53	11.84	10.70	8.21	13.23
1935	3.10	27.85	26.96	11.34	9.95	8.02	12.78
1936	2.59	23.33	26.88	13.51	9.41	9.57	14.71
1937	3.57	27.54	23.99	11.53	10.35	8.71	14.51
1938	3.13	24.32	23.93	12.73	11.49	9.68	14.72
1939	2.71	22.63	24.35	13.67	11.83	10.62	14.19

Source: Table 3.3

after the decline from the 1912 figure.   During the 1900's and 1930's the top one per cent in the United States owned only about 5 per cent more of the total assets than their New Zealand counterparts.

The decline in the gini coefficient from 0.788 in 1893 to 0.720 in 1939 has its counterpart in the rising proportion of assets held by the bottom 50 per cent of the population, and the decline in the proportions held by the top one per cent.   From a low of owning only 3.89 per cent of the total assets, the bottom 50 per cent increased their proportion to 14 per cent in 1939.   Most of this increase took place between 1903 to 1910 (when our statistics are missing) and from 1921 to 1939.   The bottom was not the only section to grow.   As Table 3.4 shows all the groups below the top 5 per cent of the population showed rapid growth in their proportion of assets, starting in the period 1893 - 1897 with the rapid growth of assets held by the top 5 - 10 per cent wealth group. The top 1 - 5 per cent group fluctuated in their fortunes, peaking in the early 1920's, however overall they experienced no change.   Those above the top 1 per cent experienced an overall decline, although the top 0.1 per cent experienced a slight recovery in the later 1930's.   The basic pattern of

TABLE 3.5

CHANGES IN WEALTH HOLDING

Period	Wealth Groups Gaining	Wealth Groups Losing
1893-1903	1 - 5 per cent 5 - 10 per cent	0.1 per cent
1903-1910	10 - 20 per cent 20 - 50 per cent 50 - 100 per cent	0.1 per cent 0.2 - 1 per cent
1920-1924	1 - 5 per cent 20 - 50 per cent 50 - 100 per cent	0.1 per cent 0.2 - 1 per cent
1929-1939	0.1 per cent 50 - 100 per cent	1 - 5 per cent

Source: Table 3.4

change is shown in Table 3.5.

The changes took place in four main periods, 1893-1903, 1903-1910, 1920-1924, and 1929-1939. In the first period the redistribution took place at the top - from the very wealthy to the not quite so very wealthy. It would seem that this pattern was also followed in land holdings,[3] and was due at least partly to the division of the large estates of early settlers among a large number of children. However from 1903 onwards the lower wealth groups begin to dominate the growth in asset share; and except for the slight revival of the 1 - 5 per cent group from 1920-24 and the top 0.1 per cent group in the 1930's depression, the bottom 90 per cent of the population was expanding its share at the expense of the top 1 per cent. The 1 - 5 per cent group, the moderately wealthy, were able to hold their own, and no more. During the 1930's it was the extremes that improved : the top 0.1 per cent and the bottom 50 - 100 per cent. The 5 to 50 per cent middle range did not grow during the depression, but did not suffer too harshly. It was the moderately wealthy who did worst in this period - the 1 - 5 per cent group. This group had experienced fluctuating fortunes during the 1920's, but had ended the decade, as they began it, in the 30 per cent range. By 1939 they had barely been above 25 per cent for a decade. The general downward trend in the average wealth in this decade was the result of the poor fortunes of this group.

For most sections of the community, the trends in wealth, as shown in the estate valuations information in the New Zealand Official Yearbook, were towards material well-being. The general rise in real wealth from the turn of the century to 1924, was accompanied by an overall trend towards a more equal distribution of wealth. On average New Zealanders of the 1920's and 1930's were much better off materially than their fathers had been in the 1880's or 1890's. And, the limited range of international comparisons made, suggest that the residents of New Zealand had as much wealth on average as those in Victoria, but that this wealth was more equally dis-

---

[3.] See J.D. Gould "The Twilight of the Estates, 1891-1910' Australian Economic History Review X No. 1 (March 1970), Pp.1-26.

tributed than in that colony, or the United States, and much
more equally than in Britain.   It is clear that Governor
Grey's vulgar saying "every man is not only as good as his
neighbour, but a good deal better "[4] was becoming increasingly
characteristic of the economic, as well as the social realm.

---

[4].See footnote 1 to this chapter.

CHAPTER 4

THE SAMPLE AND THE "MISSING" PEOPLE

Once we have looked at the average value and distribution of estates, we have almost exhausted the available information on wealth holdings in New Zealand between 1870 and 1939. We can, it is true, use the New Zealand Official Yearbook estate information to look at the age structure and its effect on wealth, (this is done in Chapter 8) but the most interesting questions about wealth holding in New Zealand cannot be answered from this source. It is necessary therefore to turn elsewhere.

New Zealand's scholars can look with envy at the wealth censuses held in Australia in 1915, and in the United States in 1840, 1850 and 1860. For all their imperfections, the published tables give the Australians a feel for the wealth distribution in that country, and in the United States, the original census manuscripts have allowed many scholars (notably Lee Soltow[1]) to look in detail at the effects of such factors as occupation, family structure and migration on the pattern of wealth.

In New Zealand there was no wealth census. The two published sources which come nearest to one are the Return of Freeholders in New Zealand in 1882,[2] and the 'Return Relating to Property and Property Tax'.[3] The first of these is a nominal

1. Soltow L, Men and Wealth in the United States, 1850-1870 (New Haven, Conn.; Yale University Press, 1975).

2. (Wellington; Government Printer, 1884)

3. Appendices to the Journals of the House of Representatives, (1890), B-15.

list of those people who owned land under freehold tenure in
1882, listing their address, occupation, the acreage and the
value of the land.   Land was an important asset, but using it
alone would give an incomplete picture of total wealth holdings.
We will use this source in Chapter 10 when we look specifically
at landed wealth.   The second source, the 'Return Relating to
Property and Property Tax' is more promising.

Under the Property Assessment Act of 1879 and 1885, New
Zealand had a tax based on wealth for the years 1879 to 1891.
The property tax was assessed on all real and personal property
owned by people, companies or trusts in New Zealand, less any
debts they owed.   There was however, an exemption of the first
£500 of property.   As the average wealth in 1893, uncorrected
for age differences, was £293, most of the population was exempt
from tax, and as a result did not have to file a declaration of
assets.   Of the 648,000 people in New Zealand in 1888, only
26,327 (or only 4 percent) were subject to property tax, though
84,547 people, trusts or companies actually filed declarations
of assets.

The Property Tax Commissioner was well aware of the gold
mine of information available to him, and in 1884 published the
Return of Freeholders, based on his valuation of all the land in
New Zealand.   The public outcry which followed this breach of
the privacy clause in the 1879 Act was sufficient to prevent any
information of value being published after the 1885- triennial
valuation.   But after the 1888 valuation he published aggregate
statistical tables on the distribution of assets in the 'Return
Relating to Property and Property Tax'.

The Return enables us to look at the wealth distribution in
1888 of assets owned by the 84,547 people who filed declarations,
and also it published some comparable figures from the 1885 tax
returns.   The tables distinguish between real property, (land
and buildings) and personal property (chattels, furniture,
financial and business assets).   The tables on these two diff-
erent types of assets show that personal property was more un-
equally distributed than land.   Of those who filed returns, the
top 1 percent of holders of personal property owned 49.67 per-
cent of such assets, but the top 1 percent of real property
owners owned only 31.4 percent of the real property which was

covered by declarations.   This probably reflects the widespread practice of home ownership in the country.

The return also provides a breakdown of the type of personal property held.   As the average value of personal property of the people involved was £1,147, the distribution was obviously that of the wealthy, however it is of particular interest as the only breakdown of asset type available in our entire period.   The figures are complicated by the inclusion of the assets of compan-

TABLE 4.1

THE DISTRIBUTION OF PERSONAL PROPERTY, BY ASSET

(Percentages)

	1885	1888
Horses		1.53
Cattle		1.98
Sheep		6.61
Other Livestock		0.37
All Livestock	11.56	10.49
Wool		0.22
Grain		0.55
Other Produce		0.19
All Produce	1.14	0.96
Stock-in-trade		8.94
Machinery and Plant		4.32
Consignments		0.30
All industrial goods	12.31	13.56
Furniture etc	5.74	5.48
Cash in hand		0.85
Cash at bank		7.25
Deposits		1.79
Shares in Building Societies		0.56
Mortgages		33.77
Debts		11.42
Debentures (1)		2.44
All financial assets	54.32	58.08
Other	14.92	13.88
Average value of personal property	n.a.	£1147

Note: (1)   in 1885 debentures were included in the
                "other" category.
Source: AJHR (1890) B-15 Table 5.

ies, including the banks and financial institutions, however some
trends are clear. First, it is clear that sheep farming domin-
ates the farming interests of the wealthy, and that for these
people, sheep were a major asset. Secondly, it is clear from
the high value of stock-in-trade, that merchants are also well
represented, and that stock-in-trade was probably their major
personal property. Finally, the high level of mortgages and
debts, even after the exclusion of assets owned by the trading
banks suggest that a large number of people had investment in-
come. These impressions are confirmed by the second table of
interest, which gives a breakdown of the occupation of the
24,013 individual taxpayers. The figures on the average value

TABLE 4.2

WEALTH BY OCCUPATION, 1888

Occupation of Taxpayers	Average Value	Ranking	Number	%
Professionals	£2426	4	1155	4.81
Civil Servants, Teachers	972	10	547	2.28
Retired professionals, merchants etc.	8988	1	342	1.42
Merchants	3475	3	667	2.78
Tradesmen, shopkeepers etc	1119	9	3156	13.14
Working storemen, mechanics etc.	434	11	2242	9.34
Manufacturers, brewers etc.	2307	5	525	2.19
Graziers, sheepfarmers	2273	6	8611	35.86
Land, Commission etc. Agents	1766	7	1858	7.74
Widows, Spinsters	1422	8	3760	15.66
Absentees	5421	2	1150	4.81

Source: AJHR (1890) B-15 Table 10

are not, of course, indicative of the average value owned by that
occupational group in society, as the figures are based on the
upper tail only, however they do suggest the ranking of the
groups. The retired people and those who lived overseas had
the highest average wealth. Probably both of these held the
bulk of their assets in financial investments, taking advantage
of the higher interest rates in New Zealand. Of the working

groups the merchants have the highest average wealth by some margin, accounting for the high level of stock-in-trade, and professionals and manufacturers also had high wealth levels. These are followed by the sheep farmers, who with almost 36 percent of the taxpayers, are the largest single group.

The 1890 Return gives only this much information on wealth holding, and so does not solve the problem of the lack of detail in the New Zealand Official Yearbook statistics. It was necessary therefore, to create a source of information that contained the wealth and biographical data needed to study the structure of wealth holding in this country. The best source of information on wealth was again the valuations of estates at death, as this was the basis on which an independent, market-based valuation was made of every person's wealth. These valuations were processed by the Commissioner of Stamps, but unfortunately the records of the Death Duties section of the Department were subsequently moved to the Inland Revenue Department when it was established in 1952, and are now subject to the strict secrecy provisions of this Department.[4] Fortunately, from mid-1887 to mid-1917 the Commissioner of Stamps released his valuations of estates which had been recently finalised to the Mercantile and Bankruptcy Gazette of New Zealand. They published the lists of the names and values of estates about once a month.

No reason was given for the sudden end of these publications in mid-1917. From late 1916 onwards the publication of lists had become erratic. The Mercantile Gazette was obviously suffering from the shortage of printing paper caused by the First World War, and the lists of estates was one of the more expendable items. It was probably dropped as a paper saving measure, and then not revived once the situation changed. The gap caused by this was fortunately relatively short, because a change in departmental responsibilities in 1921 led to the Supreme Court being charged with the task of actually collecting the death duties on estates. To do so, they had to be informed of the valuation of each estate so that the level of death duties

---

4.   An approach to the Department for access to the records
      was denied.

could be determined. The change took place in 1922, but it was not until 1924 that a regular system for reporting valuations had been established and was running smoothly. This system remained in force throughout the remainder of our period, and indeed until 1964 the Supreme Court received the final valuation on all estates and filed them as public documents among the Court records.

There were far too many estates for all to be collected, yet the skewness of the distribution of wealth meant that random sampling was not an appropriate procedure to use. It was decided therefore, that the best solution was to select years, and all estates which fell into those years would form the sample used in our study. All estates published in the Mercantile Gazette in 1888 (the first complete year), 1896, 1906 and 1916 were taken, as these years were census years (except for 1888), so the results could be readily compared with those for the total population. It was decided however not to use census years with the High Court records: 1926 and 1936 were not good years to use to see the effect of the 1930's depression on wealth. The estates which were filed for probate in 1924 (the first full year of reporting), and 1939 (the last year of our period) were taken, along with those from 1932, an intermediate year which coincided with the depths of the depression.[5]

The two series are not quite identical because of timing. The High Court records captured an estate when it was first filed for probate, which legally had to take place within three months of death. The Mercantile Gazette lists were compiled when the valuation was finalised. There was no time limit on this, and on occasions it was 20 or 30 years after the death of the person involved. But this was rare, and usually the estate was finalised within two years of death. The difference is not large then: with the 1916 valuations we are looking at primarily 1914, 1915 and 1916 deaths, whereas with 1924 valuations we are looking at deaths in the last quarter of 1923 and most of 1924.

The estates in 1916 are not complicated by the deaths of soldiers at the first World War. Soldiers who died, either on

---

5.   The co-operation of the Registrars of the High Courts (formerly Supreme Courts) in Whangarei, Auckland, Hamilton, Gisborne, Napier, Wanganui, Palmerston North, Masterton and Wellington, Blenheim, Nelson, Christchurch, Timaru, Dunedin and Invercargill was greatly appreciated.

active service, or of wounds acquired in active service were automatically exempt from death duties, and so their estates were not valued. There was, perhaps, a slight lack of estates of young men in this year as some of those who would have died in New Zealand died on active service instead. However the numbers involved would not have been great.

These sources enabled a file to be constructed giving the name and wealth of a sample of the deaths in our period. It was then necessary to get biographical details on each person. This was accomplished by tracing the death certificate for each individual. This was reasonably easy as we knew the full name, an approximate year of death, and except for intestate estates handled by the Public Trustee (which all went through Wellington) the nearest Court to the usual residence of the deceased. The death registers were searched therefore for someone with the same name and district, and who died in the three years up to and including the year in question with the Mercantile Gazette lists, or the previous year and the year in question for the High Court records.

Not all the death certificates were traced. This may sometimes have been because the person died overseas, and so there was no certificate issued, but it was probably more commonly because of problems matching the name. Sometimes the surname was spelt slightly differently in the two records (the worst case being the Reeds, Reids and Reads), and this made it difficult to link records unless the christian names were unusual. It was also not uncommon to find the christian names reversed - and again without an unusual name, it was hazardous to link the records. Finally, the people with very common names - the William Smith's and Donald McDonald's - were almost impossible to trace, as many people died with these name each year. When there was doubt no certificate was taken.

The number of estates and of death certificates traced in each year of our years is shown in Table 4.3. Overall a success rate of matching of over 80 percent was achieved. The matching rate was however noticeably higher with the High Court records, where death took place closer to the date of the record, than with the Mercantile Gazette records. As Table 4.4 shows for the untraced 1916, some of this was due to the inclusion of

TABLE 4.3

CHARACTERISTICS OF THE SAMPLE : MATCHING RATES

	Number of Estates	Number of Death Certificates	% Traced
1888	442	284	64.25
1896	874	527	60.30
1906	1599	1157	73.48
1916	2788	1823	65.39
1924	3932	3174	80.72
1932	4299	3714	86.39
1939	6327	5430	85.82
Total	20251	16127	79.64

Source: See text.

estates for people who died prior to 1914 and so would not have been found in our search.

TABLE 4.4

DATE OF DEATH OF UNTRACED ESTATES IN THE
1916 PROBATE SAMPLE

Date of Death	Number of Estates
1869-1879	3
1880-1889	9
1890-1899	6
1900-1909	26
1910-1913	35
1914	34
1915	381
1916	183

Source: Mercantile and Bankruptcy Gazette, monthly lists.
In 1916 the date of death was included in the lists.

It would seem that the 20 percent of estates whose death
certificates could not be traced were significantly smaller than
those whose certificate could be found.   The statistics in
Table 4.5 show that the median estate whose certificate could
not be found was only 60 percent of the group whose certificate
could be found.   As the maximum estate was also substantially
below the traced group, the mean estate is also below that of
the traced group.   This was because the estates of the Public

TABLE 4.5

CHARACTERISTICS OF THE SAMPLE :

MATCHED AND UNMATCHED ESTATES

	Those with death certificates	Those without death certificates
Number	16127	4124
Mean	£2708	£2032
Standard deviation	£9577	£7473
Maximum	£426650	£170120
Top 75%	£2119	£1376
Median	£770	£463
Bottom 25%	£290	£139
Minimum	£0	£0

Source: Probate sample

Trust Office were all passed through the Wellington Court, and
so it was more difficult to trace these people as their region
of residence was not known.   Our sample of usable cases has
therefore an upward bias compared with the probate valuations as
a whole.

It is possible to get an approximate idea of the people
who are not included in our sample (either because their certi-
ficate could not be traced, or because they had so few assets
as to not require a valuation for death duties) by comparing our
sample with the statistics collected on all deaths in the year
of our probates.   This is, of course, only an approximate means,
as our probates in all cases relate to deaths also in previous

years.   The people who are not accounted for by estate valuations
were, as we found in Table 2.2, a substantial, if declining pro-
portion of deaths.   Table 4.6 shows that this was also true of
our sample, and that throughout the period we have less than half
of the deaths registered.   Women were particularly unlikely to
be included in the sample because so many of them owned no estate
in their own right, and so did not require probate valuations.

TABLE 4.6

PROPORTION OF DEATHS IN THE SAMPLE : BY SEX

Year	Male	Female
1888	6.67	2.63
1896	10.28	5.23
1906	16.58	10.49
1916	20.14	12.85
1924	34.00	23.54
1932	35.06	27.68
1939	41.10	34.90

Source: Deaths <u>Vital Statistics</u> (1937) p.30-31
            (1939) p.23-24.

The statistics on all deaths include a large number of
children who did not own estate in their own name.   As Table
2.7 shows once a person was over 20 the chances that they would
be included in our sample increased markedly especially in the
latter years.   The proportion of deaths included reached its
peak at about age 60, after which the chances of inclusion again
declined.   Those too poor to require valuations tended then to
be concentrated at both ends of the age spectrum.

The proportions in each age group in Table 4.7 are reduced
by the high number of women excluded from the sample.   Women
were particularly under represented as spinsters and married
women.   Spinsters tended to be young women, who, in common with
young men, had not had the chance to accumulate wealth prior to
their death.   Married women, that is those with husbands who
survived them, tended to have less estate due to the social
conventions of the period.   Not only did these women in general

TABLE 4.7

PROPORTION OF DEATHS INCLUDED IN THE SAMPLE : BY AGE

(Percentages)

	1888	1896	1906	1916	1924	1932	1939
0- 9	0.08	0.03	0.05	0.25	0.34	0.33	1.30
10-19	0.81	0.78	1.13	1.75	3.12	3.14	2.73
20-29	3.65	5.07	8.59	8.42	16.55	14.91	18.28
30-39	6.52	10.02	12.23	16.76	28.09	22.91	27.17
40-49	8.98	10.99	16.32	20.20	33.94	33.93	36.57
50-59	12.54	13.10	19.15	25.40	38.14	36.31	38.79
60-69	10.60	18.51	25.54)		43.27	40.94	44.71
70-79)			)	26.93	40.77	42.55	47.74
80-89)	9.53	16.28	23.58)		35.83	36.06	49.10
90-99)			)		25.14	32.61	42.16

Source: Statistics of New Zealand

not work, and so have no independent source of income, but
major household assets such as the family home tended to be held
in the husband's name alone.   These assets would not therefore
have formed part of the wife's estate.   Widows, on the other
hand, had a relatively high chance of being included in our

TABLE 4.8

PROPORTION OF WOMEN IN THE SAMPLE :

BY MARITAL STATUS

(Percentages)

	1932	1939
Spinster	16.20	22.01
Married	23.52	30.85
Widow	39.31	45.19

Note: Marital breakdown is not available for deaths
          prior to 1932.
Source: Vital Statistics (1932) p.61 (1939) p.82

sample, probably because they had inherited their husband's major assets on his death. However, even the widows did not have quite as high a proportion of members as men in the same age group.

Table 4.9 shows the proportion of men who had died who were included in our sample for 1924 by the occupation which was given on the death certificate.

TABLE 4.9

PROPORTION OF MEN IN THE SAMPLE FOR 1924 :

BY INDUSTRY

Farming	54.71
Hunting & Fishing	-
Forestry	12.50
Mining	24.16
P.P.P.	*
Food, beverages & tobacco	60.98
Clothing	46.43
Other textiles	51.85
Leather	46.67
Footwear	36.21
Wood & furniture	54.90
Paper & printing	57.50
Chemicals	-
Metal & machinery	36.46
Miscellaneous manufacturing	27.14
Public utilities	29.41
Building & construction	56.49
Rail transport	48.25
Other transport	38.29
Trade	37.23
Professional Services	52.48
Non-professional services	3.21
Miscellaneous	23.33

* Over 100 percent.

Source: Vital Statistics (1924) pp.75-77

As could be expected the groups which had high wealth in our earlier analysis based on the 1888 Property tax (see Table 4.2) are well represented in our sample. Professional services, farming, food and beverages (especially the beverages side)

clothing and other textiles, and the wood working industries (wood and furniture and building and construction) are well over-represented, while those excluded tend to be in the industries with a large proportion of unskilled workers, such as non-professional services and the large section of labourers in the miscellaneous group.

Table 4.10 gives the last portion of the analysis of our sample relative to the population. It would seem that overall those included in the sample were drawn about equally from the major countries of birth. The people born outside the main national groups are however, underrepresented in our sample.

TABLE 4.10

BIRTHPLACE IN THE SAMPLE,

RELATIVE TO DEATHS OVER THE AGE OF 25

(Percentages)

	1916	1924	1932	1939
New Zealand	21.86	38.00	36.78	42.30
England	29.96	41.71	39.12	51.22
Scotland	26.12	36.58	33.39	39.16
Ireland	22.53	33.68	37.71	44.01
Australia	22.91	34.51	39.79	36.25
Other Countries	10.68	24.01	23.70	27.66

Note: 1916 deaths over 30 years old
Source: Vital Statistics (1916) p.72, (1924) p.74
          (1932) p.62, (1939) p.83

It would seem then that our sample of 16,127 for whom both estate valuations and death certificates have been traced, is a reasonable sample for those who died over the age of about 30. The exemption which meant that many estates did not need to be valued has meant however, that our sample is upwardly biased, drawing unduly on the skilled and business groups, and on men

rather than women.   This tendency has been slightly accentuated
by the tendency for the estates for which death certificates
could not be traced, to also be at the lower end of the wealth
hierarchy.   However, our sample of 16,127 case studies does
provide us with the detailed information that was lacking due to
the absence of a wealth census, and it is on the basis of this
sample that we will look further into the structure of wealth
holding in New Zealand.

CHAPTER 5

THE CHARACTERISTICS OF WEALTH HOLDERS:
AN OVERVIEW.

The combination of information from the estate valuations
for death duties and death certificates has provided us with
a file of information which is a basis for studying the factors
affecting wealth holding in New Zealand. In all, a total of
23 variables were collected covering a wide range of factors
on the origins, family structure, working life and final wealth
of each individual.

The wealth of each person was measured as the net value
of the estate as it was assessed for the payment of death
duties. These are the same figures as were used to produce the
tables in the New Zealand Official Yearbook, and the problems
associated with this measure of wealth, outlined in Chapter 2
apply to the figures. Briefly, the valuations were conserva-
tive partly because there was taxation involved, but also
because there were deductions automatically made if the spouse
survived the deceased. On the other hand, estate values were
increased by life insurance pay outs which would not have been
in the person's wealth had they not died, and negative estates
were recorded as zero. However, even bearing in mind the
limitations in the measure, the estate valuations were obvious-
ly closely related to a person's material wealth. A second
variable was created from this. The estates for each year
were ranked from 1 downwards on a percentage scale, and the
ranking of the person included. This is a relative measure
of wealth, indicating where in the distribution each person
belonged. It also allowed comparisons of the position of
different groups between years, and, as a less skewed
measure than the level of wealth itself, was used to produce
statistics that were not so heavily affected by the extreme
ends of the distribution.

There were four variables collected which dealt with
factors which a person inherited, and could not change :
their sex, the place and date of their birth and their father's
occupation.   The person's sex (coded 0 if male and 1 if female)
was obviously a very important one.   The difference in life
pattern between men and women was probably the most marked
distinction in the economy.   The place of birth, as stated
on the death certificate was coded at county level in Great
Britain, state level in Australia, and provincial level in
New Zealand.   This enabled comparisons to be made within the
major countries as well as between them.   The date of birth
was calculated from the age given in the death certificate.
The ages were notorious for being rounded to the nearest 5
yearly number, especially in the case of very elderly people
who had few remaining close relatives.   In general however,
it provides a guide to the year of birth that will seldom be
more than a few years out.

The father's occupation and the person's own occupation
were both given on the death certificates.   It is well known
that in the nineteenth century occupational classifications
were less precise, many combining the work of two or more
occupations defined in the twentieth century.   It was also
not uncommon for a person to change occupation during their
lifetime.   We can only guess then, that the occupations given
were those associated by the descendents with the person,
either because the person had spent most of his working life
at this occupation, or because it was the last one the person
held.   Retired people were classified according to their
previous occupation, but until the 1930's total retirement was
not often indicated on the death certificate.   There is some
evidence that in England the descendents tended to place the
deceased in the best possible light in terms of job status,
and that as a result the social ranking of the dead exceeded
their ranking while alive.[1]   We can only presume that the
same occurred here.

1.   A.B. Atkinson and A.J. Harrison Distribution of Personal
     Wealth in Britain (Cambridge; University Press 1978)
     pp. 62-64

Both the father's and the deceased's occupations were
coded using the first issue of the New Zealand Standard
Industrial Classification.[2] Despite being a modern classifi-
cation, this procedure gave rise to few problems. Most of
the jobs were included in the classification and, with the
exception of butchers (who were classified under trade, but
in the nineteenth century were frequently slaughtermen, i.e.
under food and beverages, as well as retailers) the industrial
classification appeared to be appropriate. The occupation
was used to define two further variables for both the father
and the deceased. First, there was an aggregation into a
22 sector industrial grouping, which provided a basis for
broad comparisons,[3] and secondly, a social status variable was
constructed. This again was based upon a modern New Zealand
scale,[4] but as job ranking does not appear to alter markedly
between countries with similar cultural backgrounds, this was
not seen as inappropriate for the father's status. The use of
a modern scale also produced few problems. The main problem
was the classification of all farmers at the third ranking
point. The social status of the farming community ranged
from the top elite on the Canterbury runs, to the bottom rung
on the West Coast bogs. We could have allowed for this
variation using the wealth of the deceased as a guide, but it
would not have been possible to carry out a similar adjustment
for the father's social status (as we do not know his wealth),
and this would have prevented intergenerational comparisons.
The allocation of all farmers to the third category was there-
fore kept.

In addition to the specific job, there were three other
variables which related to the person's time at work: the

2. Department of Statistics, Wellington, N.Z. 1965.

3. See the appendix to Chapter 8 for details.

4. W. Elley and J. Irving, 'Revised Socio-Economic Index
for New Zealand' New Zealand Journal of Educational
Studies XI (1976) pp. 25-36.
On international comparisons see Donald J. Tremain
Occupational Prestige in Comparative Perspective (New
York; Academic Press, 1977).

length of time they had to work in New Zealand, the district
in which they died, and the length of time they had been sick
with their final illness.   The length of time which a migrant
had lived in New Zealand was declared on their death certifi-
cate.   It did tend however, to be stated as a rounded number
(or rounded date of arrival) more commonly than age, espec-
ially if the deceased had no family living who had also
migrated.   The length of residence can be assumed, however,
to give an approximate idea of the proportion of the deceased's
working life which was spent in the colony.   For the New
Zealand born this was assumed to be all of the working life,
though obviously they could go to another country for substan-
tial periods and return to die in New Zealand.   For a migrant
such periods of absence tended to be noted on the certificate,
but it was rare for this to happen for those born in New
Zealand.   The district in which the person died was taken to
be indicative of the district in which they had spent their
working life.[5]   As New Zealanders were highly mobile this is
only approximately true.   Obviously some of the movements
would have been offsetting, and the resulting spatial patterns
would give a guide to the geographic wealth patterns.   The
district was coded into counties, and probably the counties
with cities in them are over represented, as the elderly re-
tired to town, and the sick were sent there for hospital
treatment.   The length of sickness was supposed to have been
supplied along with the cause of death by the doctor who
certified death.   In fact it was the information most commonly
omitted.   However, it was an important piece of information,
as those who had forecast their death more than two years in
advance had the option of giving away their estate and so
avoiding death duties.   Gifts which fell within two years of
death were counted as part of the estate, and so a sudden
fatal illness would have ensured a true representation of the
deceased's wealth, whereas a longer illness may have given
them a chance to decrease their estate.   The length of sick-
ness variable also gave some idea of possible losses in earn-

---

[5].   Occasionally, when someone died away from home, the
place where he normally lived was also given, in which
case this was taken instead of the place of death.

ings through ill-health.

Finally, there were a number of variables taken from the death certificate relating to the nuclear family to which the person belonged. In particular, we took the marital status of the deceased, and the number and sex of his or her children. The marital status was based on whether any marriage was recorded on the death certificate. A second variable was constructed from the age of the widow for men, or the stated occupation for women, stating if the spouse was dead or alive. In the case of the handful of divorcees in our period, the spouse was taken to be dead, as he or she would not have been contributing to the deceased family, nor would they have had any claim on the estate. Unfortunately, prior to 1916, it was not necessary to give the age of the widow, so it was not possible to determine if a man's wife was alive or not. The woman's marital status was given as her occupation so the reverse does not apply. For most of the analysis in this chapter, we have used the number of children, the proportion of males, and the age of the oldest and youngest. However, for three years (1888, 1916 and 1939) we took the age and sex of each child, and this more detailed information will be used in subsequent chapters.

We can get an overview of the size and direction of the impact of each of the above variables on the wealth held by an individual through ordinary least squares multiple regression. This method measures the marginal impact of each variable on the value of wealth, that is it measures the impact of that variable, while all other influences in the model are held constant. The results for our models have low r^2 values, even bearing in mind that we are dealing with cross-section elata. This suggests that the variables which are available to us do not cover the total range of major factors influencing wealth-holding. The results are further complicated by the fact that our variables tended to be interrelated with each other, as well as related to wealth.

Only three variables in our regression were continuous variables - the year, the person's age, and the length of residence in New Zealand. The remaining variables were represented by "dummy" variables which took the value of one if the person possessed the quality represented, and zero if they did not. For each set of dummy variables representing

aspects such as country of birth, or religion, one character-
istic was totally omitted from the analysis. The people who
formed the group that had these variables omitted formed a
control group, and the regression results are relative to the
wealth of this group. A positive coefficient suggests that
people whose coefficient had more wealth on death than our
control group, and a negative one, suggests that people with
that coefficient had less wealth than our control group.

The control group consisted of English born males, the
fathers of whom were not farmers, who died unmarried, had
no stated religion, and who worked in a low status job which
was not associated with farming, trading, or the professions.
In addition, the people in the control group died in one of
the lower wealth regions of Auckland, Taranaki, Marlborough,
Westland, Otago or Southland. This control group was repre-
sented in the regression by the continuous variables, by the
following equation :

Wealth = 41561.8 - 22.98 year + 31.58 age +
44.25 New Zealand residence.

This equation suggests that wealth increased with age, and also
with the length of time the English people spent in New Zealand.
Those people who came to New Zealand young, and so had a larger
proportion of their life here obviously had an advantage. Each
year of age added about £32 to the wealth of a member of this
control group, whereas a year spent residing in New Zealand
added about £44 to the average persons wealth. On the other
hand, the level of wealth decreased as the year of death rose,
and each year later a person died reduced their wealth by about
£23.

The variable of age-squared, which has commonly been used
in similar overseas' equations, was not significant in any of
the equations tried for this analysis. We will see in Chapter
8 that this was a correct reflection of the age patterns of
wealth in New Zealand. Unlike overseas, wealth did not decline
in old age; the New Zealand elderly were not dissaving until at
least the age of 90. This contrasts with the findings of Lee
Soltow,[6] where the dissaving of the elderly was a major pattern,

---

6. Lee Soltow, Men and Wealth in the United States 1850 -
1870. (New Haven, Conn,: Yale University Press, 1975)
Ch.

and also with more modern studies of wealth.

The basic results for the first regression are given in Table 5.1. For this regression none of the variables on family structure were included, except whether the person was married or not. This meant that a larger proportion of the available cases were included, and enabled the sample to be broken down by age groups. Of the 19 variables which were included, 11 had coefficients which were significantly different from zero at the five per cent level for the total population, and 2 further variables were significant at the 10 per cent level. There were five variables of the 11 significant at the five per cent level, which indicated a positive addition to wealth of the holders above the control group. First, being a Scot added materially to wealth, with the Scottish born having £552 more than the identical English born person. Secondly, being Jewish had a major positive impact, adding £5,177 above those who had no religion. This was the only religious group which showed a significantly different coefficient at this aggregate level of analysis. It is particularly interesting to note that the Catholic faith had a coefficient that was similar to that of the Protestants, though neither were significantly different from the control group, who had no stated religion. Both the variable of having the person's father as a farmer, (Dadfarm) and having been a farmer oneself had positive coefficients, though not significantly different from the mass of low status jobs which formed our control group. The only occupation which was significantly different was that of trader, which produced a highly significant coefficient, adding £2,622 to the wealth level of the control group. Gains in wealth were also made by those in the top three status groups, and by those who died in the high wealth regions (Regions) of Hawkes Bay, Wellington or Canterbury, relative to the control regions. In the preliminary runs, it was clear that three groups of regions, these three being the richest, Auckland, Nelson and Otago, providing a middle group, and Taranaki, Marlborough, Westland and Southland being considerably poorer. We will pursue the importance of location in determining wealth in Chapter 8.

In contrast, there were only two negative coefficients

TABLE 5.1

Category	Variable	Total Population Estimate	T-val	Aged 30-39 Estimate	T-val	Aged 50-59 Estimate	T-val	Aged over 70 Estimate	T-val
	Intercep	41561.84	2.99**	2988.04	0.33	37867.16	1.42	81558.66	2.68**
	Year	-22.98	-3.17**	-1.58	-0.34	-20.16	-1.45	-43.04	-2.71**
Origins	Age	31.58	3.65**						
	Sex	-1234.99	-5.59**	-151.55	-0.88	-363.80	-0.85	-1806.71	-4.04**
	Colonial	663.26	1.72*	-196.97	-0.60	338.06	0.46	880.55	1.14
	NZ Born	-829.74	-2.06*	217.15	0.67	-707.83	-0.90	-1261.60	-1.51
	Scot	552.48	2.10*	-27.14	-0.09	-835.34	-1.36	1083.04	2.41*
	Irish	-526.34	-1.69*	-49.48	-0.15	-1127.35	-1.51	-558.13	-0.99
	Born else.	-187.36	-0.46	162.47	0.42	-1172.67	-1.27	-181.66	-0.25
	Dad farmer	137.04	0.73	-116.34	-0.81	-175.82	-0.46	191.77	0.52
Family	Married	-3.46	-0.02	278.17	2.20*	406.72	0.98	-422.41	-0.87
Structure	Jewish	5177.51	3.58**	308.19	0.26	14155.71	4.55**	4787.72	1.69*
	Protestant	417.88	1.31	-18.88	-0.09	754.41	1.18	515.59	0.84
	Catholic	350.55	0.87	-267.36	-1.01	1038.85	1.33	567.76	0.69
Working	Profess.	17.50	0.05	-55.46	-0.25	-225.37	-0.38	-26.60	-0.04
Life	Farmer	441.38	1.56	264.03	1.21	531.29	0.91	478.60	0.84
	Trader	2621.99	7.31**	533.69	2.21*	2134.35	3.23**	4664.87	5.85**
	Status	1649.68	7.64**	415.16	2.50*	2053.14	4.73**	2051.41	4.78**
	NZ Res.	44.24	6.06**	16.10	1.75*	31.36	1.83*	66.03	5.39**
	Region	898.52	5.40**	387.15	3.06**	766.78	2.37*	1285.97	3.82**
	n	14995		734		2289		6616	
	R squared (adjusted)	0.0335		0.0421		0.0366		0.0291	

Source: Probate Samples.   Significant at 1% level •

5% level ✱

10% level ✦✱

which were significant at the five percent level. The one
that most heavily reduced wealth was the sex of the person.
Women had, by virtue of their sex alone, £1,235 less wealth
than men. The second variable is surprisingly, that of being
born in New Zealand. Being a colonial, that is born in either
Australia or New Zealand did have a positive advantage (though
the coefficient is significant at the 10 percent level only),
but once the colonial advantage had been taken into considera-
tion, being New Zealand born had a negative impact. This was
probably because the regression did not fully take into account
the effects of the year of death and age. The New Zealand born
tended to be concentrated in the younger age groups, and so have
less wealth, and they were also under represented in the early
years, when wealth was slightly higher.

The division of the sample into 10-year age groups, suggests
that the influence of the factors varied with age to a signifi-
cant extent. Only the last four variables, that is being a
trader, in the top status groups, the length of New Zealand
residence, and dying in the high wealth regions, were significant
in all age groups. The year of death, sex of the deceased, and
being Scottish were important for the elderly people only, and
it is because of their heavy weighting in our sample that the
total population gives them a significant coefficient. For
those aged 30 to 39 though the coefficients have the same signs,
the factors do not have an effect which is statistically differ-
ent from zero. This group is more heavily influenced by
marriage, those that were married having £278 more wealth. The
significance of marital status declines with time and indeed has
a negative impact for those aged over 70. Though the coeffic-
ient is not significantly different from zero, it would seem
that those who were never married held onto their wealth more
at an advanced age. The significance of being Jewish varies
across the age groups, probably because the Jews were a small
sample. However the Jewish community does appear to have had
a positive advantage in material well-being.

Table 5.2 looks at the influence of family structure on
wealth. By the nature of the variables, only those who
actually were married were included in the analysis, with the
result that the sample is much smaller than in Table 5.1. The
introduction of the variables on family structure does not have
a marked effect on the coefficients of the other variables.

TABLE 5.2

Category	Variable	Total Population		Males		Females	
		Estimate	T-val	Estimate	T-val	Estimate	T-val
	Intercept	40449.28	1.65*	50359.74	1.29	22018.61	1.03
	Year	-22.29	-1.75*	-28.50	-1.40	-11.11	-1.00
Origins	Age	7.95	0.36	11.62	0.32	-6.78	-0.37
	Sex	-1035.40	-3.46**				
	Colonial	772.55	1.65*	1465.76	1.97*	-110.73	-0.27
	NZ Born	-785.77	-1.59	-1404.73	-1.76*	-28.15	-0.07
	Scot	32.04	0.10	199.75	0.38	-203.94	-0.67
	Irish	-111.74	-0.27	-4.28	-0.01	-215.95	-0.58
	Born Else.	-196.93	-0.37	-301.20	-0.38	-33.27	-0.07
	Dad Farmer	140.82	0.58	560.46	1.56	-135.01	-0.48
Family	Married Age	18.80	0.77	17.00	0.45	7.98	0.35
Structure	Spouse alive	572.83	2.43**	1085.63	2.95**	-366.81	-1.73*
	Children	41.26	0.67	84.43	0.90	-23.18	-0.40
	Proport. Male	223.69	0.63	88.78	0.16	327.01	1.01
	Oldest	-16.46	-0.60	-4.08	-0.09	-40.27	-1.67*
	Junior	47.82	2.18**	48.09	1.42	52.24	2.58**
	Protestant	264.15	0.63	284.38	0.44	163.49	0.43
	Catholic	141.82	0.27	232.21	0.28	-33.98	-0.07
	Jewish	1750.56	0.92	2178.89	0.69	1060.25	0.68
Working	Professional	-133.98	-0.31	-676.59	-1.19		
Life	Farmer	1180.67	3.09**	-25.65	-0.04		
	Trader	2673.89	5.63**	2409.81	4.12**		
	Status	1170.82	4.14**	2153.87	4.07**	857.42	3.18**
	NZ Residence	37.13	3.89**	48.77	3.21**	23.08	2.75**
	Region	876.56	4.14**	1339.50	4.10**	230.99	1.20*
	n	8578		5151		3027	
	R squared (adjusted)	0.0304		0.0273		0.0123	

Source: Probate Samples.

Significant at 1% level •

5% level *

10% level **

None of the coefficients changed sign, though the significance of the variables relating to the place of birth and religion was reduced. The age variable also became insignificant, but this was probably because the married people fell into a much smaller age range. Of the five variables dealing with family structure, only two had coefficients which were statistically significant from zero. The first, spouse, took the value of 1 if the person's spouse survived them. This was significant at the 5 percent level for the total population, but was significant with different signs in the separate equations for men and women. Men had an extra £1,085, if their spouse survived them, a coefficient which was significant at the one percent level. The effect on women's estates is less statistically significant (only reaching the 10 percent level) but having a surviving spouse reduced their estate by £367. It is not surprising to find this difference. Women who were survived by their husbands had no chance of acquiring the joint family property which was traditionally in his name. On the other hand, men without a wife probably had to purchase much more from outside to run their home, and possibly also had less estate because they had not inherited personal estate whatever which their wife had owned in her own right. The second variable, which had a coefficient which was significantly different from zero, was the age of the children, and especially the age of the youngest (Junior). The age of the oldest child (Oldest) had a consistently negative impact, though, except for women, this impact was not significantly different from zero. It would seem then that those people who married and had children at a young age were disadvantaged when they were acquiring wealth. On these lines, it is interesting to note that the age of first marriage variable (Marry 1), has a positive coefficient suggesting that each additional year prior to marriage did have a positive effect on wealth accumulation. Those that married young had fewer savings on which to begin life, took on the responsibilities of children at an earlier stage, and also tended to come from and remain in the lower social status groups. On the other hand, those who finished having children at a young age, and so had a relatively old youngest child, had more wealth. Each additional year of age

of the youngest child added about £50 to the estate of both
the mother and father.   This was probably because the children
drew less in the parents' estate during the parents' old age,
and, because the children were older, were possibly able to
contribute to their parents' support.   The relationship is
explored more fully in the detailed analysis of Chapter 9.
The variables on the number of children, and the proportion of
male children both had no statistically significant effect.
We will see in Chapter 9 the patterns involved were not strong.

The New Zealand results can be compared to the results of
two similar studies on wealth in the United States.   The first
of these, which was based on a much smaller scale, looked at
factors which influenced land ownership in Colonial North
Carolina.   The results, shown in Table 5.3, show some similar-
ity to the New Zealand results.   The results for the children
suggest that the older children, who had become independent,
were a liability, while less land was added to the family by
very young children, then by older children still at home.
Further, Gallman's variables of "landowner in 1695", an analo-
gous variable to our length of residence-one, was, as with our
variable, both positive and significant.   On the other hand,
Gallman's variables included some our model did not include.
The death certificate information did not have any similar
variable to his "father" which indicated if the deceased father
was alive or not.   This was a significant variable in Gallman's
study so the omission in ours is unfortunate.   As already
mentioned, age-squared, which is included in Gallman's model
was insignificant   whenever it was included in our models.
The second study on household wealth in Utah 1850 to 1870,
also found age-squared to have a negative, and statistically
significant coefficient.   It was a more similar regression
analysis to our one, and used a large number of dummy variables.
The control group which was used was described as "farm house-
holds, with a male head who was born in the Northern United
States, who lived in Salt Lake County, and who appeared in the
1870 census only."[7]   As in New Zealand, the merchants formed
a group which was noticeably more wealthy than the other groups

---

7.   J.R. Keal, C.L. Pope, and L.T. Wimmer, 'Household Wealth
       in a Settlement Economy, 1850-1870'
       Journal of Economic History XL No. 3 (Sept. 1980,) p.486.

TABLE 5.3

LANDHOLDING IN COLONIAL NORTH CAROLINA

<div>

n = 54
F ratio = 2.58(Prob.:0.0153
Adjusted R^2 = .2469

Intercept =	-861.17(-1.1029)
Age =	66.29 (1.4814)
Age squared =	-1.10(-1.8485)
Children, less than 8 years =	48.76 (1.1053)
Children, 8 through 15 years =	146.57 (2.0404)
Tithable sons at home =	257.04 (1.7181)
Tithable sons not in Perquimans =	-87.54(-0.5100)
Independent sons in Perquimans =	-247.06(-1.4111)
Landowner in 1695 =	726.40 (3.4729)
Father =	270.45 (2.1218)
Male siblings =	19.76 (0.7429)

(t values in parentheses.)

</div>

Source: Robert Gallman, 'Influences on the Distribution of
Landholding in Early Colonial North Carolina'
Journal of Economic History XLII No. 3 (Sept 1982),
p.566

in the community.   However, in Utah the professionals also
form a wealthy group, which was not the case in New Zealand.
Keal et al find that long residence adds significantly to
wealth, and that it was beneficial to be born in the same
broad area as Utah.   These are comparable findings to our ones
on length of residence and being colonial born.

In the next few chapters we are going to look in more
detail at the relationship between wealth and the various
characteristics which we have used in this chapter.   Chapter
6 will discuss inherited characteristics and their impact;
Chapter 7 the influence of migration;   Chapter 8, work and life
patterns;   Chapter 9 family structure;   and Chapter 10 social
status, inheritance and wealth.   The regression analysis of
this chapter does however provide an overview of the results,
and it is important as a guide to the relative impact of the
various influences.   It has made clear the fact that of the
inherited characteristics, the person's sex is the most signi-
ficant.   That age, length of residence and the person's occupa-
tion, are all highly significant in their wealth accumulation.
And it is clear that the place of both was less significant,

TABLE 5.4

CHARACTERISTICS OF WEALTH-HOLDERS, UTAH, 1870

Explanatory Variables	Estimated Coefficient	
Age	74.21	5.39
Age^2	-.71	4.60
Sex	-460.11	2.22
Occupations:		
Professional	896.23	3.56
Merchant	5,946.16	21.18
Clerk	-14.72	0
At Home	-320.10	1.38
Labourer	-591.10	5.81
Bench Worker	57.69	.26
Craftsman	-403.03	3.56
Transportation	-165.65	.76
Miner	-594.59	2.48
Other	-367.09	2.01
Utah, Davis and Weber Counties	-768.96	7.62
Other Counties (except Salt Lake)	-675.23	7.28
Move Between 1850 and 1860	-614.04	1.44
Move Between 1860 and 1870	-908.53	4.26
Foreign Born (English-speaking)	-297.18	3.60
Foreign Born (Non-English-speaking)	-435.42	4.16
U.S. Born (South)	-287.33	1.68
Appears in 1850, 1860 and 1870 Census	2,470.57	8.31
Appears in 1850 and 1870 Census	1,139.59	3.46
Appears in 1860 and 1870 Census	987.68	6.80
Constant	52.39	
Number of Observations = 19137		
Mean of Dependent Variable = 5894.85	-	
R^2 = .06		

Note: Control group is composed of households with male heads who are farmers, born in the northern United States, living in Salt Lake County and appearing only in the 1870 Census.

Source: Keal et al _ibid_ p. 487

and religion, except for the Jewish community played little part. Finally it is clear that family structure had overall relatively little impact on wealth.

CHAPTER 6

INHERITED CHARACTERISTICS
AND THE FINAL LEVEL OF WEALTH

Each person in our sample was born with certain character-
istics which would have affected his or her ability to accumu-
late wealth.   Unfortunately, we are not able to measure some
of the most interesting of these - intelligence, personality
and the like, which does not of course make them any less im-
portant though they are not discussed.   We have however, five
variables which were inherited characteristics, each of which
placed constraints on the person's ability to accumulate wealth.
These were the person's sex, date and place of birth, and their
father's job and his status.

Of these characteristics, the one which had the most impact
on the person's wealth was undoubtedly their sex.   Women could,
after 1885, own property in their own right in New Zealand, but
social conventions of property ownership, and of paid employment
worked against their accumulating wealth.   This was especially
true of married women, where household assets were most commonly
in the husband's name.   Until his death then, when most husbands
left their communal property to their wife, the married woman
appeared to own nothing.   Unmarried women were not hindered in
their accumulation of assets by this factor, but the prejudice
against working women meant that few single women reached high
paying jobs.

We have seen already in Chapter 3, that women were under-
represented in our probate sample, because they held less wealth
than men so were more frequently below the legal exemption limit.
Table 6.1 shows that even those in our sample tended to have
wealth substantially below that of the men.   However, the
material position of women was improving steadily during our
period, and as the men's average estate fluctuated with rela-
tively little sign of growth, by 1939 the average woman had 60
percent of the assets of the average man.   This rise in the
average level of estates for women can be attributed to two

TABLE 6.1

AVERAGE WEALTH AND RANKING BY SEX

	Average Wealth (in pounds)			Average Rank		
	(1) Men	(2) Women	(3) (2) ÷ (1)	(4) Men	(5) Women	(6) (5) ÷ (4)
1888	3790	726	19.16	51.13	40.90	79.99
1896	2823	1002	35.49	54.56	47.91	87.81
1906	2737	1122	40.99	54.89	44.71	81.56
1916	3115	1734	55.67	55.48	47.37	85.38
1924	3703	1869	50.47	52.49	45.79	87.24
1932	3327	1832	55.06	51.87	46.92	90.46
1939	3070	1926	62.74	53.74	48.77	90.75

Note: The average rank was calculated by ranking estates
          within each year on a percentage rank, the highest
          being 1 and bottom 100.   See Chapter 5.

Source: Probate samples.

factors: first a relative increase in the number of widows and
spinsters in our sample, and secondly a marked rise in the
number of women in the top deciles of wealth as a result of in-
heritance patterns.

Table 6.2 shows the effect of marital status on the dis-
tribution of womens' estates.   Wives, that is women whose hus-
bands were alive at the time of their death, tended to be con-
centrated in the lower wealth ranges.   The major asset of most
households, the family home, was typically in the husband's
name, and so not valued as part of the wife's estate on her
death.   In general however, widows were left the family home.
It is not surprising therefore, to find that widows are more
concentrated on the middle deciles.   The same is also true of
spinsters who, through saving out of their own income and
possible inheritance, were also able to accumulate sufficient
wealth to put them into the 3rd to the 7th decile, and to a
lesser extent beyond.   The steady fall in the proportion of
women in our sample who were wives would therefore have tended
to lead to an increase in the average value of estate.   Most
of the growth took place with spinsters, and is probably a
reflection of the changing sex balance of the population.   When

TABLE 6.2

MARITAL STATUS OF WOMEN

(Percentages)

	Proportion in each Wealth Group			Percent of Estates			
	Wives	Widows	Spinsters	Year	Wives	Widows	Spinsters
Top Decile	4.40	7.93	9.00	1888	47.06	52.94	–
2nd	6.51	10.93	7.98	1896	68.75	31.25	–
3rd	7.68	9.99	9.87	1906	31.36	66.10	2.54
4th	9.06	12.30	11.76	1916	42.69	50.81	6.50
5th	12.98	10.57	11.18	1924	39.91	48.85	11.24
6th	11.07	11.49	10.30	1932	34.18	50.96	14.86
7th	12.45	10.79	11.76	1939	32.67	52.54	14.79
8th	13.72	9.47	12.34				
9th	12.71	10.65	9.14				
Bottom	9.32	6.42	6.68				

Total: 100.00   100.00   100.00

Source: Probate samples.

women were scarce, not only were there fewer of them to die and
so enter our sample but the greater relative opportunity to
marry increased their marriage rate.[1]   The proportion of women
who lived long enough to accumulate an estate yet died unmarried
was therefore smaller.   The trend towards a more even sex
balance, by lessening the opportunities for marriage, meant that
more women had an estate worth talking about when they died.

A more important cause of the relative rise of womens'
wealth was, however, the rise in the number of very large es-
tates.   As Table 6.3 shows, the proportion of women in the top
30 percent of the population rose very substantially during our
period, so that by 1939 they held almost 30 percent of the
assets.   Our detailed study of the top 0.1 percent of wealth-
holders in Chapter 13 suggests that women almost invariably in-
herited large estates from either their husbands or their fathers.
While there were cases of women adding substantially to the for-

---

[1]. M.N. Arnold, 'Aspects of Finding a Wife in Nineteenth
      Century New Zealand' VUW Working Paper in Economic History
      82/1 Feb. 1982.

TABLE 6.3

TOP WOMEN WEALTH HOLDERS AS PROPORTION OF BOTH SEXES

(Percentages)

	Top Decile	2nd Decile	3rd Decile
1888	0.00	4.65	0.00
1896	3.49	6.98	1.15
1906	3.14	7.50	6.25
1916	11.91	14.39	17.63
1924	14.76	19.35	27.23
1932	24.01	19.34	30.23
1939	25.16	32.59	29.75

Source: Probate Samples

tune they received through prudent investment, there was not
one woman in our top 0.1 percent who by her own endeavours
reached the very rich category.   It is not surprising there-
fore to find few women in the top deciles in our early years.
Most of the wealthy men in New Zealand accumulated their wealth
in the first 40 years of settlement, and they had not died in
sufficient numbers to pass this on to their wives and daughters.
As the wealthy men did die, and follow the standard practice of
leaving their wife their estate if she outlived them, or their
daughters an equal share with their sons, the number of wealthy
women showed a secular tendency to rise.

The relatively late settlement of New Zealand put New Zea-
land women at a disadvantage compared to those in Victoria.
There was less time for large inheritances to fall to women than
in Victoria, with the result that New Zealand women held less
relative to New Zealand men that Victorian women did relative
to their men.   In 1880 the Victorian woman held on average
15.73 percent of the assets of Victorian men, but in New Zealand
the comparable figure was 8.69 percent.[2]   The 1908/9 and 1906

---

2. W.D. Rubinstein 'The Distribution of Personal Wealth in
   Victoria, 1860-1974' AEHR XIX No. 1 (1979) Table 2 p.35
   and n.18 p.34
   All deaths over the age of 20 not accounted for by probates
   are assumed to have left no assets in both colonies.

figures in the two countries respectively were 32.32 percent
and 27.83 percent.   By 1939 women held about 53 percent of
the average estate of men in both countries.

Relative to the effect of sex on the final wealth of the
person, their date and place of birth had little effect.   However, some trends are discernable.   Graph 1 shows the average
estate for people born in each decade, for each of the seven
years in our sample.   The declining trend in the curves were
expected: people accumulate wealth by saving and investment
across time with the result that as a rule the older they are
when they die, the more wealth they are likely to have accumulated.   However, if this was the only factor involved, we
would expect the curves to parallel one another rather than show
the definite advantage to those born between about 1820 and 1840
which Graph 1 does show.   It obviously was advantageous to be
born at such a time that one was a young adult during the first
few decades of settlement.   The people here in that period,
when natural resources such as land were plentiful and people
with the required skills and capital were scarce, obviously had
chances which later generations did not have.

We would expect that those born in non-English speaking
countries, with a different cultural background, were
at the most serious disadvantage in the New Zealand economy.
Certainly this has generally been the case in comparable studies
of wealth in colonial America.[3]   Of our 10,218 men in our
probate sample 301 were born in non-English speaking countries.
However, it would seem that they did not suffer the problems in
the New Zealand environment which the non-English speaking experienced in the United States.   This is probably due to two
factors: first, as a rule the non-English speaking Europeans
were chosen by Government agencies to migrate to New Zealand,
and they were selected for specific skills which they had which
would be needed in the New Zealand environment.   The most obvious was the choice of Scandinavians to settle in the Seventy-
Mile Bush, where their timber felling expertise was a major

---

3.   See E. Bubnys, 'Nativity and the Distribution of Wealth:
     Chicago 1870' Explorations in Economic History 19(2)
     April 1982 pp. 101-109

GRAPH 6.1

AVERAGE WEALTH BY YEAR OF BIRTH
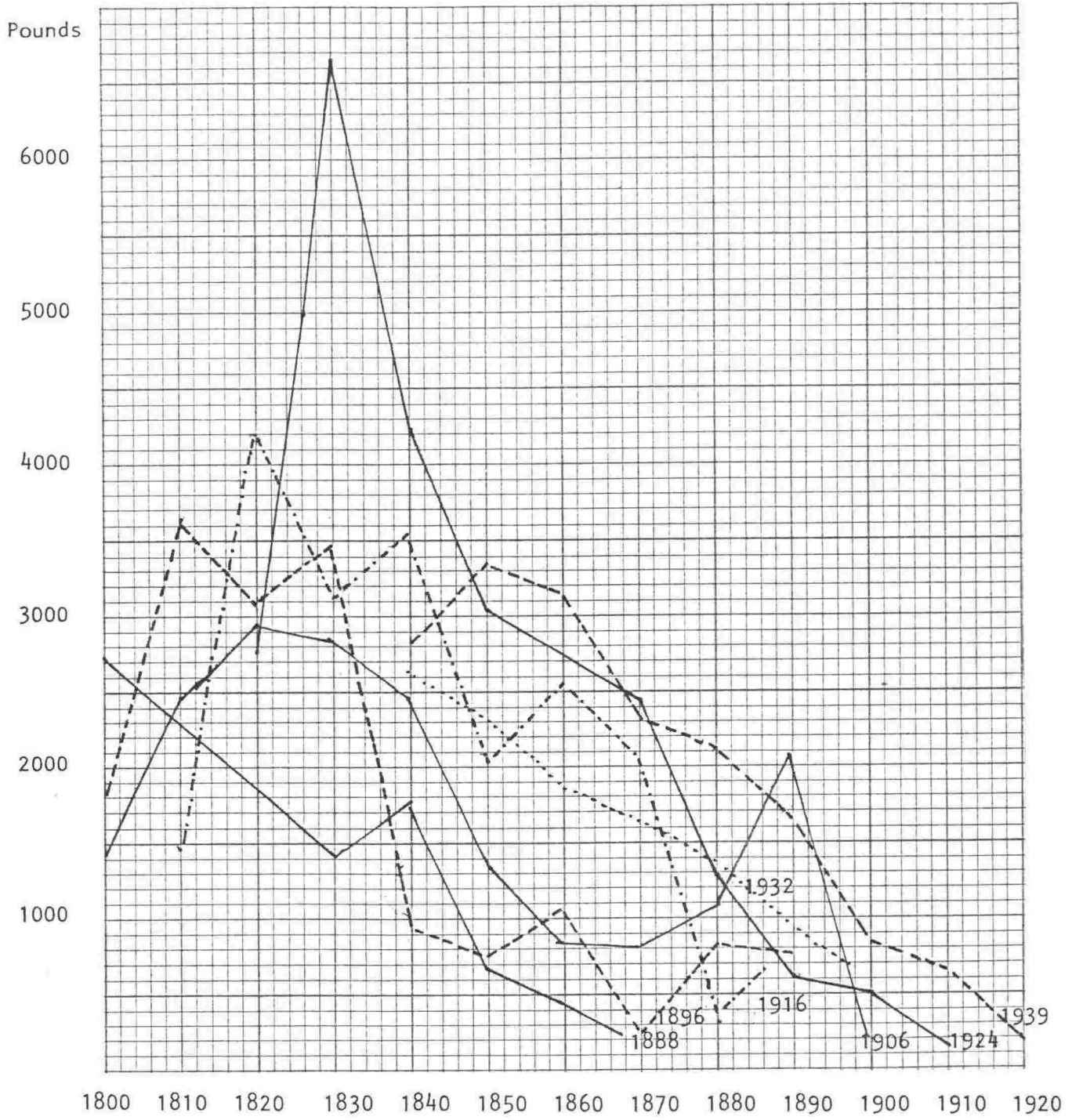
Source: Probate Samples

advantage which most English and Scottish migrants did not possess.[4]   The second factor, was that this migration was small relative to the population, and although the migrants tended to live in the same district, their small numbers forced them to mix and finally assimilate with the mainstream of New Zealand life.   For these reasons then, the distribution of wealth in Table 6.4 shows no difference between the English and non-English speaking peoples.

TABLE 6.4

LANGUAGE AT BIRTH AND WEALTH GROUP
(MEN ONLY)

(Percentages)

	English	Non-English
Top Wealth Decile	12.85	11.63
2nd	11.95	9.63
3rd	10.90	11.30
4th	10.25	11.96
5th	9.55	9.63
6th	9.55	10.30
7th	9.23	7.97
8th	9.12	9.97
9th	7.72	6.98
Bottom Wealth Decile	8.78	10.63

Source: Probate samples.

Graph 2 attempts to show the effect of being born in one of the four major countries which provided the basic stock for New Zealand.   To eliminate the effect of the different age structures, the graph shows their wealth at various ages at death.   (New Zealanders had a younger population, so tended to die younger and so appear to be poorer than the other groups). It is clear from the graph that national origin did have some effect on the final wealth outcome of the people concerned. In the middle age ranges – from 30 to 70 years old, New Zealand born men had considerably more wealth than the migrants.   At

---

4.   See W.J. Gardiner 'A Colonial Economy' in W. Oliver The Oxford History of New Zealand p.73 (Oxford Clarendon Press, 1981)

64

GRAPH 6.2

WEALTH BY AGE GROUP AND COUNTRY OF BIRTH

(Males Only)
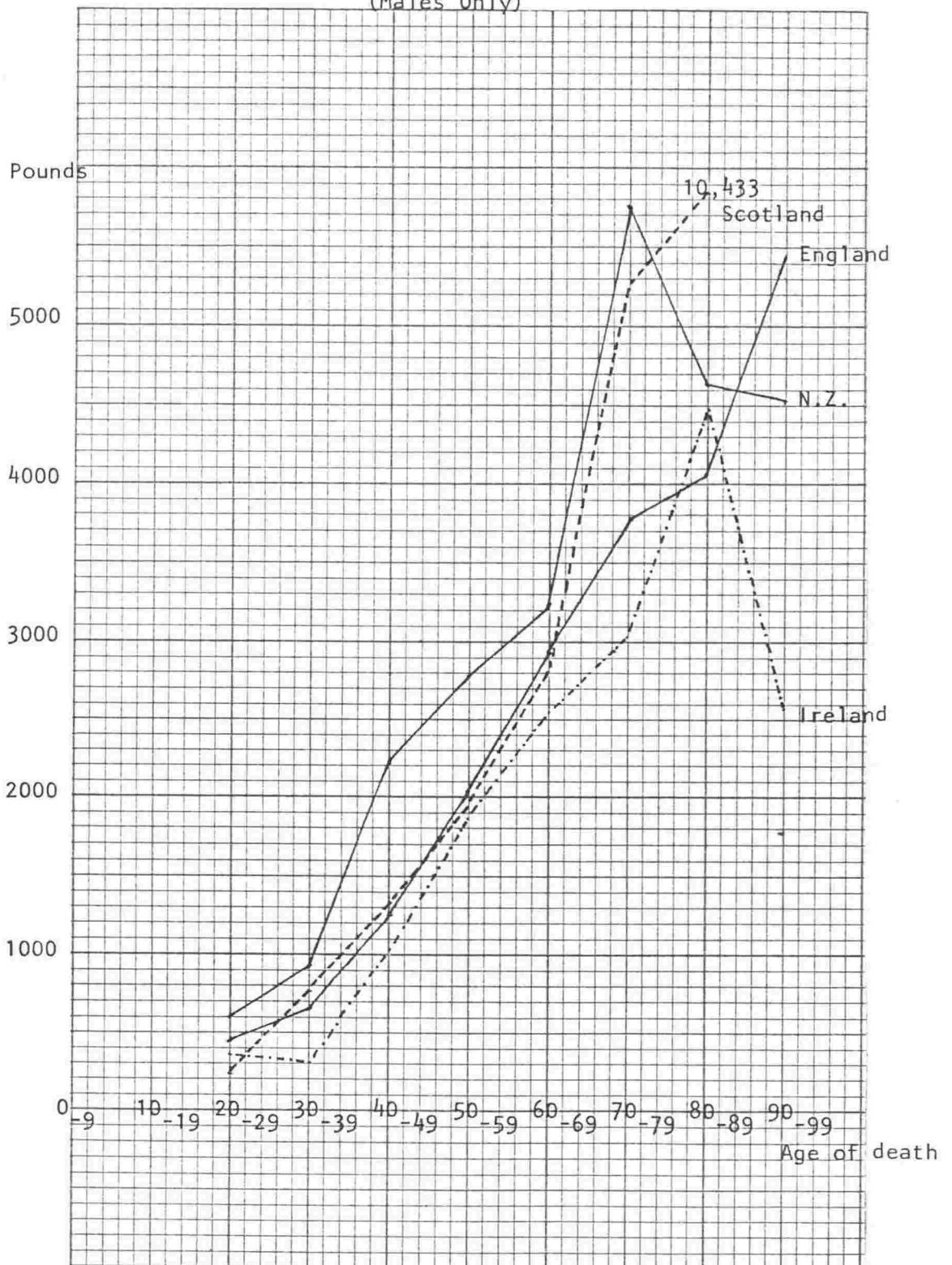
Source: Probate Sample

these ages the migrant groups were not noticeably different, except that the Irish had £200 - £300 less wealth than the Scots or the English. After the age of 70 the pattern is more diverse, and the advantage to the Scots which we noted in our regression analysis becomes clear. On the other hand, the Irish fall further behind.

The reason for the success of the Scottish and New Zealanders, and the lack of success of the Irish, would not appear to be the quality of their background. If the father's status is shown for each nationality, as in Table 6.5, it would seem that the English and the Australians had the best start in life, and that the Scots and New Zealanders had a relative handicap. The Irish do not stand out as having a particularly poor background by the proportion in the bottom status categories (despite the higher proportion of labourers) or a particularly good one by the top status categories. The number of Irish whose fathers were farmers meant they were concentrated in the third status category. This is probably a too high a classification relative to other groups, as farmers in Ireland were distinctly poorer than in our other national groups.

TABLE 6.5

FATHER STATUS, BY NATIONAL GROUP

(Percentages)

Status/Birth Place	N.Z.	England	Scotland	Ireland	Australia	Other
Top Status Group	1.82	3.45	1.61	1.35	3.15	1.50
2nd	5.39	7.77	5.29	3.42	8.33	10.04
3rd	39.44	23.13	34.56	52.02	29.05	26.50
4th	19.36	17.92	15.02	6.01	18.92	13.46
5th	4.38	7.66	7.74	2.90	4.28	3.85
6th	14.15	15.66	14.87	8.29	11.94	4.70
Unknown	15.27	24.73	20.92	26.01	24.32	39.96

Source: Probate Samples.

It would seem that the Irish were also not particularly handicapped by their higher proportion of Catholics. The Catholic members of the New Zealand population as a rule did not do as well as the other religious groups (for reasons which will be explored in Chapter 8), however there is no discernable

difference between the Catholic Irish, who had an average estate of £2,843, and the Protestant Irish, who had an average estate of £2,937.

It would seem that those Irish who migrated to New Zealand had a tendency to concentrate in the unskilled occupations which had the lowest social status, and which provided relatively little scope for accumulating large estates. They also seem to be involved more with small farming, along the lines of their homeland, and possibly because they were under capitalised, they were concentrated among the less well-off farmers. The

TABLE 6.6

OCCUPATIONS, BY COUNTRY

(Percentages)

	N.Z.	England	Scotland	Ireland
Farming	37.27	36.76	44.42	48.61
Hunting, fishing, forestry	0.30	0.07	0.08	0.21
Mining	1.39	2.64	2.99	3.96
P.P.P.	0.72	0.78	0.40	0.21
Food, beverages & tobacco	1.12	1.79	0.97	0.54
Clothing	0.91	0.85	0.97	0.54
Other textiles	0.63	0.55	0.73	0.32
Leather	0.24	0.49	0.49	0.43
Footwear	0.63	0.95	1.13	0.64
Wood & furniture	0.91	1.66	1.05	0.64
Paper & Printing	1.18	0.75	0.49	0.21
Chemicals	0.06	–	–	0.11
Metal & Machinery	3.74	3.16	4.05	1.18
Misc. Manufacturing	0.42	0.88	0.97	0.54
Public Utilities	0.33	0.26	–	0.21
Building & Construction	6.73	7.40	7.28	4.82
Rail Transport	2.75	2.12	2.10	2.25
Other Transport	4.95	5.74	4.61	4.28
Trade	9.99	9.98	8.82	7.92
Professional Service	16.20	14.16	11.08	10.71
Non-professional Services	0.48	0.52	0.24	–
Labourer	7.51	5.45	4.77	9.53
Gentlemen	0.48	1.89	1.46	1.07

Source: Probate Samples

Scots on the other hand, also tended to go into farming, trade and the professions all with notable success.

There were major variations in the fortunes of those born within regions of countries. In New Zealand those born in

the Wellington provinces did best, probably because the combination of the Government service, and a major trading port gave ample urban opportunities, and the extensive pastoral farming on the Wairarapa and more intensive farming in the Manawatu, gave a range of rural openings that would have suited people of varying backgrounds and capital.

TABLE 6.7

AVERAGE ESTATE, BY PROVINCE OF BIRTH

(In Pounds)

	1888	1896	1906	1916	1924	1932	1939	All Years
Auckland	862	373	608	2471	2503	2509	2574	2469
Taranaki	264	–	892	2051	1447	1128	2588	1906
Hawkes Bay	–	12628	1742	3172'	2748	2562	2896	2877
Wellington	799	1328	3119	2390	2750	4387	3751	3568
Marlborough	479	1067	17983	4625	831	3055	1779	2753
Nelson	–	960	814	1001	2085	2414	2195	2104
Westland	160	298	3001	995	1675	1129	1927	1585
Canterbury	470	354	534	4022	2255	2371	3258	2795
Otago	296	123	1788	1490	1837	1810	2104	1905
Southland	–	251	407	555	1344	2787	2277	1999

Note: –   No people born in province in probate sample for this year.

Source: Probate sample.

Auckland had a similar range of trade and professional possibilities, though without the Government service, but its hinterland was relatively undeveloped and infertile in our period. Canterbury provided better opportunities on the rural side, and throughout its native born had a high level of wealth.   Nelson, because it was a relatively small place, had fewer opportunities and as a consequence, had lower wealth among those born there than Canterbury.   Marlborough and Hawkes Bay had a similar problem, but the few wealthy families increased their average wealth level to a respectable level.   If one was born to those families, being born in the Hawkes Bay or Marlborough was a good thing indeed, but otherwise the figures give the impression that one's chances of a "lucky break" into wealth were greater in Wellington, Auckland and Canterbury.   Taranaki, being a bush province, did not attract and make very wealthy families.   The wealth in this province was moderate, and the chances of moder-

MAP 6.1

DISTRIBUTION OF WEALTH, BY COUNTY OF BIRTH

Average Ranking

65 and over

55 - 64.9

45 - 54.9

less than 45

no migrants
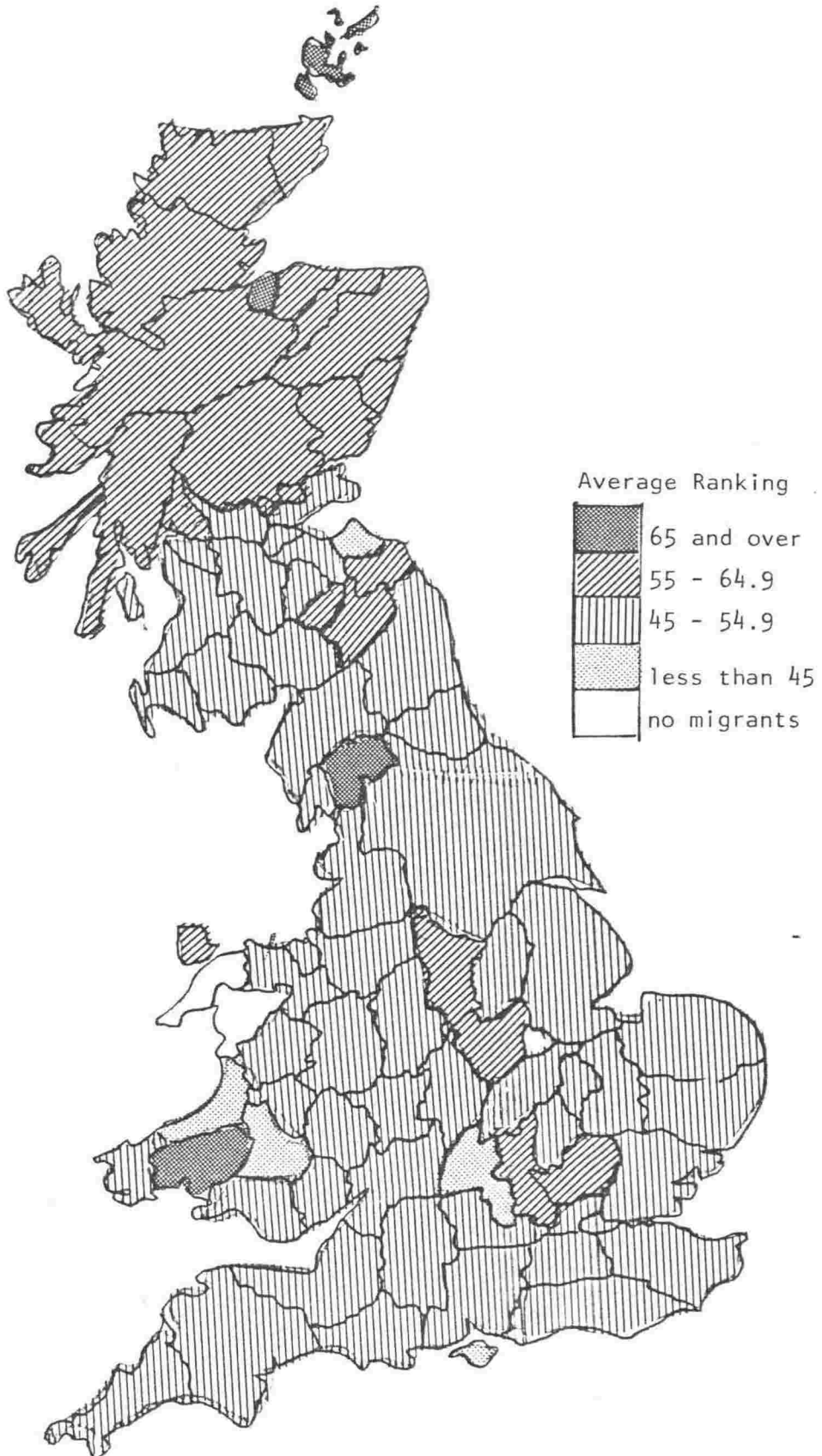
MAP 6.1(a)

DISTRIBUTION OF WEALTH, COUNTY OF BIRTH IN IRELAND

Average Ranking

65 and over

55 - 64.9

45 - 54.9

less than 45

no migrants
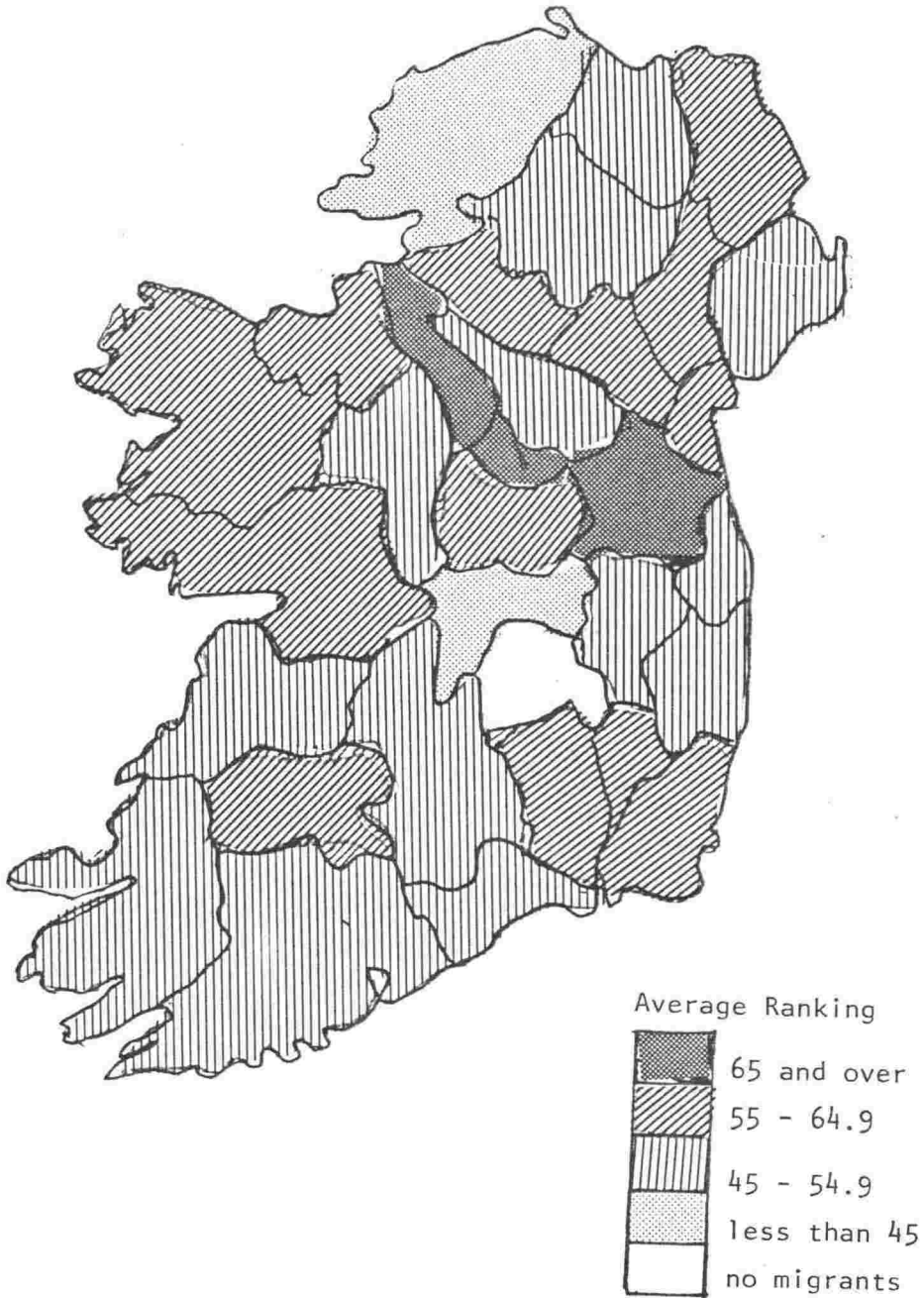
ate wealth were probably good: of being rich, they were not
good. The same was true of Westland, where the relatively poor
land left few chances once the gold had been worked out.

The regional variation in the final wealth achieved by
British and Irish migrants can be seen on map 6.1 and 6.1a.
The maps have been based on the percentage rank of the estate
in the distribution of estates in each as this gives relatively
less weight to estates at the extremes of the distribution,
especially very large estates. Scotland, particularly the
highland counties, shows through clearly as having sent migrants
who did well in the New Zealand environment. The migrants from
just south of the border, Derby,and Leicester, Buckingham and
Hertford and Suffolk, also did well. In Ireland, there was a
band of counties in the northern Catholic portion which did
particularly well, and the northern, western and south-east
corners also sent migrants who ranked above average on wealth.

One reason for this distribution would appear to have been
the different distributions of immigrants over time. As we
will see in the next chapter, those migrants who came in the
1860's and 1870's appear to have done better than those who came
either earlier or later. Map 6.2 shows the relative proportions
of each county's migrants who came in the 1860's, the decade
when migrants did best, and it is not surprising to find that
the Scottish migrants, and those from the borders are disprop-
ortionately represented. The isolated counties of Wales that
had a high average wealth level, also migrated disproportion-
ately in this decade. However, south of the border counties
the timing of migration was less obviously related. In the
English counties, it would appear that those with a large acre-
age in pasture sent migrants who did better than average, but
the relationship is not complete.

Those men whose father was a farmer had a slight advantage
over the rest in their ability to accumulate wealth. Only
those with fathers in paper and printing or non-professional
services had as high a level of wealth, and in both these cases
the samples are small and the variance large. Next to having
a father in farming, having one in trade or professional ser-
vices was helpful All of these sectors were associated with
high wealth in New Zealand, and it would seem likely that both

MAP 6.2

PROPORTION OF ALL MIGRANTS

FROM EACH COUNTRY

WHO CAME TO NEW ZEALAND IN 1860-1869

Proportion

30 +

20 - 29
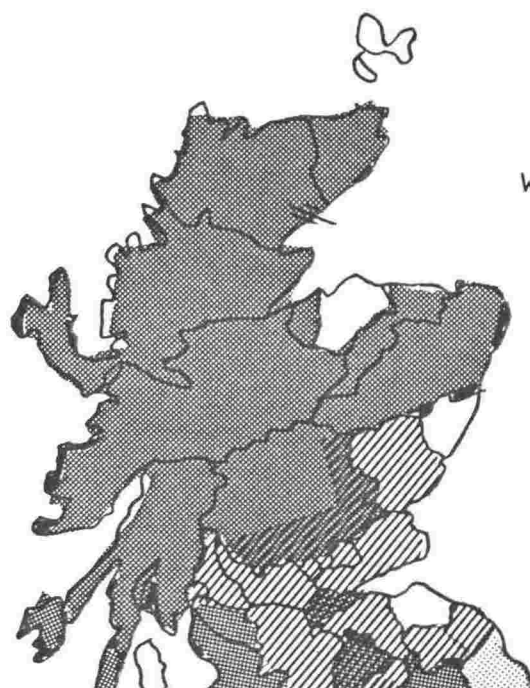
the skills that could be informally learned, and possible in-
heritances were a significant factor in determining the good
standing of the sons.   It is interesting to note the high level
of estates of those who had fathers whose occupation was given
as 'gentleman', people of some social standing usually accompan-
ied by private resources.   At the other end, the disadvantages

TABLE 6.8

AVERAGE WEALTH, BY FATHER'S OCCUPATION

(Men Only)

Father's Occupation	Number	Average Wealth
Farming	3479	£4094
Hunting, fishing and forestry	25	2047
Mining	289	1772
P.P.P.	70	3689
Food, beverages and tobacco	134	2232
Clothing	103	4816
Other textiles	125	2544
Leather	42	1598
Footwear	142	1838
Wood and Furniture	118	2542
Paper and Printing	79	4896
Chemicals	3	513
Metals and Machinery	344	2019
Misc. Manufacturing	141	2304
Public Utilities	8	1348
Building and Construction	685	2562
Rail Transport	108	1689
Other Transport	381	2180
Trade	698	3734
Professional Services	1044	3573
Non-professional Services	30	4064
Labourers	501	1702
Gentlemen	106	4766
Unknown	1552	2744

Source: Probate samples.

of being born to a father with an unskilled occupation is
clearly given by the low level of wealth achieved by those
whose fathers were labourers or miners.   Given this, it is not
surprising to find that the social status of the father, and
the final wealth of the sons was closely related.   The concen-
tration of farming on the 3rd category has the effect of in-
creasing this category's wealth out of line with its position.

However, apart from this there is a clear relationship. Those born to people with skilled, highly paid and socially prestigous occupations had a final level of wealth nearly double those born to the unskilled, lowly paid and low social status job.

TABLE 6.9

FATHER'S STATUS, AND AVERAGE WEALTH

(Men Only)

Father's Status	Number	Average Wealth
Top Status Group	233	4261
2nd	638	3982
3rd	3380	4254
4th	1673	2501
5th	572	2822
6th	1373	1803
Unknown	2338	2947

Source: Probate sample

The background which a person inherited in terms of their sex, birthplace and date and their father's position in society, did have a major impact on their final wealth accumulation. However, within all these trends there was a high variation caused by the person's own choices - the choice of when to migrate, of occupation, and of family structure. In the next three chapters we will investigate the results in terms of wealth accumulation of these factors, over which the person themselves could exercise some discretion.

CHAPTER 7

MIGRATION

Of the 20251 people in our probate samples, 10216, or
about 50 percent, were born outside New Zealand. For these
people migration to New Zealand was a major turning point in
their lives. New Zealand as a new settlement, offered the
possibility of more opportunities for material progress than
were to be had in the more rigid societies of the Old World.
We could expect then that the timing of migration in the person's
life would be significant, as would their time of arrival rela-
tive to the level of development in the economy.

The time of arrival in New Zealand, and age of arrival, was
deduced from the answers given to the question on the death
certificate "how long in New Zealand?" This was not a totally
satisfactory source of information on two accounts. First, the
answers to this question were frequently vague. Families of
the deceased were obviously not clear on the deceased's move-
ments, especially in those cases where the person migrated prior
to marriage, and the birth of children. If the person was
married and survived by a spouse who had accompanied them, then
the chances of an accurate date were high. They were also high
if some children had been born prior to migration, and people
could work out by their ages a reasonable estimate. But in
other cases, the tendency to round the length of New Zealand
residence was obvious. The second count on which the informa-
tion was unsatisfactory, was that it ignored any other migratory
experience. In particular those people who came to New Zealand
via a sojourn in Australia can not be differentiated from those
who came directly. As we saw in our regression analysis, col-
onial experience was significant in explaining wealth, and those
with experience in Australia would have had an advantage over

those who did not have that experience, but who had the same length of residence in New Zealand.

The dates of our sample years meant that the migrants from all years did not have equal probability of being included in our sample. Those close to the end of our period, and who migrated as healthy, young people, had small chance of dying and so being included and those who came in the early decades of settlement, especially the 1840's, had also less chance, especially if they came as mature adults. Table 7.1 gives some idea of the rate of inclusion by measuring the number of migrants in each year per 100 immigrants. This is not a perfect measure for working out the probability of various groups being included in our sample, as the migration statistics did not differentiate between short term visitors and intending permanent migrants. The rise in such short term migration as shipping improved, would mean that it would seem that we were being less successful at including migrants in our sample. This was probably one reason for the decline in the number of migrants included. However, most of the drop in the 1920's and 1930's will be because the migrants were young and healthy, and so not dying in sufficient numbers.

TABLE 7.1

MIGRANTS IN PROBATE SAMPLE PER 100 IMMIGRANTS

1860 - 1869	1.353	1900 - 1909	0.282
1870 - 1879	1.500	1910 - 1919	0.175
1880 - 1889	1.174	1920 - 1929	0.068
1890 - 1899	0.346	1930 - 1939	0.025

Note: Immigration Statistics begin only in 1860

Source: Miscellaneous Statistics
          Probate Sample.

It would be expected that those who arrived early in New Zealand and so were on hand to take any opportunity which presented itself, would do best in the accumulation of estates. Graph 7.1(b), which shows the average value of estates for various death cohorts suggests that this indeed was the case

and that those who arrived after about 1860 to 1865, did accumu-
late less.   However, despite the large number of very wealthy
people who came in the first years of settlement, those who
arrived in the 1840's did not do as well as those who came
slightly later.   The picture is even clearer in Graph 7.1(a),
which by comparing the time of arrival for different lengths of
residence, eliminates the fluctuations due to the latter.
Again it is those who came in the 1850's and 1860's who did
exceptionally well, and the later arrivals showed declining
wealth expectations.

    If the date of arrival was important in determing the final
wealth expectation of immigrants so too was the age at which
people came.   Table 7.2 gives the breakdown of the age of
arrival of the male migrants.   As was common, the men were con-
centrated in the early adult age groups.   This did not appear
to vary across time, though because of our sampling method we
tended to over sample the young people who migrated in the early
years, and the old people who came in the later years.

TABLE 7.2

AGE AT MIGRATION : MEN ONLY

Age	1840–1849	1850–1859	1860–1869	1870–1879	1880–1889	1890–1899	1900–1910	Overall
0-5	23.4	15.2	9.3	6.5	3.4	2.5	0.7	6.9
5-10	18.3	13.4	9.7	9.2	5.3	1.8	0.7	7.8
10-15	12.4	10.9	8.5	8.5	4.9	3.4	1.4	7.1
15-20	10.2	14.1	12.0	14.1	11.2	8.8	6.7	10.1
20-25	12.4	19.5	22.7	24.8	25.3	19.5	13.8	22.3
25-30	11.7	9.8	17.2	17.0	19.0	18.1	20.3	17.3
30-35	5.1	9.1	11.0	9.5	11.6	18.3	18.5	11.9
35-40	4.4	3.4	4.7	4.2	8.0	9.5	14.9	6.5
40-45	2.2	2.7	2.4	3.8	5.2	8.6	12.3	4.8
45-50	-	0.9	1.5	1.4	3.2	3.6	8.2	2.6
50-55	-	0.5	0.5	0.8	1.5	2.9	5.5	1.5
55-60	-	0.7	0.3	0.2	0.7	1.8	2.7	0.7
60+	-	-	0.1	0.1	0.8	1.1	2.9	0.5
Total Number	137	441	1439	1680	1039	442	635	5813

Source: Probate samples

GRAPH 7.1(a)

TIME OF ARRIVAL AND WEALTH :

BY LENGTH OF NEW ZEALAND RESIDENCE

(Men Only)

GRAPH 7.1(b)

DATE OF ARRIVAL AND WEALTH :

BY DEATH COHORTS

(Men Only)

Source: Probate Samples
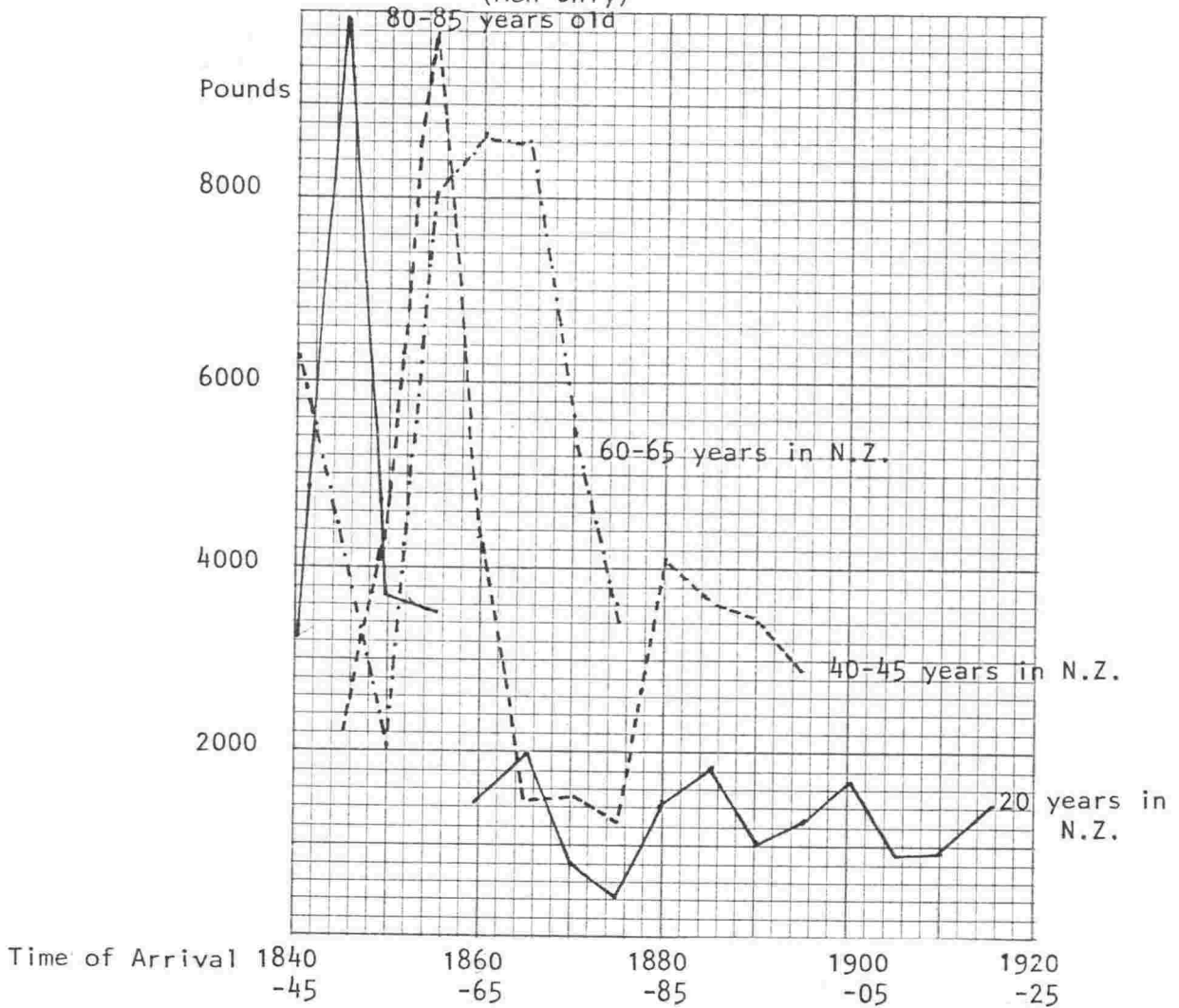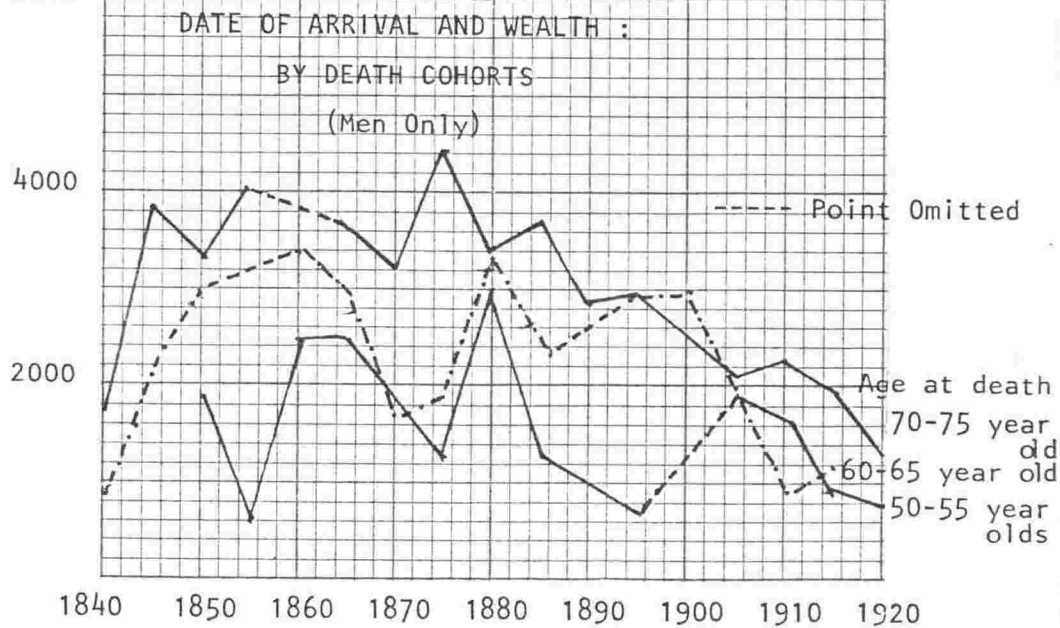
The effect of the age of migration on the final wealth of the men in our sample is shown in Graph 7.2(a). The trend was clearly in favour of the men who came in their late teens and early 20's. The comparison of the three age groups suggests that the added wealth due to those who came in these prime ages increased with age rather than diminished, and this is confirmed by Graph 7.2(b). Until the age of about 40 the wealth margin was in favour of those who had come out at a very early age, but after this those who came in the 20 to 25 age group had an increasing margin of wealth.

The advantages of coming young are obvious. If chances for wealth accumulation were better in the new environment, then those who had the longest here were at an advantage. The young were also less likely to be encumbered with family commitments and be able to take more risks than those who had the welfare of others to consider. In the colonial environment risks were often associated with moving to recently opened land, where, if the land was good, the prospect of capital gains were highest, but primitive living conditions would have put off many married men. However, there appears to have been less advantage to coming to New Zealand very young.

There are two possible explanations for the lack of success of the youngest migrants. First, the selective process in migration would not have been as clearly defined with this age group. For assisted immigration the qualities of the father and older sons were of prime consideration, very young children just being included by their association. Presumably this would mean that more unhealthy, under motivated or untrained would therefore have been included in the young children. For those who paid their own way the self-selection was again present for the adults, so the characteristics that are often attributed to migrants and associated with success - motivation and adventurousness - did not necessarily also apply to the children. The children did not also have the high expectations from migration, including the high material wealth expectations, which tended to make migrants work hard and live frugally. In this they came very close to being New Zealand born citizens, and it is interesting to compare the fortunes of those who came at a very young age relative to the New Zealand born. As Table 7.3 shows the

GRAPH 7.2

AGE OF MIGRATION AND WEALTH : BY DEATH COHORTS

(Men Only)
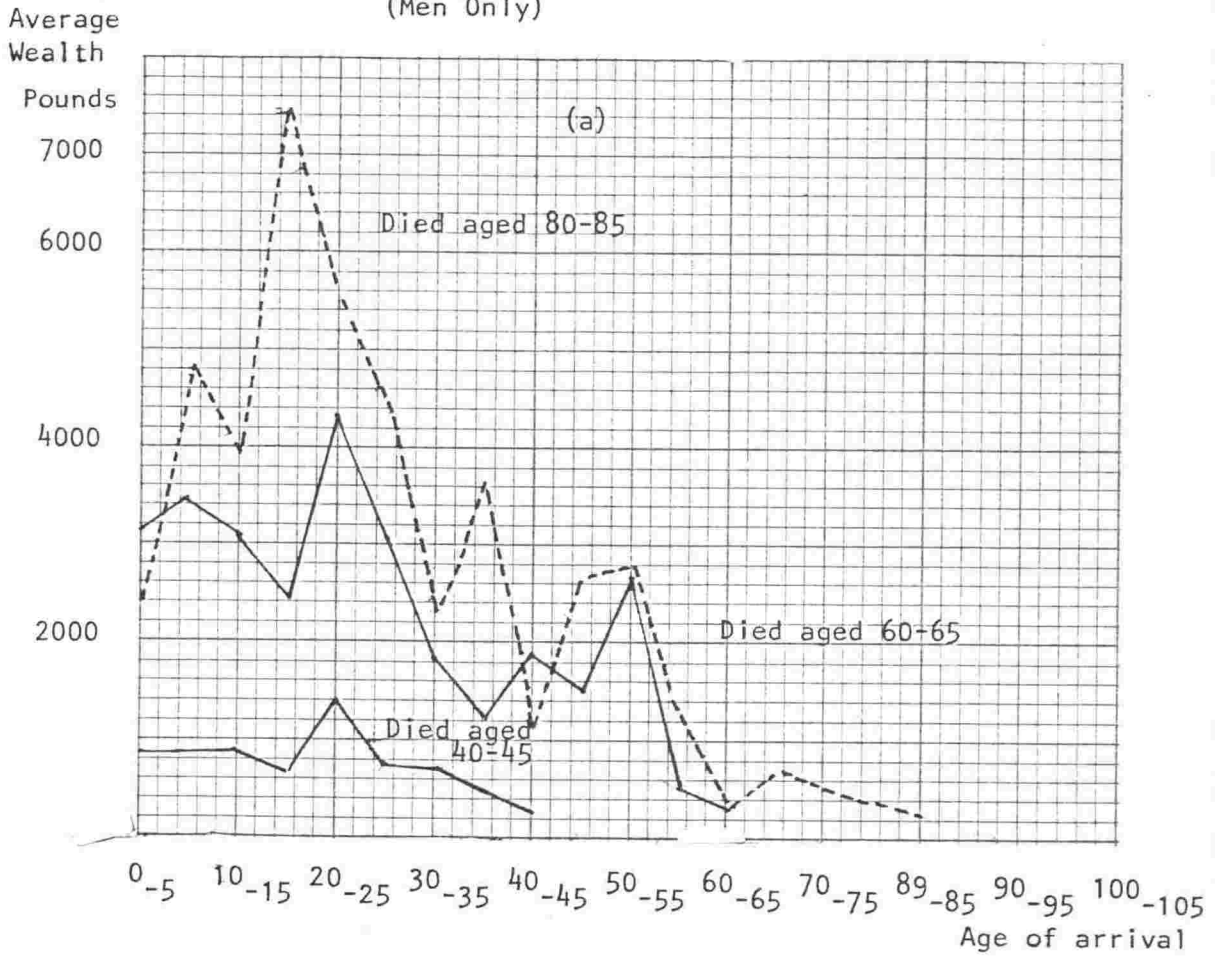
Source: Probate sample

New Zealand born do slightly better than those who came young, probably because they inherited greater wealth from parents who had been in the colony for a longer period of time. However, those who came aged 20 to 25 on average tended to do even better still, despite the possible handicap of not having parents in the colony.

TABLE 7.3

AVERAGE WEALTH; IN POUNDS

Age at Death	New Zealand Born	Came to N.Z. Under Age 5	Came to N.Z. aged 20 - 25
30-35	856	1064	516
35-40	1098	861	480
40-45	1633	839	1406
45-50	2648	1270	1986
50-55	2407	2745	3285
55-60	3121	1962	2944
60-65	3162	3025	4368
65-70	3305	2277	4655
70-75	4863	2752	5328
75-80	7372	3491	5532
80-85	5073	2651	5613
85-90	3448	4161	4794

Source: Probate samples

The father's status showed some tendency to increase with the age of migration, however this was not significant until after the age of 60, and certainly the age groups who did best in wealth were not from significantly better, or worse backgrounds from the migrants who came as children.

The second factor which may well have lead to lower wealth for the young migrants was the institution of family farms and businesses. Here children worked unpaid and frequently without any real independence with which to accumulate assets, until they wished to marry, when a farm was purchased for them. In this situation, children were unlikely to leave the family to take paid employment, so that the effective age at which children were able to accumulate their own assets was probably higher

TABLE 7.4

FATHER STATUS BY AGE OF MIGRATION

(MALES ONLY)

(Percentages)

Age of Migration:	0-5	20-25	40-45	60-65
Top Category	2.27	2.08	1.98	6.38
2nd "	5.79	7.14	7.37	4.26
3rd "	33.75	32.27	24.93	27.66
4th "	19.40	15.46	12.75	6.38
5th "	8.06	5.65	7.08	6.38
Bottom "	16.62	12.34	14.16	12.77
Missing	14.11	25.06	31.73	36.17
n	397	1345	353	47

Source: Probate samples

for children born in New Zealand, or children who were young
when their family migrated.   Most of those over 15 who came
to New Zealand would however have broken with their family prior
to coming, and many, if not the majority of the migrants who
were in the age-groups that did best would have come out to New
Zealand on their own.

Graph 7.3(a) shows the advantage of migrating single.
As this graph obviously includes more of the older age groups
in the married category, some lower value would have been ex-
pected;   however, it would seem that even in the narrower range
of prime migrant age-groups it paid to come as a single man.
It also did not help to have too many children at the time of
migration.   As Graph 3(b) shows, those that came with no
children did better, until they reached the retirement age
groups when the series tend to converge.   In contrast, those
who came with 6 or more children already born did not do as
well through most of their life span.   It is possible that
this was partly due to the balance of families brought out by
the Government.   In its major migration drive in the 1870's
the New Zealand Government gave preference to families, es-
pecially families with older sons who could also provide labour,

82

GRAPH 7.3(a)

MARITAL STATUS, AT MIGRATION

(Males Only)
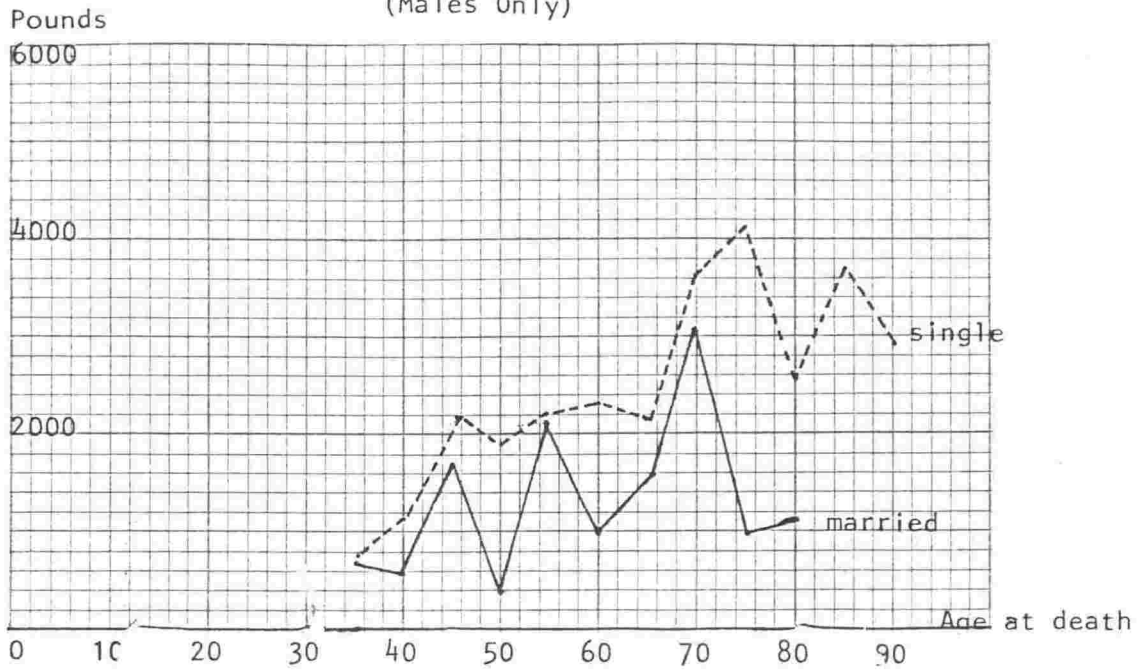
(b)

FAMILY SIZE, AT MIGRATION

(Males Only)
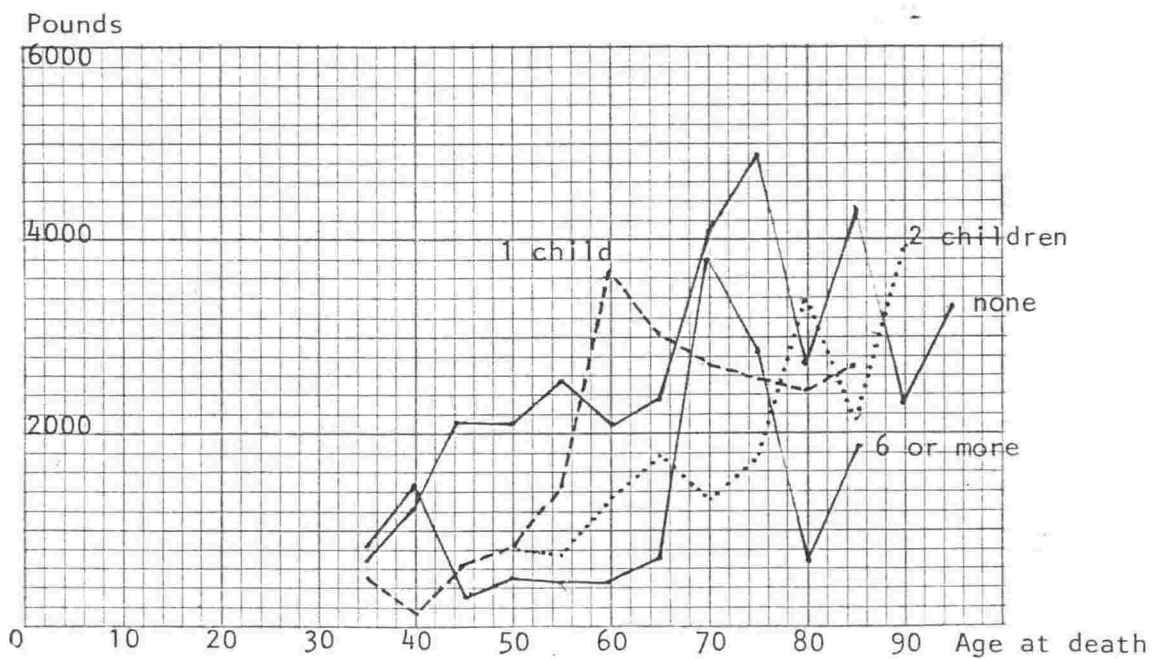
Source: Probate Sample

or older daughters who could do their bit to help redress the serious sex imbalance which had developed during the gold rush migration of the 1860's.   Families tended then to come more than proportionately as assisted immigrants, and assisted immigrants tended to be drawn from the poorer sections of British society.

The difference between assisted and unassisted immigrants was studied using those who came in the 1870's from ten counties in England.   The 1870's were the period when assisted immigration was at its height - of the 132,827 British immigrants, 97,011 or 73 percent, were assisted migrants.   Our ten counties provided 21,377 of these assisted migrants, or 22 per cent of all assisted migrants from Great Britain.   They were over 40 percent of the English migrants.   The ten counties - Cornwall, Devon, Berkshire, Gloucester, Kent, Lincolnshire, Oxfordshire, Somerset, Warwickshire and Wiltshire - were used because indexed lists of these migrants were collected by Professor R.D. Arnold.[1] By taking these indexed lists we were able to determine whether those people who were born in these counties and whose time of

TABLE 7.5

1870's MIGRATION FROM SELECTED ENGLISH COUNTIES

	(1)	(2)	(3)	(4)	(5)	(6)
	Total no. of assisted migrants	% in each County	Total Probate Sample	No. of assisted in Probates	% of assisted	Proportion of assisted migrants in sampl per 1000 (4)÷(1)
Berkshire	1017	4.76	22	5	3.25	4.92
Cornwall	5239	24.51	117	40	25.97	7.64
Devon	1978	9.25	52	15	3.25	7.58
Gloucester	2187	10.23	40	6	3.90	2.74
Kent	3876	18.13	70	24	15.58	6.19
Lincolnshire	1528	7.15	25	14	9.09	9.16
Oxfordshire	1830	8.56	30	20	12.99	10.93
Somerset	945	4.42	23	7	4.55	7.41
Warwickshire	1942	9.08	55	19	12.34	9.78
Wiltshire	835	3.91	17	4	2.60	
Total:	21377	100.00	451	154	100.00	7.20

Sources: (1) Figures supplied by Professor Arnold
             Probate samples

1. These were collected for his study of the 1870's migration published in his The Farthest Promised Land (Wellington; Victoria University Press, 1981) and were kindly made available in a personal communication.

arrival implied they came in the 1870's were assisted or not.
Table 7.5 gives the overall distribution of our results.   We
do not know the number of unassisted migrants who came from
our counties, so we cannot directly compare the ratio of
assisted to unassisted in our sample compared to the total
population; however it would seem that those who were assisted
were significantly less likely to leave an estate of a suffi-
cient size to require probate.   Only 34 percent of our sample
were assisted immigrants, whereas 73 percent of the immigrants of
the period were assisted.   The number of probate estates did how-
ever vary significantly from one region to the next.   Those
from Gloucester in particular seemed to be less likely to have
an estate of a sufficient size to require probate, whereas in
Oxfordshire and Lincolnshire the proportion of assisted in our
sample (as shown in column 6 of Table 7.5) is moving up towards
the proportion of all immigrants in our sample, (as shown in
Table 7.1).   The variation in the proportion of probate estates
to immigrants seems to have been related to the extent to which
the Farm Labourers' Union was involved in this migration.
Oxfordshire was in the heart of the Union established by Joseph
Arch, and Lincolnshire also, was greatly affected by a similar
union.   Cornish migration however tended to be more dominated
by those fleeing the fall in copper prices, and the Farm Lab-
ourers' Union was not widely established in Devon, a county of
small family farms.   The exception was Kent a county with an
active and successful union run by Alfred Simmons.   While this
union promoted foreign migration it also promoted migration
within England, and possibly relatively less of the leaders of
the union came to New Zealand than with the other groups.[2]

Once we turn to compare those who did take out probate
the levels of estate were not markedly different from those of
the unassisted migrants.   As Table 7.6 shows, the mean wealth
was rather less for the assisted migrants, but this was due to
a lower upper tail.   The median figure was very close for the
two groups, and indeed gave the assisted migrants a slight
edge.   The largest estate by an assisted migrant was £24,858

---

2.   See _ibid_.   Chapters 2 and 4.

held by Joseph Bryan, a Christchurch hotelkeeper, who came out aged 3 from Oxford in 1874. He died in 1932, the same year as the wealthiest unassisted migrant of the 1870's, William Nelson of Nelson Bros. William Nelson came in 1870 to manage the company's boiling down works in Napier, and remained in New Zealand as manager of their freezing works in Napier, dying at the age of 89.

TABLE 7.6

WEALTH OF ASSISTED AND UNASSISTED MIGRANTS

(In Pounds)

	Assisted	Unassisted
Mean	2060	2244
Standard deviation	3552	4156
Median	863	743
Maximum	24858	36678
Upper Quartile	1943	2243
Lower Quartile	337	265
Minimum	30	0
Number in Sample	154	296

Source: Probate samples

The assisted migrants tended to arrive in New Zealand too young or too old to take maximum advantage of migration. As Table 7.7 shows the period of the late teens and early 20 year olds was relatively under represented in the assisted migrants, while the unassisted migrants were concentrated in these age-groups. This was largely a result of the deliberate attempt

TABLE 7.7

AGE AT MIGRATION, ASSISTED AND UNASSISTED MIGRANTS

(Percentages)

Age	0-9	10-19	20-29	30-39	40-49	50-59	60+
Assisted	13.54	17.71	32.29	28.13	6.25	2.08	-
Unassisted	8.60	23.12	47.31	13.44	4.30	2.15	0.55

Source: Probate samples

by the Government to attract families to New Zealand. As a result, the parents who came tended to be older, and burdened with a large number of children, and under these conditions they would not have done so well, as we have already seen in this chapter.

The assisted migrants came more than proportionately from families where the father was an unskilled labourer. Indeed, in our sample the proportion of labourers in the assisted group was more than double that of the unassisted group. The work of Professor Arnold suggests that many of these were probably farm labourers, rather than general labourers. The large number of assisted Cornish migrants meant that mining was also slightly higher. In contrast, both the trade and the service sector were under represented among the occupations of the fathers of the assisted. As these were two industrial groups which tended to be associated with high wealth levels (see Chapter 8), it is clear that the background of the assisted migrants was poorer than that of the unassisted.

TABLE 7.8

OCCUPATIONS OF ASSISTED AND UNASSISTED IMMIGRANTS

(Percentages)

| | Father's Job | | Own Job (Men only) | |
	Assisted	Unassisted	Assisted	Unassisted
Farming	27.2	28.6	36.0	34.5
Mining	7.4	6.4	3.6	1.5
Industry	27.9	27.9	22.5	30.5
Trade	3.3	6.4	8.1	7.6
Other Services	4.5	9.8	6.3	12.2
Labourers	17.5	7.4	18.9	8.1
Unknown	12.3	13.5	4.5	5.6

Source: Probate samples.

The industrial distribution of the migrants reflected that of their fathers, and the high proportion of labourers remained among the assisted, and the preference for the professions (but not trade) among the unassisted. There was however a tendency for those who moved from their father's job to move in different

directions. The unassisted moved disproportionately to industry, while the assisted displayed a preference for trade (particularly retailing) and agriculture.

The assisted migrants tended to be directed to particular provinces on arrival, notably Canterbury and the bush areas of the Taranaki, Hawkes Bay and Wellington provinces. It is not surprising therefore, to find that these provinces had the highest proportion of assisted migrants dying in them. The bush provinces were probably not the place for massive fortunes to be made, but probably did enable people to accumulate a moderate size estate. The places to which they were sent probably (added to their background) prevented the assisted migrants from moving into the upper wealth range.

TABLE 7.9

RELIGION OF ASSISTED AND UNASSISTED MIGRANTS

(Percentages)

	Assisted	Unassisted	All Probates
Anglican	44.16	45.45	38.84
Presbyterian	14.94	12.79	26.70
Methodist	27.92	20.54	10.87
Baptist/Brethren	2.60	2.69	2.17
Other Protestant	3.90	5.72	3.44
Catholic	-	2.69	10.92
Jewish	-	-	0.33
No Minister at Burial	4.55	5.39	4.13
No details given	1.95	4.71	2.58

Source: Probate samples

It is not surprising to find that the assisted migrants had a high proportion of Methodists among them. This church was indirectly involved in the establishment of the farm labourers' union, and hence, the assisted migration to New Zealand.[3] However it is surprising to find that unassisted migrants also also had a high proportion of Methodists. This suggests that our particular counties, which sent a large proportion of the

---

3. ibid p.34.

1870's migrants had a high proportion of Methodists in their
populations.   On the other hand the number of Catholics, was
very low.

Overall, our sample would suggest that the assisted migrants
came from a background that would have hindered them in accumu-
lating wealth relative to the unassisted migrants.   The age at
which they were brought to New Zealand and their family commit-
ments at this time would have hindered their wealth accumulation
further still.   Despite this, the average level of estate which
they achieved was not statistically different from that achieved
by the unassisted migrants, and although they did not achieve
the number of large estates, neither were they unduly concentrated
at the lowest end of the wealth spectrum

CHAPTER 8

OCCUPATION AND WEALTH

Throughout our period some occupations attracted wealthy
men, and some occupations rewarded those involved in them to
the extent that they became wealthy men.   It is not surprising
to find that there was both a strong relationship between a
man's background and his occupation, and a strong relationship
between his occupation and his estate at death.   In this
chapter we will concentrate on the latter relationship.   Chap-
ter 10 will explore the relationship between a person's occupa-
tion and that of his father.

The death certificate required the next of kin to nominate
one occupation for the deceased.   It is clear from studies in
occupational mobility in New Zealand that this was an unrealistic
request;   most people held more than one occupation during their
lives. [1]   We can only presume that the next-of-kin did their
best to provide the occupation that was most appropriate,
either because the person worked longest at it in their lives,
or because it was the final occupation achieved.   In this latter
case, it is probable that the final occupation was achieved
after some upward mobility, and so the death certificate in-
formation will give an optimistic view of the jobs held by our
sample during their total working lives.   This tendency is
increased by the tendency noted in Chapter 5, of the next-of-
kin providing the most prestigous title for the job in question,

---

1.   See for instance, Claire Toynbee, 'Class and Mobility in
     19th Century Wellington Province an exploratory study of
     immigrants arriving 1840 - 1880.'
     (Wellington; Victoria University, M.A. Thesis, 1979)

or   Pickens, K.A. 'Occupational Mobility in a Nineteenth
     Century Colony' J. of Social History 11(3) Spring 1978
     p.404-412.

so giving a higher social rank to the person than they may have given themselves.

The specific job given on the death certificate was coded using the <u>New Zealand Standard Industrial Classification</u>,[2] as we wished to link occupations with industrial groupings.   The use of of a modern classification system produced surprisingly few problems;   most of the jobs from the nineteenth and early twentieth century were listed, and were recognisably the same in their job description.   The only job of any significance which gave us doubts was the modern classification of the butchers in the retail sector.   In the nineteenth century, the local butcher was more likely to slaughter his own meat than receive it already processed from an abattoir.   They could therefore have been more akin to the modern slaughterers, and so be in primary produce processing (P.P.P.).   It was however decided to leave them in retail trade, as this was undoubtedly one of their functions.   There were two indefinite occupations, the "labourers", who gave no industry, and the "gentlemen", who abounded in numbers in the early years of our samples.   Both of these were kept as separate groupings in our industrial classification.   The other specific jobs were amalgamated into 22 industrial groupings, on the basis of the classification shown in the first appendix to this chapter.

The average wealth for each of these subgroups is shown in Table 8.1.   This conforms closely to our expectations from the regression analysis.   Overall the most wealthy industrial group was trade.   This was almost solely due to the large number of wealthy merchants.   The merchants were involved in international trade as opposed to storekeepers and the like who were involved in selling to the New Zealand consumer.   The involvement in international trade almost always implied a substantial amount of capital investment.   A London branch or an interconnecting firm was almost essential as most imports came from London and exports sold there.   The poor communications of the period meant this could not be done from New Zealand and some trusted person had to be left to buy and sell in London

---

[2] (Wellington;   Department of Statistics, 1965).

TABLE 8.1

INDUSTRIAL GROUP AND WEALTH

(MEN ONLY)

(Pounds)

Average Wealth	1888	1896	1906	1916	1924	1932	1939	Overall	n.
Agriculture Hunting, Fish-	3612	1958	3588	3995	5568	4386	4225	4328	3740
ing & Forestry	–	100	–	403	842	362	601	574	24
Mining & Quarrying	939	887	593	1342	746	1495	833	983	236
P.P.P.	–	6836	223	7164	1554	3302	1913	2862	63
Food, beverage & Tobacco	–	926	2365	1416	2958	1992	1288	1917	119
Clothing	544	397	1145	921	476	1303	1153	1025	86
Other Textiles	704	745	2752	1056	1429	430	1056	1194	60
Leather	1087	289	960	1712	1163	1525	1499	1333	39
Footwear	–	960	525	1094	1443	872	1345	1123	82
Wood & Furniture	1385	1130	1107	3461	4056	1698	2856	2658	118
Paper & Printing	127	131	3630	809	2893	1650	5740	3024	81
Chemicals	–	–	–	–	–	6595	851	2765	3
Metals & Machinery	550	1496	1031	5351	1421	1466	1428	1862	326
Misc. Manufact- uring	–	6056	604	3115	2356	1598	3717	2459	67
Public Utilities	–	–	–	–	733	1319	385	719	22
Building & Construction	2196	407	1467	2349	1553	1483	1851	1688	670
Rail Transport	–	54	486	991	906	1232	1044	1040	225
Other Transport	572	313	1456	1535	1540	1488	1534	1466	519
Trade	2448	5321	5162	3129	5808	6816	4389	5013	918
Professional Services	1205	5006	2315	1995	3633	2607	2986	2915	1368
Non-professional Services	–	–	2705	1096	4254	585	2416	2355	43
Gentlemen & Labourer	18939	6700	2822	1994	970	785	844	1773	892

Source: Probate samples

on behalf of the New Zealand firm.   Establishing such a branch
or firm could involve high overheads.   Not only was London an
expensive city in which to have a headquarters, but, especially
in the early days, the long delays in shipping produce to London
meant that even a 60 days sight bill was likely to fall due
prior to the return cargo being sold.   Some idea of the capital
outlay involved can be judged by the attempt by Russell, Ritchie
and Co, a Dunedin firm of stock and station agents, to establish

an interlocking firm in London, Russell, Le Cren & Co., Ritchie
wrote to Russell on the capital commitment involved:

> "I have been thinking over this London business and
> fear it is a heavier thing than any of us contemplated.
> In fact it comes to this that supposing the capital
> which you have is required for (?) up to our NZ friends
> and sundry odds and ends about your business ... then
> we should require to send money along with all indents
> and orders to enable you to pay them. Supposing you
> execute indents of an average of £4000 p. month and
> have to pay cash, then, even though we remit on receipt
> of documents you must be 4 or 5 months in advance - and
> in order to do this I sh(oul)d say £20,000 capital is
> required ... It is wonderful how money gets absorbed." [3]

One of the major factors behind the sale of their business to
the National Mortgage and Agency Co. Ltd, was that they were
undercapitalised for their business. To be a merchant then,
one had to begin as a reasonably wealthy man, and this entry
barrier limited the number of merchants, and gave those in-
volved very high profits indeed. The level of profits de-
clined with time - the very large fortunes made in the 1840's,
1850's and 1860's became more modest by the 1890's - but the
tradition of the son following his father in business kept the
fortunes made in the trading sector in our period of study.

The second most wealthy industrial group was the farmer.
The large estates formed in the early years of settlement re-
warded their owners with high returns as wool prices rose and
as demand for stock by new settlers maintained sheep prices.
For those that bought land, the rise in its value with in-
creased settlement and improved means of transport, added to
their returns, and indeed tended to mean that the wealth of
the farmer exceeded the level which their income would lead
one to expect.

The industrial occupations which employed a reasonable
number of men and which had high wealth were wood and furniture,
paper and printing, and miscellaneous manufacturing. The wood
and furniture tended to have a high proportion of relatively
skilled men, particularly cabinetmakers, whose skills were in
relatively high demand in the rapidly expanding economy. The
profits that could be made by buying land and clearing it of
timber were also large, and many sawmillers were able to cap-

---

3.
J.M. Ritchie to le Cren. 7 March 1876. J.M. Ritchie
Private Letterbook. 7 March 1876. NMA Records Hocken
Library.

italise on this. The high level of wealth in paper and print-
ing was as a result of a relatively few people doing very well.
New Zealand had many small settlements whose newspapers remained
small, but those fortunate enough to begin early in a settlement
which grew large, could do very well indeed in the printing
trade. The miscellaneous manufacturing category was high
largely because of the large number of men described as "manu-
facturers" allocated to this indefinite category. Those who
were employers in the manufacturing world were likely to have
inherited wealth and to have added to it.

The professional services were in line with the people in
the leading industrial groupings. They did not achieve the
wealth of the farming community, let alone that of the traders,
but they were definitely in the upper wealth levels of the
community. It is probable, as we will see in our income sect-
ion, that in terms of income levels they did better than the
farming community or the merchants. Both these groups had
substantial amounts of their capital tied up in land or merch-
andise, which was increasing in value for most of our period,
but which increase was not readily realisable in terms of dis-
posable income.

The life time wealth levels of the groups for which we had
sufficient numbers to divide, is shown in Graph 8.1. At age
20, all of our men have remarkably similar wealth levels. The
labourers have only about a quarter of the wealth of the pro-
fessional men, but the discrepancy is small in relation to that
at the end of their life. The level of wealth at age 20
suggests that those who became farmers and professionals came
from a rather more prosperous background than those who were in
trade and who went labouring. However by age 25, those in-
volved in the trading sector had equalled the top two categories.
Those in trade did tend to accumulate funds the quickest, and
from age 45 onwards, their superiority in terms of accumulated
wealth was becoming apparent. The farming sector also accumu-
lated wealth fast, (though the upswing at age 50 is probably
due to the small sample) and the growth in wealth appears to
last to rather later in life. It is not until old age, 75 and
over that the wealth of the farming sector declines, whereas
the decline   is apparent from age 55 in the trade

GRAPH 8.1(a)

WEALTH BY INDUSTRIAL GROUP

Trade

Farming

Professionals

Labourers

Age at death

GRAPH 8.1(b)

WEALTH BY STATUS GROUP

Status level 2

Status level 4

Status level 6

Age at death
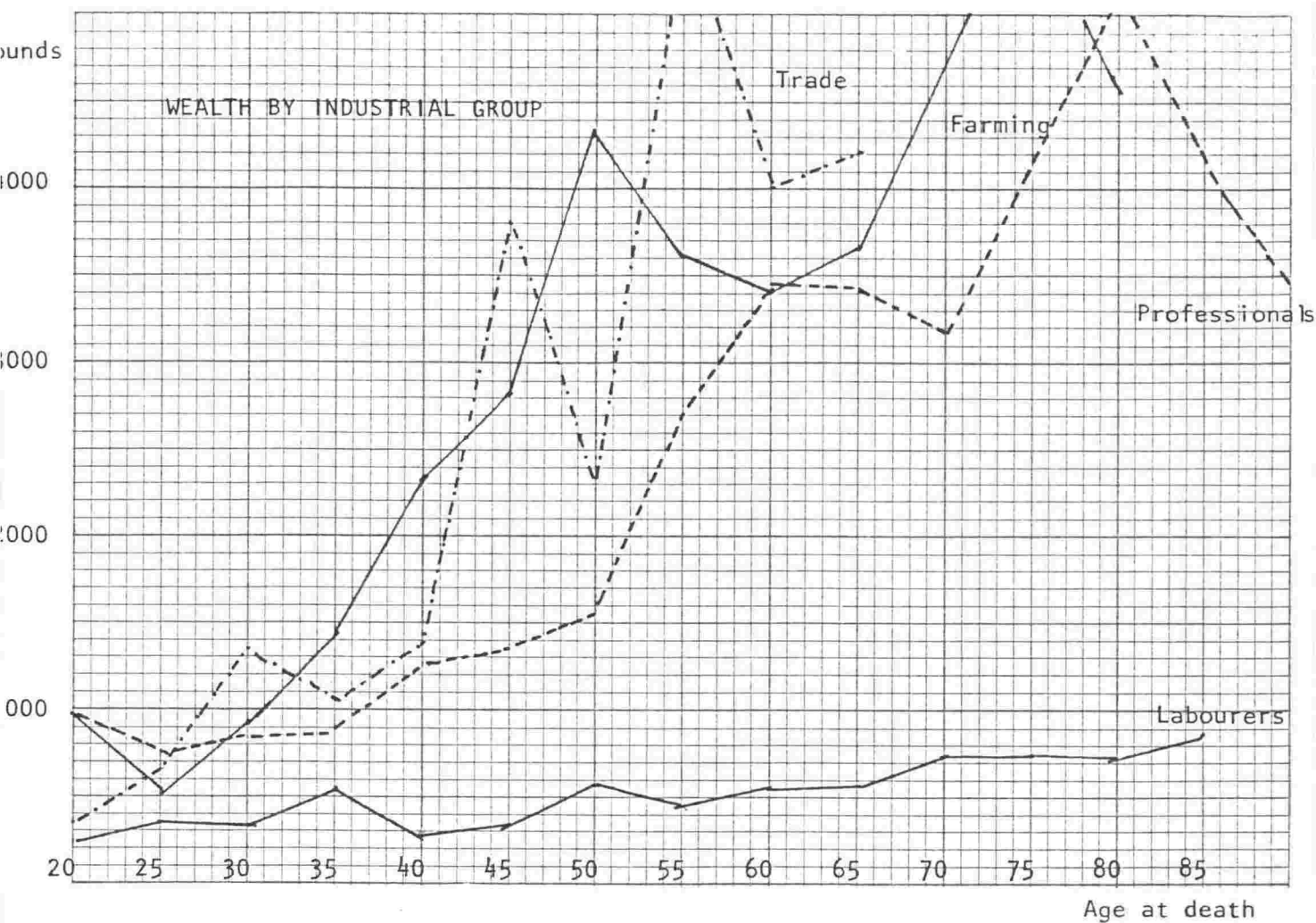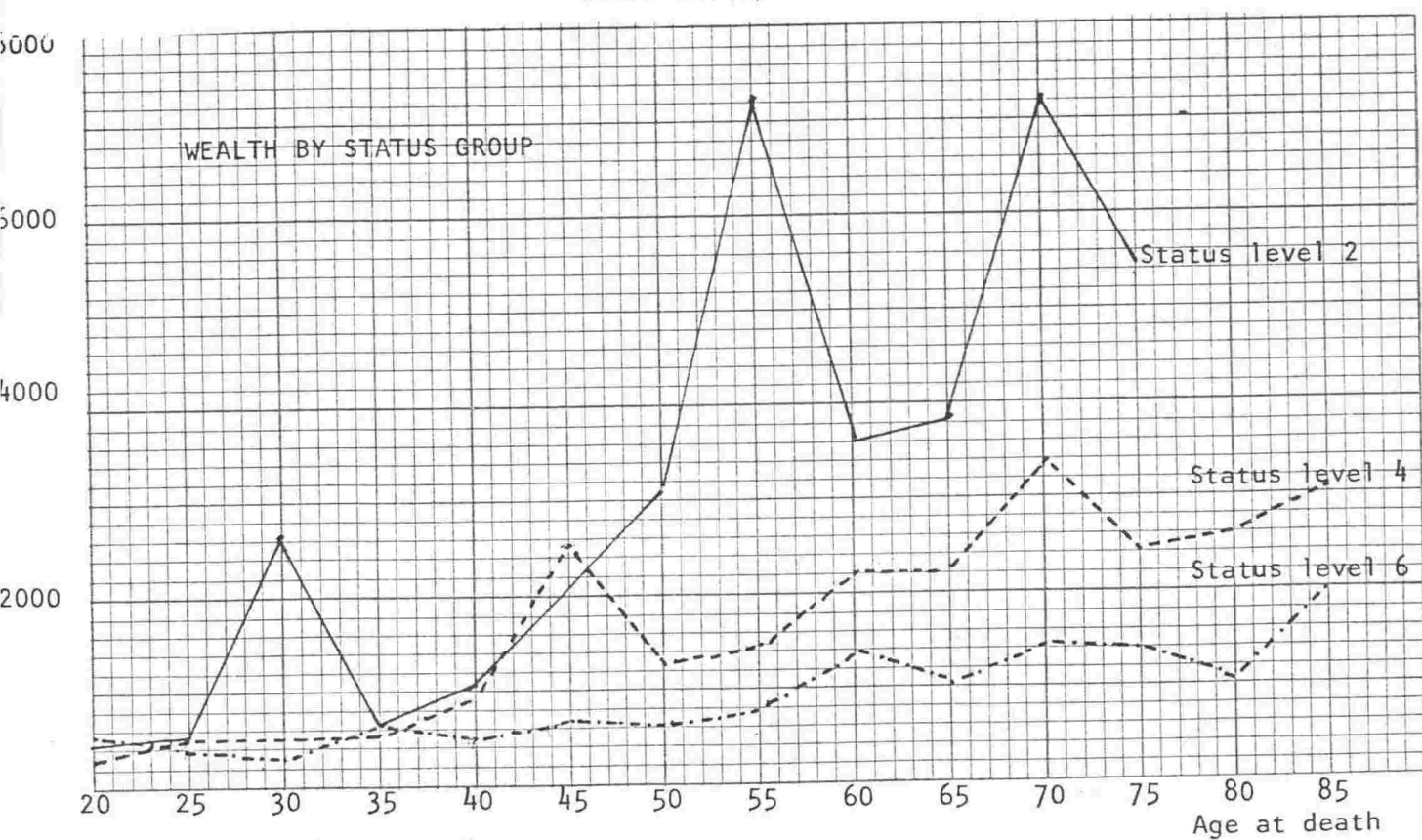
Source: Probate Sample

sector. It seems that being a trader was a difficult life, and many of the people here died young. Those that did not die tended to retire early and pass their business on to their children. It is not until age 50 that the professional men show the same growth as the other wealthy groups. The greater proportion of discretionary saving available to them appears to have meant that their saving levels were not high in the years of the child rearing, and it is only once the level of family commitment dropped that their wealth showed a marked improvement. The professional men's wealth continued to rise until late in their lives. In many cases by 1939 the oldest professional men had pension schemes to which they belonged, but even when this was not the case the nature of their work relative to farming tended to mean that they could continue to work till much later in life. Those who chose life as a labourer showed very little growth in their wealth relative to that of the high flying occupations. Such growth in wealth as they did show however, was steady and there is no sign of the decline in wealth in old age apparent in the other series.

The general effect of educational and social status on final wealth is shown in Graph 8.1(b). The status scale used was that developed for New Zealand in the 1970's by W.B. Elley and J.C. Irving.[4] The scale used correlated highly with other similar scales for New Zealand and other British Commonwealth nations. There was relatively little difficulty in applying the scale as most occupations were represented, but the scale had a major drawback in that there was no distinction between the largest and smallest farmers, both being coded as "3". It would have been possible to use our information on wealth to correct this defect, but only for the individual who had just died. The scale was, however, also being used as guide to the father's social status and as no wealth information was known on the father it would not have been possible to redistribute farmers there. For this reason the status scale was not adjusted, and this defect in the status scale needs to be remembered when interpreting the results. Appendix 2 to this

---

4. W.B. Elley and J.C. Irving 'Revised Socio-Economic Index for New Zealand'.
   NZ Journal of Educational Studies XI(1976) pp.25-36.

chapter gives the status rank for the major occupations in our
sample.   The rankings broadly equate to the positions in
Table 8.2.

TABLE 8.2

STATUS LEVELS

Status Level	Interpretation
1.	High status jobs, with extensive training necessary prior to work and high incomes when working e.g. doctors.
2.	Less skilled work than 1, but still requiring extensive education and providing moderate incomes. e.g. Government employees
3.	Dominated by farmers, but also includes white collar workers with little formal training e.g. selling agents.
4.	Skilled tradesmen e.g. carpenters
5.	Semi-skilled tradesmen e.g. woollen mill workers
6.	Unskilled labourers and day workers

Note: See Appendix 2.

It is clear from Graph 8.1(b) that the level of skill which
the person acquired materially affected their wealth accumula-
tion, and that unskilled workers were not able to achieve the
level of wealth of either the skilled tradesman or white collar
workers after the age of 40.   This is even clearer on the
finer breakdown of individual wealth levels for the five largest
occupations which is shown on Graph 8.2.   The labourers with no
specific skills are less wealthy than farm labourers, who in
turn do less well than carpenters, civil servants and, of course,
farmers.   What begins as very similar wealth levels in the 20

GRAPH 8.2

SPECIFIC JOBS AND WEALTH LEVELS
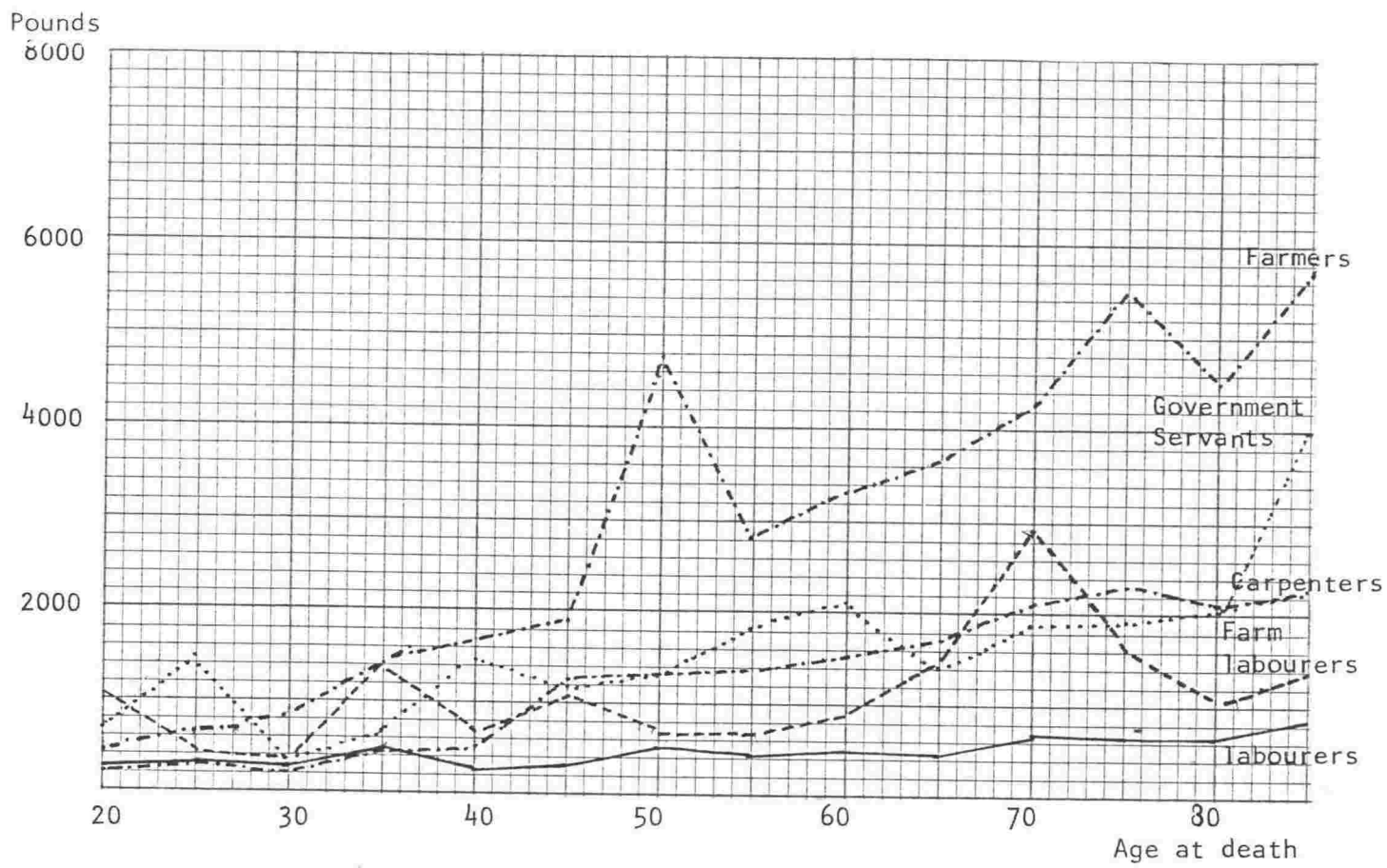
Source: Probate Sample

to 40 year old age range is, by age 60, an hierarchically organised system.

The accumulation of wealth from income tended to mean that it increased markedly as people aged. The age-specific wealth levels for each of our sample years is shown in Graph 8.3. Until 1924 there is only a slight difference between the curves for each of the years, though there is perhaps a tendency for the average level of estates to rise across time. This tendency is markedly reversed for those over 45 in 1939. The average value of estate for these people was significantly less than in 1924 or in 1932. This was almost certainly the result of their investments having been disproportionately affected by the depression, and the Government's policies to aid the farming community. The proportion of an individual's assets in stocks and shares and in mortgages has been generally shown in overseas' studies to increase with age and wealth. Unfortunately, we do not have information on the distribution of assets in New Zealand estates in our period. The first published figures were for the

TABLE 8.3

PROPORTION OF NET ESTATE
IN SELECTED ASSETS, 1954.

Value of Estate	Realty	Mortgages	Life Policies	Stocks and Shares
Under £1,000	32.40	2.36	8.75	5.59
£1,000 - £10,000	42.79	6.87	5.31	9.10
£10,000 - £20,000	38.55	8.95	4.09	16.75
£20 - £50,000	30.04	9.29	5.95	23.14
£50 - £100,000	27.62	7.84	4.78	25.61
£100,000 +	6.10	6.58	4.08	55.65

Note: Debts due on each asset have not been deducted

Source: New Zealand Official Yearbook 1956, p.1123

1954 year, 15 years after the end of our period, and the valuations from which these statistics were collected are protected by the confidentiality provisions of the Inland Revenue Depart-

GRAPH 8.3
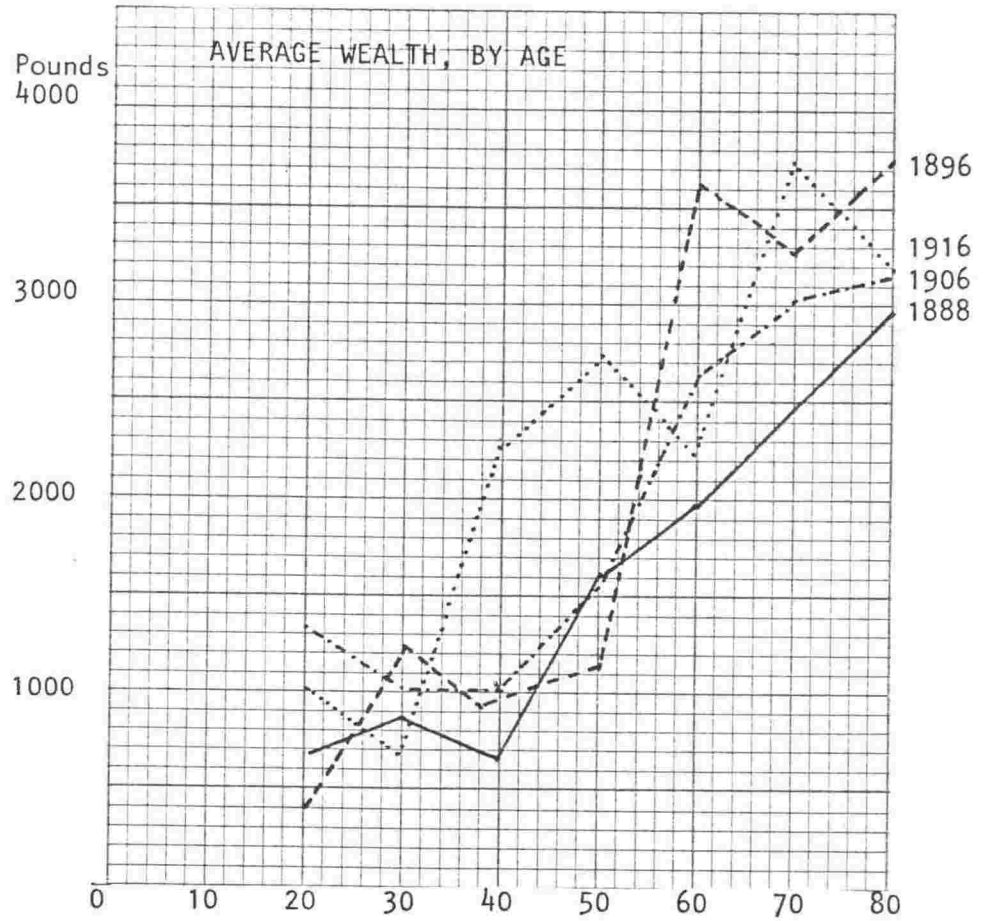
Source: Probate Sample
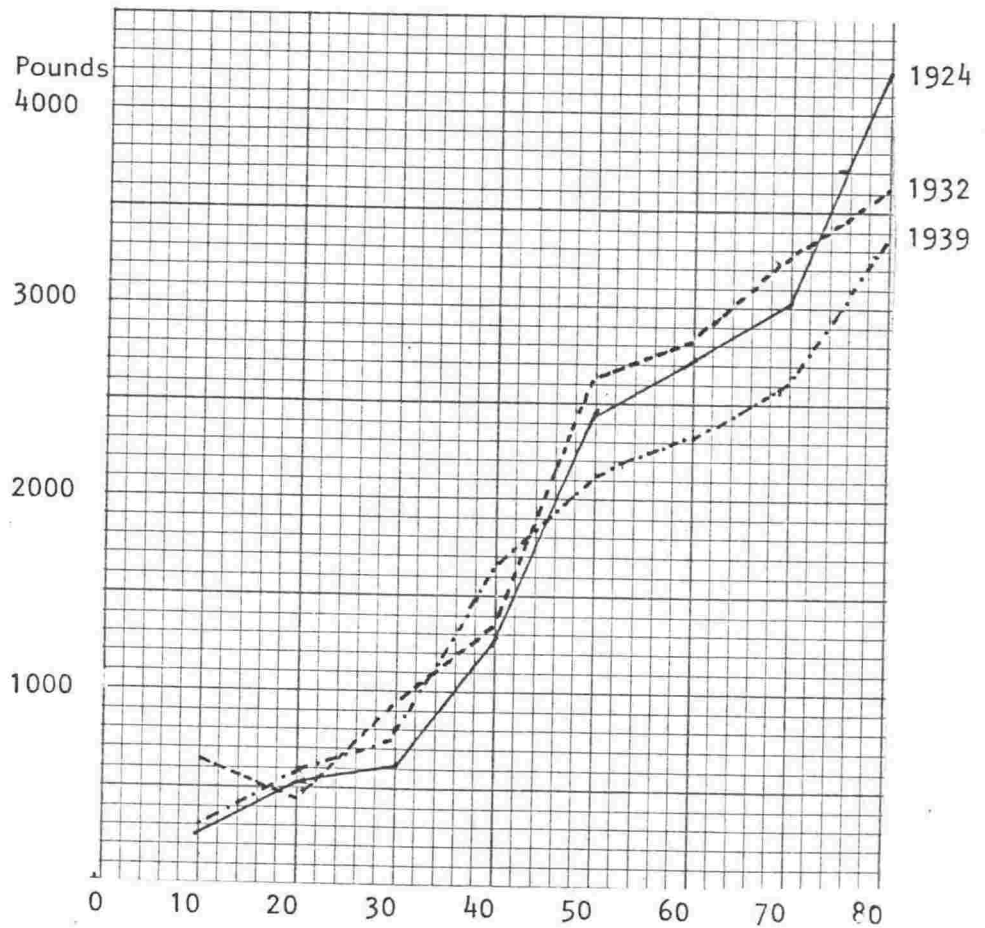
Source: Probate Sample

ment.[5]   However, it seems likely that the trends shown in
the 1954 figures of an increase in the proportion of assets held
in shares and stocks, and in mortgages would also have been true
in the 1930's.   And it is also probable that this increase,
which in Table 8.3 is shown as relating to wealth, also related
to age.   The effect of the depression on the value of stocks
and shares was as devastating in New Zealand as overseas,
though the macro-economic impact on our economy was far less
as the stock market was a relatively undeveloped portion of our
financial market, and the Government's attempts to assist the
farming community by writing down mortgage interest, and in
some cases capital, would equally have disproportionately re-
duced the wealth of the older people.

The age-wealth trends shown in Graph 3 are unusual in that
they show no decline in wealth in extreme old age,   and the
more complete figures for the age-wealth people given in the
Official Yearbook and shown in Graph 4 also suggest that while
accumulation stopped at about the age of 70, there was no dis-
saving prior to the age of about 90.   This is an unusual find-
ing compared to the age-wealth profiles found overseas, and it
suggests that the elderly in New Zealand were able to live with-
in their income, while those overseas were expending their
capital.   There are three reasons why this was possibly the
case.   Firstly, the level of average wealth in New Zealand was
high on an international level, and it is possible that the
income of this wealth, if carefully invested, was sufficient
for the elderly to survive without drawing on the capital it-
self.   Secondly, the high rate of home ownership in New Zealand
probably meant that for the majority of the wealth-holders
their largest asset was not one which would have enabled them
to spend the capital easily.   The home could not be sold off
piecemeal, and there were probably high emotional costs to sell-
ing it totally to get out some ready cash.   The estate had a
tendency therefore to be frozen in old age.   Thirdly, the Old
Age pensions, introduced in New Zealand in 1898, provided a
level of income and wealth below which an elderly person could

---

5.   A request to the Department for use of these records
      was denied under these provisions.

GRAPH 8.4

AGE AT DEATH AND WEALTH
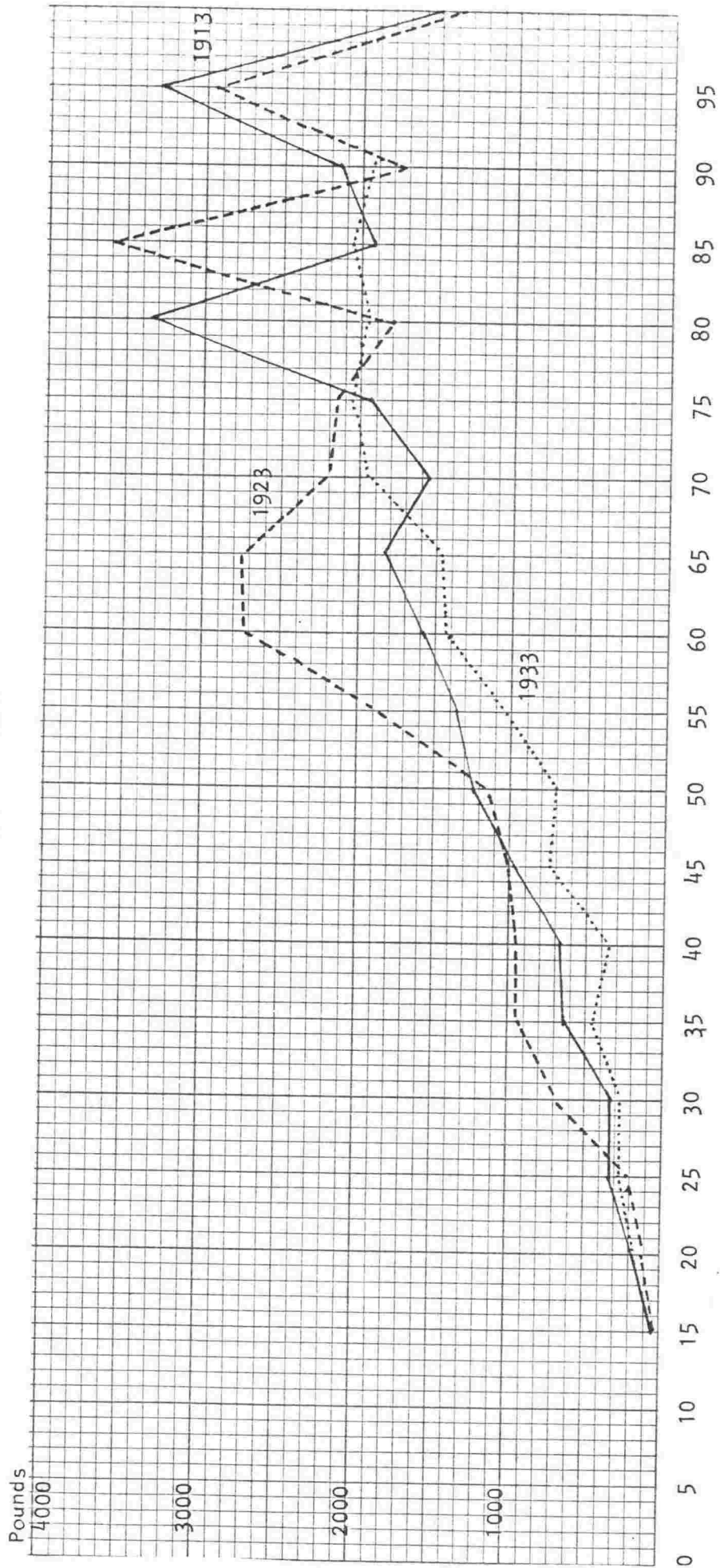
Note: Allowance has been made for missing estates using the procedure in Chapter 2.

Source: NZOYB

not fall.   While the benefit was means tested, both on income
and wealth, it was generally assumed that a home and furniture
would be owned.   The benefit made it unnecessary therefore for
people to divest themselves totally of their assets.

The elderly also showed no tendency to pass their estate
to their children prior to death.   We have already seen, in
Chapter 2, that the level of death duties was relatively low
on most estates during our period, and it would seem that the
combination of death and succession duties did not cause concern
to the parents.   As Table 8.4 shows there is little evidence to
suggest that those who were ill for 2 or more years with their
fatal illness dissaved relative to those who died suddenly.
Yet those who had been ill with diseases which led to death for
2 years or more had the opportunity of avoiding death duties
through gifting their estate.   The lack of incentive to pass
estate to children, the lumpiness of the major asset of the in-
dividual, and the provision of a minimum income, all appear then
to have meant that elderly people aged 70 to 90 kept their es-
tate intact even if they did not add to it.

TABLE 8.4

LENGTH OF SICKNESS, SUICIDE AND WEALTH

(In pounds)

Length of Final Illness	1888	1896	1906	1916	1924	1932	1939
Suicide	1035	1963	903	1118	2224	1184	1782
Sudden death	2525	2025	1804	2597	3936	2858	2330
Illness less than 1 year	8929	4328	2798	3940	3631	2359	2570
1 - 2 years	916	2618	1689	3745	3778	5652	5191
2 - 3 years	1906	1227	2114	4274	4700	6283	3524
More than 3 years	1435	5001	4421	2274	3689	4510	3284
Unknown	3741	2491	3755	3252	3492	3304	3186

Source: Probate Samples

The figures in Table 8.4 also suggest that prolonged ill-
ness did not strain the resources of the person.   Indeed, the
only consistent trend in the table is for those who committed
suicide to have markedly less estate.   This was largely because
they were younger people than those who died from other causes.

It is obvious that not all those who committed suicide were in
financial trouble.

The geographic spread of wealth for our sample years is
shown on Map 8.1.   Given that the farming community was parti-
cularly large and relatively wealthy, the distribution is not
surprising.   The early sheep farming around northern Canterbury
and Ashburton, Gisborne, Napier and the Southern Wairarapa were
places where wealth was particularly concentrated.   The wealth
of the extensive pastoralist was obviously the dominant charac-
teristic of the period.   The areas with small holdings, which
became the areas of dairying and fat lambing, were not wealthy
during our period, as the below average levels achieved by
Taranaki and Southland suggest.   The distribution was however
beginning to change towards the end of our period.   (There was
a considerable lag between changes in the economy and changes
in our wealth statistics, as using wealth at death means the
pattern of wealth reflects accumulation over the period of the
person's working life, commonly 40 to 50 years)   Appendix 3
to this chapter lists the counties where more than 20 percent
of estates were in the top 10 percent of the wealth distribution.
In the first few years (particularly once the sample sizes rise)
the counties which dominate are the pastoralist's counties in
Hawkes Bay, Wairarapa, Wanganui and Canterbury.   However by
1932 this was obviously changing and some of the dairying and
fat lambing areas of Taranaki, the Manawatu and Wairarapa are
beginning to enter the lists.

The percentage of estates in the top ten percent of the
distribution in the four main centres is shown in Table 8.5.
The low figure for Dunedin in 1888 is almost certainly due to
the relatively small number of estates in our 1888 sample.   It
is clear that apart from that one figure the cities were rela-
tively prosperous in the nineteenth century.   Christchurch was
the most wealthy in this period, probably because many of those
who had acquired fortunes sheep farming in Canterbury retired
to Christchurch.   This wealth was declining in importance in
the twentieth century and Christchurch's fortunes fell with it.
The Dunedin figure is the only one to keep rising throughout,
probably because of the lag in deaths compared to wealth accu-
mulation.   The wealth accumulated in Dunedin in the 1880's

MAP 8.1

AVERAGE WEALTH BY COUNTY OF DEATH

1888-1939

	10000 +
	4000 - 10000
	2000 - 4000
	1000 - 2000
	0 - 1000
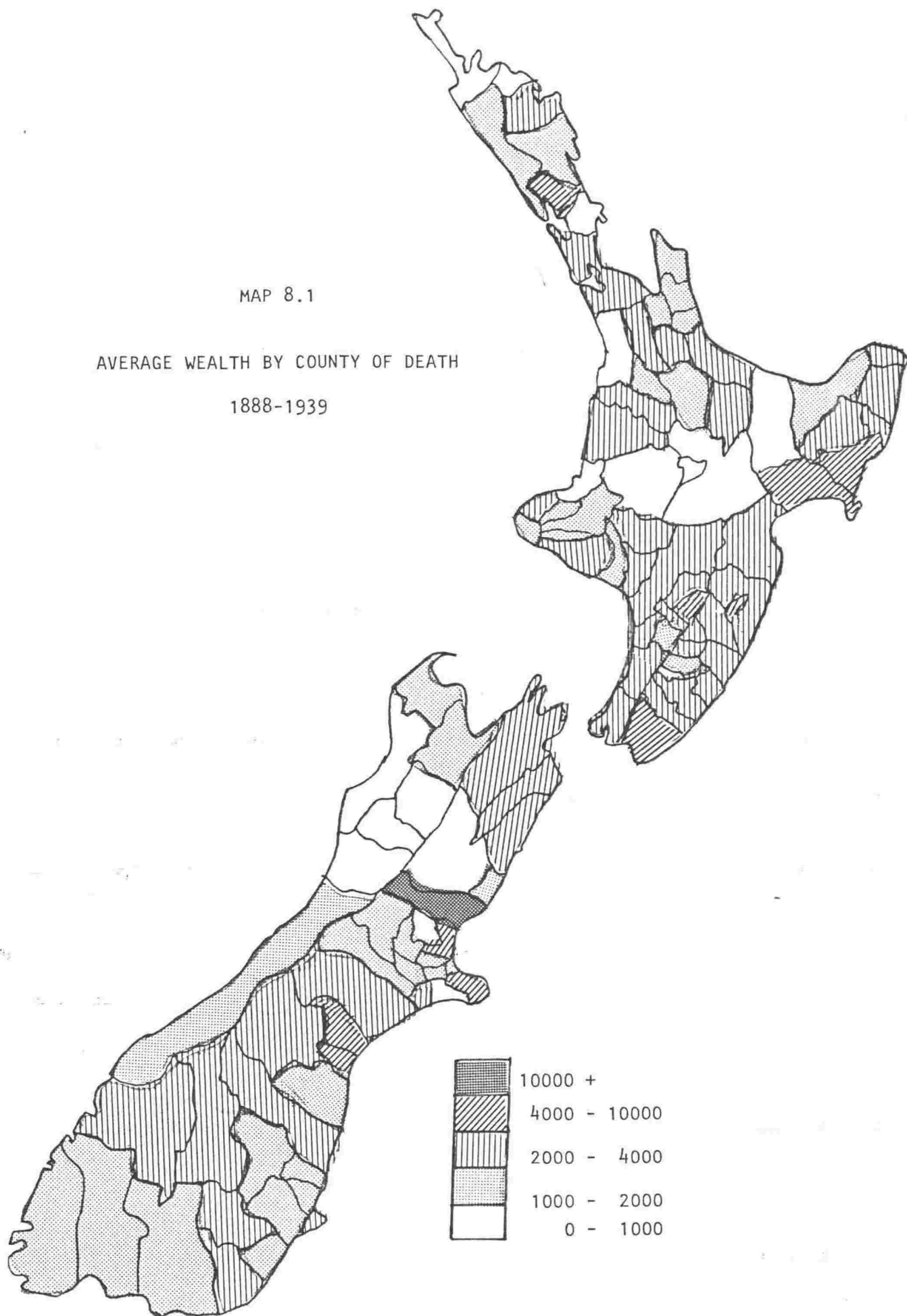
Boundaries as at 1 September 1957

TABLE 8.5

PROPORTION OF THOSE IN OUR SAMPLE

IN THE TOP 10 PERCENT

MAJOR CITIES

	Auckland	Wellington	Christchurch	Dunedin
1888	13.51	10.52	16.28	2.32
1896	11.43	14.28	29.26	10.00
1906	12.95	17.24	13.59	9.35
1916	9.59	16.44	10.37	11.84
1924	10.07	11.30	13.84	10.85
1932	10.38	12.94	7.36	12.10
1939	10.13	11.34	11.59	12.34

Source: Probate samples

and 1890's, when its commercial activity was dominant, would probably not have been registered in deaths until the 1910's and later.   The Auckland and Wellington figures peak earlier, probably because the major fortunes in both towns were the trading fortunes created in the 1840 to 1870 period.   These fortunes were gradually dispersed between descendants, and they were not replaced by fortunes amassed by professional people. This probably changed in later periods when manufactured fortunes, such as those reputed to the Todd family, were accumulated.

The geographic distribution of wealth was changing therefore with the change in the occupational distribution of wealth. The early high wealth areas of farming, trade and the professions, were declining as manufacturing, executives and professional wealth rose, to be by 1966, about 4.2 percent of the top nine percent of wealth holders.[5]

---

5.   Easton, Brian Income Distribution in New Zealand
      New Zealand Institute of Economic Research, Research
      Paper 28, 1983 Table 11.3

APPENDIX 1

The industrial groups contain the following:

Industrial Groups	NZSIC Codes
Agriculture	1000 – 1130
Hunting, Fishing and Forestry	1131 – 1302
Mining and Quarrying	2100 – 2302
Primary Produce Processing	3111 – 3116
Food, beverages and tobacco	3117 – 3140
Clothing	3221
Other textiles	3210 – 3215
Leather	3233
Footwear	3240
Wood and furniture	3311 – 3320
Paper and printing	3411 – 3420
Chemicals	3511
Metals and machinery	3811 – 3899
Miscellaneous manufacturing	3600 – 3699
Public Utilities	4000 – 4999
Building and Construction	5101 – 5999
Rail Transport	7111
Other Transport	7112 – 7999
Trade	6000 – 6999
Professional Services	8101 – 9391
Non-professional Services	9540 – 9999
Gentlemen *	0000
Labourer *	0001

* These two codes were especially used to represent these occupations in this study.

APPENDIX 2

Status of Specific Jobs

Farmer	3	Railway Construction	6
Farm labourer	6	Contractor	4
Gardener	6	Labourer	6
Hunting	6	Rail worker	4
Fishing	4	Seaman	4
Forestry	5	Road	4
Mining	6	Taxi	4
Meat worker	6	Storeman	6
Dairy factory worker	4	Garage Proprietor	5
Flour milling	5	Merchant	2
Baker	4	Agent	3
Brewer	5	Grocer	4
Tobacconist	5	Butcher	4
Tailor	5	Draper	4
Woollen mill worker	5	Storekeeper	4
Flax mill worker	5	Hotelkeeper	4
Saddler	6	Chemist	4
Shoemaker	6	Banker	3
Sawmiller	6	Insurance Agent	2
Cabinet maker	4	Lawyer	1
Paper maker	3	Accountant	1
Printer/compositor	4	Engineer/surveyor	2
Chemicals	5	Land agent	3
Blacksmith	5	Clerk	3
Tinsmith	5	Teacher	2
Boilermaker	4	Doctor	1
Wheelwright	4	Minister	2
Wharf worker	4	Journalist	2
Storeman	4	Domestic servant	6
Manager	2	Civil servant	2
Electrician	4	Army	2
Gas worker	4	Gentleman	1
Carpenter/builder	4	Bricklayer	4
Painter	5	Plasterer	4
Plumber	4	Road Construction	4

APPENDIX 3

Districts with more than 20 percent of population
in the top 10 percent of wealth holders:

District	Number in District	Proportion in top 10%
1888		
Thames – Coromandel	3	33.33
Wairoa	1	100.00
Oroua	4	25.00
Westland	4	25.00
Clutha	2	50.00
1896		
Tauranga	2	50.00
Hawkes Bay	17	29.41
Wanganui	9	33.33
Kiwitea	1	100.00
Masterton	1	100.00
Waimairi	2	50.00
Ellesmere	4	25.00
Ashburton	10	20.00
Waimate	5	20.00
Christchurch	41	29.00
1906		–
Cook	13	23.08
Wanganui	14	21.43
Rangitikei	7	28.57
Marlborough	15	20.00
Ashburton	18	33.33
Mackenzie	4	25.00
Tuapeka	9	33.33
1916		
Piako	2	50.00
Rotorua	5	40.00
Waiapu	3	33.33
Waipawa	9	33.33
Waipukurau	3	33.33
Waimate West	3	33.33
Patea	10	20.00
Manawatu	3	33.33
Masterton	14	21.42
Kaikoura	1	100.00
Oxford	4	25.00

1916 continued

Paparua	2	50.00
Malvern	4	25.00
Akaroa	13	38.46
Ellesmere	6	66.67
Ashburton	22	22.73
Waikouaiti	14	21.43
Maniototo	6	33.33
Lake	8	25.00

1924

Great Barrier Island	1	100.00
Manakau	4	25.00
Hawera	30	20.00
Kiwitea	10	40.00
Pohangina	3	66.67
Pahiatua	16	31.25
Wairarapa South	10	20.00
Waipara	3	33.33
Malvern	4	25.00
Akaroa	3	33.33

1932

Waiapu	4	50.00
Woodville	7	28.57
Egmont	5	20.00
Patea	14	21.43
Pohangina	6	33.33
Kaikoura	5	40.00
Akaroa	6	50.00
Ashburton	32	21.88
Vincent	5	40.00
Wallace	20	20.00

1939

Franklin	17	29.41
Otorohanga	15	20.00
Wairoa	19	21.05
Waipawa	15	26.67
Waipukurau	15	26.67
Waimate West	4	25.00
Hawera	29	20.69
Masterton	55	25.45
Featherston	15	26.67
Waipara	4	50.00
Ellesmere	11	27.27

CHAPTER 9.

FAMILY STRUCTURE, RELIGION AND WEALTH

We found in our regression analysis in Chapter 4 that most of the characteristics associated with family were not significant in explaining wealth levels. The two exceptions were whether the deceased spouse survived them or not, and the age of the youngest child. Being widowed added substantially to the wealth of women, presumably because they had inherited from their husbands, but it reduced the wealth of men. The older the youngest child was at death the more wealthy both sexes were likely to be. We would expect that wealth and family structure would be interrelated: that the level of wealth would affect a person's decisions on whether and when to marry, and the number of children born in a marriage, and that the demands of having a dependent spouse and raising children would reduce wealth, however such relationships were not apparent in a linear regression. Neither was there any suggestion that boys were preferable to girls as children because of their greater potential for manual labour on a family farm, and indeed, the contribution of having a wife in a period when the wife provided many basic goods and services within the home, was only significant and positive among the younger age groups.

The effect of marital status on wealth is shown in Graph 9.1. The graph is broken down by age at death, as age was strongly correlated to both wealth and marital status. It is clear from this graph that the regression results on the effects of the survivorship of the spouse were true for most age groups. Through all ages men whose wives survived them were wealthier than those whose spouses predeceased them, and the opposite is true for women over 50 years old. Men tended to leave their

GRAPH 9.1

MARITAL STATUS AND WEALTH
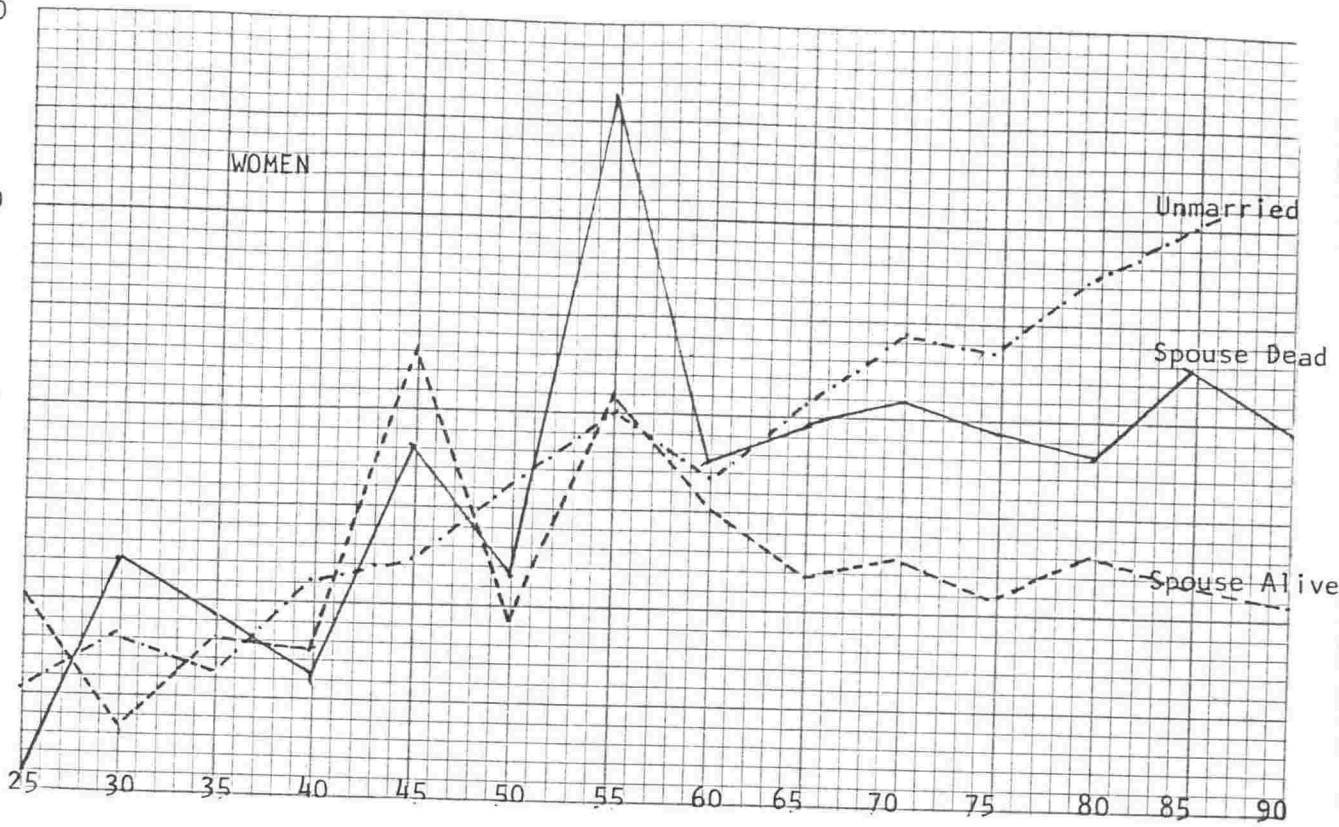
Source: Probate Sample
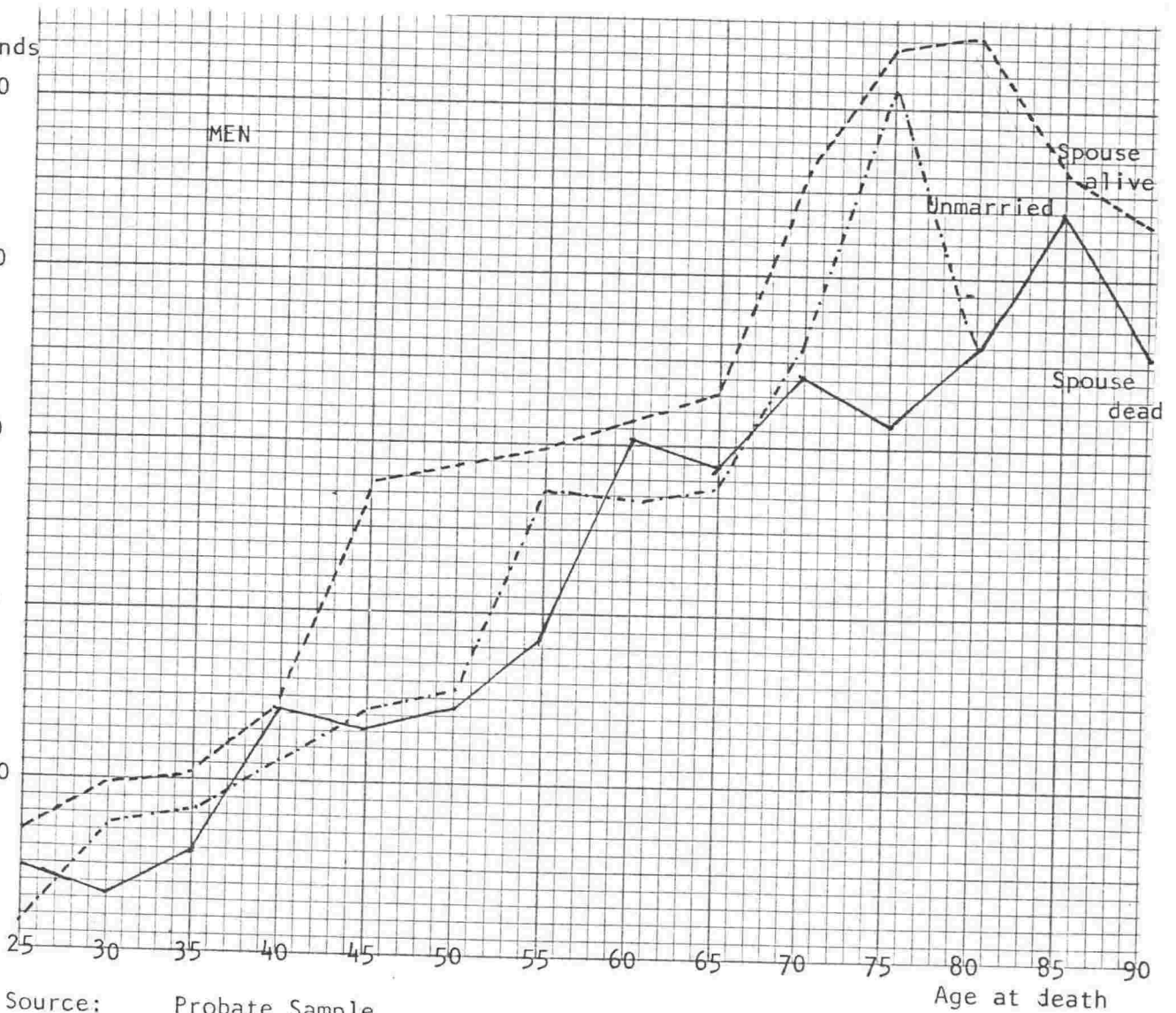
estate to a surviving spouse, so adding heavily to the estates
of widows, but while women also left their estates to their
husbands, in many cases it would seem that this was too small
to offset the loss of income due to unavailability of their
wife's services.   Widowers were faced with a more expensive
life because they had not been trained in domestic economy while
women could continue to run their homes in a very similar manner,
and so keep their newly acquired wealth intact.

The average wealth of unmarried women was increasingly above
that of married or widowed women from the age of about 65 onwards.
Spinsters had the advantage of generally working for wages, while
married women did not, and this no doubt was the major reason be-
hind their steady rise during working ages.   But spinsters also
tended to come from higher status backgrounds.   As Table 9.1
shows, of those whose father's status was known far more spins-
ters were in the top status groups and far less in the bottom
groups.   As status was broadly associated with wealth, this
probably meant that the spinsters inherited relatively more from
their fathers than the other groups, especially as the social
conventions would make them seem to be an extra worthy target of
legacies - married women after all had their husbands to provide
for them.   It is likely that more than one spinster cared for
elderly parents and were paid by an additional legacy.   Such
extra inheritances from their parents gave spinsters an edge
over the married women later in life.

TABLE 9.1

WOMEN'S MARITAL STATUS AND FATHER'S STATUS
(Percentages)

	Married	Widowed	Single
Top Status Group	2.71	2.84	3.24
2nd	7.04	9.06	10.97
3rd	40.09	42.44	45.68
4th	24.79	20.16	25.00
5th	6.52	7.65	5.58
6th	18.85	17.85	9.53

Source: Probate samples

The age at marriage appears to have had little effect on the final wealth of men or women. Graph 9.2 shows two features of the age of marriage and wealth for men only. The top graph shows the age of marriage and final wealth for each 4 five-yearly age groups at death. It suggests that for those who lived over about 50 at least there was some advantage in being married between the ages of 25 to 35, but the fluctuations in the series are too great to suggest more than that this advantage was slight indeed. The second graph also suggests that later in life those who married aged 30 to 35 did better than those who married earlier or later. However this is probably because those who proceeded with post-secondary school training either in the form of an apprenticeship or in tertiary education would have tended to marry in this age group. The age of first marriage for the major industrial groupings is given in Table 9.2 and tends to bear this out. Unlike women, the men who did

TABLE 9.2

AGE OF FIRST MARRIAGE FOR MAJOR INDUSTRIAL GROUPS

(Percentages)

	Farming	Building	Trade	Professions	Labourers
20 - 30	42.66	55.08	48.96	45.72	31.80
30 - 40	25.25	19.06	26.40	25.46	16.35
40 - 50	5.93	4.33	4.90	5.18	3.92
50 - 60	1.39	1.20	1.53	1.76	1.68
60 +	1.79	2.57	2.00	1.65	4.03
Unmarried	22.98	17.76	16.21	20.23	42.22

Source: Probate samples

not marry tended to be those with lower socio-economic standing, as the high proportion of unmarried labourers in Table 9.2 suggests. This was probably due partly to choice, in that some of these men obviously lived an unsettled life style, and probably was partly due to social expectations. It is possible

GRAPH 9.2

MARRIAGE AGE AND WEALTH

(Men Only)

Age at death

Died aged 70-75

Died aged 50-55

Died aged 60-65

Died aged 40-45

Pounds

Age at Marriage

30-35 year old

20-25 years

40-45 year olds

Age at Death
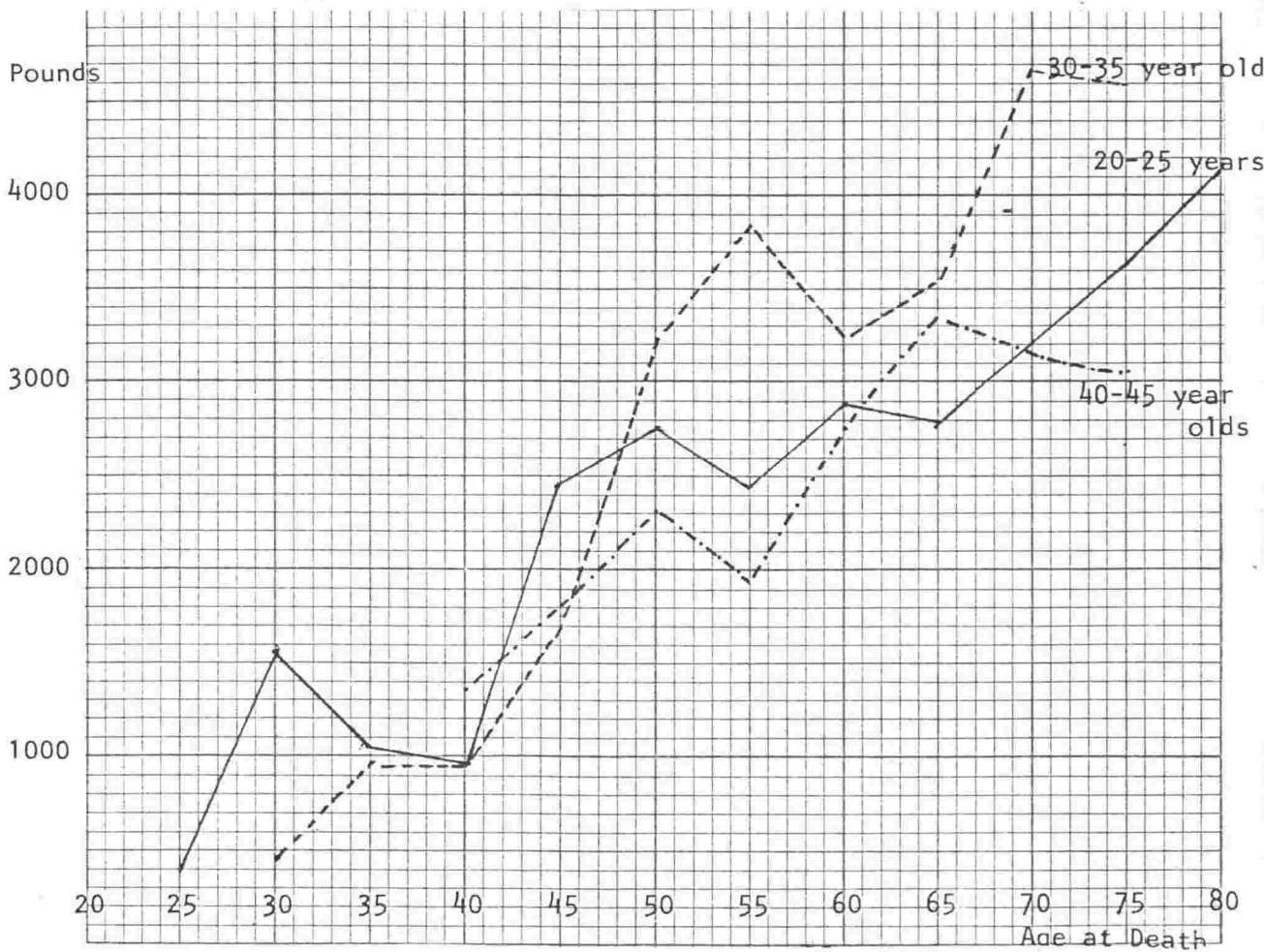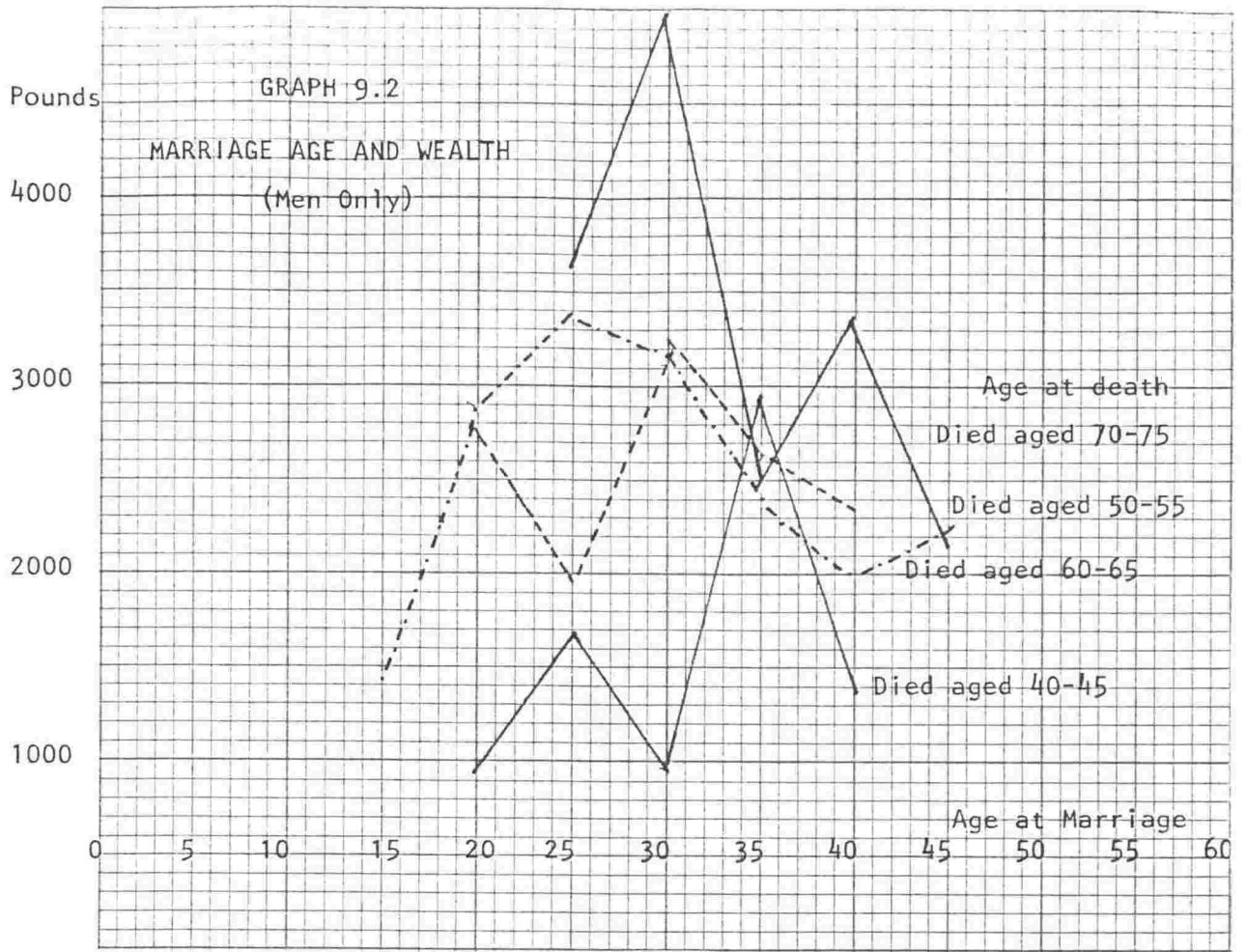
Source: Probate Sample

some men did not feel their income sufficient to support a wife and family.

Despite the fact that those engaged in farming did not marry younger, they did tend to have more children than the average. This can be clearly seen in the distribution of children in the 3rd status group which was dominated by the farming sector. From family sizes of 4 children and over this sector has an above average number of children. The top status groups on the other hand, tended to dominate those with small families,

TABLE 9.3

FAMILY SIZE, BY STATUS GROUP
(MARRIED MEN ONLY)

(Percentages)

| Number of Children | Status Group: | | | | | | |
	1	2	3	4	5	6	Overall
0	26.07	25.47	19.98	27.62	27.29	23.88	24.03
1	9.83	8.02	4.44	6.65	5.04	7.63	6.12
2	14.11	12.03	8.90	11.88	11.87	10.69	10.61
3	14.53	10.38	10.99	12.88	9.50	14.56	12.29
4	11.11	13.68	11.01	10.68	11.27	10.90	11.16
5	10.25	8.96	10.11	9.62	10.09	9.31	9.76
6	3.84	8.96	9.98	7.13	8.61	7.33	8.22
7	3.41	5.65	8.16	4.52	4.45	6.04	6.22
8	3.84	1.88	5.31	4.69	5.93	4.56	4.58
9	1.28	2.59	4.40	2.26	2.07	2.77	3.07
10	1.71	1.88	4.64	1.49	2.37	1.79	2.73
11	-	0.23	0.94	0.29	1.48	0.50	0.60
12	-	0.23	0.60	0.18	-	0.10	0.33
13 and over	-	-	0.65	0.12	-	-	0.30
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Probate samples

though the lowest wealth groups also had a slightly high proportion of these. As can be seen from Graph 9.3 there was no clear trend in the distribution of wealth by the number of children. For men, those who had more than 7 children tended to be slightly wealthier than those with 6 or less, probably

GRAPH 9.3

WEALTH, BY NUMBER OF CHILDREN

(a) Women aged 70-75

(b) Men aged 70-75
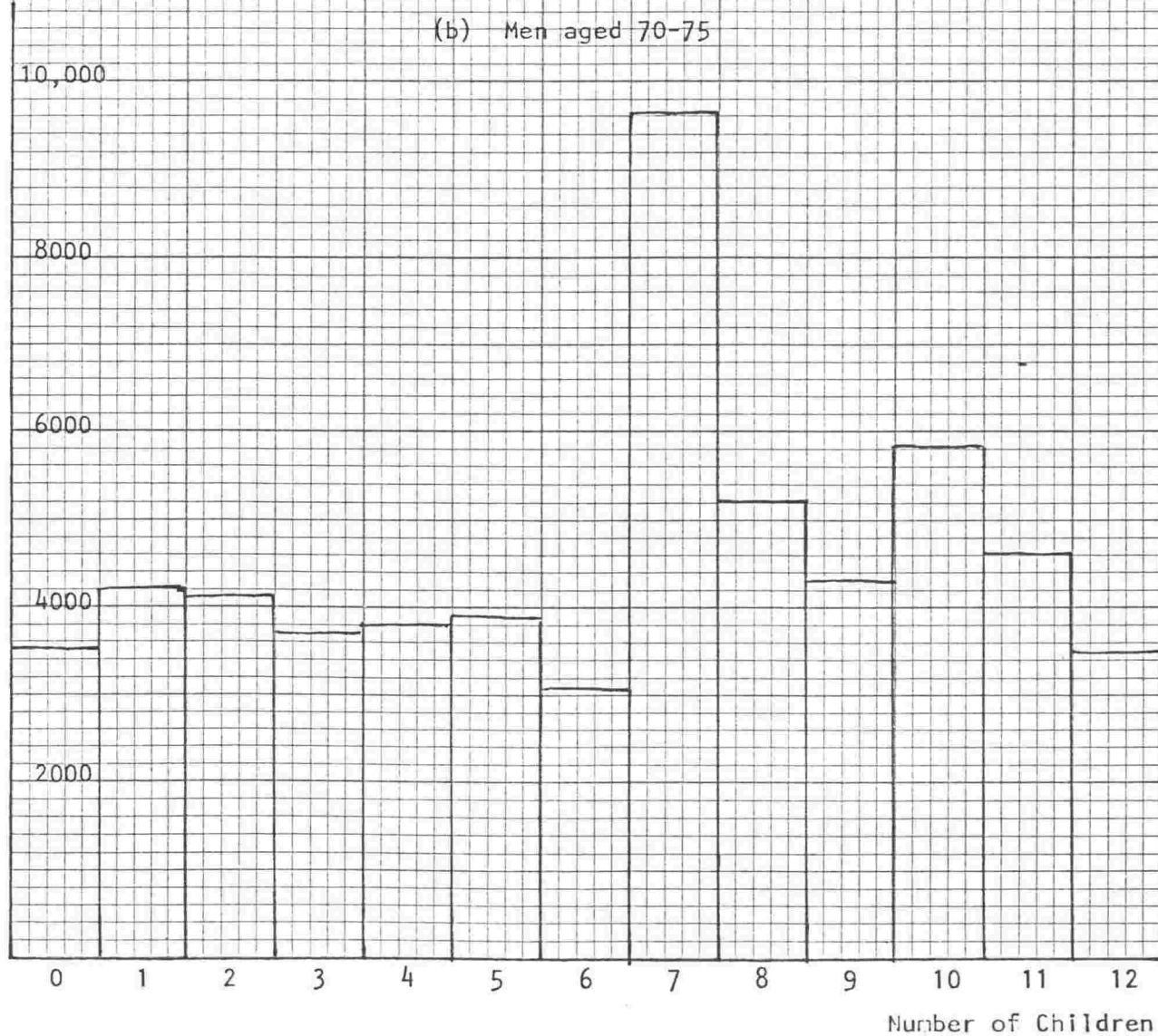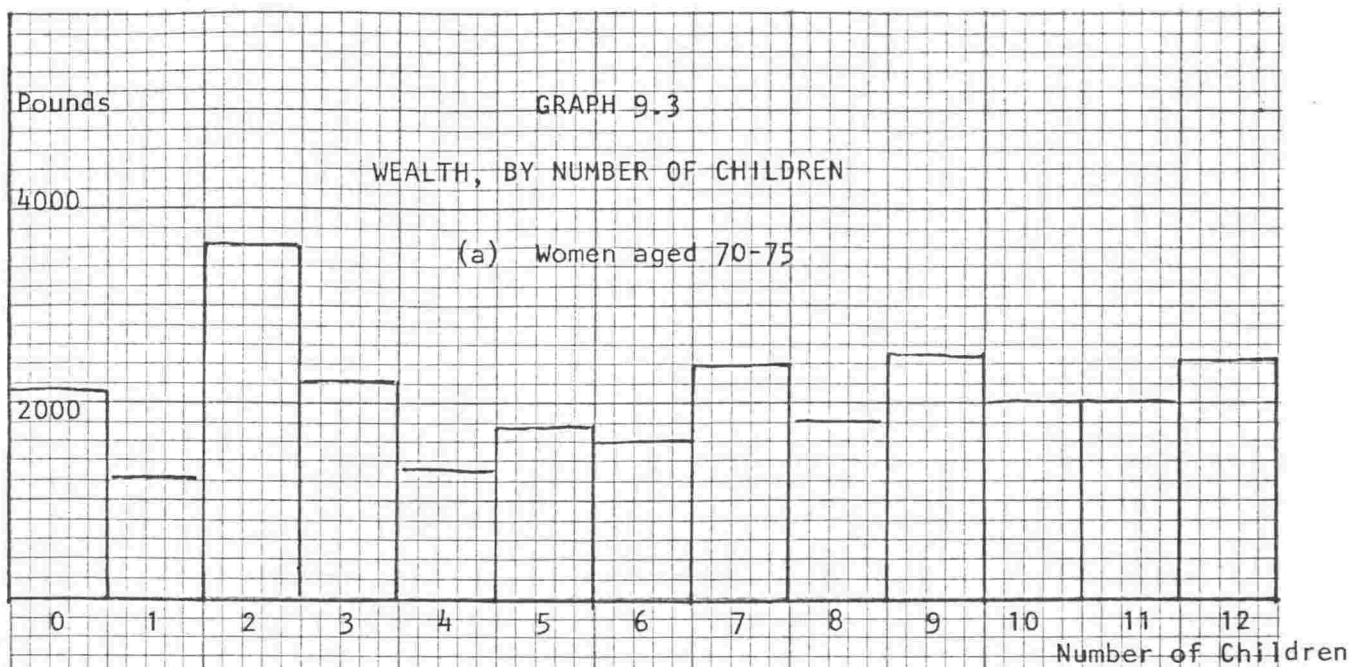
GRAPH 9.4

MALE CHILDREN AND ESTATE VALUE

(Men only)

Source: Probate Sample

because of the number of farmers with many children.

There is no evidence in our statistics that male children were more likely to be associated with wealth than female children. Graph 9.4 shows the size of estates for families of various sizes and sex composition. Not only is there no change in the estate size for families with an increasing absolute number of male children, but except for families with 2 children, there is no pronounced downward trend in estate values as the number of female children increased. Indeed the graph does little but reinforce the conclusion that any effect of the number of children on the final wealth of the estate was slight indeed.

It also does not seem to have greatly affected the final wealth level if the children were scattered in age compared to being born quite closely together as Graph 5(a) shows, while it would appear that those who died aged 60 - 65 were relatively better off if they had their children closely together. There is little sign of any trend for those who died 10 years later. The only significant factor was the length of time that parents were without children prior to death. It is this which was captured in our regression analysis using the age of the youngest child.

Graph 5(b) shows the final value of estate for men who died in two different age groups. The approximate length of time since children left home was calculated by assuming the youngest child left home at age 15. In the period from 5 to 20 years after the last child approximately left home, the average wealth of the men showed a substantial rise. This cannot be attributed to age, as this factor has been eliminated from the graph by using death cohorts. Obviously children were a net drain on their parents' resources, and the longer the period of their working life which they had without having to support children the better off the parents were. Not only do they no longer have to feed, clothe, house and educate the children, but in cases of emergency, the children could be called upon to help support the parents. The trend does not however, appear to extend past 20 years of having an empty nest, and indeed, for those who died aged 60 to 65 there appears to have been some decline. This was probably again due to the fact that those

GRAPH 9.5(a)

SPREAD OF CHILDRENS' AGES AND WEALTH

(Men Only)

died aged 70-75 years old

died aged 60-65 years old

Age difference between oldest
and youngest child

GRAPH 9.5(b)

APPROXIMATE LENGTH OF TIME AFTER
CHILDREN LEAVE HOME

(Men Only)

died age 70-75

Died aged 60-65

Approximate years without dependent
children.
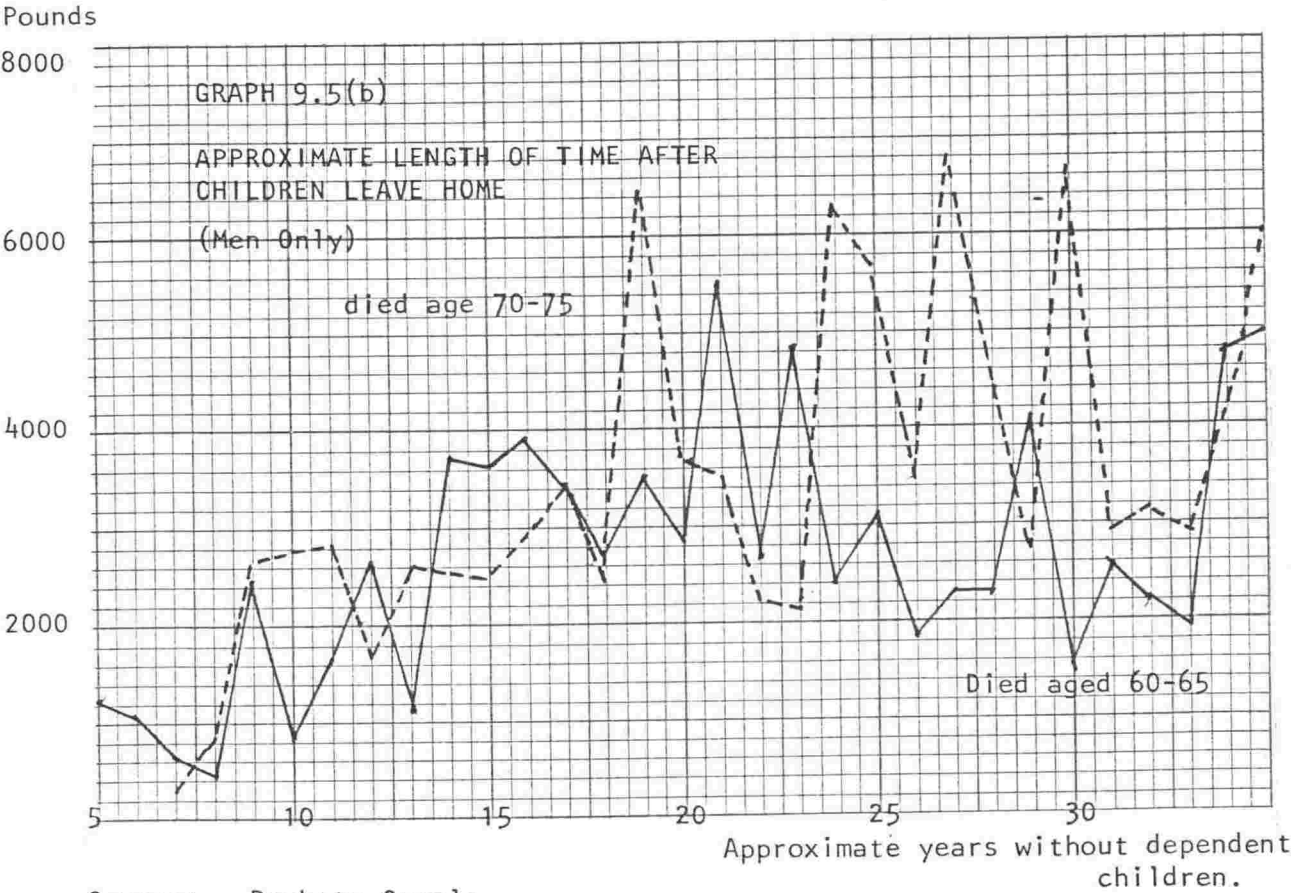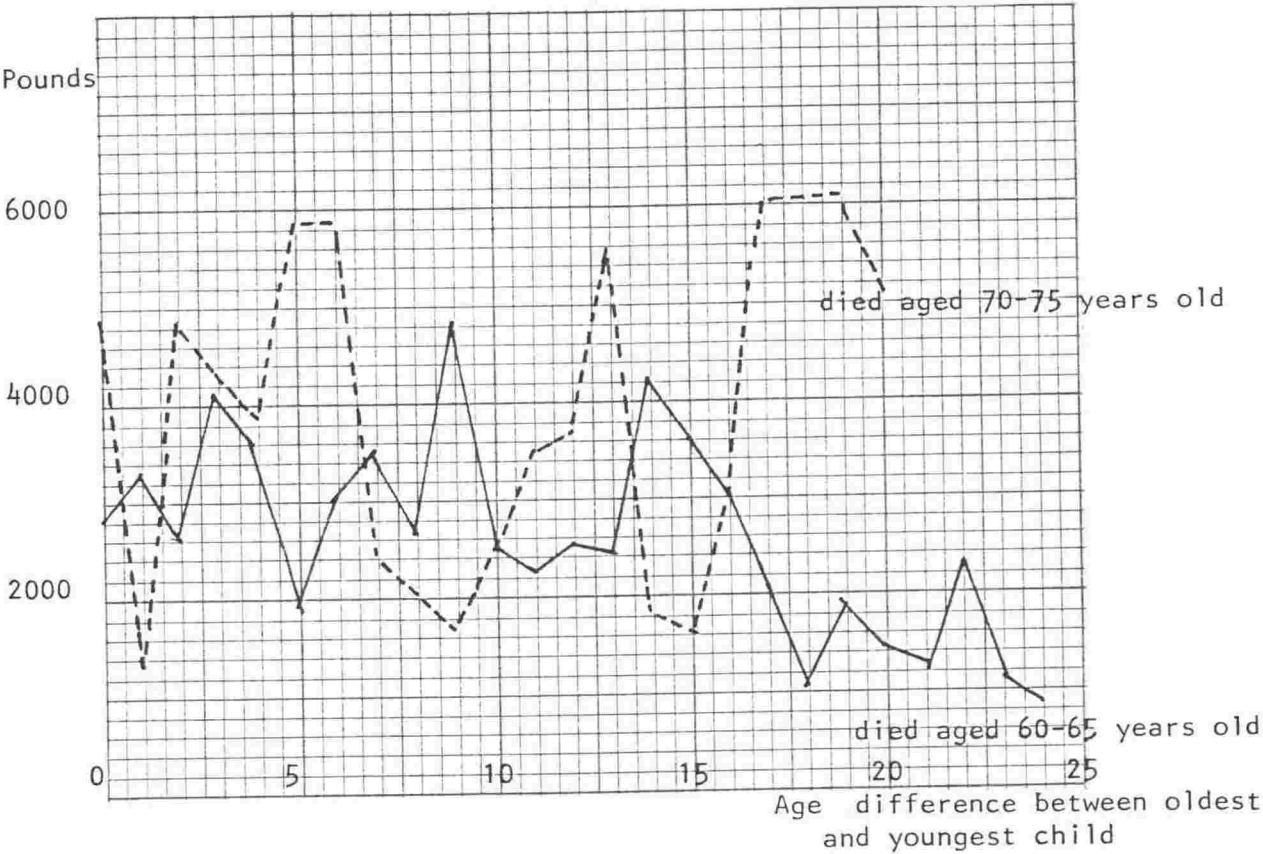
Source: Probate Sample

who married and had children at a young age tended to be un-
skilled workmen, who had therefore lower incomes and lower rates
of saving.   Their children would have left home while the
parents were still young, but this alone could not compensate
for the relatively poor prospects which the fathers faced.

The only aspects of the family structure which appear, on
their own to have influenced wealth are, therefore, the marital
status of the individual, and the length of time which the
parents had to accumulate wealth after the youngest child had
left the household.

The State was concerned to see that every burial which took
place in New Zealand was done in such a way as to prevent a
crime being hidden.   For this reason every person who died in
New Zealand had to be buried in the presence of either a minister
of religion, or two householders who were not relatives of the
deceased.   It is possible then to get some idea of the religious
beliefs of the deceased from the description of the person who
buried them.   Obviously this is a crude measure.   The body had
to be buried, and many people who were nominal attenders would
have used a Christian funeral service and minister to perform
the task.   Further, in rural districts, the choice of which
protestant minister to use was often determined by who was
around at the time.   However, it is unlikely that either of
these would be so significant as to invalidate the statistics,
as we are dealing with a period when religious attendance was
high and communications not too primitive.

The basic distribution of estates by religious beliefs is
given in Table 9.4.   The group which stands out as doing by
far the best was the Jewish community, who through their tradi-
tional trading links succeeded in getting almost one quarter of
their members in the top 10 percent.   This probably understates
rather than overstates their wealth, as more than one Jew
followed the course chosen by William Hort Levin, and joined the
socially more acceptable Anglican church.   The Anglicans had
the second highest proportion in the top 10 percent but did not
have the highest average wealth.   This placing went to the
Presbyterian church who did not have the proportion in the top
10 percent that the Anglicans achieved, but who had less of
their members in the bottom wealth groups.   The trend towards

TABLE 9.4

RELIGIOUS BELIEFS AND WEALTH

	Ang-lican	Pres-byter-ian	Meth-odist	Bapt-ist/ Breth-ren	Other Prot-est-ant	Cath-olic	Jewish	No Minister
Top Decile	12.13	11.91	7.95	7.42	6.18	7.69	23.53	9.53
2nd	10.75	12.32	10.02	7.72	9.55	9.40	11.76	8.23
3rd	10.07	10.87	11.39	8.90	7.68	9.52	9.80	11.41
4th	10.95	10.32	11.63	8.31	10.30	9.88	7.84	10.94
5th	9.99	9.79	11.51	13.35	9.74	10.41	5.88	11.09
6th	9.85	10.42	11.39	11.87	10.86	9.40	5.88	8.59
7th	9.36	9.74	11.27	14.54	11.99	10.41	13.73	9.84
8th	9.99	9.40	9.96	8.90	10.67	11.89	9.80	8.44
9th	8.89	7.37	8.36	8.61	11.42	11.00	5.80	11.72
Bottom	8.03	7.85	6.52	10.39	11.61	10.41	5.88	10.16
Average estate £	2972	3133	2199	2102	1561	2345	6566	2039
n	6028	4138	1686	337	534	1691	51	640

Source: Probate Samples ·

the middle was even more pronounced with the Methodists who were firmly concentrated in the 3rd to 7th wealth decile.   The bottom is dominated by Baptists and Brethren (though most of the latter were probably buried with only householders listed for theological reasons), the other Protestant groups (notably Congregationalists and the Salvation Army) and the Roman Catholic faith.

The reasons for the distribution of wealth by religious group is not immediately apparent.   The theological bases of the protestant churches were not sufficiently different to explain for their different wealth structures.   It seems likely then that the distribution of wealth was because of the type of person attracted to these churches.   We have already noted that William Levin became Anglican, and the Anglican church did

tend to have an establishment reputation because of its links with the Church of England. On the other hand, the Methodist, as a non-conformist church in England, had tended to draw the people dissatisfied with the Establishment, and so drew particularly heavily from the lower socio-economic groups.[1] The Brethren and Baptists were in the same situation, though the latter had been in existence longer and so gained some respectability. All these groups had come out of the English religious scene, and one suspects that the status hierarchy which was attached to them in England would have been transferred to the Colony. Those who rose in social status would therefore, have been tempted to follow William Levin and join a church more in line with their new position in life. The same is probably also true of Presbyterians, though being the Church of Scotland, the Presbyterians did have some considerable status.

The groups which were least likely to move were the Catholics and the Jews, both of whom had considerable theological barriers between them and the Protestant groups. Despite the move by William Levin, the Jews obviously kept their wealthy members, and indeed if anything the poor would have felt out of place. They probably inherited their initial wealth profile, partly by coming from well to do families, and partly because of their involvement and training in trade which led to a number of fortunes in the early years of settlement. The Catholic profile was undoubtedly influenced by their relatively high proportion of Irish, who did not do well in terms of wealth. The wealth profiles of the various religious groups would therefore seem to have been a reflection of the social prestige and national mix of the group, and that, with the possible exception of the predilection of the Jews to go into trade, the religious background of the person had little influence on their final wealth.

---

1. For instance the farm labourers in the 1870's
   See R. Arnold The Farthest Promised Land (Wellington;
   Victoria Universith Press, 1981) p.34

CHAPTER 10

SOCIAL MOBILITY AND INHERITANCE

In this chapter we are going to look at the intergenera-
tional factors that are noted on the death certificate: the
occupation of the son relative to that of his father, and a
statistical view of potential inheritances from one generation
to the next.

OCCUPATIONAL MOBILITY.

In Chapter 6 we saw that the occupation and social station
of fathers were correlated with the wealth of the men in our
sample.   There can be no doubt that those who were born into
a family with a professional, merchant or farmer at its head
were much more likely to accumulate wealth than those born to
fathers without these characteristics.   However the relation-
ship was not a strict one, and many of the men demonstrated an
improvement or loss relative to their father.   We can measure
this mobility best by comparing the occupation given for the
father, and that given for the son.

Claire Toynbee in her work on social mobility in early
Wellington,[1] found that many of the migrants changed jobs fre-
quently after arrival.   By using the death certificate informa-
tion, where only one occupation was given, we are therefore
underestimating both the range of jobs held by the men in our
sample, and we are missing the steps by which they transferred.

---

1.   Claire Toynbee 'Class and Social Mobility in the Nine-
      teenth century Wellington Province : an exploratory
      study of immigrants arriving 1840-1880' (Wellington :
      Victoria University Unpublished M.A. Thesis, 1979)
      ch.6.

Our occupation is likely to be the last one held by the person, or in the event that this was a relatively new job, the dominant occupation pursued by him in his life.

It is commonly found that death certificate occupations were subject to "uplift". The descendants of the person in general wished to give the most favourable impression possible of the deceased, and so stated his job in the best possible light.[2] So a railway porter becomes a guard, or a nurse aid a nurse. No work has been done on whether this affected both the father's occupation and the person's own one equally; however it would not be surprising to find that the tendency to uplift was stronger in the case of the person who had just died, and with whom the informants were personally involved, than with the previous generation who were more removed. Some of the upward mobility we note in our sample may well therefore have been due to this rather than being a reflection of reality.

We are using for the following analysis the 8675 men whose own and whose father's occupation was given on the death certificate. This represents 85 percent of our total sample of men for whom both probate and death certificate information could be traced. In general, the father's occupation was missing rather than the son's own one, and as Table 10.1 shows there was a distinct bias towards father's occupation being omitted in low status cases. In many of these cases the men had obviously lived a drifter's life, never marrying or obviously separated from their wife. The information that could be reliably found out about them was often very limited, but it would seem likely that most came from a low status family or had been downwardly mobile from a middle class one. The proportion of fathers whose jobs were unknown was also higher in the top status group and this arouses the suspicion that some of those from poor backgrounds who had done particularly well themselves, and had a position to uphold, may well have repressed knowledge about their past. This suggests that we are going to have a biased

---

2. See the study quoted by A.B. Atkinson and A.J. Harrison Distribution of Personal Wealth in Britain (Cambridge University Press, 1978) pp.62-64

TABLE 10.1

PROPORTION OF FATHER'S OCCUPATION UNKNOWN,

BY SON'S STATUS GROUP

(Percentages)

Son's Status Group	(1) Proportion of father's job unknown	(2) Proportion of sons in category	(1) (2)
Top Status Group	2.86	3.02	94.70
2nd	4.37	5.07	86.19
3rd	29.28	36.18	81.15
4th	18.68	19.93	93.73
5th	3.51	4.10	85.61
Bottom	26.18	15.76	166.12
Missing	15.15	16.01	94.22
Total	100.00	100.00	

Source: Probate samples

sample that underrepresents those who had been strongly mobile either up or down, and which probably also underrepresents those people with a drifting lifestyle who came from a poor background, the non-mobile low status group.

There are two different levels of change which can be traced in the sample: the first is those changes of job which do not lead to a change in the broad occupational classification of the person involved. These changes are between similar jobs such as a carpenter's son becoming a bricklayer, or a lawyer's son becoming a teacher, or a horizontal movement such as a farm labourer's son becoming a farmer. Of the 8675 men who had a different occupation from their father 713 had this kind of movement. However there were 5173 who held a job that was in a completely different occupational classification to that of their father's. These were major changes in job type, where the father's position probably had little influence on the son's potential position. The balance of 2789 men had the

identical job to their father. There were then 32.15 percent of men who held the same job, 8.22 who held a different job but in the same job classification and 59.63 percent who worked in a completely different occupational grouping to their father.

The distribution of these movements by the father's occupation group is given in Table 10.2. Of all the industrial groupings only one, farming, stands out as holding a high proportion of the sons born to its members, and even in this case

TABLE 10.2

DISTRIBUTION OF OCCUPATION CHANGES, BY FATHER'S JOB

(Percentages)

Father's Occupation	Son in same job	Son in different job, but same industrial group	Son in different industrial group	n
Farming	54.66	7.80	37.53	3485
Hunting, fishing & forestry	8.00	0.00	92.00	25
Mining	21.45	1.04	77.51	289
P.P.P.	5.71	2.86	91.43	70
Food, beverages & tobacco	18.66	1.49	79.85	134
Clothing	18.45	0.00	81.55	103
Other textiles	8.00	0.80	91.20	125
Leather	14.29	0.00	85.71	42
Footwear	18.18	0.00	81.82	143
Wood & Furniture	15.25	1.69	83.05	118
Paper & Printing	11.39	0.00	88.61	79
Chemicals	0.00	0.00	100.00	3
Metals & Machinery	19.19	5.52	75.29	344
Miscellaneous manufacturing	10.64	0.71	88.65	141
Public Utilities	0.00	0.00	100.00	8
Building & Construction	19.53	7.14	73.32	686
Rail Transport	27.78	0.00	72.22	108
Other Transport	14.44	4.72	80.84	381
Trade	17.60	11.59	70.82	699
Professional Services	13.12	23.75	63.12	1044
Non-Professional Services	3.33	3.33	93.33	30
Labourers	21.71	0.00	78.29	502
Gentlemen etc.	8.49	0.00	91.51	106

Source: Probate samples

almost half of the sons born to farmers moved to a different
occupational group.   There was obviously a high level of occu-
pational mobility in New Zealand.   The industrial grouping,
which most commonly kept children within it but in a different
job, was that of professional services.   This is hardly sur-
prising as the range of professional services which were socially
and educationally similar is wide, and personal qualities and
preferences would have most easily been accommodated within this
range.   The same can be said also in the building and con-
struction sector, where the range of tradesmens' jobs was wide
relative to the choice within many occupational groupings.   In
the trade sector the movement was between merchants and retail-
ing jobs and vice versa.   In every industrial group, except
farming, the majority of the sons left the father's industrial
classification.

Overall, intergenerational occupation mobility was highest
in the upper and lower social status groupings, and least notice-
able in the middle groups, especially group 3 where farmers
dominate and to a much lesser extent group 4, where skilled
manual workers dominate.

TABLE 10.3

FATHER'S STATUS, AND OCCUPATIONAL MOBILITY
(Percentages)

Father's Status Group	Jobs Identical	Same Occu- pation Group	Different Occupation Group
Top Status Group	11.71	16.22	72.07
2nd	14.03	18.18	67.78
3rd	56.46	6.80	36.74
4th	18.73	6.34	74.92
5th	16.04	3.38	80.57
6th	19.61	7.13	73.26

Source: Probate samples

The overall changes in status which took place are given
in Table 10.4.   There was relatively little change in the

status structure between the father's and the son's, and it
would seem that there is little evidence of major social
mobility.   Of the 6837 men in the table, 50.40 percent had the

TABLE 10.4

STATUS CHANGES

(NUMBER OF MEN)

Father's Status / Own Status	Top	2nd	3rd	4th	5th	Bottom
Top	35	48	65	52	9	12
2nd	24	117	103	78	27	49
3rd	66	169	2072	325	130	364
4th	35	112	372	676	125	289
5th	5	20	59	85	108	59
Bottom	16	44	372	199	78	438

Source: Probate Samples

same social status as their father, 25.38 rose in status and
24.22 percent fell in status.   Most of these movements were
small and only 14.7 percent of the men moved 3 or more points
away from the status of their father.

TABLE 10.5

SOCIAL MOBILITY, BY BIRTH PLACE

Son's Status Relative to Father's	N.Z.	England	Scotland	Ireland	Australia	Other	Total
Down 5 points	0.16	0.23	0.22	0.16	–	–	0.18
4	0.48	1.31	1.00	0.16	2.11	0.41	0.84
3	4.62	9.16	7.99	3.63	5.63	5.31	6.49
2	8.60	8.65	8.77	4.74	7.75	7.35	8.17
1	8.64	12.16	8.99	6.64	9.86	8.98	9.69
Same status	54.90	45.07	50.28	58.14	42.61	42.86	50.36
Up 1 Group	9.24	10.71	10.54	11.53	15.49	17.14	10.73
2	5.81	7.48	5.11	3.32	8.80	10.20	6.34
3	6.85	3.93	6.10	10.74	7.39	6.94	6.23
4	0.52	0.84	1.00	0.79	0.35	0.82	0.72
5	0.20	0.47	–	0.16	–	–	0.24

Source: Probate samples

The change in status was similar in all the major national groups which made up the New Zealand population. However there was a noticeable tendency for the English born settlers to do less well in relation to their father's status than the other groups, and the "other countries" group, which consisted mainly of people born on the continent and Scandanavia, to do better than the average.

In changing from their father's industrial grouping the sons were obviously taking a gamble. Far fewer of them ended up at the same social status than those who moved within the same industrial grouping. However, it would seem from the distribution in Table 10.5 that this gamble paid off rather more often than it failed. About 43 percent of those who changed their industrial grouping had a higher social status ranking than their father, while only 36.4 percent had their status reduced by the move. However, those who moved within the industrial grouping

TABLE 10.6

SOCIAL MOBILITY BY OCCUPATIONAL CHANGE

(Percentages)

Son's status relative to father's	Those moving within Industries	Those moving between Industries
Down 5 points	0.02	0.41
4	-	1.33
3	22.66	8.52
2	4.77	11.22
1	9.77	14.92
Same Status	32.01	16.97
Up 1 point	9.74	16.64
2	3.58	14.81
3	16.90	9.75
4	-	1.58
5	0.04	0.27

Source: Probate Samples

had more chance of doing very well than those who changed industrial groups. Almost 17 percent of the former moved up 3 or more status points while only 11.6 percent of those who changed industry did as well. However those changing within industries were hampered in their chances of moving up a large

amount because they were already concentrated at the top.   As
Table 10.6 shows those who moved within an industry were far
more likely to be sons of high status fathers, while those who
moved between industrial groups were far more likely to be sons
of lower middle to low status fathers.   It is not surprising to
find then that those who changed within industrial groupings,
who had furthest to fall, did indeed tend to do less well than
their fathers.   While 30.6 percent did indeed end life with a
higher status than their father's - some, as we have noted, con-
siderably higher - 37.38 percent ended life at a lower status
occupation than their father - 22.7 percent being 3 or more ranks
below.

TABLE 10.7

FATHER'S STATUS, BY OCCUPATIONAL CHANGE

(Percentages)

Father's Status	Son same job	Son same industry	Son different industry	All Groups
Top Status Group	0.97	6.03	3.56	2.96
2nd	3.31	19.10	9.47	8.09
3rd	70.77	38.04	27.31	42.98
4th	11.65	17.59	27.62	21.25
5th	3.38	3.18	10.07	7.26
6th	9.92	16.08	21.06	17.46

Source: Probate samples

    The typical pattern of intergenerational occupation change
can best be seen if we look at the three industrial groups which
dominated farming, the trading sector and the professions.   For
those who moved within the farming sector the most typical moves
were between being a general farmer, whose branch was unspecified,
to being a farm labourer or vice versa.   There were 80 cases of
men who had farm labourers as fathers becoming farmers, and this
constituted 83 percent of those moving from within the sector.
On the other hand 108 men became farm labourers having had
fathers who were farmers.   This balance of downward mobility
would seem to have been due to the closing of land for new

settlement in the 20th century, and the difficult times exper-
ienced by those in the farming sector in the 1920's and 1930's.
The movement into farming from other sectors is given in Table
10.8.   Farming tended to attract people from all the other

TABLE 10.8

MOVEMENT INTO FARMING, TRADE AND THE PROFESSIONS

(Percentages)

Father's job \ Son's job	Farming	Trade	Professions	All Groups
Farming	-	33.66	33.25	24.85
Hunting, fishing & Forestry	0.65	0.16	-	0.44
Mining	5.18	4.41	4.73	4.39
P.P.P.	1.94	0.98	0.85	1.23
Food, beverages & Tobacco	1.20	3.11	2.31	2.04
Clothing	1.94	1.47	1.57	1.64
Other textiles	2.40	1.96	2.06	2.18
Leather	0.65	0.49	0.61	0.68
Footwear	3.14	2.29	2.68	2.29
Wood & Furniture	2.68	2.62	0.97	1.91
Paper & Printing	0.74	1.15	2.55	1.36
Chemicals	0.09	0.16	0.12	0.06
Metal & Machinery	6.56	3.59	5.34	4.99
Miscellaneous Manufacturing	3.70	1.80	1.70	2.46
Public Utilities	0.18	0.16	0.12	0.15
Building & Construction	11.83	9.48	10.07	9.84
Rail Transport	1.02	1.96	2.18	1.55
Other Transport	4.72	7.52	7.28	5.96
Trade	12.38	-	14.32	9.61
Professional Services	19.04	16.83	-	12.65
Non-Professional Services	0.18	0.98	1.10	0.55
Labourers	5.31	0.99	0.82	2.30
Gentlemen	0.97	3.89	0.92	0.49
Missing	13.49	3.85	4.46	6.39

Source: Probate samples

sectors, but particularly attracted those in the unskilled or
semi-skilled areas.   Labourers, often farm labourers, moved into
farming over twice as often as any other sectoral move, and min-
ing metal and machinery, miscellaneous manufacturing, and build-
ing and construction also provided farmers in numbers in excess
of those that moved elsewhere.   Farming also attracted those
from trade and the professions.   Many of these who became very

wealthy moved into farming so as to cement their social status. The purchase of a sheep run was seen as a major announcement of success. These were frequently farmed by the sons, who then continued to follow that calling. The movements out of the farming section are shown in Table 10.9, and display a very similar distribution to the movements into farming.

TABLE 10.9

MOVEMENT OUT OF FARMING, TRADE AND THE PROFESSIONS

(Percentages)

Son's Job Father' Job	Farming	Trade	Profess-ions	All Industries
Farming	–	26.31	34.63	22.50
Hunting, Fishing & Forestry	0.04	–	0.33	0.32
Mining	3.98	1.32	2.86	2.43
P.P.P.	1.65	1.54	0.68	1.01
Food, beverages & tobacco	1.17	1.76	1.51	1.50
Clothing	0.92	2.86	1.01	1.13
Other Textiles	0.58	0.44	0.68	0.78
Leather	0.50	0.44	0.33	0.48
Footwear	0.75	0.44	0.50	1.01
Wood & Furniture	1.17	0.66	1.68	1.62
Paper & Printing	0.33	1.32	1.68	1.28
Chemicals	0.17	–	–	0.06
Metals & Machinery	3.40	3.96	3.53	3.99
Miscellaneous Manufacturing	0.67	1.32	1.01	0.89
Public Utilities	0.58	0.22	0.17	0.37
Building & Construction	10.70	9.03	7.40	8.30
Rail Transport	4.64	2.64	3.36	3.47
Other Transport	9.20	6.16	10.76	7.37
Trade	17.08	–	17.31	12.66
Professional Services	22.72	25.99	–	17.25
Non-Professional Services	0.33	0.44	0.68	0.63
Labourers	13.80	4.09	3.99	7.42
Gentlemen	1.45	3.66	2.96	1.26
Missing	3.83	2.15	2.96	2.29

Source: Probate samples

The number of farmer's sons who became general labourers was almost double the overall move into that sector, and mining and building and construction also attracted more than the normal

proportion from this farming sector.   Again there was a sub-
stantial outward link into trade and into the professions.

The most common movement within the trade sector was for
retailers to move into merchant business or vice versa.   Six-
teen men, who had fathers who were merchants, died in the retail
sector, and 11 moved in the opposite direction.   There were
also substantial movements within branches of the retail trade,
and 50 of the men who changed from their father's occupation in
a retail trade moved within the retail sector.   No one pattern
of movement dominated this - grocers, drapers, butchers and so
on all moved about equally.   The trade sector drew most heavily
from the farming sector in inter-sectoral movements.   Over one
third of those who moved into trade came from a farming back-
ground, and these men moved into all branches of the trading
sector.   The professional services also provided a dispropor-
tionate number of traders, though the balance of the movement
was out of trade and into the professions.

The main movements within the professions are summarised
in Table 10.10 below.   The professions had a large number of
occupations of similar educational, social and income level.

TABLE 10.10

MOVEMENTS WITHIN THE PROFESSIONS

(NUMBER OF MEN)

Own Job				Father's Job				
	Engin-eer	Clerk	Lawyer	Civil Servant	Army	Teacher	Doctor	Minister
Engineer	–	4	1	8	7	3	4	7
Clerk	3	–	1	7	3	2	1	4
Lawyer	2	0	–	6	1	1	2	2
Civil Servant	8	2	5	–	6	7	3	6
Army	1	0	0	0	–	1	0	1
Teacher	2	0	3	3	2	–	1	5
Doctor	4	1	2	1	1	3	–	1
Minister	2	0	1	1	0	0	2	–

Source: Probate samples

The large proportion of movements that occurred within them is
not therefore surprising. The main movements in the Table were
the general movement out of the army and the ministry into the
other professions as the former two declined in popularity, and
the movement from the civil service into the ranks of the clerks.
The professions were an attractive option for the sons of farmers,
skilled tradesmen, and those involved in trade. The availability
of good basic education in the rural areas of New Zealand un-
doubtedly was a major factor in the net movement into the pro-
fessions from those sectors. The movements out of the pro-
fessions (in Table 10.9) were into farming, trade and the other
transport sectors, all the other sectors being below average.

The overall numbers moving between the three main sectors
is shown in Table 10.11. As farming was a declining occupation,
the net movement was out of this sector, with about 60 percent
moving to the professions. The professions increased in numbers
more than trade, but in both cases the movement out of farming
provided the major source of new recruits.

TABLE 10.11

MOVEMENTS BETWEEN FARMING, TRADE AND THE PROFESSIONS

(NUMBER OF MEN)

Movements out of	Movements in to	Farming	Trade	Professions
Farming		–	134	206
Trade		206	–	103
Professions		274	118	–

Source: Probate Samples

The effect of job mobility on the final wealth of the person
is given in Table 10.12. It is clear that despite the fact that
those who moved within industrial groupings had on average
fathers with higher social status, it was those who stayed in
the same job as their father who did best in accumulating wealth.
The successful fathers probably encouraged their sons to stay

in the same occupation, and those with less success would not have presented the occupation as being as worthwhile. Those who moved between occupations did tend to come from a background of unskilled labour more than the other group. However, the move was not on average sufficient to offset any such handicaps, and these people had a final wealth distribution that was near the overall average.

TABLE 10.12

WEALTH, BY OCCUPATIONAL MOBILITY

(Percentages)

Wealth Rank	No change	Within Industrial Group	Between Industrial Group
Top decile	18.14	13.88	10.96
2nd	15.85	11.78	10.28
3rd	12.23	12.48	10.23
4th	10.51	9.96	10.61
5th	9.50	9.12	9.67
6th	8.64	10.10	10.30
7th	6.60	8.84	10.67
8th	6.96	8.70	10.21
9th	5.20	6.73	8.27
Bottom decile	6.42	8.42	8.99

Source: Probate samples

We have, unfortunately, no direct information on the inheritances which the people in our sample received. An attempt to use the family trees compiled by members of the New Zealand Genealogists Society to trace the levels of estates of forebears was not successful. The Genealogists were invited to send truncated family trees for those who died in New Zealand in 1924, 1932 and 1939.[3] It was hoped that the forebears could be traced through the lists in the New Zealand Mercantile

---

3. See M.N. Galt "Tracing the Family Fortune". New Zealand Genealogist 1982.

<u>Gazette</u>. Despite the fact that over 25 families' trees were located the method was not successful. Too many of the people who died were first generation New Zealanders whose forebears died elsewhere, and in too many cases one or more of the potential benefactors died in the period 1917 to 1924 when the <u>Mercantile Gazette</u> did not publish the lists. The sample was therefore too small to provide interesting results.

However some feel for the level of inheritance can be gained by using our probate samples. For three of the years, 1888, 1916 and 1939 the age of every living child of the deceased was collected from the death certificate. It was possible therefore to work out the child's year of birth and his probable inheritance. In each case it was assumed that the spouse received the estate should he or she have survived the deceased, but that if the spouse was also dead, that the children received an equal share of the estate regardless of their sex or birth position in the family. This was the typical distribution of estates found by Peter Jenkin in his study of wills, and appeared to be the dominant distribution for those wills that were randomly read in the course of this study.[4] From our 1888 sample we therefore had a series of probable average inheritances for children born in particular five-yearly intervals to a father following a particular occupation. These inheritances were then linked to the estates of people who died in 1916 with fathers with the same occupation and who were born in the same five-yearly time span. Exactly the same procedure was used to link the average inheritances of the children of those who died in 1916 with the people who died in 1939.[5]

There was one complication in the procedure: we did not know that our sample people in 1916 and 1939 had actually been predeceased by both their parents. If they had not, then they would not have received any inheritance. The probability that

---

4. Peter Jenkin 'Distribution on Intestacy'.
   <u>New Zealand Universities Law Review</u> 3 (Oct 1968) pp.169-191

5. This method is similar to that employed by L. Soltow in his 'Male Inheritance Expectations in the United States in 1870' <u>Review of Economics and Statistics</u> LXIV (2) May 1982 pp. 252-260.

a person had received an inheritance had therefore to be calcu-
lated, and this was done by using the life tables for 1911 –
1915 printed in the Report on the Census, 1921. It was assumed
that parents were 25 years older than the child, and from the
tables the probability that both parents were dead for children
in five-yearly age groups was calculated. The average level of
inheritance received was then reduced from the level calculated
by the 1888 or 1916 samples to take into account this probability

Table 10.13 gives the results of our calculations as in-
heritances calculated from the 1888 sample, and the 1939 figures
referring to inheritance calculated from the 1916 sample. The
table gives the clear impression that inheritances were much

TABLE 10.13

PROPORTION OF ESTATE INHERITED, BY WEALTH GROUP

Wealth Group	Proportion Inherited	
	1916	1939
Top decile	4.81	6.19
2nd	7.81	17.62
3rd	2.23	24.37
4th	15.02	34.22
5th	4.36	33.88
6th	41.26	71.38
7th	6.36	109.07
8th	15.85	137.26
9th	15.91	327.40
Bottom	45.07	1335.11

Method: See Text
Source: Probate samples

more important to those in the bottom wealth categories than at
the top. This is partly due to the method used to calculate
the inheritances. An average estate, even for one occupational
group, will over-estimate inheritances at the bottom, and under-
estimate them at the top. The trend is however, much more

marked in the 1939 figures than in the 1916 ones, and this
suggests that at least part of it was not a statistically arti-
fact.   As we will see in Chapter 13 the very rich tended to
come from comfortable but not wealthy backgrounds.   Inheritance
was not as important to their wealth level as their own endeavours
Our figures on inheritance in Table 10.13 also suggest this, and
they suggest that downward mobility was common with the poor
declining in wealth between generations.

In both our years the overall proportion of estate was close
to 100 percent, suggesting that the average person had a very
similar level of wealth to that inherited from their father.
The assumption that female children inherited equally with males
meant of course, that their inheritance was of a similar size to
that of males.

TABLE 10.14

PROPORTION OF ESTATE INHERITED, BY SEX

	1916	1939
Males	109.75	143.81
Females	111.85	104.00
Total	110.39	129.37
n	161	703

Method: See Text
Source: Probate samples

Inheritance was not strongly related to industrial group-
ings.   Farming and the professions tended to have lower than
average inheritance levels, probably because of the large number
of sons of the unskilled who moved into those industrial groups.
The other major industrial groups in Table 10.15 show marked
variations between the two years, but overall appear to indicate
a more normal level of inheritance relative to the value of
estate left.

TABLE 10.15

INHERITANCE, AS A PROPORTION OF FINAL WEALTH,

BY MAJOR INDUSTRIAL GROUPS

	1888 - 1916		1916 - 1939	
	n	Proportion inherited	n	Proportion
Farming	47	36.84	189	80.86
Building & Construct- ion	9	133.8	21	85.34
Other Transport	10	64.30	28	589.3
Trade	10	103.26	38	51.6
Professions	11	48.13	63	86.0
Labourers	44	81.4	303	109.74

Method: See text
Source: Probate samples

We cannot however, put much weight on these inheritance
figures.   They are based on assumptions which are not as re-
fined as we would like, and use a round-about method of measur-
ing inheritance.   They do however suggest that wealth mobility
was probably as common as social and occupational mobility.
Overall then the figures on intergenerational change presented
in this chapter suggest that change was the norm outside of
farming circles;   that mobility was both upward and downward,
with only a slight bias upwards, and that those whose occupation
changed did not do as well as those who followed in their father's foot-
steps, with the extent of the change being positively related
to the probability of ending life in a worse position than their
father's.

CHAPTER 11

LAND OWNERSHIP AND WEALTH

1882 - 1911

Land is a conspicious asset. Broad acres which stretch
into the distance cannot be hidden to the same degree as bank
deposits or Government stock certificates. Those with large
tracts of land tended therefore to be perceived as wealthy,
regardless of possible liabilities attached to their land. It
is interesting to find that the Government's lists of large land-
owners printed in the Appendices to the Journals of the House of
Representatives were most commonly delineated by acreage and not
by the valuation of the land.[1] Those who held land in large
acreages were commonly seen therefore to be at the top of the
wealth holders. We will see in Chapter 12 that this was only
partially true. Farming did provide the largest proportion of
the very wealthy, but many also made their fortune through trade,
and one or two through industry. In this chapter we are there-
fore not going to look specifically at the large land holders,
but rather concentrate on the relationship between land ownership
and wealth levels.

The general feeling that land equated with wealth, accentuated
by Henry George's theories, led to it being the basis of taxation
in New Zealand through to the First World War. What began as a
property tax on all assets in 1879 became by 1894 a graduated
land tax as a result of the general attitude towards this asset.
Because land was the basis for taxation, the Government put con-
siderable resources into measuring its acreages and value and

---

1.
See AJHR (1890) B-15, (1891) B-20A, (1903) B-20, (1907) B-20
and (1911) B-17A. The last return provides summary
statistics from the previous ones.

determining the overall extent of land owned by each individual. The result, from our point of view, was a series of reports on the distribution of land owned in New Zealand, which were summarised in the 1911 report.[2] Unfortunately the most consistent series is that in groupings of acreage rather than value.

TABLE 11.1

LAND OWNERSHIP AND DISTRIBUTION

Year	Average Holding	Gini Coefficient	% of land held by top (in average)				Adults with no land (%)
			0.1%	1%	10%	20%	
1883	429	0.775	15.90	32.34	50.69	71.90	69.77
1886	413	0.760	13.97	28.42	45.47	70.67	70.64
1889	380	0.761	14.73	28.68	45.01	70.95	71.13
1892	395	0.763	15.33	29.30	46.77	70.95	70.41
1902	374	0.781	11.19	25.82	47.73	76.25	70.02
1906	424	0.796	9.15	23.71	48.28	83.04	75.13
1911	465	0.796	7.65	23.10	49.84	82.40	74.59

Notes: (1) The distribution is by holding size, and this will overestimate the inequality by value.

(2) In 1911 only the number of land owners owning over 5 acres was given. It was assumed these were 31% of the total land owners in line with the trend from 1902 onwards.

(3) The number of adults was estimated from the proportion of the population 21 or over.

Source: AJHR (1911) B-17A Table 2.
Census Statistics

This means that our statistics will in general over-estimate the level of inequality in land holding. Small sections, such as those in towns, have a high value per acre, while poor quality farm land which was only economic in large holdings, had a low value per acre. The wealth implied by a quarter acre section

---

2. AJHR (1911) B-17A

will therefore be much more than the difference in acreage be-
tween it and a 10,000 acre block would suggest. Table 11.1
presents the basic statistics on land value and distribution
from the summary table by acreage.

It would seem probable that in the years to 1892 land owner-
ship was rather more equal than wealth. Our gini coefficient
for wealth was 0.788 in 1893 compared to 0.763 for land from a
source that would tend to accentuate inequality. However this
does not remain the case. The gini coefficient for wealth was
0.753 in 1910 compared to that of 0.796 for land. The distri-
bution of land was obviously becoming more unequal overall,
while that of wealth was tending towards equality. The group
that was gaining in the redistribution of land was clearly that
below the top 10 percent but above the top 20 percent. This
group increased its proportion in the years after 1892 at the
expense of both the more wealthy and those who owned no land at
all. These were the people with small acreages - those gener-
ally omitted from the statistics because they had less than 5

TABLE 11.2

PROPORTION OF LAND HELD BY GROUPS, LAND OVER 5 ACRES

(Percentages)

		Top				Bottom	Gini
	0.1%	1%	5%	10%	20%	50%	Coeff-icient
1883	11.41	33.22	54.87	64.97	74.83	10.50	0.696
1886	10.64	32.28	53.26	63.45	73.65	11.43	0.677
1889	11.37	34.02	54.54	63.84	73.43	12.24	0.671
1892	11.30	34.06	53.95	63.66	74.01	10.82	0.686
1902	6.52	23.08	42.90	54.52	67.76	13.21	0.618
1906	4.26	19.55	39.01	51.41	65.22	14.14	0.594
1910	2.62	15.45	35.88	48.89	63.50	14.64	0.576

Note: There is no allowance for people without land.
Source: AJHR (1911) B-17A Table 2

acres. The relative rise in urban land prices was obviously
of crucial significance in the changing fortunes of land owners

in this period. Within the rural land the move was from the
very wealthy groups to those on the bottom of the scale, parti-
cularly those below the top 20 percent but above the bottom 50%.
These were people who in 1911 had 100 to 320 acres, that is
those who were based on intensive farming either for fat lambing
or dairying. The decline was most pronounced in the top 0.1
percent, those with over 30,000 acres in 1910 who had less than
a quarter of the proportion of land value which they had in
1882. The fall in the proportion of land owned by the top 1%
(which includes the top 0.1 percent) was less pronounced, and
in 1911 they still retain about 45 percent of the share of land
they had held in 1883. The further below the one percent level
a group lay, the more its position improved across time. Almost
all the decline in the top 5 percent was due to the decline in
the top 1 percent, and those below the 5 percent added to their
proportionate land holdings - those between 5 and 10 percent by
2.91 percent of the value of land, those below 10 but above 20
percent by 4.75 percent of the total value of land, and those
below 20 but above 50 percent by 7.19 percent. The bottom 50
percent increased by 4.64 percent. The decline of the very
rich was matched by the rise of the moderately poor. This
naturally is reflected in the gini coefficient.

The rise in the gini coefficient for all land ownership
(Table 11.1) was not therefore due to increasing inequality in
rural land holdings. Rather it would seem to have been due to
the steady rise in the proportion of the adult population who
did not own any land at all. In 1883 69.77 percent of those
over 21 owned no land: by 1910 this had risen to 81.70 percent.
Part of this rise would have been due to the increase in the
proportion of women in the adult age groups. As we will see
shortly, only about 10 percent of the land owned in 1882 was
owned by women, despite the fact that they were 39.6 percent of
the adult population at the time of the 1881 census. The rise
in the proportion of adult women to 45.8 percent by 1911 would
therefore have reduced the proportion of adults who owned land
by 8 percent assuming that the change in womens' property
rights did not lead to a rise in land holdings. This leaves
one third of the rise in the proportion of landless adults to
be explained, and this was probably partially explained by the

relative rise in the number of young adults, as land, like wealth, tended to be accumulated over time. To the extent that the rise in the number of small farms reflected a lowering of the size of an economic farm unit, this should have eased barriers to farm land ownership. It is much easier to save for a small unit of a few hundred acres that costs perhaps £1,000 - £2,000 than for an estate of 30,000 acres which costs £30,000 to £100,000. The figures in Table 11.2 do not however suggest that ownership of farm land was causing the rise in the proportion of landless, but rather that the rise in urban land prices as cities expanded at the turn of the century meant there was a rising barrier to home ownership.

The figures on land holdings do give some picture of the changing distribution across time, but the sources do not provide any real clues as to the characteristics of land ownership at one point of time. To construct this picture a detailed list of landowners is needed, and fortunately, the Government provided one based on the 1882 valuation of land. The <u>Return of the Freeholders of New Zealand</u>, 1882 was modelled on the 1873 <u>Return of Owners of Land</u> published in Great Britain. It gave the name, address, occupation, location of town and country lands and their values in 1882, and the acreage of country land for every freeholder in New Zealand.[3] The 1882 list was the only one published: the outcry against invasion of privacy meant that the security provisions of the Property Tax Act 1879 were observed rather more closely thereafter.[4]

---

3. Freehold is a legal term implying the right to dispose of the land absolutely. It should not be confused with "unencumbered" which means unmortgaged. Obviously the return of freeholders should not include leaseholders.

4. From 1902 valuation lists are available in manuscript form for each country and subdistrict. For a thorough study of land ownership these could be collated - but that would require an army of research assistants not made available for this thesis. See National Archives V series Rolls.

The 1882 list has been analysed by Claire Toynbee using a random sample of 1095 cases.[5] She found that the value of land owned was strongly related to the broad occupational grouping to which the person belonged. Unskilled manual labourers in particular tended to be concentrated in the bottom range of land values, while over a quarter of those in high status white collar

TABLE 11.3

VALUE IN LAND (GROUPED) BY OCCUPATION (GROUPED)

(Numbers)

Value in £	No Occ.	White Collar & Proprietors High**	Low*	Blue Collar Skilled	Other Manual	Settlers	Total
1- 249	110	33	90	83	142	54	512
240- 499	30	16	69	49	35	7	206
500- 999	28	16	69	25	11	9	158
1000-1999	25	20	43	11	7	4	110
2000 or more	24	32	44	5	–	4	109
Totals	217	117	315	173	195	78	1095

(Percentages)

Value in £	No Occ.	White Collar & Proprietors High**	Low*	Blue Collar Skilled	Other Manual	Settlers	Total
1- 249	51	28	29	48	73	69	47
250- 499	14	14	22	28	18	9	19
500- 999	13	14	22	14	6	12	14
1000-1999	12	17	14	6	4	5	10
2000 or more	11	27	14	3	–	5	10
Totals	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: * includes farmers
** includes graziers
Source: Claire Toynbee Op cit Table II 3 p.194

jobs owned land valued at £2,000 or more. Indeed her occupational ranking bears a striking similarity to that found for

5. Claire Toynbee. 'Class and Mobility in 19th Century Wellington Province : an exploratory study of immigrants arriving 1840-1880'. (Wellington; VUW MA Thesis, 1979) Appendix II.

wealth as a whole, presented in Chapter 7. Those involved in
international trade head the ranking list, and those in the
farming sector were (through the graziers) also well represented
in the top land owning categories. The high land holding by
merchants suggest that land was seen as an investment asset.

TABLE 11.4

OCCUPATIONS RANKED IN ORDER OF LAND OWNERSHIP

Mean Value in £'s	Occupation	Rank % over £1,000
7127	Merchants	1
6926	Graziers	2
2058	Hotelkeepers	3
1229	Farmers	4
1008	Builders & Contractors	5
643	Gardeners	6
557	Agents	7
549	Storekeepers	8=
549	Retailers	8=
495	Officials	10
408	Skilled tradesmen	11
396	Clerks	12
308	Engineers	13
300	Smiths	14
248	Tailors, upholsterers	15
222	Carters	16-
262	Semiskilled	17
218	Unskilled	18
167	Labourers	19

Note: The rank is based on the proportion of each group
         with land holdings of over £1,000.
Source: Claire Toynbee Op cit Table II 5 p.197

Certainly some of this land was held for speculation as land
prices rose with improved communication and close settlement.
However, it was also common for merchants to aspire to become
farmers.   The social prestige of land ownership had been trans-
ferred from England and affected people's asset holding.

        The 1882 Return does not provide more information than the
occupation: to analyse land holding more closely it was necess-
ary to match people by name with other sources of information.

In our case the obvious source to link to was the probates and death certificates for 1888. It was possible, using the name and address to link 237 estates for which we had death certificates with the persons owning land in 1882. The 1888 probates are, of course, a biased sample. Probate was only required in 1888 if the person who died owned a clear £100 of net assets, with the result that more than 90 percent of adults who died did not file for probate. The sample we have therefore is biased towards those who were likely to own land. Overall 52.74 percent of our sample were land owners compared to the 30.23 percent of adults for the nation as a whole. The men of our sample were much more likely to own land - 54.75 percent of them had some land holding while only 24 percent of women owned land.' In our sample women accounted for 6.75 percent of land owners - rather less than the 9 percent that Claire Toynbee found in her random sample.[6] The women did however tend to hold large estates when they owned land at all. If we break the distribution of land into quintiles, as in Table 11.5, the

farms, as their income from agriculture would have been too small to employ male labourers, but it is surprising that there were no women with small urban sections. Many women were of course still under a legal impediment for owning land as the Married Women's Property Act was yet to be passed. However, of the 4 women landowners in our sample, 3 had living spouses in 1888, and only one was a widow.

For men land ownership was a means of investment, possibly a livelihood, and also a status symbol. The value of land owned depended on the total assets of the individual. The 1882 Return provided only the gross value of land, the mortgages and other loans used to acquire the asset were not taken off the value as is obvious in Table 11.6, in the seventh and ninth deciles. However despite this it is clear that land was forming a high proportion of assets at most wealth ranges, and if anything land tended to increase as a proportion of assets as estate size increased. The mean value of land held by men in each decile of wealth is shown in Table 11.6. However, these varied widely and in each decile - even the top one - about one third of the men had no land at all.

TABLE 11.6

ESTATE VALUATION AND LAND HOLDING

Ranking of Estate	n	Mean value of land	Standard deviation	Land as % of estate
Top Decile	23	£17076	47362	59.4%
2nd	19	2112	3005	73.6
3rd	23	786	1150	46.1
4th	23	861	1086	79.6
5th	24	480	895	63.5
6th	20	386	554	70.7
7th	21	687	1359	156.6
8th	24	73	137	22.7
9th	24	296	684	132.3
Bottom Decile	20	51	101	37.2

Source: See Text

The average value of estate tended to increase with age and with the length of residence in New Zealand. Table 11.7 shows the average land held by each decade age-group. This showed a tendency for land to increase as a proportion of wealth until very old age when it declines both as an absolute amount and as a proportion. The aberration at 70 - 79 was due to two very wealthy men dying in this age group in 1888. The effect of their estates was to heavily pull up the average, as both had sufficient assets to put them into the top 0.1 percent. Without Donald Gallan's £75,051 and John Johnston's £221,679, the 70 - 79 year old group would have had £2,002 worth of land.

TABLE 11.7

LAND HOLDING AND AGE, 1882/8

Age at Death	n	Value of land	Land as % of estate	% with no land
10 - 19	2	0	0	100.00
20 - 29	14	£103	22.9	85.71
30 - 39	28	143	17.9	67.86
40 - 49	38	1334	63.6	42.11
50 - 59	56	1137	75.2	39.29
60 - 69	43	888	42.4	34.88
70 - 79	29	12096	65.2	34.48
80 - 89	11	508	46.3	36.36

Source: See Text

The proportion of men with no land shows no sign of rising until the 80 - 89 year olds, when the decline is small. The older men of working age would therefore seem to have been reducing their land holdings rather than selling up altogether. This was probably due to their subdividing their land for their sons to farm, and only when they were truely too old to farm did they transfer the final portions of the land.

For migrants the length of time which they had been resident in New Zealand was also a major factor in determining land ownership. Only about 10 percent of new migrants acquired land in their first 10 years. We have of course only one year's

sample, so that this may have been influenced by the particular factors of the migration of the previous period. However the results seem consistent throughout and even the period of the Vogel immigration drive does not seem to have left a marked fluctuation on the figures. The consistency of the 5 percent in the top quintile for those in New Zealand less than 20 years suggests that only this proportion of the people in our sample would have come to New Zealand with sufficient assets to put them into the top 20 percent of land owners. The rest had to work their way there and only began to arrive after 20 years of residence.

TABLE 11.8

LENGTH OF RESIDENCE AND LAND OWNERSHIP

(Percentages)

Length of Residence	0-9	10-19	20-29	30-39	40-49
Date of Arrival	1878-87	1868-77	1858-67	1848-57	1838-47
Top Quintile	5.56	5.40	22.78	34.21	40.91
2nd	-	18.90	18.99	23.69	22.73
3rd	5.56	21.62	17.72	15.79	18.18
4th & 5th)					
Owned no land)	88.89	54.05	40.51	26.32	18.18
Number	18	37	79	38	22

Source: See Text

As always those born in Scotland appeared to do best in the accumulation of wealth. Even without John (Johnson) and Donald Gollan the average value of land owned by the Scottish born was £1,193. The Scots had the lowest proportion with no land at all. The highest proportion was those born in New Zealand, however they tended to be a generation younger than those born overseas and so had less time in which to accumulate land. The Scots showed a preference for land - theirs was the highest as a proportion of their total estate. In contrast those born in Ireland, which group had the lowest value (except for the one

TABLE 11.9

BIRTHPLACE AND LAND HOLDING

	n	Value of land	Land as % of net estate	% with no land
New Zealand	18	313.22	49.0	66.67
England	107	1239.64	53.1	45.79
Scotland	42	8202.40	68.6	30.95
Ireland	26	587.50	43.0	42.31
Australia	1	0.0	0.0	100.00
Other	16	627.75	46.4	50.00

Source: See Text.

Australian born person) had also the lowest proportion of land in their portfolio. The Irish did not have an unduly high proportion with no land and this suggests that they tended to accumulate modest land holdings rather than be left out altogether.

The distribution of land by industrial group is given in Table 11.10. It is not surprising, given that the largest holdings were the large sheepruns, that the farmers and the "Gentlemen" had the highest average land holdings. However it is interesting to note that in both these groups about half of the people did not own land in 1882, though they may have purchased it in the subsequent 6 years prior to their death. The lowest rate of landlessness was in the building and construction sector, where presumably the skills of the men involved would make it easier for them to have at least acquired their own home. However it is obvious that many did more than this, and the high average level of estate suggests that the purchase of land in suburbs for subdivision was common in the 1880's. The trading group was also relatively high. Many traders, such as John (Johnson) (who was actually described as a gentleman and so is in that category) tended to invest in land. This was partly on economic grounds - land was a high returning asset if bought carefully, as subsequent developments in transport and settle-

TABLE 11.10

LAND AND OCCUPATION

Industrial Group	n	Value of land	Land as % of estate	% with no land
Farming	78	£2082	57.6	42.31
Mining	9	244	26.0	77.78
Clothing	2	247	45.4	50.00
Other Textiles	2	0	0.0	100.00
Leather	2	200	18.4	50.00
Wood & Furniture	7	731	52.8	42.86
Paper & Printing	1	0	0.0	100.00
Metals & Machinery	7	365	66.5	42.86
Building & Construction	9	1847	84.1	11.11
Other Transport	9	109	19.0	66.67
Trade	30	1312	53.6	30.00
Professional Services	26	555	46.1	46.15
Gentlemen etc.	21	12369	68.5	47.62

Source: See Text

ment could raise land prices substantially.   But the purchase of land was also related to the social prestige of the asset. A landed gentleman was perceived as having a social standing that outweighed that of the most wealthy trader or manufacturer, and the purchase of estates to gain respectability in England had its counterpart in New Zealand.   Only 9 percent of those in the top status group had no land holding in 1882 compared to 77 percent of the bottom status group.   And those at the top of the status hierarchy owned large land holdings and not small ones.   Those whose livelihood depended on land - the farmers in group 3 and builders in group 4 - were much more equally distributed depending on their individual wealth.

Land was then a significant asset for the wealthy to hold, and also for the not so wealthy.   It appears to have been about 50 to 60 percent of the assets which men owned, and was also owned by a proportion of the wealthy women, regardless of the legal and social customs.   Land ownership was however more

TABLE 11.11

STATUS AND LAND HOLDINGS

(Percentages)

	Top Status	2nd	3rd	4th	5th	Bottom
Top Quintile	72.72	22.22	24.68	20.93	–	5.71
2nd	18.18	11.11	20.78	23.25	20.00	5.71
3rd	–	22.22	15.59	23.25	30.00	11.43
4th	9.09	44.44	38.96	32.56	50.00	77.14
5th						
n	11	9	77	43	10	35

Source: See Text

than an asset, or even a way of making a living;   it had social
overtones that influenced its ownership as much as any economic
factor.

CHAPTER 12

THREE CASE STUDIES:

THE POOR, THE WELL-TO-DO AND THE RICH

We have discussed the effect of various personal attributes
on the likely wealth at death.   In this chapter we aim to draw
this together, to give a profile of three diverse groups in our
sample - the poorest 10 percent, the richest 10 percent, and the
10 percent in the middle.

The profile of a poor person:

The very poor did not need a probate.   Those people who
died with few assets were exempt from death duties, and unless
they owned land or shares, they did not need to apply to the
Supreme Court for the legal documents of probate.   Our sample
does not then include the bulk of people who died with net assets
under this legal limit of £100 to 1921, then £500 to 1923 and
then £1,000 to 1939.   We have already looked at these 'missing'
people in Chapter 4.

There were, however, some people about whom we have detailed
information, who died with few assets.   These were people who
left land or shares, so that probate was needed before these
could be transferred to their legatees.   Legally, these estates
did not need to go to the Stamp Duties Department for valuation -
a sworn statement by the executor that the estate was too small
to attract duty should have sufficed.   But whether it was be-
cause the Stamp Duties Department was afraid of tax evasion, or
just because the Supreme Court sent on every estate lodged for
probate, most of them were valued.   And for those that were not
valued we have a sworn upper limit as a guide.   We have therefore
a sample of the poor for whom we have reliable valuations, and

the death certificate information.

The bottom 10 percent of our sample, which included mainly people below the legal limit, will form a group which we will call the poor. Over 90 percent of the people in our poor group had estates valued at less than £100. In many cases their estate was valued as nil, usually because their liabilities exceeded their assets. In some cases the people concerned had actually filed for bankruptcy prior to their death, in which case the Official Assignee applied to the Court for authority to divide the assets among the creditors. In many cases, death forestalled bankruptcy proceedings.

The relative proportion of men was almost exactly the same in the bottom 10 percent as in our sample as a whole. Women were much more likely to have nothing at all than men, and so not require any probate, but it seems that if they did own assets

TABLE 12.1

STATUS OF MEN IN THE POOREST 10 PERCENT

(Percentages)

	1888	1896	1906	1916	1924	1932	1939	All wealth Groups
Top Status Group	-	3.03	-	3.26	2.46	3.83	2.27	3.02
2nd	5.00	9.09	5.36	5.43	3.94	4.26	4.92	5.03
3rd	10.00	30.30	14.29	29.35	23.65	29.36	23.86	36.08
4th	30.00	27.27	16.07	26.09	20.69	22.55	25.38	19.93
5th	-	3.03	3.57	2.17	5.42	5.96	4.17	4.10
6th	25.00	21.21	37.50	17.39	28.08	21.28	28.41	15.76
Missing	30.00	6.06	23.31	16.30	15.76	12.77	10.98	16.08
n	20	33	56	92	203	235	264	10317

Source: Probate samples

they were not over represented in the poorest 10 percent. The men in the sample came from many walks of life. In terms of their social status however, there was a tendency for them to be concentrated in the lowest social groupings, which were dominated

by those with low paid unskilled work. The proportion of the men in this group grew across time, suggesting that the 1920's and 1930's were particularly unrewarding to men with few skills. This is hardly surprising given the excess supply of labour and the consequent high level of unemployment in those years. The skilled manual workers, such as carpenters and plumbers, who fitted into the 4th status group are also over represented in the bottom 10 percent, though these groups show less of a growth in the latter years of our period.

TABLE 12.2

OCCUPATIONS OF MEN IN THE BOTTOM 10 PERCENT

(Percentages)

	(1)	(2)	(1) (2)
	Bottom 10 percent	Overall Distribution	Relative Proportion (%)
Farming	27.80	36.66	75.83
Hunting, fishing & forestry	0.55	0.23	239.13
Mining	3.54	2.31	153.25
P.P.P.	0.44	0.62	70.97
Food, beverages & tobacco	1.44	1.16	124.14
Clothing	1.44	0.84	171.43
Other textiles	0.55	0.59	93.22
Leather	0.55	0.38	144.74
Footwear	0.78	0.80	97.50
Wood & Furniture	1.33	1.15	115.65
Paper & printing	0.89	0.79	112.66
Chemicals	-	0.03	0.00
Metal & Machinery	3.43	3.19	107.52
Miscellaneous manufacturing	0.33	0.66	50.00
Public utilities	0.22	0.22	100.00
Building & construction	7.42	6.56	113.11
Rail Transport	1.44	2.20	65.45
Other Transport	5.87	5.08	115.55
Trade	9.86	8.99	109.68
Professional services	11.52	13.40	85.97
Non-professional services	0.22	0.42	52.38
Labourers	13.29	6.65	199.85
Gentlemen etc	0.89	1.13	78.76
Unknown	6.20	5.94	104.38
n	903	10218	

Source: Probate samples

GRAPH 12.1

PROPORTION OF THE BOTTOM 10 PERCENT
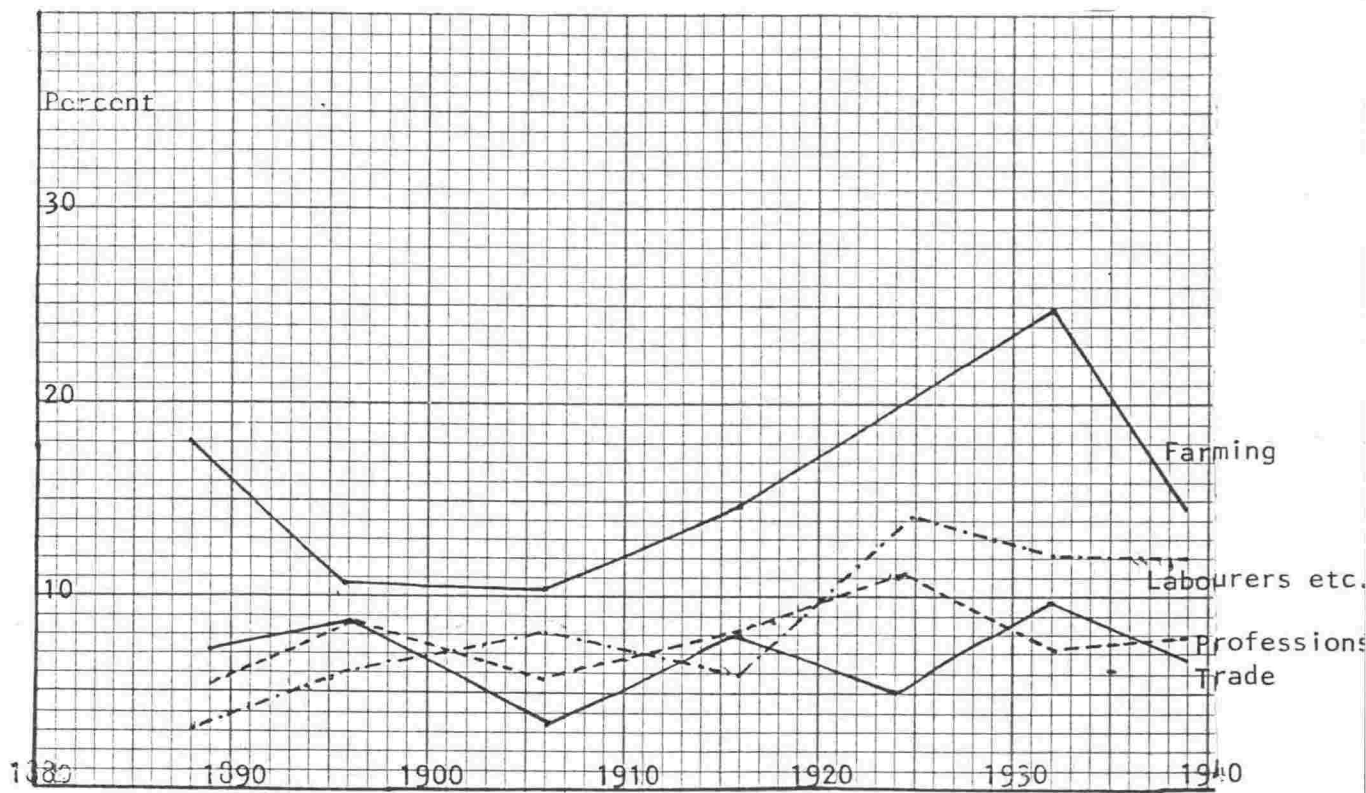
The status group which showed the lowest proportion of their members in the bottom 10 percent was the 3rd group. Even in the peak year of their involvement in 1896, the proportion in the poor is low. Group 3 was dominated by farmers, and it is not surprising to find therefore that farming was under represented in the bottom 10 percent.

To be a farmer required some capital, and it would seem that this requirement meant that relatively few in the farming sector were found in the bottom 10 percent. It is interesting to note however that this proportion was not stable across time, and as Graph 3 shows, farming, more than any of the other major employment groupings fluctuated in its proportion of the poor. This was undoubtedly because of the major fluctuations in the value of land which took place in our period. Land was the farmer's chief asset, and the fall in land prices in the 1880's depression and after the post war boom would have reduced their assets without reducing their liabilities so putting marginal farmers into the category of the poor. It is hardly surprising to find then that the farmers crowd into the poor in 1932.

The industrial groups which had the highest proportions in the poorest 10 percent were characterised by having a high proportion of unskilled labour or being dying industries. The activities associated with horses come into this latter category, and the number of blacksmiths, saddlers and carters increase their respective industrial groups. General labourers, mining, and the textile industries come into the first category. With training, security of employment or an expanding industry, the workers were much less likely to end up poor, as the professions, the railways and the primary product processing industries show respectively. But money or breeding also helped, as those who were described as "gentlemen" demonstrated.

Those people who ended life in the bottom 10 percent tended to have begun life with a handicap. Both men and women in this group tended to have fathers with low status occupations. It is interesting to note however that the proportion of fathers in the bottom status group was considerably lower than the proportion of sons who ended life in that category. There was obviously a considerable element of downward mobility adding to the group. However it remains true that those who were born to

TABLE 12.3

STATUS OF THE FATHER

FOR THOSE IN THE BOTTOM 10 PERCENT

(Percentages)

	Men	Women	All Wealth Groups
Top Status Group	1.44	1.76	2.27
2nd	7.09	6.80	6.42
3rd	24.70	26.70	33.14
4th	14.29	15.11	16.86
5th	5.87	8.56	5.56
6th	16.72	18.39	13.47
Unknown	29.90	22.67	22.28
n	903	397	15519

Source: Probate samples

fathers in status group 5 or 6, had about 30 percent more chance
than average of ending their life also in these groups.   It
would seem likely that the fact that the father had a relatively
unskilled job would have tended to mean the son did also, and
that his daughters would marry people of a similar occupational
status.

As with the person's own occupation, their fathers were
much more likely to be in an industrial group that had a high
proportion of unskilled workers or which, as a dying industry, was
unlikely to provide the children with marketable skills.   Those
in the bottom 10 percent were less likely to have fathers who
were farmers, and so were unlikely to have the positive gains in
knowledge from an agricultural upbringing.   A rather high pro-
portion of fathers were involved in railway transport compared
to the level of involvement of the deceased, presumably because
the expansion of the New Zealand railway system called for a

high input of relatively unskilled labour.   On the other hand
the fathers were less inclined than the sons to be involved in
clothing and textiles, or in the migratory life of the hunting,
fishing and forestry sector.

The tendency of declining industries to leave their workers
less well off, can also be discerned in the place of birth.
The poor, as a group, had a very similar racial mix to our sample
as a whole.   Of those whose birth place was known 30 percent

TABLE 12.4

FATHER'S JOB FOR MEN IN THE POOREST 10 PERCENT

(Percentages)

	(1) Father's job	(2) All wealth groups	(1)	(2)
Farming	27.02	34.11	79.21	
Hunting, Fishing & Forestry	0.11	0.24	45.83	
Mining	3.77	2.82	133.22	
P.P.P.	0.33	0.69	47.92	
Food, Beverages & Tobacco	1.44	1.31	109.92	
Clothing	0.78	1.01	77.23	
Other Textiles	1.44	1.22	118.03	
Leather	0.44	0.41	107.32	
Footwear	0.89	1.40	63.57	
Wood & Furniture	1.11	1.15	96.52	
Paper & Printing	0.44	0.77	57.14	
Chemicals	-	0.03	0.00	
Metals & Machinery	4.10	3.37	121.66	
Miscellaneous Manufacturing	1.11	1.38	80.43	
Public Utilities	0.11	0.08	137.50	
Building & Construction	5.43	6.71	80.92	
Rail Transport	1.11	1.06	104.72	
Other Transport	4.21	3.73	112.87	
Trade	5.76	6.84	84.21	
Professional Services	9.86	10.22	96.48	
Non-professional Services	0.22	0.29	75.86	
Labourers	6.76	4.91	137.68	
Gentlemen	0.66	1.04	63.46	
Missing	22.92	15.19	150.89	
n	903	10218		

Source: Probate samples

MAP 12.1

BIRTHPLACES OF THE POOR,

RELATIVE TO ALL IMMIGRANTS

(Men Only)

Relative Frequency
of poor

2.00 +

1.50 - 2.00

1.00 - 1.50

0.5 - 1.00

0 - 0.5
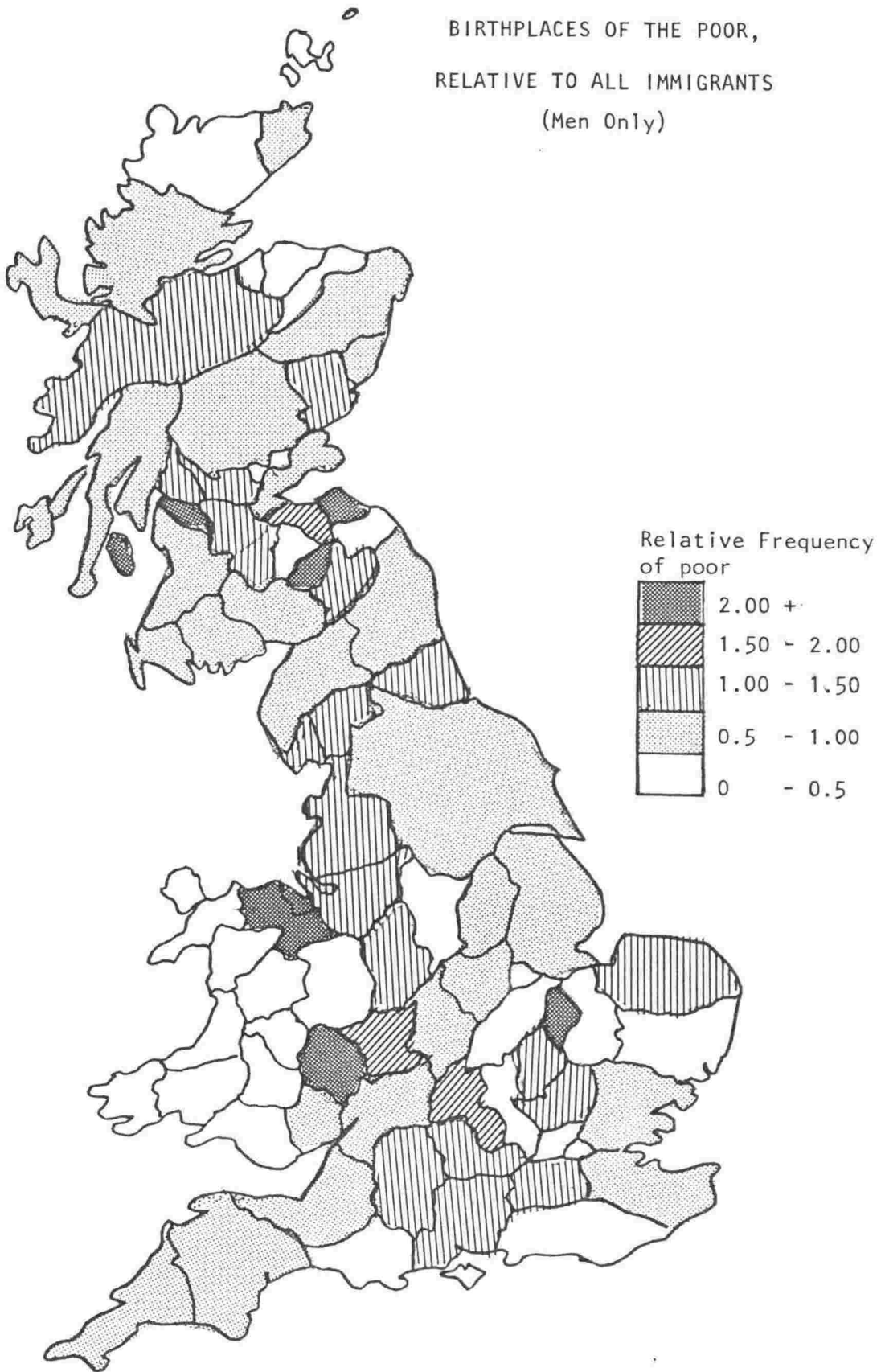
were English, 12 percent were Scottish, and 9 percent were
Irish, compared to 31, 12.6 and 10 percent in the sample as a
whole.   There were slightly more New Zealanders in the poor,
38 percent as compared to 36, but this difference is too small
to be significant.   National origin did not seem to play much
part in determining the person's inclusion in this group.
However, this was not true of variation within the countries.
Within New Zealand those born in the declining areas of Westland,
Otago and Southland were more likely to be included in the poor.
So too were those born in Hawkes Bay and Nelson, where settle-
ment was early and opportunities for late arrivals more limited.
And those born in Taranaki, the province which tended to attract
parents with few resources but a desire to farm, had the highest
chance of all to be included in the poor.   To do well as a New
Zealander it helped to be born in Auckland or Wellington pro-
vince.

The English people did better if they were not born in an
area affected by a major industrial town.   As Map 1 shows, the
areas that did not do well were those that were in general
affected by the industrial revolution, particularly around
Lancashire and the main Scottish cities.   The distribution is
probably related to two factors: those who lived near expanding
towns would have been likely to have migrated there unless they
wished to have an agricultural life, or unless their particular
skills were in industries which were being undermined by the
industrial revolution.   Those people may well have been inclined
to migrate to New Zealand, where those in dying industries did
not do well.   Secondly, the areas that sent the poor migrants
tended to be sending migrants disproportionately in the period
after 1880.   As we saw in Chapter 7 those who migrated in the
1860's did best as a group, and those who migrated later than
1880 did substantially worse.   Graph 12.2 shows the number
coming in each year for the rich (the top 10 percent) and the
poor, and this trend is clear in these two groups also.   The
rich were relatively more heavily concentrated on the 1850's
and 1860's in particular, whereas the poor came in the 1870's
and later, with a notable group migrating in the 1900 to 1915
period.   This disadvantaged them first, because the enormous
gains due to the development of the country were no longer
available, and secondly, because they had a shorter period in

GRAPH 12.2

DATE OF ARRIVAL IN NEW ZEALAND

TOP AND BOTTOM 10% SAMPLES

(Males Only)

Rich n=819

Poor n=585
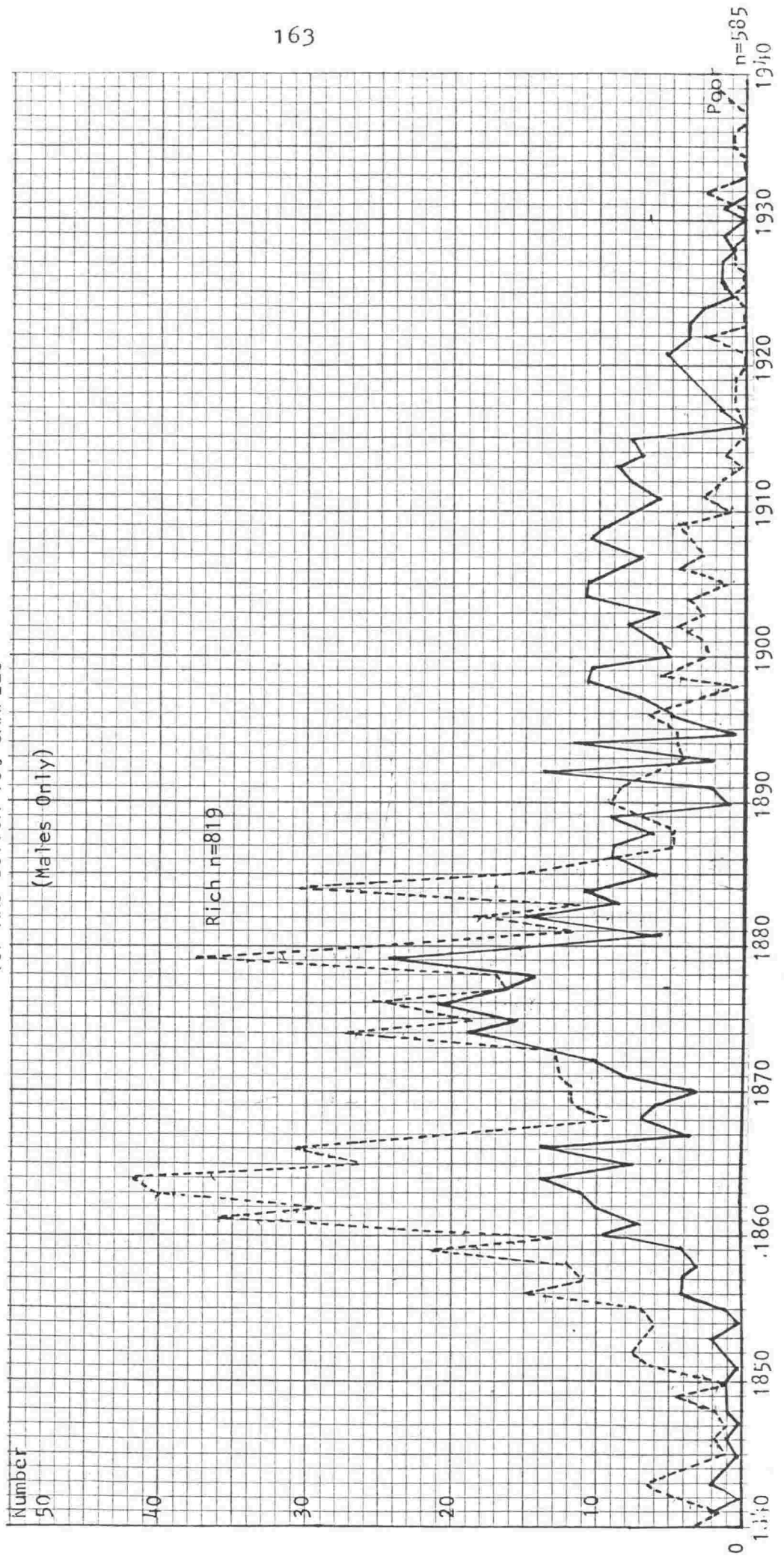
which to accumulate wealth in their new country.

The poor lived for a shorter period of time. The average age of death for the bottom 10 percent was 61 years compared to an overall average lifespan of 64.8 years for all the people in our sample. This would appear to have been due to a weaker overall constitution rather than to a different pattern of sickness. More of them died suddenly than average (27 percent as opposed to 24 percent) and relatively less had a long terminal illness. This suggests that it was general physical condition that was at fault, rather than the poor catching specific diseases or injuries more often. It is quite possible that their relatively deprived background meant that they had poorer nutrition as children, and that this contributed to their death. The poor were only slightly more likely to take their own lives. Twenty-five people in our poor, or 1.92 percent committed suicide as opposed to 1.44 percent in our total sample. This was however, the highest rate of suicide in any particular decile in our sample, and suggests that the pressures of poverty were perhaps an important part of the background to suicide. It is difficult to tell with 25 people, but it seemed to be the case that those

TABLE 12.5

RELIGION OF THE POOREST 10 PERCENT

(Percentages)

	Men	Women	Total Sample all Wealth Groups
Anglican	38.43	35.90	38.84
Presbyterian	25.03	23.87	26.70
Methodist	8.75	8.48	10.87
Baptist/Brethren	1.99	3.75	2.17
Other Protestant	3.88	5.92	3.44
Roman Catholic	13.62	13.81	10.92
Jewish	0.33	0.20	0.33
No Minister at Burial	4.98	5.33	4.13
No Burial Recorded	2.99	2.76	2.58

Source: Probate sample

with a low net estate who committed suicide had high assets and high liabilities, while those with low assets and liabilities were less inclined to take their own lives.

The religious convictions of the poor were very similar to that of the sample as a whole. The Roman Catholic faith is slightly overrepresented among the poor, ahd the Methodists .are underrepresented, but in neither case is the variation from the overall distribution large.

The profile of the poor is therefore one of people with a rather poorer background, a tendency to be in unskilled occupations like their fathers, who were born in the less rapidly growing area of New Zealand, or industralising areas of Britain, who migrated late and died young. However the bottom 10 percent was not a very homogeneous group. There was obviously a great deal of downward social mobility of people with good backgrounds and even some who were born at the right time, in the right place and who migrated at the best of times who did not do well in the New Zealand environment.

The profile of a comfortably off person:

We are going to take as our middle wealth holders those who fell into the rank between 50 and 60 in the percentage ranks of

TABLE 12.6

WEALTH OF THE MIDDLE WEALTH PERSON

(Pounds)

	Men	Women
1888	£722.91	£668.00
1896	388.90	386.00
1906	594.68	597.91
1916	808.32	775.91
1924	918.32	896.41
1932	923.38	909.96
1939	923.49	949.48

Source: Probate sample

each year.   The rank of 50 was of course the median estate, but wealth was skewed in its distribution so that the average estate tended to fall in the decile that we have chosen here.

Unlike the poor, the middle wealth holder experienced a rise in the average estate, and as price levels did not rise as much they experienced a real rise in the level of material poss- essions.   The person in the category would undoubtedly have been able to afford a comfortable house in a good part of town and a life style which, if not extravagant, was not constantly thwarted by a lack of funds.

TABLE 12.7

OCCUPATIONS OF THE MIDDLE GROUP

(Percentages)

	(1) Middle Group	(2) All Men	(1)	(2)
Farming	34.84	36.66	95.04	
Hunting, Fishing & Forestry	0.31	0.23	134.78	
Mining	2.46	2.31	106.49	
P.P.P.	0.72	0.62	116.13	
Food, Beverages & Tobacco	1.33	1.16	114.66	
Clothing	0.92	0.84⁻	109.52	
Other textiles	0.82	0.59	138.98	
Leather	0.20	0.38	52.63	
Footwear	0.92	0.80	115.00	
Wood & Furniture	0.92	1.15	80.00	
Paper & Printing	1.13	0.79	143.04	
Chemical	–	0.03	0.00	
Metal & Machinery	3.38	3.19	105.96	
Miscellaneous Manufacturing	0.61	0.66	92.42	
Public Utilities	0.20	0.22	90.91	
Building & Construction	7.07	6.56	107.77	
Rail Transport	2.87	2.20	130.45	
Other Transport	6.05	5.08	119.09	
Trade	8.09	8.99	89.99	
Professional Services	14.86	13.40	110.90	
Non-professional Services	0.61	0.42	145.24	
Labourers	5.74	6.65	86.32	
Gentlemen	0.61	1.13	53.98	
Unknown	5.33	5.94		

Source: Probate Samples

The middle wealth group was most likely to be involved with farming, the professions or the skilled trades. There were still a body of unskilled workmen who achieved this standing, but they were underrepresented. Mining, which had been over-represented in the poor, continued to be overrepresented as successful or skilled miners appear to have reached about this level: few of them went any higher up the wealth scale. But it is those involved with industries demanding some skill, the compositors in paper and printing, weavers and spinners in the woollen mills, those in non-professional services, and the skilled tradesmen in the building industrywho were more typical members of the non-farming and non-professional members of our group.

TABLE 12.8

STATUS AND FATHER'S STATUS: THE MIDDLE GROUP

(Men Only)

(Percentages)

	Own Status		Father's Status	
	Middle Group	All Groups	Middle Group	All Groups
Top Status Group	2.36	3.02	1.23	2.28
2nd	5.94	5.03	6.14	6.24
3rd	34.08	36.08	33.20	33.14
4th	22.44	19.93	16.91	16.38
5th	4.61	4.10	5.64	5.60
6th	18.47	15.76	13.73	13.46
Unknown	15.16	16.08	23.16	22.90

Source: Probate Sample

The number of professional people and skilled tradesmen meant that this group had a high status relative to that of the poor. As a rule, the person's own status was higher than their father's, as many of those with unskilled fathers moved into skilled work, and those with fathers in skilled work moved into the professions or farming.

A much higher proportion of the men in the middle wealth

group had fathers involved with farming than was the case with the poor group, and the proportion of fathers in the professions almost reaches its peak in this wealth decile. Skilled trades, notably those in the building industry were also well represented, though unskilled labourers were also fathers to a high proportion of this group. Non-professional services were also well represented.

TABLE 12.9

FATHER'S OCCUPATION, MIDDLE GROUP

(Percentages)

	(1) Middle Wealth Father	(2) All Fathers	(1) (2)
Farming	32.79	34.11	96.13
Hunting, fishing & forestry	-	0.24	0.00
Mining	2.56	2.83	90.46
P.P.P.	0.61	0.69	88.41
Food, beverages & tobacco	1.33	1.31	101.53
Clothing	0.61	1.01	60.40
Other textiles	0.61	1.22	50.00
Leather	0.41	0.41	100.00
Footwear	1.84	1.40	131.43
Wood & furniture	0.82	1.15	71.30
Paper & printing	1.33	0.77	172.73
Chemicals	0.10	0.03	333.33
Metal & machinery	4.51	3.37	133.83
Miscellaneous manufacturing	1.43	1.38	103.62
Public utilities	-	0.08	0.00
Building & construction	7.38	6.71	109.99
Rail Transport	0.92	1.06	86.79
Other Transport	3.79	3.73	101.61
Trade	6.56	6.84	95.91
Professional Services	10.96	10.22	107.24
Non-professional Services	0.41	0.29	141.38
Labourers etc.	5.33	4.91	108.55
Gentlemen	0.51	1.04	49.04
Unknown	15.16	15.20	99.74

Source: Probate samples

Unlike in the poorest 10 percent, the Methodists have a higher than average proportion of this middle group. The Methodists reached their peak proportion in the 3rd to lowest decile, but are still relatively high among the average wealth holders. The Roman Catholics have a lower proportion in this than in the poorest 10 percent, but it is still above the average for the sample as a whole. The other major denominations are all slightly underrepresented but in no case is the difference significant.

TABLE 12.10

RELIGION OF THE MIDDLE WEALTH HOLDERS

(Percentages)

	Middle Wealth		All Wealth Groups
	Men	Women	
Anglican	38.42	39.24	38.84
Presbyterian	25.61	25.75	26.70
Methodist	11.68	11.11	10.87
Baptist/Brethren	2.77	2.57	- 2.17
Other Protestant Groups	3.07	4.02	3.44
Roman Catholic	11.37	11.36	10.92
Jewish	0.31	0.36	0.33
No Minister at Burial	4.92	3.23	4.13
No Burial Details Given	1.84	2.36	2.58

Source: Probate samples

The profile of a middle wealth holder is then one of a person brought up in a farming, professional or skilled trade background, who themselves went into these areas, who was more likely to be Methodist or Roman Catholic, but having a higher status than the poor group. This group did well in increasing their real wealth across time.

Profile of a Rich Person:

We will take our rich as being those in the top 10 percent

of our estate valuations.   The very rich, those in the top 0.1
percent will be studied in the next chapter.   Unlike the middle
wealth holders, the rich experienced no real increase in the
average size of estate during our period.   The average value
of estate fluctuated, but if anything, showed a downward trend.
The rich were losing real wealth to the gain of the middle group.

TABLE 12.11

AVERAGE ESTATE: PROPORTION OF ASSETS HELD, AND SEX

BALANCE OF THE RICH

	Average Estate Men	Women	Proportion of Wealth held by top 10 percent	Sex Balance Men	Women
1888	£26743	–	79.20%	100.00%	–
1896	17374	5040	81.30	94.55	5.45
1906	16372	6478	69.22	96.08	3.92
1916	16259	13434	66.08	83.16	16.84
1924	20617	15395	65.48	81.88	18.13
1932	18223	12749	63.11	72.89	27.11
1939	15099	13070	60.82	73.65	26.35

Source: Probate sample

The height of the economic position of the top 10 percent came
in 1896 when they owned more than 80 percent of the assets of
the estates in that year.   By 1939 this proportion had dropped
to 60 percent.

Throughout the period women were underrepresented in the
top wealth holders, but this imbalance was being corrected over
time.   Initially those women who did make it into the rich were
concentrated at the very low end of the decile, with the result
that their average estate was less than one third of that of
the men.   By 1939 the women were more evenly distributed
throughout the decile, and their average estate was only slightly

less than that of the men.   The rise in the proportion of
women in the rich category was probably almost solely due to
the time lag of distribution by inheritance.   It was found that
the women in the top 0.1 percent, about whom we know rather more,
did not accumulate their wealth by their own efforts, but rather
inherited it from their husband or their father.   It was to be
expected then, that as the second generation of New Zealand
settlers died there would be an increase in the number of women
wealth holders who had inherited estates from the first genera-
tion of wealth holders.

TABLE 12.12

OCCUPATIONS OF THE RICH MEN

(Percentages)

	(1) Rich Men	(2) All Men	(1) (2)
Farming	52.25	36.66	142.53
Hunting, fishing & forestry	-	0.23	0.00
Mining	0.53	2.31	22.94
P.P.P.	0.61	0.62	98.39
Food, beverages & tobacco	0.61	1.16	52.59
Clothing	0.23	0.84	27.38
Other textiles	0.23	0.59	38.98
Leather	0.08	0.38	21.05
Footwear	0.31	0.80	38.75
Wood & furniture	1.22	1.15	106.09
Paper & printing	0.69	0.79	87.34
Chemicals	0.08	0.03	266.67
Metals & machinery	1.53	3.19	47.96
Miscellaneous manufacturing	0.46	0.66	69.70
Public utilities	0.00	0.22	0.00
Building & construction	3.67	6.56	55.95
Rail transport	0.46	2.20	20.91
Other transport	2.14	5.08	42.13
Trade	13.22	8.99	147.05
Professional services	12.83	13.40	95.75
Non-professional services	0.15	0.42	35.75
Labourers etc.	0.38	6.65	5.71
Gentlemen	2.90	1.13	256.64
Unknown	5.43	5.94	91.41

Source: Probate Sample

Over three-quarters of the men in the top 10 percent were involved in farming, trade or the professions.   Over half were involved with farming, particularly sheep farming.   The high profits to sheep farmers in the early years of settlement, and the rise in land prices as settlement progressed gave this section of the community a head start.   On the other hand, the fall in land prices after World War I, and the lower profits in farming in the depression were major reasons why the top 10 percent were losing out in this period.

Merchants and owners of major department stores also had high profits in the early years of settlement, when the high level of capital required to undertake these businesses limited

TABLE 12.13

RELIGION OF THE RICH

(Percentages)

	The Rich		Total Sample
	Males	Females	
Anglican	42.70	47.65	38.84
Presbyterian	30.18	27.15	26.70
Methodist	8.02	8.03	- 10.87
Baptist/Brethren	1.68	0.83	2.17
Other Protestant Groups	1.99	1.94	3.44
Roman Catholic	7.56	8.59	10.92
Jewish	0.69	0.83	0.33
No Minister at burial	4.20	1.66	4.13
No burial details given	2.98	3.22	2.58

Source: Probate Sample

entry to a select few, but when the value of business to be done was great.   Many of the merchant firms were run by Jews and Scots with the result that the Jewish and Presbyterian religions were overrepresented in the rich.   The farmers and professional people had a tendency to prefer the more established and tradi-tional forms of worship, and congregated particularly in the Anglican, but also the Presbyterian churches.

TABLE 12.14

INDUSTRIAL GROUPING OF THE RICH, BY YEAR

(MEN ONLY)

(Percentages)

	1888	1896	1906	1916	1924	1932	1939
Farming	36.00	42.31	48.98	56.44	56.11	53.79	49.77
Trade	24.00	13.46	9.18	9.82	14.50	13.72	13.53
Professions	4.00	9.62	9.18	7.36	13.74	13.00	15.83
Other occupations	36.00	34.61	32.66	26.38	15.65	19.49	20.87

Source: Probate sample

The dominance of the three major occupations reached its
height in 1924.   From 1888 to 1924 there was a decline in the
proportion of rich men in trade and in the professions while
farming continued to grow at their expense and the expense of the
"other occupations" category, notably the "gentlemen".   In this
latter case this may well have been due to the decline in the use
of the term as it went out of vogue, and as the Registrars of
Deaths tried to get more accurate statements of occupation.
The decline of the professions and trade would seem to have been
due to the status attached to farming and land ownership.   As
we will see in the next chapter many of the rich who made money
by trade ended their lives by buying land for farming, and be-
queathed this life style to their children.   The life did not
cause the children to prosper, and the fall in profits and in
land prices meant that farmers fell out of the top 10 percent
category in the depression.   The stable incomes of the profess-
ional men stood them in better stead at that time.
    It is hardly surprising to find that the wealthy were con-
centrated in the high status social groupings or that their
parents also held a relatively high social status also.   Table
12.15 gives the breakdown for the 974 men whose own social status
was known.   The largest group by far is the 3rd one, which con-
tains the farmers and the high proportion of sons who followed

TABLE 12.15

SOCIAL STATUS OF THE RICH

(By Number)

Rich Own Status	Rich Father's Status						% distribution of own Status
	Top Group	2nd	3rd	4th	5th	6th	
Top Group	16	16	18	10	2	2	6.57
2nd	6	23	21	13	5	4	7.39
3rd	21	38	451	55	21	41	64.37
4th	3	12	41	64	14	13	15.09
5th	1	0	2	8	12	3	2.67
6th	1	1	13	7	3	13	3.90
% distribution of father's status	4.93	9.24	56.06	16.12	5.85	7.80	

Source: Probate sample.

their fathers into farming meant that nearly 60 percent of the
rich had the same social status as their father.   In many cases
however, actual social graduation would be present, as our
status measure is too imprecise to discern the differences which
did exist between farmers.   Of those who were socially mobile,
24.44 percent moved up.   Most of these were only up one or two
points on our social scale, but 62 people moved up 3 or more
points, the bulk being those from semi- or unskilled work to
farming.   It is reasonable to assume that most of these would
have been first generation rich.   There were fewer people in
the top 10 percent who had been downward mobile, but they still
were 16.12 percent of cases where both the father and son's
status was traced.   Again the bulk moved down only one or two
points, but 19 people did move 3 or more, the bulk of these
being people whose fathers had been farmers, but who were them-
selves unskilled wage workers.   It seems reasonable to assume

that these people inherited their sizeable fortunes. The ratio of those who moved up 3 or more points to those who moved down suggests that self-made men were an important component of the rich in New Zealand.

The distribution of the father's industrial grouping was very similar to that of the wealthy themselves, with a concentration on farming (with 43.62 percent) trade (with 8.94 percent) and professional services (with 10.70 percent).

Graph 2 showed that the rich tended to arrive early and that in particular, they arrived in the decades of the 1850's and 1860's when the colonial economy was beginning to move, and there were chances to make fortunes. They were relatively under-represented from the turn of the century when the poor were over-represented. The rich tended to live longer. Whether it was because of better nutrition, better health care, or both, is not clear, but on average they lived to be 70 as opposed to an over-all mean age of 64.8 years. It would seem that they were able to profit both from their longer life span and from their longer time in New Zealand.

As could be expected, the rich lived disproportionately in the sheep farming provinces and in Wellington, and less of them were to be found in Taranaki, Marlborough, Westland, Otago and Southland relative to the population in these provinces. It did not however, seem to pay to be born in New Zealand. Only in Hawkes Bay or Wellington did the rich have as high a proportion as they had in births in general. More than proportionately, the rich were born in England and Wales (28.09 percent) or Scotland (11.69 percent) or Australia (4.01 percent). The relative frequency of the rich compared to all the men in our sample for the United Kingdom is shown on Map 2. As can be seen from the insert the countries which were more heavily in-volved in sheep farming tended to send people who did better in New Zealand, especially the highland countries of Scotland where extensive farming was practised. Not all the countries where sheep were concentrated were good at sending rich people, but rather the count ies which did best sent a disproportionate number of the migrants in the 1860's, as a comparison with Map 6.3 in Chapter 6 will show. Sheep rearing skills were of value then only if they came at an appropriate point in New Zealand's history, when these skills could be put to most use.

MAP 12.2

BIRTHPLACES OF THE RICH, RELATIVE TO ALL IMMIGRANTS

(Men Only)

Sheep

Relative Frequency
of the Rich

2.00 +

1.50 - 1.99

1.00 - 1.49

0.50 - 0.99

0   - 0.49

Insert from Geographie Universelle Vol 1 p. 261 (Paris, 1927)
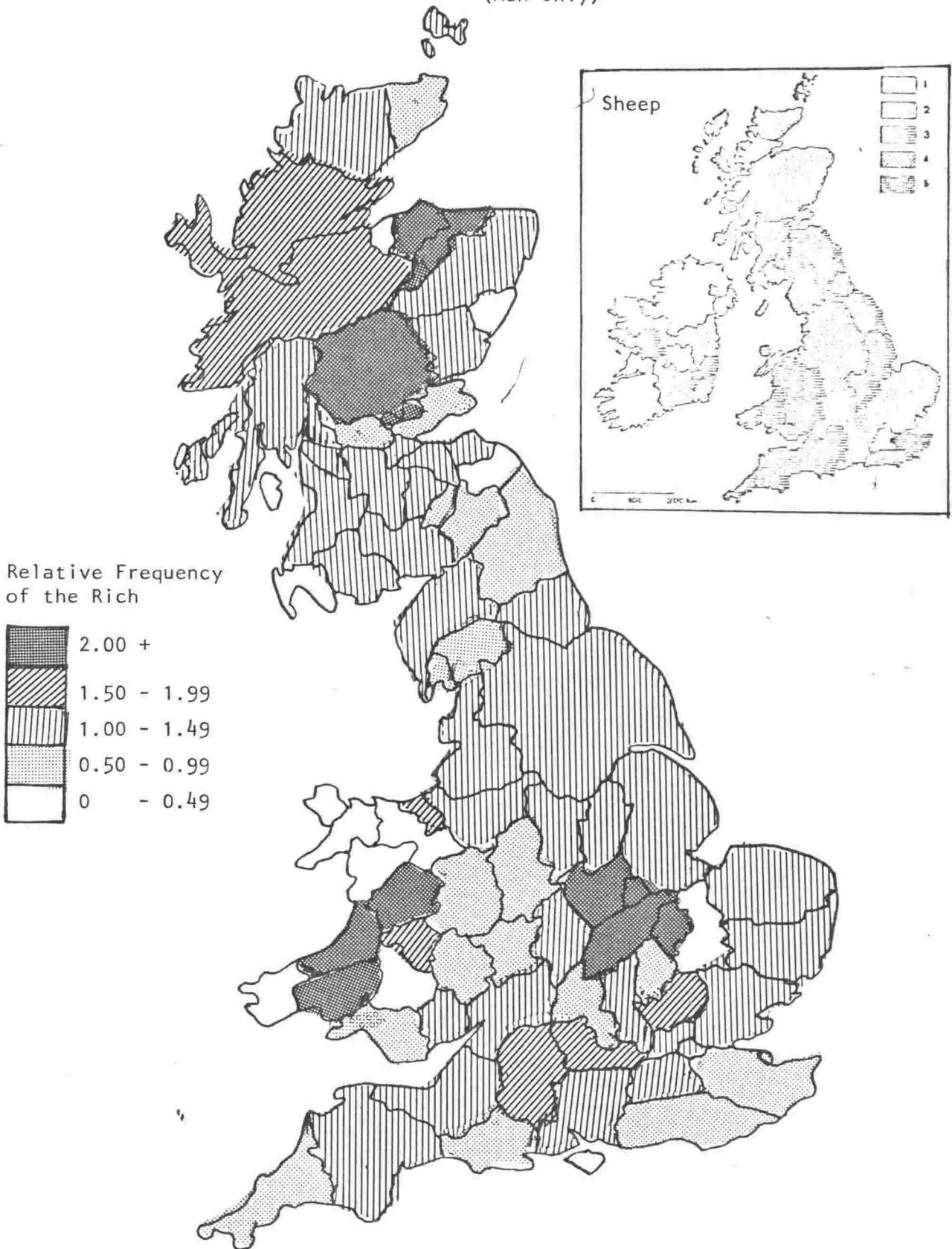
The most common characteristics of a rich man were then
that he came to New Zealand in the 1860's from a moderate to
good background. He went into farming, trade or the profess-
ions, areas in which his father also worked, and using the skills
he had learned from his father and elsewhere, was able to profit
grandly from the development of his land and of the New Zealand
economy in general. A rich woman was likely to have been
married to such a man or the daughter of a person fulfilling
this profile, and to have inherited the estate of her husband
or father (or both) on their death.

CHAPTER 13

THE VERY WEALTHY

The one group of the population which has not been adequa-
tely covered by the previous analysis was the very wealthy.
Because they were relatively few in number the chances that they
would die in our years, and so be captured in our sample is
small.   Indeed as less than 1 percent of the population died in
any one year, the chances of capturing any particular one of the
top 0.1 percent of wealth holders is less than 0.007 percent.
But the very wealthy are a group of special importance to our
study.   As we saw in Chapter 3, the distribution of wealth was
such that the top 0.1 percent owned over 30 percent of the assets
in the economy.   But also the group is important as they often
represent the growing edge of the economy, where super-profits
can be made by venturing successfully into new areas.

For the purposes of this study we have defined the very
wealthy as being those in the top one thousandth of the popula-
tion - the top 0.1 percent.   The wealth required to get into
this category was calculated from the Official Yearbook distri-
bution of estates used in the first chapter.   As the average
level of wealth was increasing over time, the value of estate
needed to get into the top 0.1 percent of the population was
also rising.   To get into this category in 1893 required
£30,000 of assets; by 1939 this had risen to £200,000.   The
minimum level used in each year is given in the Appendix to this
chapter.

Once the minimum levels were established the names of those
who qualified were collected.   The major sources of information
used were:

(1)   the lists of estates passed for death duty published about monthly in the New Zealand Mercantile Gazette from July 1887 to March 1917. (except for a few issues in 1900-01 which could not be traced)

(2)   those people with the required level of assets, who appeared in our surveys of 1924, 1932 and 1939.

(3)   the New Zealanders who appeared in the 'Other Peoples' Money' column of the Daily Mail Yearbook between 1901 and 1943.   This list gave the names and estates of those people who died in England leaving at least £50,000.

(4)   the 1882 Return of Freeholders and the subsequent papers in the AJHR's[1] listing large land owners in New Zealand.

As a result of these searches the names of 215 wealthy New Zealanders were collected.

While every effort was made to get all the people in the top 0.1 percent of wealth holders, the file is not complete. The gaps in the sources used mean that some people were less likely to be found.   In particular, those who died in England prior to 1900 were unlikely to be traced as the Daily Mail Yearbooks were not available, and similarly, the end of the Mercantile Gazette lists in 1917 means that those who died in the 1920's and 1930's were much less likely to be found.   Those who owned large acreages of land and who died in New Zealand between 1888 and 1917 were almost certain to be included.

Once the names of the people were known every effort was made to trace biographical details for each of them.   The obvious sources, such as the New Zealand National Biography, the Who's Who, and the Cyclopedia of New Zealand,[2] were searched, and this was supplemented by local and company histories and such files of biographical information as have been collected in libraries.[3]   As a last resort, the local librarians in the

---

1.   Appendices to the Journals of the House of Representatives (1885) (1890) B-15A, (1892) B-20A, (1903) B-20, (1911) B-17B.

2.   G. Scholefield, A Dictionary of National Biography (Wellington; Department of Internal Affairs, 1940); Who's Who in New Zealand; The Cyclopedia of New Zealand (Christchurch; Cyclopedia Publishing Co. 1897-1908) 6 volumes.

3.   Notable the New Zealand Biographies in Turnbull Library and the MacDonald Biographies in the Canterbury Museum.

district where the person died were approached, and the death and marriage certificates were checked. However, there were still 36 people for whom very little or no information could be found. As one librarian put it: "We seem to have a large number of "foreigners" and a few fairly obscure, and just downright awkward persons among the wealthy."[4] These people must have died outside of New Zealand and, in general, they were not active at the turn of the century when the Cyclopedia of New Zealand was compiled. But for some of them, more information should have been more forthcoming, such as John Logan, about whom Hocken Library could only find that he was the Otago Provincial Secretary.

The list is perhaps a little surprising in its composition. The wealthy landed families of Canterbury appear with John Grigg, the Rhodes and Deans. But some of the members of that group only make it into the next 0.4 percent of wealthy holders, for instance John B.A. Acland with his £39,746 in 1904. Similarly, the landed of the Wairarapa and Hawkes Bay are not as strongly represented as one might have thought - many also being in the next 0.4 percent of the population. As a rule, the top political figures were not very wealthy or even wealthy. Sir George Grey, Sir Thomas Gore Browne and Sir Francis Dillon Bell made it into the 0.5 percent category, but no further, and many leading politicians were no more than comfortable. The Auckland business community is represented with John Logan Campbell, Josiah Firth and Falcolner Larkworthy, but many of its leading lights were also in the next 0.4 percent - Thomas Russell being one of them. The number of untraceable people is indicative of the large number of relatively unknown wealthy people. A few of these surprised their contempories on death, as they had lived so frugally during their lives as to appear poor. Edward Costley, one of Auckland's leading benefactors belongs to this category. But most probably lived comfortable, but not pretentious lives, and did not by conspicuous consumption draw attention to their good fortune.

The overall distribution of wealth in the top 0.1 percent

---

4. David MacDonald, Reference Librarian, Hocken Library 18 Oct. 1983.

of wealth holders is shown in the first table.   This is the
distribution of estate valuation, and so is based purely on the
first three sources of information.   The large number of missing
is therefore a result of those included because of their land
holding but whose estate on death could not be traced because of
gaps in our sources.   It is clear from the table that although
the minimum level of wealth in the top 0.1 percent was rising
the top of the range was increasing its proportion to the same
extent.   The top estates of the 1920's were not higher than
those of the 1890's and 1900's.

TABLE 13.1

VALUES OF ESTATES OF THE WEALTHY

(Number)

Year of Death Wealth Range	1880's	1890's	1900's	1910's	1920's	1930's
£400,000 +	0	1	2	1	1	1
3-400,000	2	0	0	1	0	0
2-300,000	0	1	6	6	2	2
1-200,000	2	8	11	7	na	na
50,000-100,000	5	13	9	na	na	na
20-50,000	11	13	2	na	na	na
10-20,000	0	0	3	na	na	na
missing	14	14	4	4	1	3
n=	34	50	37	19	4	6
Mean value	80,658	88,630	141,150	237,424	277,665	294,959

Source: See text

The first point which must be stressed about the top estates
in New Zealand, is that they were not wealthy by international
standards.   If we had applied the criteria of £500,000 assets
which was used by W.D. Rubenstein in his study of the wealthy
in Britain, then only two of our 215 people would have qualified –
Annie Quayle Townend with her £796,446, and Allan McLean with
his £596,904.   There was certainly no estate in New Zealand to
rival J.P. Morgan's $80 million, or Rockefeller's $900 million.

There were not even the millionaire estates which began appearing in New South Wales from the 1880's onwards. The top of the New Zealand wealth hierarchy was equivalent to the second rank in the New South Wales, the third rank in Britain, and would not even have rated as wealthy in the United States.

There were probably two main reasons why New Zealand estates remained relatively small: the fact that most of these people were joining this level of wealth for the first time, and the relative small size of the New Zealand economy. It has been found that even among those who are seen as 'self-made' men in Britain, it is very unusual for a very large estate to be made in one generation. Taking alternatively a very narrow and a wide definition of self-made, Rubenstein found that 6.4 and 24.6 percent respectively of those with estates between £$\frac{1}{2}$ million and £1 million were self-made.[5] As less than 10 percent of our New Zealand sample would have been born in the top 0.1 percent, most of them were doing well to get so far in their life-times. But even those who were born into a family with wealth found the small size of the New Zealand economy put a ceiling on the level of wealth which they could achieve. Monopoly power such as was wielded to achieve large estates in America would just not have produced the same level of wealth in New Zealand, and in the political environment of the 1890's onwards such monopolies were unlikely to be tolerated. The New Zealand economy was small, and the pressures to ensure the average man was comfortable limited the resources that could be held in the large estates.

It is significant then that the most wealthy person in the list was one of the 20 people whose fathers also appeared in it. Annie Quayle Townend, who died in 1914 leaving nearly £200,000 more than her nearest rival, was the only child of George Henry Moore, a Canterbury runholder who shortly before his death in 1905 had owned land valued at £372,189. Through the general rise in land prices and judicious subdivision, Annie had almost doubled this in nine years. Her husband, Dr Joseph Henry Townend, did not add to her fortune. While he was in a respectable position himself, his father had been a wharfinger. In any

---

5.   W.D. Rubenstein <u>Men of Property</u>, (London; Croom Helm, 1981) p.127

case the marriage was terminated in less than two years by the death of Joseph. Annie, having married at the age of 54, had born no children, and this lack of heirs meant that her death in 1914 led to one of the most bitter battles over an estate on record in New Zealand, as Joseph's children by his first marriage fought other distant relatives for the spoils. Annie achieved this great wealth because her headstart in the position was matched by her ability to profit from a period when all estates were rising in value.

Not many of the people in our file had the good opportunities which had favoured Annie. But when we look at their background, it is clear that most were privileged by the standards of the average New Zealander. Some assessment of this can be made using the information collected on the father's position – his occupation as rated by the Elley and Irving status scale,[6] the land held by him in England in 1872 as shown by the Return of Owners of Land in England and Wales, and the type of education which he could give his children. The father's position was categorised in three ways:

(1) Well-to-do: those who owned a lot of land, who could afford university education, or who held occupations in classes 1 or 2.

(2) Comfortable: those who owned a little land, who gave their children grammar school education, or who had occupations in class 3 or 4.

(3) Poor: those who owned no land, who gave their children elementary education, possibly followed by an apprenticeship, and who had occupations in class 5 or 6.

The overall distribution is shown in Table 13.2

Overall, almost 40 percent of the total number of fathers were in the well-to-do category. But this varied significantly from one nationality to another. The English and Irish, who became wealthy in New Zealand came from a good background. There are only a few instances of these people making a significant change in the one generation. This is even more true of

---

6. W.B. Elley and J. Irving "Revised Socio-Economic Index for New Zealand", New Zealand Journal of Educational Studies XI (1976) pp.25-36.

TABLE 13.2

FATHER'S POSITION : BY NATIONALITY

(Percentages)

	n	Well-to-do	Comfortable	Poor	Unknown
England	76	55.26	18.42	9.21	17.11
Scotland	46	30.43	43.48	17.39	8.70
New Zealand	23	95.65	4.35	-	-
Ireland	7	57.14	14.29	-	28.57
Australia	4	50.00	-	-	50.00
Other	5	80.00	-	-	20.00

Source: See text

the New Zealand born wealthy, where almost all are from families in the well-to-do category.   Indeed, of the 23 New Zealand born wealthy, 15 had fathers also in the top 0.1 percent of wealth holders.   There is of course a bias against the New Zealand born, in that our sources are not complete in the 1920's and 1930's.   However, there is little sign of the children of the 1840's, 1850's or 1860's, who should have been captured in our sources, doing well apart from those from already good back-grounds.

The wealth mobility is strongest in those born in Scotland. Here it is those whose fathers who were comfortably off who dom-inate, and there is a sizeable proportion of self-made men from poor backgrounds.   The Scottish were known for doing this also in Britain.   Their schooling at basic levels, and the lack of strong class ties enabled anyone with ability and hard work to do well.

It would seem that a good family background could provide two major advantages for the people who became wealthy - capital with which to begin their life in New Zealand, and education which gave them marketable skills.   The first of these is hard to document, though in a number of the autobiographical articles

in Cyclopedia of New Zealand the advantage of having cash in a
country where money was scarce was mentioned.   But there remains
very little evidence on the amount of capital which these people
had at their disposal.   The best source on the father's financial
position was the 1872 Return of Owner's Land in England and Wales,
and for those whose fathers migrated, the 1882 Return of Free-
holders.   But both of these are rather too late: many of the
fathers had died or passed on their estate prior to the compila-
tion of the lists.   However, of the 14 fathers who were traced
in the 1872 land owners in England, 6 had land with an annual
rental value of between £1 and £100, 5 had land with rental value
of between £100 and £500, and there were 2 in each of the rental
categories £500 - £1,000, and £1,000 - £9,000.   Only these latter
two would rival the wealth achieved by their sons.   Thomas
Elworthy, a woollen manufacturer, owned land in Wellington,
Somerset amounting to a rental value of £1,505, or assuming a
5 percent rate of return, a capital value of over £30,000; and
Robert Campbell owned 4,183 acres in Berkshire with a rental
value of £8,398, implying a capital value of £168,000.   But
these two are exceptional in the level of land attained by the
father, and only   9 of 76 English born had fathers with landed
wealth with a capital value over £2,000.   It would seem probable
then that even though they were from the well-to-do groups in
society the English migrants would bring with them hundreds,
rather than thousands of pounds.

Most of those who became wealthy did however have the advan-
tage of superior education.   As Table 13.3 shows, most of those
who became wealthy had at least post-primary education.   This
is particularly true of those who were born in England, probably
because of their general better background.   With over 10 per-
cent receiving University education this group was undoubtedly
much better educated than the average.   The Scottish migrants
were less inclined to go to University, though once there, they
tended to proceed to higher degrees, particularly medical
degrees.   However, far more of the Scottish received only parish
school education.   But since the parish school in Scotland gave
a superior education to those in England, this did not mean that
they were necessarily less well educated.   The New Zealand born
wealthy were inclined to receive either secondary level or
university education.

TABLE 13.3

THE EDUCATION OF THE WEALTHY :

BY COUNTRY OF BIRTH

(Percentages)

	Total	English Born	Scottish Born	New Zealand Born
Parish School	5.58	5.26	13.04	8.70
Apprentice	5.12	10.53	6.52	-
Grammar School	13.02	15.79	10.87	34.79
Non-University Tertiary (1)	7.44	9.21	6.52	-
University to bachelor	7.91	10.53	2.17	26.09
University-post bachelor	2.33	1.32	6.52	-
Unknown	58.60	47.37	54.35	30.43

Notes: (1) Mainly Sandhurst
Source: See text.

Those who went onto university went overseas to do so: not one of the New Zealand born wealthy attended a New Zealand university. In general it was Oxford or Cambridge which attracted the colonial wealthy, though a few also attended classes on the continent. Undoubtedly the best educated was Thomas Henry Lowry, who attended both the Royal Agricultural College, Cirencester and Cambridge University before returning to inherit his father's sheep farm. In general secondary education was done in New Zealand. The exceptions were George Hugh Charles Clifford and Sydney Johnston (who were both sent to Stonyhurst), Alexander A. McMaster who attended Rugby, and Edward Joshua Riddiford who was sent to "Morrison's Scotch College", Melbourne, for his schooling. But as a rule it was the local College that attracted the children - Auckland Grammar, Nelson College and the Lincoln Road High School. The main exception was in Wellington. There, Rechab Harding and William Holt Levin, both sons of prominent merchants, were sent to Toomath's School, the Wellington

Commercial and Grammar School, in preference to Wellington College. The two people who did not proceed past primary education were both sons of the Williams missionaries, and presumably were reaching the highest level of education possible in the 1830's.

It would seem that when marrying the wealthy tended to reinforce the position which their father had given them. As Table 13.4 shows the status of the spouse's father, on the 59 cases where it could be determined, was equivalent to that of the wealthy person's own father's position. The table is not the

TABLE 13.4

STATUS OF THE SPOUSE'S FATHER

Father's Status	Spouse's Father's Status			
	Well-to-do	Comfortable	Poor	Missing
Well-to-do	44	0	1	52
Comfortable	7	2	0	30
Poor	1	0	2	11
Missing	3	0	0	62

Source: See text. Spouse of the first marriage only.

best evidence (as so many of the father-in-laws could not be traced) but it does suggest that only in one case did a person marry significantly down in the world, and this was the case already given of Annie Quayle Townend and her husband, the son of a wharfinger. Equally, there is only one case of a marriage in which the spouse's father could be given as well to do, while the wealthy person's was poor. This was James Chapman Smith, a Scot who received only a parish school education before being apprenticed as a baker. He came to Nelson with the New Zealand Company in 1842, and made sufficient money as a baker in Nelson and Dunedin to purchase land in 1854. James Smith married Margaret Martin in 1850. Margaret was the daughter of John

Martin, a clergyman, whose son the Hon. John Martin was also in our top 0.1 percent list. It is probable that while John Martin was in a respectable occupation with every sign of belonging to the well-to-do, the family had sunk. The Hon. John Martin, who died in 1892 witth £92,338, began life in the new colony of New Zealand as a carter and pick and shovel man. So it is possible therefore that the match was not so unequal as our rough assessment of the position of the fathers would suggest.

Many of the wealthy also came to New Zealand with experience from Australia. Of the 136 whose movements could be fully documented, 41 had some time in Australia prior to coming to New Zealand. This frequently involved experience in the Australian pastoral industry or in a merchant or shipping business, and so undoubtedly proved useful in establishing the people in the New Zealand economy.

Most of those who came to New Zealand and became wealthy did so early on. The last arrival time of migrants in the top 0.1 percent of wealth holders came in 1905, but this was at the end of a long tail. Over 90 percent of those in our list whose date of arrival could be ascertained, came prior to 1870, and the largest single years were 1840 with 12 arrivals, 1850 with 11, and 1841 and 1863 with 10 people each. The 1840 and 1850

TABLE 13.5

DATE OF ARRIVAL IN NEW ZEALAND

Date	Number	Date	Number
1821–25	2	1861–65	21
1825–30	–	1866–70	6
1831–35	–	1871–75	1
1836–40	16	1876–80	6
1841–45	20	1881–85	1
1846–50	18	1886–90	1
1851–55	26	1891–95	–
1856–60	24	1895–00	–
		1901–05	3

Source: See text.

peaks are probably partly due to the tendency of arrival dates to be rounded in autobiographical accounts, but Table 13.5 leaves no doubt about the advantages that were attained by coming early. Indeed unless one came prior to 1865 ones chances of becoming wealthy prior to 1939 were not great.   This cannot be totally due to the scarcity of information after 1917, as those who came as adults in the 1870's and 1880's should have either owned enough land or have died by this date.

TABLE 13.6

NATIONALITY PROPORTIONS

	Wealthy	Census 1906	Probate Sample 1906
England	35.35	13.13	38.04
Scotland	21.40	5.38	23.14
Wales	–	0.24	1.33
Ireland	3.26	4.78	15.91
New Zealand	10.70	68.26	14.13
Australia	1.86	5.35	2.56
Other	2.79	2.86	4.89
Unknown	24.65	–	4.12

Source: See text.   Census report 1906.

The majority of those who became wealthy were migrants and were born in England.   The proportion of English was rather high compared to either the population or our sample of estates from 1906 (a middle year in our time span), but not so as to suggest that the English were unusually successful in amassing wealth.   This honour would belong to the Scottish group with their apparently higher wealth mobility.   The Irish were not successful however, despite the arrival of many of them in the early 1860's.   As we have seen, the Irish show the least social mobility of the British groups, and this, combined with the fact that many of them came penniless to the gold fields, probably

hindered their rise.   Many of them could also have been pre-
vented from reaching their full potential by anti-Catholic pre-
judice, though the major occupations associated with high wealth,
sheep farming and commerce, were relatively unimpeded by such
prejudices.   The "other" group is also smaller than would have
been expected.   Indeed, it contains only one person who was not
born in either the Empire of British descent, or in the United
States.   Bendix Hallenstein, who was born in Brunswick, Germany,
and who amassed a fortune of £101,491 through the clothing trade,
was the only person for whom English was a second language.
And it is significant that even in his case he spent many years
prior to coming to New Zealand in first Manchester and then
Victoria working in a shipping house.   It is obvious that with-
out a good command of English an immigrant could not amass a
fortune.

The accompanying map gives the distribution of the proportio
of wealthy in each of the counties of England and Scotland.   The
lowland counties of Scotland near to Edinburgh, and the southern
counties of England tended to produce the highest proportion of
estates relative to the number who migrated from them.

Most of the wealthy immigrants came to New Zealand in their
late teens, 20's or early 30's.   They came, in general, on
their own, or with siblings, rather than as part of a family mi-
gration.   It is not clear from the information available if
they were younger sons displaced by primogeniture but most were
making their new life without parental supervision.   They were
generally of an age to have already begun to work, and to have
had a few years of experience in their job.   Presumably then
they had savings in addition to any inheritance with which to
start their new life.

TABLE 13.7

AGE AT ARRIVAL IN NEW ZEALAND

	Number		Number
0- 9	8	50-59	5
10-19	17	60-69	1
20-29	55	70-79	1
30-39	37	Unknown	53
40-49	15	N.Z. born	23

Source: See text

MAP 13.1

VERY WEALTHY BIRTH PLACES

Number

Over 20

10 - 20

5 - 10

0 - 5
no wealthy
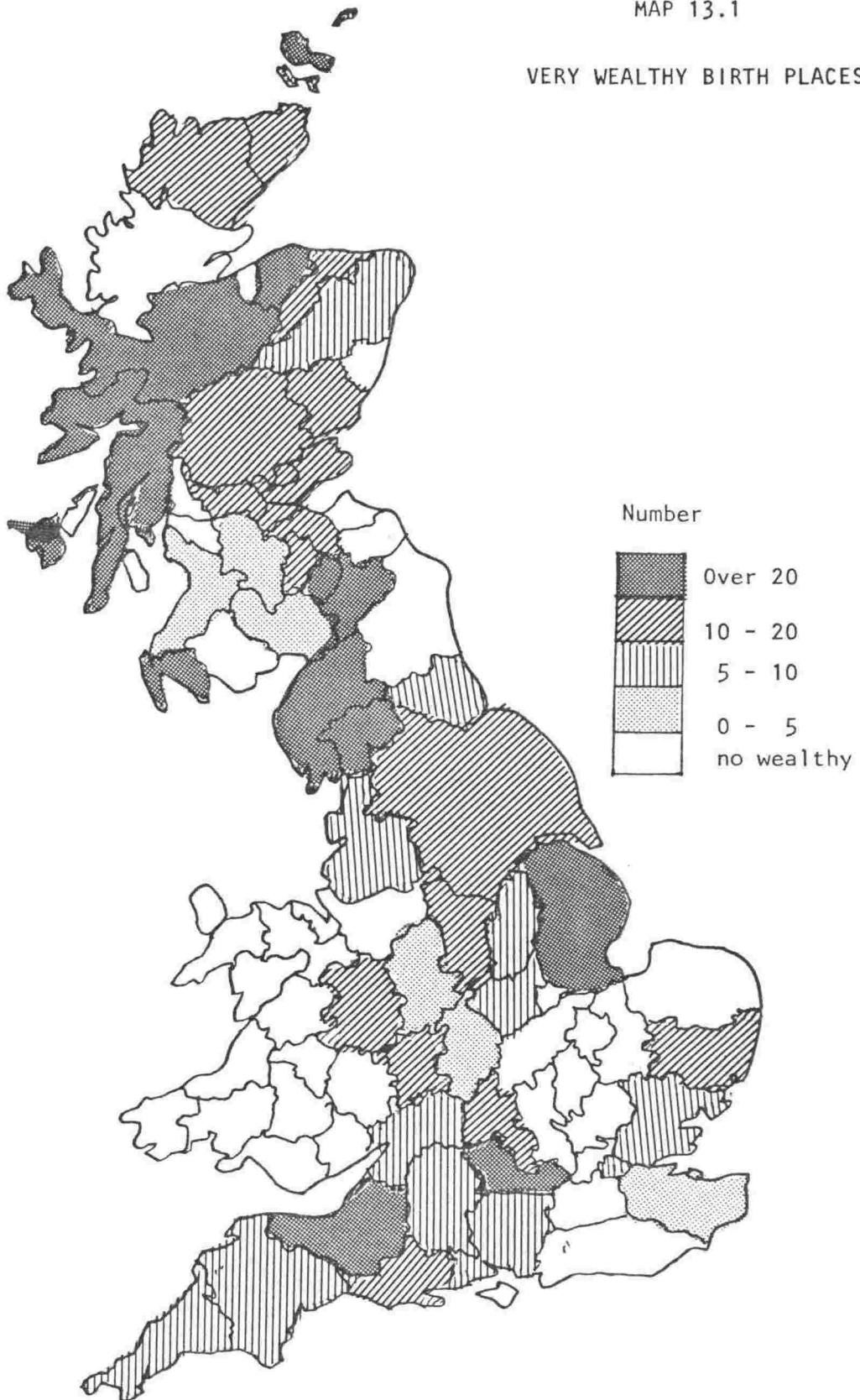
The range of occupations with which they began life was much wider than those with which they ended.   However as Table 13.8 shows, even then there was a tendency for farmers and merchants to dominate.   However these two occupations were about 50 percent of the first jobs held by the wealthy, whereas they were

TABLE 13.8

OCCUPATIONS OF THE WEALTHY

	Father's Job	Wealth Holder's First Job	Wealth Holder's Last Job
Agriculture:			
Labourer	9	13	–
Farmer	57	67	119
Forestry	1	–	–
Fishing, Whaling	–	–	–
Goldmining	–	6	2
P.P.P.	–	–	1
Food & beverages	3	6	3
Clothing	1	3	1
Other textiles	3	1	1
Leather	1	1	1
Footwear	1	–	–
Wood & furniture	1	1	1
Paper & printing	1	–	–
Chemicals	1	–	–
Building	1	3	2
Transport:			
Road	–	3	–
Sea	3	3	–
Trade:			
Shopkeeper	2	10	3
Merchant	15	26	24
Services:			
Financial	2	8	7
Land agent	–	3	4
Minister of Religion	10	–	–
Other professions	18	22	8
Non-professional	–	2	1
n=	131	179	179

almost 80 percent of the last jobs.   The majority of the wealthy followed their father in their first job.   This was particularly true of those who had fathers who were farmers or merchants and those in trades.   Those whose fathers were professional men tended to become farmers or merchants rather than follow in their parent's footsteps.   And those whose fathers had been clergymen – mainly, but not solely missionaries to New Zealand – tended to become farmers.

TABLE 13.9

FINAL OCCUPATION BY COUNTRY OF BIRTH

(Percentages)

	England	Scotland	New Zealand	Total
Agriculture:				
Labourer	–	–	–	–
Farmer	65.33	77.27	82.61	68.35
Whaling	–	–	–	–
Goldmining	1.33	2.27	–	1.27
Food & beverages	1.33		–	0.63
Textile manufacturing	2.67		–	1.90
Leather	1.33		–	0.63
Blacksmith	1.33		–	0.63
Coopers	1.33		–	0.63
Building	–		–	0.63
Transport:				
Road	–		–	–
Sea	–		–	–
Trade:				
Shopkeeper	1.33	2.27	–	1.90
Merchant	13.33	9.09	8.70	11.39
Services:				
Non-professional	1.33		–	0.63
Banking	5.33	2.27	–	3.16
Land agent	1.33	2.27	–	2.53
Other professions	2.67	4.55	8.70	4.43
n=	75	44	23	158

The occupations varied little by the major nationalities.
Those born in New Zealand tended to go straight into farming
while those from England tended to fill the ranks of the banking
and other professions, become merchants, and generally do the
more unusual first jobs.

The more unusual occupations tended to become farmers.   As
Table 13.10 shows farming gained heavily from all the various
occupational groups, and gave very little away to the other major

TABLE 13.10

CHANGES IN JOB CATEGORIES

Acquired from first job of	Agriculture Sheep Farming	Merchant	Banking	Other Professions
Agriculture:				
Labourer	11	0	0	0
Farmer	65	1	1	0
Whaling	–	1	0	0
Goldmining	4	0	1	0
Food & beverages	4	0	0	0
Textile manufacturing	3	0	0	0
Leather goods	0	0	0	0
Blacksmith	0	0	0	0
Cooper	0	0	0	0
Building	0	0	0	0
Transport:				
Road	1	0	0	0
Sea	2	1	0	0
Trade:				
Shopkeeper	7	0	0	0
Merchant	5	18	1	1
Services:				
Non-professional	0	1	0	0
Banking	3	0	4	1
Land Agent	1	0	0	0
Other professions	13	2	0	6
No. changing jobs	54	6	3	2
No. same job	65	18	4	6

occupations. Indeed of the 67 people who began life as farmers, 65 ended their lives in this occupation. The merchants were a much more fluid group. Eight of the 26 people who began life as merchants moved on, in 5 cases to become farmers. However, these were replaced by 6 new entrants, who began life mainly in the professional services.

Many of these transfers were not completed in one jump. Indeed of the 179 people whose occupation could be traced 5 had four significant occupation changes, 19 had three changes and 50 changed jobs once. It is probable that this under estimates the number of changes, as one source of information used - the death certificate - lists only one occupation, and biographical notes may also have been incomplete. In a number of cases the person ended in the same line of business in which they began. For instance John Studholme began as a farmer in Canterbury then went as a goldminer to Australia, but returned to farming in Canterbury. Goldmining was undertaken by 5 of the 24 people in this category, and in three of these cases it was an interlude in between two periods in the same occupation. A similar pattern can be found also with other occupations, for instance James Dilworth spent a period with the New Zealand Banking Co. between two periods of farming. In three cases there was a fairly natural progression of jobs from a job which was not wealth producing to one which was. For instance Henry John Le Cren was initially agent to the Canterbury Association, but left this to become a storekeeper in Lyttelton and finally a merchant based in London with the firm Russell, LeCren & Co. Similarly George Read began life as a whaler in company with William Barnard Rhodes. He became a storekeeper in Gisborne, and ended life as a merchant. John Tinline moved from his initial job as storekeeper to become a surveyor, and based on this experience was able to purchase valuable land in Amuri. But many of the other job changes show no particular pattern. William Acton Adams oscillated between his legal practice and farming, and James Chapman Smith did the same with his bakery business and farming. Josiah Firth began and ended life on the land, but between this was a brickmaker, a flourmiller and the manager of an iron works. The wealthy people found many avenues within the economy for making a profit.

However compared to overseas, the New Zealand wealthy were unusually concentrated in the agricultural sector.   Farming, sheep farming in particular, generated the largest proportion of our wealthy.   This is particularly true compared to the industrial country of Britain where the industrial revolutions provided openings for large fortunes to be made.   The New Zealand fortunes

TABLE 13.11

INTERNATIONAL COMPARISONS OF FINAL OCCUPATIONS

(Percentages)

	New Zealand	New South Wales	Great Britain
Agriculture	55.35	49.29	(23.22)
Mining	0.93	–	7.95
P.P.P.	0.47	) –	–
Food & Beverages	1.40	) 4.43	11.15
Textiles	0.47	) 1.95	4.33
Other light industry	1.40	)	5.57
Heavy industry	–	2.84	6.71
Building	0.93	–	0.93
Trade	12.56	26.95	22.50
Services:			
Finance	3.26	3.01	15.07
Real estate	1.86	1.06	–
Other professions	3.72	4.96	1.65
Non-professional	0.47	1.06	–
Others & unknown	16.47	10.82	0.93

Sources: N.Z.   See text.
New South Wales: W.D. Rubinstein 'The Top Wealth-holders in New South Wales, 1817-1939 AEHR XX(2) September 1980 Table 4.   The percentages were calculated between 1880 and 1939.
England: Half millionaires.
W, Rubinstein, Men of Property, (London; Croom Helm, 1981) Table 3.4 and landed wealth (in agriculture) Table 3.2.   The figures for landed wealth are an estimate.

were made in a similar way to those in New South Wales, though even here the proportion who were in trade was higher; and that in agriculture was rather lower.   As far as the New Zealand wealthy were concerned then, large scale sheep farming was a

vital occupation.

Not one of the very wealthy was found to have been involved in dairying at any stage of their lives. It was sheep which gave the wealth in this period. And to become wealthy required a large sheep run with full advantages being taken of the economies of scale, so that most of our farmers can readily be traced in the AJHR lists of those who owned large acreages of land. This enable us to trace the government valuation of their land holdings in each of the five years 1882, 1885, 1888, 1891 and 1902. The government valuation is not necessarily a market valuation: indeed over the period of the decline in land prices in the 1880's there were many complaints of over valuation. Various remedies were taken when the Valuation Department was established in 1894, but the valuations tended to still lag behind price changes. Of course, the valuations do not take into account any indebtedness on the part of the owner.

Table 13.12 shows various summary statistics of the land holdings of the wealthy. As time progressed the number of very wealthy land owners was falling. In 1902 there were less than half of those in the 1882 list. However the 1882 list was a complete return of all landowners, while the latter was only those with more than 10,000 acres. The more indicative drop

TABLE 13.12

LANDHOLDINGS OF THE WEALTHY

	n	Average Value of Land	Average acreage	Average price per acre	Land Holdings as a % of the final estate
1882	190	61247	15257	2020.98	69.24
amended 1882	112	85575	24456	4.52	117.01
1885	104	66533	23543	3.91	83.39
1888	83	85714	26851	3.52	122.35
1891	80	68540	29944	3.86	164.30
1902	58	90762	26647	4.15	101.46

Notes: (1) The amended 1882, which is closer to the other year's figures, is for those with land over 5,000 acres in extent.
(2) The figures were calculated for each column independently and as the acreage for some land was not known they do not add across.

Source: See footnote 1 to this chapter.

was then between the amended 1882 and 1902, a drop of about 40 percent. Many of those with large land holdings who died during the 1890's were not followed by their children. Because estates were divided equally, those in the top 0.1 percent tended to leave their children only sufficient to get them into the top 0.4 percent if they were lucky. Indeed the average level of estate passed to the second generation on the death of the first was less than £28,000 if it is assumed that estates were divided equally among all children, or £53,000 if it were divided among all the male offspring, the two most likely patterns of inheritance. But those who came into our sample from the 1924, 1932 and 1939 sample years tended to be much more orientated to industry than to agriculture. Thomas Edmonds made his fortune of £210,392 out of baking powder and related products; Arthur Myers made his £203,485 in the brewing trade, and George McCaul of Auckland made £250,447 as an iron merchant. The tendency of the range of wealth producing occupations to grow with the economy which has been noted overseas, was beginning to be found in the 1920's and 1930's in New Zealand.

However those who did hold land did tend to steadily increase the holdings until the 1890's. Then, as Professor J.D. Gould has shown elsewhere,[7] the rise in land prices enabled those who so wished to sell their land profitably. The fall in land prices after 1882 did of course tend to minimize the value of land holdings. But after 1888 those with land had added to their wealth a substantial capital gain as land prices rose. This capital gain continued to be an important element of wealth generation after the figures given here end.

The relative impact of changes in prices and acreage has been estimated by a simple mathematical division of the change in the land holdings. Both land prices and acreages had a major effect on the trend, but except for between 1885 and 1888 they worked in opposite directions. And except for this period again it was the acreage changes which were the strongest of the two forces.

The effects of the land price changes were not felt equally

---

7. J.D. Gould 'The Twilight of the Estates, 1891-1910' Australian Economic History Review, X (1970) pp.1-26

TABLE 13.13

INFLUENCES ON LAND HOLDINGS

(Percentages)

Changes due to:	Direction	Prices	Acreages	Interaction
1882-85	Down	− 50.33	+ 361.75	− 411.42
1885-88	Up	+ 117.12	+ 62.09	− 79.21
1888-91	Up	+ 396.22	− 943.98	+ 647.76
1891-1902	Down	+ 137.12	− 143.80	− 93.32

Source: See Table 13.12

by all the wealthy.   As Table 13.14 shows in every year there
were people who experienced rises as well as those experiencing
falls.   By this breakdown the worst period for the wealthy was
from 1882 to 1885, when almost 69 percent experienced a loss
through land price falls.   The late 1880's were the best period
with the lowest proportion of falls.

TABLE 13.14

LAND PRICES : DIRECTION OF CHANGE

	Land Price Falls	No Change	Land Price Rises	Total
1882-85	68.97	−	31.08	100.00
1885-88	32.00	13.33	54.67	100.00
1888-91	19.67	−	80.33	100.00
1891-1902	8.26	−	71.74	100.00

Source: As for Table 13.12

The diversity of experience for the large landowners can
perhaps be best seen by following the 33 who were found in all
five lists.   The tree diagram shows clearly that there was no

one path for these people. All but 5 of the 33 experienced some loss through land price drops, and in one case, that of John Reid of Elderslie, a loss was experienced in every year. In between these two extremes there were 13 who had their land price fall in only one year, and 14 who lost in two years. The only strong trend evident in the tree diagram was that 14 of 33 experienced rises from 1885 to 1902.

Because they controlled such a high proportion of the resources of the country, the very wealthy often had the ability to dominate the social, political and economic life of the nation to an extent that was out of proportion to their numbers. This undoubtedly happened in New Zealand, but not to the extent that the wealthy dominated the British scene. The social divisions were less strong as the people had become wealthy during their lives, and others who began where they began presumably felt some affinity with them. On a political level, few of the leading politicans were to be found in the top wealth holders. Richard John Seddon, with his estate of £14,297 at his death, was by no means untypical of the politicans of his generation. The wealthy were much more likely to become politicans - almost 20 percent were in one or other House at some stage - but they were not the only group in society to do so, nor did they dominate when they were there.

Table 13.15 shows the distribution of positions of responsibility among the wealthy groups in society. The most common position for them to hold was that of a member of Parliament, and 23 of the 119 whose careers could be traced held this position. However they were also active at a more local level, and 13 and 12 respectively held positions in the Provincial Council and such local authorities as Road Boards and City Councils. There is, however a remarkable lack of company directorships among the wealthy as most of the farmers were not inclined to dabble with business. They did not get involved in manufacturing companies and were not inclined to become involved with the farmers' co-operatives.

In general it was the very wealthy - those over £400,000 - and the least wealthy of the top 0.1 percent who were inclined to become involved with the administration of the country. The middle groups, while showing a much higher participation rate than the population as a whole, were less inclined to become

involved.   The very wealthy no doubt, were able to become in-
volved because they had the highest incomes;   and the lowest
group probably became more involved because they were the
earliest wealthy people - dying when the level of estate required
to get into the top 0.1 percent was still low.   In the early
years of settlement, when leaders were scarce, they were the
people with the obvious ability to get ahead, and their financial
position to enable them to forgo income for community service.

TABLE 13.15

POSITIONS OF RESPONSIBILITY

	Member of Parliament	Member of Provincial Council	Local Author- ity	Educa- tion Board	Company Director
Number of Wealthy	23	13	12	4	7
% of 119	19.33	10.92	10.02	3.36	5.88
% in each estate group					
£400,000 +	37.50	12.50	12.50	12.50	12.50
£3 - 400,000	-	-	-	- .	33.33
£2 - 300,000	29.41	17.65	17.65	5.88	5.88
£1 - 200,000	12.50	9.38	9.38	3.13	6.25
£50,000 -£100,000	11.11	11.11	14.81	3.70	7.41
£20 -50,000	17.86	7.14	-	-	-
£10-£20,000	66.67	33.33	33.33	-	-
No. estate unknown	12	16	15	1	3

Source: See text.

The majority of those who were traced did not however in-
volve themselves with central or local bodies.   They tended to
be the conservative members of society, who lived in the correct
way.   This is perhaps most clearly demonstrated by the church
affiliation of the very wealthy.   When compared to the rest of
society (using again the census of 1906) they were very estab-
lishment orientated.   Nearly three-quarters of the 110 whose
religion could be traced belonged to the two respectable churches-

the Anglicans and Presbyterians.   Non-conformists were scarce -
only 2 Methodists and 2 Congregationalists appear, and the lack
of Roman Catholics is notable.   (Both of the Catholics whose
descent could be traced were Englishmen from good backgrounds.
Not one Irish Catholic appears in the list).   But the Jewish
minority was also well represented, and indeed more significantly
than these figures suggest.   More than one of those of Jewish
descent followed the example of William Hort Levin and became
Anglican late in life.   The pressures towards an "establishment"
life style were strong.

Some of the wealthy in our sample have descendants who are
still recognised as being well-to-do in society - the Myers and
the Rhodes and the Studholmes to name just a few.   But most of

TABLE 13.15

RELIGIOUS AFFILIATION

(Percentages)

	Top 0.1 Percent	Census, 1906
Anglican	49.09	41.51
Presbyterian	34.55	22.96
Methodist	1.82	10.06
Baptist & Brethren	-	2.00
Other Protestant	1.82	1.51
Roman Catholic	2.73	14.31
Jewish	4.55	0.21
None so stated	5.45	7.27 (Objects/ Other)
Number Unknown	105	-

Source: See text.

the names are not now associated with great wealth.   The tend-
ency for an equal distribution to be given to each child, or at
least each male child, mitigated against a fortune being kept in
tact.   Primogeniture, even of land, was not considered an option
in New Zealand at this period.   The effect of this can be

readily calculated for those people whose family were known. As Table 13.16 shows the average estate inherited was just not sufficient for the children to be automatically included in the top 0.1 percent. Their chances of building on to the inheritance were good if they themselves had the natural ability to do so, but, as a rule, they would not inherit the position of their fathers.

TABLE 13.16

VALUE OF INHERITANCE

	Equal Subdivision	Subdivision to Male Children
Mean	£27878	£52991
Maximum	£291252	£298452
Top 25%	61750	103452
Median	26492	61000
Bottom 25%	12120	26229
Minimum	1185	2370

Source: See text.

CHANGE IN LAND PRICES

33 WEALTHY PEOPLE OWNING LAND 1882-1885

| 1882 | 1885 | 1888 | 1891 | 1902 |
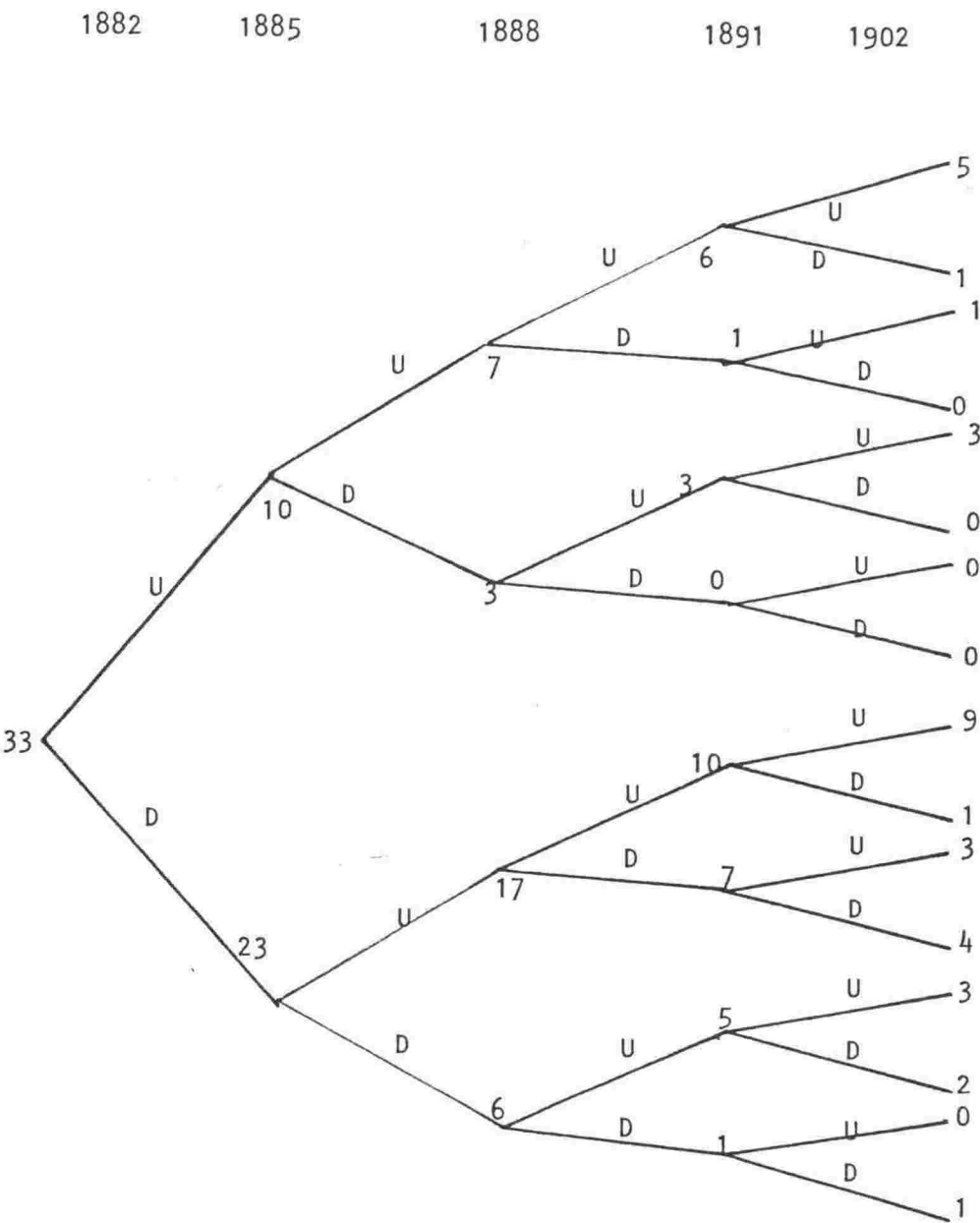
Note: U = land price per acre stable or rising
         D = land price per acre falling

APPENDIX A

The following are the minimum level of assets used in each year to delineate the top 0.1 percent of wealth holders.

1888	20,000	1903	80,000
1889	20,000	1904	90,000
1890	20,000	1905	90,000
1891	25,000	1906	100,000
1892	25,000	1907	100,000
1893	30,000	1908	110,000
1894	30,000	1909	110,000
1895	40,000	1910	120,000
1896	40,000	1911	120,000
1897	50,000	1912	150,000
1898	50,000	1913	160,000
1899	50,000	1914	170,000
1900	60,000	1915	180,000
1901	70,000	1916	190,000
1902	80,000	1917	200,000

The value of £200,000 was used from 1919 onwards in light of the decline in wealth levels in the 1920's and 1930's.

CHAPTER 14

A SUMMARY ON WEALTH IN NEW ZEALAND

1890 - 1939

In 1893, the first year of our wealth series, New Zealand undoubtedly was a wealthy nation.   The average wealth level was high compared to that of Victoria, and it tended to suggest that the contemporary impression of general well-being was correct. Between 1900 and 1922 the real level of average wealth grew steadily, and although this growth did not continue between 1922 and 1939, the average real estate was double in 1939 in comparison to what it had been in 1893.   The high relative position compared to Victoria had not been maintained.   The continued growth of wealth in Victoria until 1939 meant that by the end of our period Victoria's average wealth exceeded that in New Zealand.

The distribution of wealth in New Zealand was not equal. The gini coefficient was about 0.75 in the 1890's, and 0.73 in the 1930's, nearer to inequality than equality.   But these gini coefficients do suggest that New Zealand was an egalitarian country by international standards.   Certainly the gini co-efficients were much higher in Victoria and the United States, and the top one percent of the population had a much higher proportion of total assets in Britain.   Despite the relatively slight change in the gini coefficient, there was a definite tendency towards equality over our period.   The top wealth-holders were declining, particularly those at the very top. Whereas in 1890-1895 the top one percent of the population owned 55-60 percent of all assets, they owned only 25-30 percent in 1935-1939.

The very rich were not a particularly wealthy group by

international standards.   Their assets did not tower above the
average person's assets to the extent found in the United States,
Britain or even Australia.   The small size of the New Zealand
economy appears to have limited the size of estate which could
be accumulated, and none of our wealthy were millionaires.
The wealthy were as a rule the first generation of their
families to achieve such a level, and generally the estate was
divided upon their death between all the children, so that few
of the children of the wealthy were very wealthy themselves.
The wealthy did however come from a privileged class by contem-
porary standards with superior education and the possibility of
some capital resources from their parents.   The Scots who be-
came wealthy tended to come from a lower economic group than the
English, but those who were born in New Zealand seemed to do well
only if they inherited their estate.   The wealthy do not appear
to have formed a closed social elite.   While they were more in-
volved by far than average in politics and other social positions,
many of the leaders of society did not come from their ranks.

The level of mobility would seem to have been quite high.
We found that by occupational status, only 50.4 percent of sons
were in the same status grouping as their fathers;   25.4 percent
rose in status, while 24.2 percent fell in status relative to
their father.   The change in status appeared greatest for those
sons who moved into a different industrial grouping.   Such a
move promised either a higher probability both of a large gain
in social status, or a large loss.

Of the factors we explored as significant in determining
wealth, two inherited characteristics stood out.   Being born
female severely limited ones chances of making a sizeable for-
tune because of the cultural constraint on earnings.   For men,
the place of birth was significant.   The high social mobility
of the Scottish aided their wealth accumulation, while being
Irish or New Zealand born was a definite handicap.   As far as
we could determine, not having English as one's native language
was not a significant handicap as far as accumulating an average
fortune.   It did have more effect on the very large fortunes.

The timing of migration did affect the wealth of immigrants,
both in terms of the actual year of arrival and at what age they
arrived.   Those who did best came in the 1860's, while those
who came after the 1880's had much less chance of doing well

materially.   Similarily those who came as children or mature adults did less well than those in the 15 to 25 year old age group.   Assisted migrants tended not to get probatable estates, but those who did get a probate valuation had about the same average estate as unassisted migrants with probatable estates.

The land, and its produce tended to dominate the early wealth, and those involved in agriculture or trade were disproportionately represented among the wealthy.   The professions, and as time passed, industrial production, were also significantly more likely to make people wealthy, but were not so heavily represented in the top wealth groups.   A great deal of the occupational mobility which took place involved movements between farming, trade and the professions.

Land ownership did not however follow the trend of wealth towards equality.   Land ownership began as being more equally distributed in 1888, but over time the proportion of the population which did not own any land rose.   In 1883 about 70 percent of the population did not own land;   by 1910 this had risen to 75 percent.   This trend can be largely explained by the growing proportion of women in the population and the gradual change in the population age structure.   It was not a reflection of land monopoly at work.   Within the landowners, holdings were actually becoming more equal as the large estates declined, and the profitability of small farms rose.   Land ownership was not, however, a prerequisite of wealth.   In the nineteenth century Algernon Tollemarche left a sizeable fortune without owning any land on his death, and this became more common as industrial wealth rose in the twentieth century.

CHAPTER 15

NOMINAL WAGE RATES IN NEW ZEALAND

1873 to 1913

The analysis of the pattern of wealth holding presented
in the previous chapters was primarily based upon a large sample
of individuals from the population for whom both a probate valua-
tion and death certificate could be found.   Unfortunately it was
not possible to reconstruct a similar file of detailed examples
to examine the pattern of income earning.   With the exception
of public servants, whose details on income were published
annually, the income of the population was not collected by the
government during our period.   Income tax was only a minor
source of revenue to the central government, and was levied on
the small proportion of high income earners who did not pay land
tax.   It would seem however, that any information collected on
even this small proportion of the community has long since been
destroyed by the Inland Revenue Department and its predecessors.[1]
It is probable therefore that no good source of information on
income levels ever existed from this time, and that such incom-
plete sources that may have existed have long since been des-
troyed.

The best guide to income levels comes therefore from two
sources dealing with wages and salaries.   (Investment and other
unearned income levels can not be studied at all).   The first
source is the annual table published in the Statistics of New
Zealand from 1873 onwards, on wage rates paid to a range of
occupations in each province.   Over the period in question this

---

1.   Income tax declarations were legally required to be kept
      by the taxation authorities for only seven years, whereas
      private valuations had to be kept for fifty years.

table covered the wage rates paid to over 60 occupations for at least some of the years. The second source of information was the public sector payments which were published in the various departmental annual reports in the AJHR's. These were average incomes paid rather than income rates, and so reflect the increase in salary levels for length of service. The public service's wages have been taken as representative of wage rates paid to professional workers, as these were not reported in the Statistics of New Zealand table. It must be remembered, however, that the Government sector was consistantly seen as being underpaid in our period, and that non-Government professionals probably earned rather more.

The reliability of the wage rate figures in the Statistics of New Zealand table is more difficult to assess. The table was begun in 1873 as a companion to a table on prices in New Zealand, and was probably intended to be used as publicity material for the Vogel immigration drive in Britain. It is possible that this may have led to wage rates being reported as unduly high in the first few years. After the end of the Vogel immigration drive both the wage rate and prices table were continued, though they were not apparently used for any particular purpose. The prices of goods were collected in December by the Police force,[2] and it would seem reasonable to expect that the wage rates were collected at the same time and in the same way. No instructions on the matter could be traced in either the Police or the Registrar-General's papers,[3] and so it is difficult to say how systematically the collection was carried out. It is not improbable however that both tables were constructed by sending out a constable from the central police station in each province to make enquiries from his contacts around the town.

The figures on wage rates were given as a range for each provincial district. In some cases the difference between the top and bottom of the range was as high as 100 percent, but it was more commonly of the order of 20 to 30 percent. The midpoint of each range was taken to be the "average" rate for each province. The provincial averages were then weighted together,

---

2. New Zealand Official Yearbook (1910) p.612

3. National Archives.

using weights for each of the broad categories based on the em-
ployment in that occupational group in the census[4] to construct
a national wage rate for each occupation. The occupations and
the years for which wage rates are available for them are given
in Appendix 1 to this chapter. The concept of wage workers
appears to have dominated the choice of occupations included in
the table: professional occupations were absent, and the table
concentrates on semi-skilled and unskilled manual labour.

Before we proceed to analyse the the factors implied by the
figures on wages and incomes, it is necessary to consider the
level of reduction of nominal income paid to those employees who
received full board. Full board was common in agricultural jobs,
where presumably accommodation was difficult to find, and in
domestic service where 24 hour attendance was often required.
The Statistics of New Zealand tables specified whether the wage
was inclusive or exclusive of board, and in the case of some
occupations gave two series, one of wage rates for long term
employees with board, and a second of wage rates for casual em-
ployees without board. The difference between these two series
will reflect therefore both the implicit cost of board to the
employee and the general reduction in wages to permanent em-
ployees who did not have to be compensated for the potential loss

TABLE 15.1

THE REDUCTION IN WAGES FOR FULL BOARD

AND PERMANENT EMPLOYMENT

(Shillings per Week)

	Farm Labourers	Plough men	Threshers	Gardeners	Needlewomen
1880	21.5	16.4	15.4	n.a.	n.a.
1885	21.0	24.9	17.5	24.9	19.1
1890	20.4	21.5	13.1	20.0	14.9
1895	21.0	15.7	15.5	15.7	18.4
1900	18.4	14.2	–	20.2	20.4
1905	18.1	21.0	–	19.6	22.5
1910	20.5	24.4	–	23.1	23.3

Source: Statistics of New Zealand

4. Intercensal figures were interpolated from the census ones.
Where a province did not have a wage rate it was eliminated
and the weights adjusted accordingly.

of jobs.   Table 15.1 shows that together these two considerations
implied a reduction of wages of about 20 shillings a week to a
full time employee with board.   How this 20 shillings was
divided between board and a premium for job security is difficult
to determine, but probably at least 15 shillings per week was
the effective reduction for board.

TABLE 15.2

IMPLIED PROPORTION OF WAGES

SPENT ON FOOD AND HOUSING

(Percentages)

	Farm Labourers	Ploughmen	Threshers	Gardeners
1880	53.7	44.9	29.9	-
1885	51.6	53.9	33.7	52.6
1890	51.5	51.0	32.3	47.5
1895	54.8	44.2	36.5	40.2
1900	48.5	38.9		45.1
1905	44.5	46.7		45.8
1910	44.7	46.3		48.7

Source: Statistics of New Zealand

If we take the figures in Table 15.1 to refer only to board,
Table 15.2 shows the proportion of these occupational incomes
spent on food, housing, fuel and light.   This undoubtedly over-
states the percentages, but the table clearly shows that about
50 percent of the income was implicitly spent on these items, and
that over time this was falling.   By comparison an 1893 survey
of the household expenditure of working men undertaken by the
Department of Labour[5] suggested that 53.34 percent of income was
spent on food alone, that 10.38 percent was spent on housing and
that 8.08 percent was spent on fuel and light, a total of 71.80

---

5.   AJHR (1893) H-10 pp.40-53

percent. Those living on their employers were therefore having comparatively cheap board. This may partly be due to the fact that agricultural employers were probably able to feed their workers comparatively cheaply - mutton for tea every night. And it was undoubtedly also due to the fact that the level of comfort provided to boarded employees was probably substantially less than those provided by working people for themselves. But the difference is sufficiently great to suggest an element of employer subsidy to those workers receiving full board.

Full board was not considered to be highly desirable by those receiving it. Conditions were often less comfortable than the employee would have desired, and there was of course less choice in how to consume that proportion of their income than if it had been paid in cash. In addition, living with the employer often implied an extra tie that, especially in the case of domestic service, was shown in 24 hour attendance, and severe restrictions on the life style of the employee. It is not surprising to find therefore, that the real cost of keeping employees in full board was lower when labour was comparatively difficult to find and keep, but rose in the middle of the depression when jobs were scarce and employees had less bargaining power. An index of the real cost of board to the employer is given in Table 15.3. In part this may also have been due to the rela-

TABLE 15.3

REAL COST OF THE REDUCTION FOR BOARD

	Farm Labourers	Ploughmen	Gardeners	Needlewomen
1880	90	98	n.a.	n.a.
1885	94	161	113	86
1890	105	159	104	77
1895	115	123	87	101
1900	100	100	100	100
1905	87	145	95	108
1910	95	162	108	108

Sources: Table 15.1 and
             M.N. Arnold 'Consumer Prices 1870 to 1919'
             Victoria University of Wellington, Department of
             Economics, Discussion Paper 12 May 1982 Appendix D.

tively slow movement of wage rates compared to falling price movements, though it is clear from many of our series that substantial downward wage rate reductions took place comparatively rapidly.

The reduction of wage rates for full board is the only factor which interferes with the real distribution of income being shown by our series.   So now that we have investigated the implications of this, we can proceed to investigate the major elements affecting wage and income distributions.

The first major cause of variation in wage rates was the social convention of paying women less than men for the same work. The lower female incomes this implied was compounded by the fact that women stayed in the work force for a relatively few years, generally only those prior to marriage, and so were also concentrated at the lower end of the salary scale because of inexperience.   The effect of this can be clearly seen in the teaching profession, where from 1905 to 1925 equal pay for equal work was given, though women were not in general eligible to hold the top two positions in major schools.[6]   In 1909, four years after the introduction of equal pay, women teachers had an average income of £113.6 per annum, while men had £192.8 per annum in income.[7]

The income of women showed a definite tendency to rise in the first few years of the twentieth century.   Whereas in the 1880's women were being paid about half of the wage rate paid to men in equivalent occupations, by 1910 they were being paid about 60 percent of the men's wage.   This rise cannot be attributed to a shortage of working women.   As Table 15.5 shows the number of women in the work force rose substantially throughout our period, including between 1901 and 1911.   About half of this rise can be attributed to the increase in the population, and about half was due to an increase in the participation rate for women.   The participation rate rose from 11.27 percent of all females in 1881 to 18.95 percent in 1911 largely as a result of the substantial fall in the proportion of married women as the

6.   R.D. Arnold, Women in the New Zealand Teaching Profession 1870-1920 : A Comparative Perspective. (Paper presented to Australian History Conference August 1984.)

7.   AJHR (1910) E-1

TABLE 15.4

WOMEN'S WAGES AS A PROPORTION OF MEN

Woman's Occupation Man's Occupation	Servant Groom	Tailoress Tailor	Teacher Teacher	Farm Labourer Farm Labourer
Year				
1875	55.6	–	–	49.9
1880	58.1	–	–	65.7
1885	56.1	42.2	–	–
1890	56.6	48.3	–	–
1895 (1)	54.4	51.4	54.2	–
1900	52.2	48.3	52.3	62.2
1905	55.6	51.8	55.1	59.6
1910	64.8	53.8	59.9	62.9

Source: See text.

            (1) Teachers 1894

Sources: See text and AJHR (1914) E-1

sex imbalance diminished and fewer young women were married.
In 1881 almost 65 percent of all women over the age of 14 were
married; by 1911 the proportion had fallen to nearly 55 percent.

TABLE 15.5

MAJOR FEMALE OCCUPATIONS

(Percentages)

	1881	1891	1901	1911
Health	1.64	2.88	3.61	4.90
Education	8.15	7.10	6.00	5.70
Board and lodging	3.06	2.31	10.27	13.34
Domestic service	55.86	40.39	32.10	23.60
Dressmaking and selling	21.40	23.51	22.19	20.75
Agriculture	2.59	5.83	5.93	8.25
Other (1)	7.30	18.28	19.90	23.46
Total Female Workforce	24826	45417	65742	90330
Participation Rate (2)	11.27	15.46	17.93	18.95

Notes: (1) mainly trading
            (2) as a percent of the total female population

Source: Census, 'Occupations of the People' 1881-1911

As marriage was the major reason for women withdrawing from the work force, this substantial drop in the marriage rate implied a substantial rise in the participation rate. The rise in female wages relative to males can be seen as a result of two forces: the widening of job opportunities for women, which affected the supply of women into the traditional areas; and changing social attitudes.

Table 15.5 shows that in the 30 years from 1881 to 1911 there was a major revolution in the type of work undertaken by women. In 1881 over half of the working women were involved in domestic service; by 1911 less than a quarter of them were in it. The low social status, long hours and confining life style of a domestic servant did not appeal to the new entrants to the work force, and despite the four fold increase in working women, the number in domestic service rose by less than 7,500 between these years. Women were increasingly moving into new areas, notably nursing, shopkeeping and clerical work, all of which required reasonable education relative to domestic service and needlework.

The pressure on girls to get the required academic qualifications to move out of the traditional dressmaking and service work can be seen in the education statistics. Table 15.6 shows their educational achievement relative to that of boys in the public school system. As a rule girls were slightly outnumbered in public school classes, partly because slightly more boys were born than girls, and partly because more girls than boys were educated in private schools or at home. There was however, a dramatic change in the female attendances at the upper primary school level in our period. In 1881, when over 75 percent of women were in service or dressmaking, girls tended to leave school at the earliest possible age. This can be seen as a rational decision if education is not going to significantly increase the earning potential of each girl, and particularly since marriage rates were high. In 1881 15.6 percent of unmarried girls aged 20 to 25 were likely to marry in each year of that age group, and 15.9 percent of unmarried girls aged 25 to 30 were likely to marry each year. The problem of a low paying job with no prospects was not significant in that context. By 1900 however, this was changing. The move was out of unskilled

TABLE 15.6

EDUCATION OF GIRLS (PUBLIC SCHOOLS)

(Percentages of all Pupils in each age group)

	1880	1900	1910
Preparatory	47.64	46.96	46.93
Standard I	47.81	47.94	48.35
Standard II	48.92	48.46	47.91
Standard III	49.42	47.33	47.81
Standard IV	48.10	48.10	48.26
Standard V	47.68	49.43	47.73
Standard VI	43.63	48.13	47.73
Passed Standard VI	39.64	53.45	51.67
Secondard School	37.27	35.96	44.80

Notes: (1)   Girls were less than boys in most standards
                because a disporportionately large number of
                them were educated at private schools or at
                home (see Census, Education of the People,
                results)

          (2)   School was compulsory for the following times:
                1877 From ages 7 to 13, or passing of Standard V.
                1878-1909 from age 7 to 13, or passing Standard
                V.
                1910-1943 From age 7 to 14 or passing Standard
                VI.

Source: AJHR (1881,1891, 1911) E-1

lowly paid work, and into work which required educational quali-
fications.   The rush into teaching was such that girls will-
ingly stayed on after having passed Standard VI in the hope of
a pupil-teachership, and unpaid assistants from this group were
common,[8] but having passed Standard VI would also have been the
minimum qualification for nursing and for many clerical jobs,
and at a time when women were out competing each other, a help
also for shop assistant jobs.   By 1911, despite the fact that
most professions other than teaching were still effectively
closed to them, women were appearing as a substantially higher
proportion of the secondary school roll.

8.   Arnold   Op cit p. 11-14

TABLE 15.7

RELATIVE WAGE RATES FOR MEN AND WOMEN, BY EDUCATION

(Tailor/ess = 100)

	1880		1900		1910	
	Men	Women	Men	Women	Men	Women
Professional:						
Teaching (3)	81	89	121	128	141	161
Apprenticeship:						
Tailor/ess (2)	100	100	100	100	100	100
Carpenter	92	–	115	–	107	–
Plumber	89	–	117	–	113	–
On-the-job:						
Mining	73	–	94	–	95	–
Dressmaking	–	130	–	86	–	94
Farm labourer (1)	66	95	65	106	84	105
Storekeeper's Asst.	72	–	93	–	104	–
Unskilled:						
General labourer	69	–	78	–	94	–
General Servant (1)	–	93	–	102	–	104
Housemaid (1)	–	94	–	103	–	102
Nursemaid (1)	–	82	–	85	–	86
Groom	58	–	70	–	71	–

Notes: (1)   15 shillings per week in lieu of board added
to wage.
            (2)   Female wage 1880 28.5 shillings
            (3)   1881 and 1882 average wages calculated by
similtaneous equations using proportions of
women and men, and the overall average wage
rate.

Source: See text.

The extent to which the benefits of education were higher
for girls than boys can be judged from Table 15.7. In 1880
the benefits were negligible. Teachers were receiving wages
substantially below those paid in the semiskilled and unskilled
jobs for women, though above the unskilled jobs for men. It
would not have paid girls to forego income for an extra year
to take on such a lowly paid occupation. Indeed it is clear
why there was a vast shortage of male applicants for teaching
in the early years, and we can only assume that many of the boys
who continued their education did so to enter other, more highly

paid occupations. By 1900 teaching was the best option available to girls, markedly superior to any of the alternatives shown in Table 15.7. This, combined with the drop in the marriage rate for young girls (so that only 7 percent were likely to marry each year between the ages of 20 and 25, and 10.7 percent between the ages of 25 and 30) meant that extra education had a high return. Added to this return was the social status of teaching compared to the other occupations open to women. The rate of return to extra education was not as high for men because teaching salaries were lower compared to other occupations open to them. In particular they had a range of jobs for which there were recognised qualifications gained by an apprenticeship on the job. With the exception of tailoring, women did not in general have formal qualifications for their on-the-job training. By 1910 teaching had again increased its margin over other female occupations, though it is obvious from the male wages for shop assistants that this occupation had markedly increased its attraction. This was probably also the case for clerical office jobs, and the growth of these two occupations widened the range of semi-skilled occupations available to women, for which a reasonable education was required. The relatively low status of domestic service can, however, be seen in the fact that the higher relative wages paid in the latter years did not prevent the relative decline of this occupation.

Similar changes were taking place in wage rates in male occupations, and these can be seen best by considering the wider range of occupations listed for men in the Statistics of New Zealand tables. Table 15.8 shows the weekly pay rate for men in a range of occupations in 1880 and 1910. It should be noted that these are in current prices, and that the general period of deflation in the 1880's and 1890's meant that money wages in 1910 were worth almost 10 percent more than money wages in 1880. Three major features stand out in the diagram: the rise in real wages for teachers, the tendency for tradesmen in the building sector to advance, and the relative lack of change in wages in the rural sector. The most dramatic change was in the position of the teacher. In 1880 men teachers had been paid substantially less than skilled tradesmen. Indeed a teacher fell between the skilled and unskilled level. By 1910 there was no

TABLE 15.8

CHANGING RELATIVE PAYMENT TO OCCUPATIONS

1880	Shillings per Week	1910
Cost of living 1880 = 110	80–	Cost of living 1910 = 100
	–	
	–	
	– Primary Teacher	
	–	
	–Plasterer	
	–	
	–Bricklayer	
	–Mason	
	–	
	70–	
	–	
	–	
Plasterer	–	
Mason	–	
	– Carpenter	
	–	
	–	
	– Plumber	
	–	
Shipwright	60– Cabinet maker	
	– Shipwright, painter	
Engine driver	– Engine driver, storekeeper	
Saddler	– Harvester	
Bricklayer, carpenter	–	
Tailor	– Coopers	
Plumber, painter	– Tailors	
Shoemaker	– Saddlers	
	– Shoemaker, miner, baker	
Thresher	– General labourer, butcher	
	50–	
Primary teacher	–	
	–	
	– Draper's Asst., Grocer's Asst.	
	–	
	– Cook	
Storekeeper's Asst.	–	
Miner, Gardener	– Shearer, ploughman	
Married Couples,	) – (Shepherd, Married Couple, Station	
General Labourer	) (Cook, Storekeeper's Asst.	
	– Stockmen	
	40– Farm labourer	
Shepherd, Station lab.	– Station labourer, gardener	
Stockman	– Groom	
Men cooks	– Men cooks	
	–	
Farm lab, groom, cook	=	
Ploughman	=	
	=	
	30=	

Note: Board was assumed to reduce wages by 15 shillings per week.

doubt that male teachers were well paid and that they had a margin of pay above the most highly paid of the skilled trades- men. Most of this rise came in the period after the major restructuring of teachers' salaries in 1901, when the occupation became a nationally recognised profession. This was also the

TABLE 15.9

MALE PRIMARY TEACHERS' SALARY

COMPARED TO CARPENTER'S WAGES

1881	80.49%	1900	102.80
1885	90.31	1905	106.67
1890	94.16	1910	118.76
1894	127.55		

Note: Prior to 1894 teachers include pupil teachers, and are calculated assuming male teachers received twice the salary of female teachers.

Source: See text.

period when secondary schools were expanded with an increased demand for well qualified teachers. The upgrading of the primary teachers in New Zealand parallelled a rise in their position in the United States. In the 1880's public school teachers were being paid about 80 percent of a common urban labourer's wage. By 1910 the ratio in the United States was nearer to 1.5 times the wage of an unskilled urban labourer.[9]

The second major feature of Table 15.8 is the relatively large gains which were made by the tradesmen in the building industry. Skilled workers in other areas, such as the ship- wrights, tailors and coopers, did not share in this rise, but the general labourer, who was heavily, though not exclusively, involved with the building sector did experience the rise. It

[9]. See J. Williamson and P.H. Lindert, American Inequality (New York, Academic Press, 1980), p.69

would seem therefore that the rise was probably the result of a
sharp expansion of demand for builders in the first decade of
the twentieth century, so that the demand for building skills
outstripped the supply of men involved. There were differences
in the reactions of the skilled and unskilled workers to changes
in the demand for their labour. The comparison in Table 15.10
suggests that carpenters tended to lose real income as the ratio

TABLE 15.10

INFLUENCES IN THE BUILDING SECTOR

| | Additional house p.a. | Median labour force | Labour per house built | Growth p.a. in Wages | | |
| | | | | Carpenter | General labourer | Change in price levels |
	(1)	(2)	$\binom{3}{2} = \binom{3}{1}$			
1881-85	3767	16414	4.36	-0.021	-0.002	-0.016
1886-90	2996	15644	5.22	-0.021	-0.009	-0.017
1891-95	2751	15266	5.55	0.010	-0.018	-0.012
1896-1900	3401	20510	6.03	0.034	0.023	0.010
1901-05	4589	28895	6.30	0.008	0.015	0.010
1906-10	6511	36311	5.58	-0.004	0.030	0.008

Source: House building. J.M. Gardner, Housing Series
           Unpublished typescript, n.d.
           Labour force in building : G.R· Hawke 'Disaggregation
           of the New Zealand Labour Force'.
           VUW Working Paper in Economic History 79/1
           (Jan. 1979) Table 4
           Prices : M.N. Arnold 'Consumer Prices 1870-1919'
           VUW Dept. of Economics, Discussion Paper,
           12 May 1982.

of labour per house built increased while the general labourers
experienced less changes in income. This could well have been
because general labourers were not tied to the building and con-
struction industry, and so while they profited from its booms
they could and did move to other unskilled jobs if the building
sector was depressed.

The carpenters' wages grew most strongly from about 1895
to 1902, but other skilled workers continued to experience rapid

wage rises after this period also.   As Graph 15.1 shows, these people materially improved their nominal incomes in the early 1900's, while the carpenters did little more than hold the general level of nominal wages they had attained in the 1880's. There is no obvious reason for the lack of growth of carpenters' wage rates, but it does suggest that building styles may have been changing in a period of affluence, away from wood and into more solid construction materials.   There is certainly evidence that commercial buildings in this period were moving into brick.

TABLE 15.11

RELATIVE MARGIN FOR SKILL : MEN ONLY

(Unskilled Occupation = 1)

Skill.Occ. Unskill.Occ.	Carpenter Gen. Lab.	Shopkeeper Assistant	Shepherd (1) Station labourer (1)	Ploughman(1) Farm labourer (1)
1875	1.55	-	-	-
1880	1.34	-	-	1.09
1885	1.38	1.39	1.12	1.08
1890	1.34	1.45	1.36	1.07
1895	1.33	1.37	1.21	1.15
1900	1.49	1.71	1.18	1.14
1905	1.42	1.23	1.25	1.06
1910	1.26	1.31	1.17	1.11

Notes: (1)   with board

Source: See text.

Despite this fast growth in skilled building wages, the early twentieth century saw a reduction in the margin for skill compared to the 1890's level, in the building sector, and in most other sectors of the economy.   The demand for unskilled and semi-skilled labour was obviously sufficient in general to more than undo the rise in skill margins which had been a general feature of the depression years.

The margins for skill shown in Table 15.11 seem to be rather less than those paid in the United States.   There, in 1890, the average ratio in the building trade of artisans to

GRAPH 15.1

BUILDING AND CONSTRUCTIONS WAGES

Shillings per week

Plasterers ————
Builders ------

Carpenters

General Labourers

14 13 12 11 10 9 8 7

1870 1880 1890 1900 1910
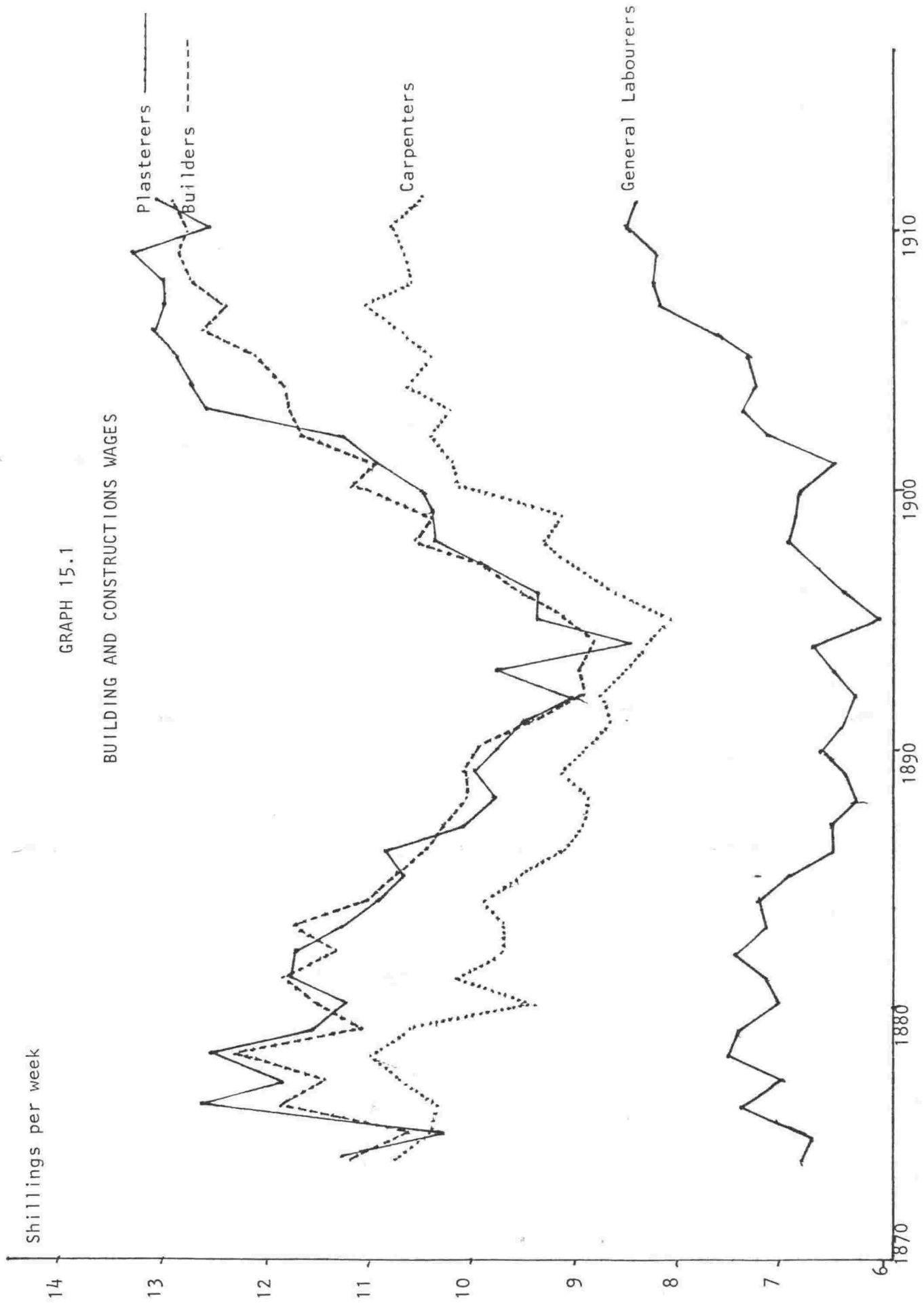
unskilled labour was 1.773, and the ratio had been consistently
above this level in the 1870's and 1880's.   This ratio was
slightly lower than that of the urban skilled worker in manu-
facturing and construction to unskilled labour.   In 1910 the
United States ratio on this more general measure was 1.919.[10]
The New Zealand figures would appear to have been more in line
with those in Australia.   P.G. Macarthy found that in Victoria
the average differential between skilled and unskilled work in
the manufacturing and construction industries was 28.6 percent
in 1901 and 27.5 percent in 1910.[11]   The differential in the
building industry appears to have been higher than most in New
Zealand and so the differential in Table 15.11 probably over-
states the average differential in the economy.

The margins for skill were substantially less in the agri-
cultural sector than in the building or service sectors.   The
job done by a shepherd was probably not significantly different
from that of a station labourer.   Certainly there was no formal
qualification in the farming jobs equivalent to those earned by
apprenticeship in the building and engineering industries.
Table 15.8 showed that urban labourers were, in general, able to
improve their earning level between 1880 and 1910, but that
nominal wages in the agricultural sector remained stationary.
In effect therefore, agricultural wage earners increased their
real earnings by only the 10 percent which consumer prices fell
between the two years.   Table 15.12 suggests that the lack of
growth of wage rates was not due to stagnation in the agricul-
tural sector.   The sector did decline from 35.7 percent of the
male work force to 31.0 percent from 1881 to 1911, but the
effective loss of about 17000 jobs in 30 years should not have
been sufficient to depress wage rates.   This is especially so
since the rise of dairying and other structural changes which
took place did not make an impact on the proportion of wage
earners in the sector.   This remained about constant between
33 and 35 percent of the agricultural labour force implying that

---

10.   J.G. Williamson and P.H. Lindert American Inequality :
       A Macroeconomic History (New York; Academic Press,
       1980) Appendix D.

11.   P.G. Macarthy 'Wages for Unskilled Work, and Margins
       for Skill, Australia, 1901-1921'
       Australian Economic History Review XII No. 2 (1972) p.156.

TABLE 15.12

FACTORS INFLUENCING WAGE RATES

IN THE AGRICULTURAL SECTOR : MEN ONLY

	(1) Total Agri- cultural Labour	(2) Agricultural Wage Earners	(3) Proportion of Wage Earners	(4) Agricul- tural Exports (£000's)	(5) Exports per worker (£1s)
1881	58601	19429	33.15	4310	73.5
1886	67764	22826	33.68	4826	71.2
1891	73345	26100	35.59	7189	98.0
1896	89057	29723	33.38	7242	81.0
1901	91016	32089	35.26	9502	104.4
1906	99714	34778	34.88	13411	134.5
1911	109583	39439	35.99	15156	138.3

Notes: (1)   All labour in agriculture including self employed
    and relatives assisting.
    (2)   Wage earners excluding those unemployed.   Prior
    to 1891, based on job description.
    (3)   (2)   (1)
    (4)   All agricultural and pastoral produce.
    (5)   (4)   (1).

Sources: Labour force : as for Table 15.10
    Wage earners and Exports : Statistics of New Zealand

the relative decline in agriculture reduced wage earners' oppor-
tunities by less than 6000 positions.

Overall, the receipts from exports, the main source of in-
come to the sector, did not experience any long term reduction
over the period. As column 5 shows the level of receipts per
worker in the sector were significantly higher in 1911 than they
had been in the 1880's. The benefits of this increased gross
income did not however appear to have been widely shared by the
wage workers. As Graph 15.2 and Graph 15.3 show, the benefits
of any rise in the level of wages tended to be concentrated on
arable farming. Pastoral farming remained relatively constant
by comparison, except for the shearers who received a sudden
boost in 1907. The stability of wages in the pastoral sector
suggests that those working in it did not readily leave to go to
other jobs which had become better paid. This was probably be-

GRAPH 15.2

PASTORAL WAGES

Shillings
per week

Ploughmen

Men Cooks

Farm Labourers

30

28

26

24

22

20

18

16

14

1870   1880   1890   1900   1910

GRAPH 15.3

PASTORAL WAGES

Shillings
per week

Married Couples
with Children

Shearers

Shepherds

Station Labourers

32
30
28
26
24
22
20
18
16

1870
1880
1890
1900
1910
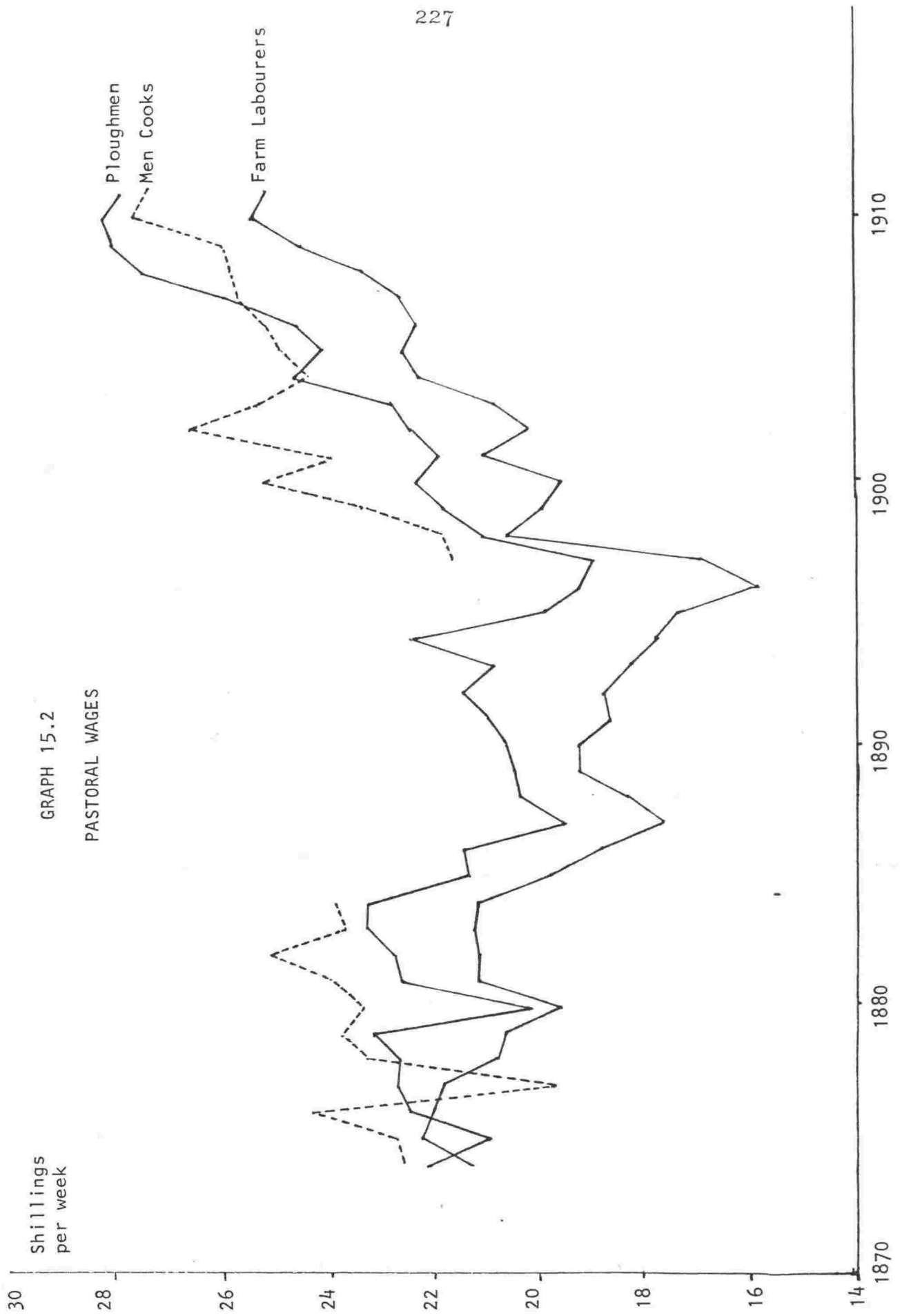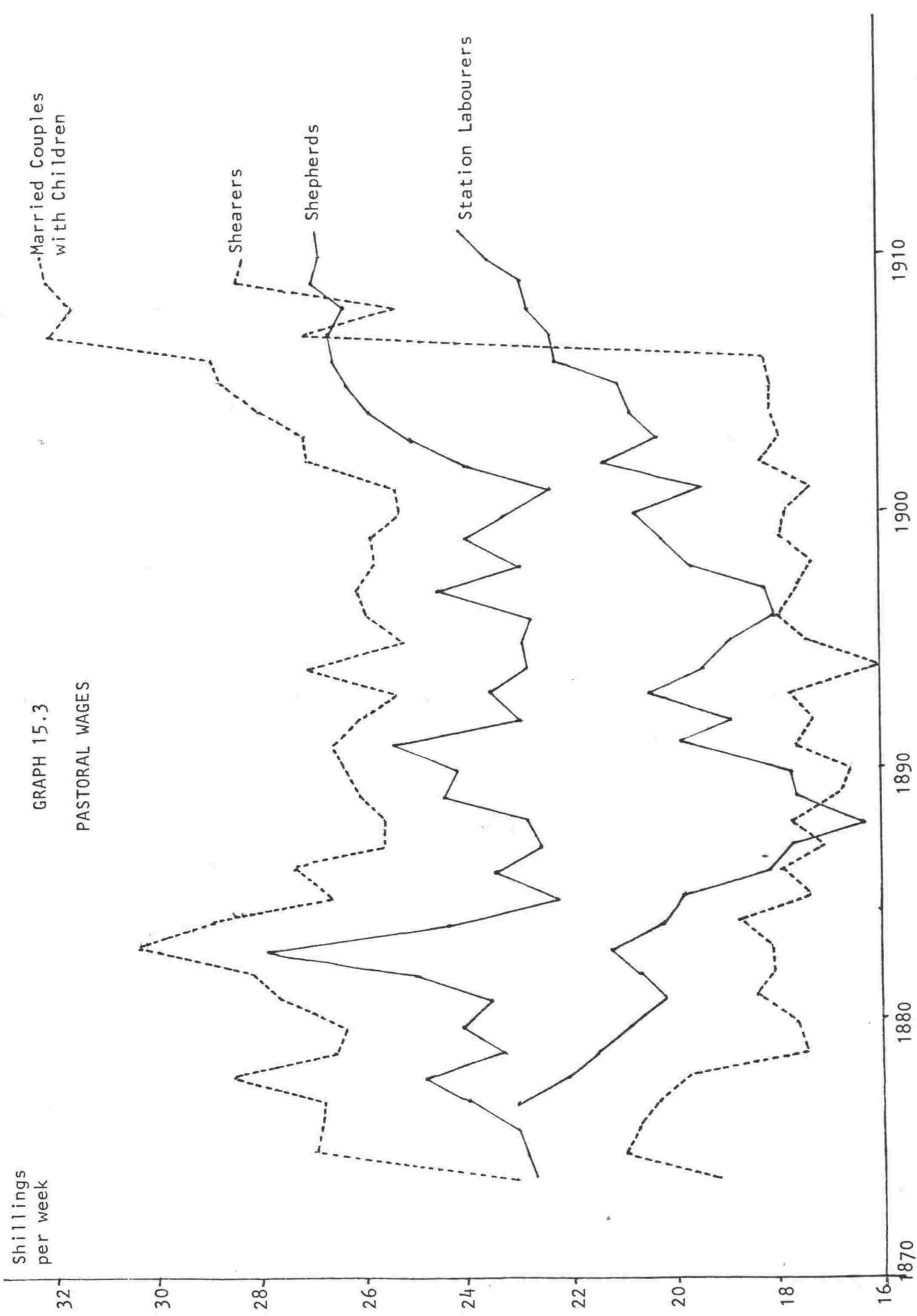
cause many pastoral labourers were aspiring farmers who were
gaining experience as well as cash, towards becoming self em-
ployed.   The jobs were seen therefore as an educational
opportunity and as only short term employment, and agitation for
wage increases was limited for this reason.   Certainly the
attempts to established agricultural unions were largely
thwarted by this factor.[12]

The lack of a union organisation would not however have
particularly hindered the growth of wates.   A comparison of
our wage series with the minimum wages suggests that minimum
wages in this period followed changes in average rates rather
than preceded them.   Table 15.13 shows the relationship between
award minimums and our wage series.   The minimum weekly wage
was constructed assuming the maximum number of hours allowable
under the award, and it is clear from the figures that such long
hours were not often worked in some industries.   There is little
sign of any trend in the relationship between minimum wage
rates and average wage rates, except in the last few years when
average wages were rising relative to minimum wages.   In this
period the rate of increase for awards was not sufficient to
keep up with reality.   Indeed, in most of the series it is
clear that minimum award wages trailed behind changes in the
average nominal wage rate, and that the industrial arbitration
system in place in this period, did not keep basic wage rates
artificially high.

Wage rates, minimum or average, are not however the full
story on income levels.   In the next chapter we will explore
some other evidence that has survived on the relationship be-
tween the nominal wage rates presented in this chapter, and
real income levels.

---

12.   See R.D. Arnold,'Yoemen and Nomads: New Zealand and
       the Australasian Shearing Scene, 1886-1896.'
       N.Z.J. of History 18(2) October 1984 pp. 117-142

TABLE 15 13

CHAPTER 16

FROM WAGE RATES TOWARDS REAL EARNINGS, 1874-1911

In Chapter 15 we have relied primarily on the information
on wage rates provided by the Statistics of New Zealand tables
as a guide to the changes in income levels in the period. Wage
rates were, however, only one factor determining income for any
particular individual. Obviously time lost without pay would
reduce the income of an individual and the level of prices for
consumer goods would affect the real value of wages to the
worker. We will look at these two factors in this chapter.

We have used wage rates as our basic source of information
because there are no annual estimates of earnings available in
our period. There are, however, isolated statistics which
provide us with some guide as to the ratio of wage rates to
earning rates. The most comprehensive of these is the informa-
tion on wages paid and hands employed in the businesses covered
by the census of industry which was carried out approximately
quinquennially. The value of total wages paid to men, women
and all workers was first published in the 1891 census. The
total value of wages paid would appear to have referred to the
total wage bill for each industry in the previous year, whereas
the number of hands employed was the number being employed at
the time of the census. If manufacturers had employed either
more or less workers during the year therefore, the implied
average wage would have been either above or below the real
average.

The average earnings for men implied by the industrial
census are given in Table 16.1 for the thirteen industrial
classifications which were covered by the industrial census.

TABLE 16.1

AVERAGE EARNINGS, INDUSTRIAL CENSUS : MALES ONLY

(Pounds per annum)

	1891	1896	1901	1906	1911
P.P.P.	87.20	84.45	86.73	87.63	113.57
Food & Beverages	86.76	78.14	84.85	86.29	106.87
Tobacco	74.07	112.81	113.80	186.93	96.00
Clothing	84.38	85.47	88.53	100.86	122.91
Other Textiles	45.83	58.76	70.48	64.36	116.71
Leather	73.75	71.61	77.62	78.08	103.31
Footwear	72.57	68.06	86.69	94.09	113.50
Wood & Furniture	81.45	77.77	74.81	91.16	111.31
Paper & Printing	87.22	93.50	99.38	113.30	130.85
Chemicals	97.17	80.45	88.96	84.73	155.38
Metal & Machinery	84.04	74.60	81.06	85.00	107.89
Miscellaneous Manufacturing	57.59	68.65	80.00	91.37	115.10
Public Utilities	127.30	128.83	123.57	123.74	126.72
Total	93.48	77.58	82.21	103.67	114.36

Source: G.R. Hawke "Industrial Development in New Zealand
           1870-1914" VUW Working Papers in Economic History
           80/1   Table 4.

The census was primarily aimed at examining trends in manufactur-
ing in New Zealand, and so excluded most agricultural and service
industries.   Generally the term factory was defined as any con-
cern where two or more persons worked together at making articles
for disposal, wholesale or retail.[1]   Our wage rate series has
been amalgamated into similar industrial groups using the census
weights for each category,[2] and so while the wage rates cover
fewer occupations an approximate ratio of earnings to wage rates
can be calculated.   This is shown in Table 16.2.

    In general, the average earnings of those shown in the in-
dustrial census was between 55 and 80 percent of the maximum

---

[1].   See The Report on the Results of a Census of the Colony
        of New Zealand 1906 p.97

[2].   The exact method is given in Appendix 1 to this chapter.

TABLE 16.2

EARNINGS AS A PROPORTION OF WAGE RATES : MEN ONLY

Industrial Group	1891	1896	1901	1906	1911
P.P.P.	n.a	n.a	n.a	n.a	n.a
Food & Beverages	85.61	77.13	74.34	66.71	77.93
Tobacco	n.a	n.a	n.a	n.a	n.a
Clothing	70.41	62.82	68.22	77.97	83.01
Other Textiles	n.a	n.a	n.a	58.98	77.27
Leather	64.13	56.49	62.38	59.30	73.62
Footwear	58.16	58.35	70.21	75.64	81.52
Wood & Furniture	75.25	67.05	53.47	63.54	75.71
Paper & Printing	62.41	73.24	76.29	85.31	86.82
Chemicals	n.a	n.a	n.a	n.a	n.a
Metal & Machinery	60.85	54.09	57.65	56.40	67.76
Miscellaneous manufacturing	41.03	n.a	51.15	57.38	72.29
Public Utilities	n.a	n.a	n.a	n.a	n.a
Mean	64.73	(64.17)	64.21	66.80	77.33
C.V.	0.20	(0.13)	0.15	0.16	0.08

Source: Table 16.1 and Appendix Table 16A

possible earnings using the wage rate series.   This proportion
is relatively stable for the first three census years though a
number of the industrial groups show a relative decline between
1891 and 1896.   From 1901 to 1911 the ratio of earnings to wage
rates is rising, with a particularly large rise being shown in
all the series between 1906 and 1911.

The difference between earnings and wage rates shown in
Table 16.2 is probably the result of three factors.   First, our
wage rate series was based on a 6 day, 48 hour week.[3]   The in-
dustrial awards of the period show that this was generally re-
garded as a maximum in many industries, and it is possible that
a 44 or 40 hour week was not uncommon.   If this was the case
our wage rate series would over estimate the wages earned by

3.   C. Clinkard "Wages and Working Hours in New Zealand,
       1897-1919".
       New Zealand Official Yearbook (1919) pp. 861-934.

8.33 and 16.67 percent respectively. From the turn of the
century onwards there was a definite tendency for the number of
hours worked to be reduced, and by 1911 the average working week
would most definitely have been shorter than in 1901 or 1891.
This should have been reflected in a fall in the ratios in
Table 16.2, so the rise from 1901 onwards is probably under-
stated.

Secondly, our industrial wage rate series is in general
based on the wage rates paid to the skilled workers in each
industry. (The general labourers were all attributed to the
building and construction group). The differential will there-
fore reflect the different proportions of unskilled labour in
each industry. It is interesting to note that miscellaneous
manufacturing, where unskilled labour was relatively high, has
throughout the series a low ratio. It is possible then that
part of the rise from 1901 onwards was the result of a smaller
proportion of unskilled labour in industry as the economy grew
and unskilled labour became relatively scarce. Certainly, the
slack labour conditions of the 1880's and early 1890's tended
to encourage mass production industry with low paid unskilled
labour, as the Sweating commission bears witness. The tendency
noted in the previous chapter for the margin for skill to decline
suggests that unskilled labour was the relatively scarce commo-
dity, especially between 1906 and 1911. However, while this is
probably one factor behind the decline, the skill differential
was not so great that such a movement alone could cause a rise
of 10 percentage points in the ratio of earnings to wage rates.

The final factor which would have influenced the figures
was the earnings lost by time spent either unemployed or on
short hours due to a lack of demand. There is no good source
of information on general unemployment rates in New Zealand in
our period. R.J. Campbell showed by his study on the matter
that the Department of Labour's figures were largely useless as
a measure of unemployment,[4] and except for the figures collected

---

4. Robert James Campbell "Unemployment in New Zealand,
   1875 to 1914."
   (M.A. Thesis, Massey University, 1976.)

by the two carpenters' unions,[5] we have no annual series of unemployment rates. From 1896 onwards the quinquennial census separated out the unemployed from other workers, but the idea of what constituted "unemployment" was ill-defined and varied from year to year. In 1896 it referred to those non Maoris aged over 15 and under 90 who were out of work on census night. In 1901 these people had to have been without work for more than one week prior to the census, and for the remaining two years of our period this remained the definition, though the age limits were dropped.[6] The census figures do however indicate that time lost through unemployment may well have been a significant factor. In 1896 6.15 percent of male breadwinners were returned as unemployed, whereas in 1901, 1906 and 1911 the proportion fell to 3.08, 2.53 and 1.97 percent respectively. If the number of unemployed on census night is taken as indicative of the time lost by the average workman through unemployment, then clearly part of the growth in the ratios of earnings to wage rates shown in Table 16.2 is a result of this reduction.

The best source on wage loss through unemployment is not however the census. It is a survey conducted by the Department of Labour in 1911 in conjunction with the census of that year. The statistics were originally intended to be part of the industrial census, and under an agreement with the Department of Census and Statistics, the Department of Labour undertook to analyse and produce statistics on patterns in wages and unemployment. In the event, the promised analysis never appeared, and we are left with the detailed tables published as an Appendix to the Department of Labour's 1912-13 Annual Report.[7]

---

5. H. Roth. "Unemployment Among New Zealand Carpenters, 1876 to 1900". _Australian Economic History Review_, 18 (March 1978) pp. 64-74.

6. Tony Endres, "Designing Unemployment Statistics in New Zealand. A Case of Political Arithmetic." c.1860-1960. _Australian Economic History Review_ XXII (Sept 1982) pp. 151-171 especially the Appendix.

7. _AJHR_ (1913) H-11, pp. 94-156. The method of collection was outlined in the previous annual report _AJHR_ (1912) H-11, P.XXV.

The table of most interest is table II. This detailed for each of the four major cities and ten provincial districts the number of people employed each month in 139 industrial occupations together with the average number of weeks worked by these employees, and the total wages paid to them for this work. The Department of Labour attempted to show the actual wages paid by linking together employees who moved factory. We have therefore details on the wage rates, earnings and unemployment of 46,261 males and 20,451 females in 139 separate occupations.

TABLE 16.3

DISTRIBUTION OF EMPLOYMENT, 1911
(Percentages)

	Males		Females	
	Total Labour Force	Dept. of Labour	Total Labour Force	Dept. of Labour
Farming	30.97	0.55	8.57	0.06
Hunting & Fishing	0.56	0.06	0.02	–
Forestry	1.65	0.28	–	–
Mining	3.80	0.57	0.01	–
P.P.P.	1.67	14.21	0.09	1.79
Food & Beverages	0.85	8.30	1.00	4.64
Tobacco	–	0.02	0.01	0.08
Clothing	0.61	4.18	11.14	60.64
Other Textiles	0.64	5.21	1.08	9.28
Leather	0.55	5.65	0.07	0.25
Footwear	0.38	3.68	0.82	5.01
Wood & Furniture	2.48	4.68	0.15	0.94
Paper & Printing	1.02	6.89	1.11	0.99
Chemicals	0.18	2.60	0.41	1.99
Metal & Machinery	2.02	26.52	0.02	1.70
Miscellaneous Manufacturing	0.77	0.48	0.14	0.94
Public Utilities	0.26	0.44	0.01	–
Building & Construction	11.02	15.22	0.07	0.09
Rail Transport	2.68	–	0.01	–
Other Transport	6.63	–	0.19	–
Trade	10.71	0.16	9.94	6.71
Services	13.38	0.33	57.15	4.89
Handicraft	7.16	–	7.98	–

Note: The Handicraft category includes small trades not defined as manufacturing by the Industrial Census. It is probable that some of these will be included in the Department of Labour's industrial classifications.

Source: G.R. Hawke "Disaggregation of the New Zealand Labour Force" VUW Working Paper 79/1 (Jan.1979) pp. 20-21, 26-27

The occupations covered were, as with the industrial census, concentrated in the manufacturing sector.   As Table 16.3 shows there were very few people in the primary or in the service sectors.   The survey was however slightly wider than the industrial census, as it included those in building and construction. The survey also covered the annual employment by an industry rather than at one point in time.   As a result the figures do not correspond exactly to those in the 1911 Industrial Census. As Table 16.4 shows, industrial groups such as primary produce processing, and food and beverages which had seasonal employment had a higher work force under the Department of Labour's survey than in the Industrial Census taken in April 1911.   The pattern of seasonal employment was actually quite different for men and

TABLE 16.4

NUMBERS IN EACH INDUSTRIAL CLASSIFICATION, 1911

	Males		Females	
	Industrial Census	Dept.of Labour	Industrial Census	Dept.of Labour
P.P.P.	5908	7081	77	275
Food & Beverage	3011	4134	872	712
Tobacco	8	8	12	13
Clothing	2158	2085	9687	9311
Other Textiles	2267	2596	940	1425
Leather	1953	2815	63	38
Footwear	1359	1834	713	769
Wood & Furniture	8759	2330	134	145
Paper & Printing	3614	3435	968	152
Chemicals	645	1295	356	305
Metal & Machinery	7135	13214	17	261
Miscellaneous Manufacturing	2713	237	121	144
Public Utilities	919	218	8	0
Building & Construction	–	7584	–	14

Note: It would seem likely that the distinction between Metal and Machinery factories and Miscellaneous Manufacturing was blurred in the Department of Labour's survey.

Source: As for Table 16.3 pp. 24-25.

for women.   The peak employment period for men was in February
and March, and the lean time was August and September when em-
ployment was about 90 percent of maximum.   Women, on the other
hand, had their peak time in November and December, as a result
of being concentrated in trades affected by the Christmas boom.
Their slack time was January when again employment fell to 90
percent of the maximum level.   Women however had less weeks of
work on average than men.   The average woman worked 43.8 weeks
in the 1910-11 year whereas the average man worked 45.9 weeks.
This was probably partly due to the fact that women were the
marginal labour of their industries, being put on and off work
by the week or even the day, while the men had more insulation

TABLE 16.5

SEASONAL   FLUCTUATIONS

IN THE NUMBER OF EMPLOYEES, 1910-11

		Male	Female
April	1910	40925	18168
May	1910	41271	18529
June	1910	40996	18465
July	1910	40128	18278
August	1910	39483	18248
September	1910	40258	18880
October	1910	41354	19684
November	1910	42364	19970
December	1910	43800	20014
January	1911	43742	18080
February	1911	44680	18727
March	1911	44489	19391
Maximum		46261	20451

Note: The maximum is the maximum achieved in each
          industry.   This seems to be the number of employees
          actually traced.   (See Department of Labour report
          p.92).

Source: AJHR (1911) H-11 Appendix Table II.

from dismissal.   But it was also probably partly voluntary as
well.   The Department of Labour report commented:

> "The irregular attendance of female workers for reasons
> other than sickness has been a cause of frequent complaint
> by employers. It may be assumed that the average earn-
> ings of females .... would generally have been higher had
> they attended more regularly to their employment." 8

The experience of the Post Office suggests that this statement
was not just prejudice. In 1910-11 the male full time employees
of the Post Office were absent on sick leave 2.46 days, with an
average length of absence on sick leave of 10.68 days. The
female full time employees, in contrast, were absent on sick
leave 6.10 days on average with an average length of absence of
15.71 days.[9]

The table presents its information for each employee group
by 14 regions, and so it is not possible to work out the unem-
ployment pattern for each individual. However if we take the
experience of each group as being each person's average exper-
ience, then we can work out from the number of weeks worked the
basic pattern of unemployment. This is shown in Table 16.6.
The method of calculation will of course mean that the extremes
of the distribution are under estimated. To have zero unem-
ployment implied having all the workers in an industry in a
region employed for 52 weeks each year. On the other hand, it
would not have made sense to include an industry in the survey
which had no workers all year round. The table does however
suggest that few male workers lost more than 4 weeks of work in
the 1910-11 year. Indeed, given the problems of groups in the
data, it suggests that probably a quarter at least of workers
were employed for 52 weeks, and that another 30 to 35 percent
lost only one week of work, that is they were probably in the
category of the fractionally unemployed. Relatively few women
on the other hand, lost no time in the year and quite a few were
without employment for between two and five weeks. Given the
seasonal pattern of women's work, probably most of this time was
during a post-Christmas shut down when the women were laid off.

While the average worker covered by the Department of
Labour survey lost about 6 weeks work or 11.73 percent of his
potential earnings, the losses were far higher than this in some

---

8. AJHR (1913) H-11 p.92

9. AJHR (1911) F-1 p.3.

TABLE 16.6

UNEMPLOYMENT PATTERNS, 1911

Weeks Lost	No. of Workers		% of Workers	
	Male	Female	Male	Female
0	12	12	0.03	0.08
1	9811	1222	23.38	8.41
2	1933	2859	4.61	19.68
3	13468	2533	32.10	17.43
4	6783	2702	16.17	18.60
5	376	4225	0.90	29.08
6	472	257	1.12	1.77
7	1724	61	4.11	0.42
8	61	33	0.15	0.23
9	539	109	1.28	0.75
10	1458	39	3.48	0.27
11-15	4129	447	9.84	3.08
16-20	1171	10	2.79	0.07
21-25	2	4	0.00	0.03
26+	17	17	0.04	0.12
Total	41957	14530		

Source: Calculated from AJHR (1911) H-11 Appendix Table 2.

industries.   As could be expected the losses were highest in
the seasonal industries of primary produce processing, leather
and other textiles.   As Table 16.7 shows, however, the loss of
wages from time lost in the year was much higher in all indus-
tries than could be expected from the census returns.   There
are three major reasons why this is so.   First, the census
figures were taken on 2nd April 1911 and the Department of
Labour survey shows that this was near the peak employment
period.   Table 16.5 showed that March 1911 had the highest
labour force of any month in 1910-11 and the labour force prob-
ably did not drop significantly in the first two days of April.
Secondly, the census specifically excluded those unemployed for
less than a week, yet a considerable proportion of income could
be lost by successive weekly breaks between periods of employ-
ment.   Short term hiring and firing was much more common, es-
pecially among the unskilled and female work force where unions
were often too weak to win significant improvements in conditions

TABLE 16.7

UNEMPLOYMENT BY INDUSTRIAL GROUP : MALES ONLY

(Percentages)

	By Weeks Lost	By Census
P.P.P.	26.13%	1.18%
Food & Beverages	10.45	0.53
Tobacco	16.83	10.00
Clothing	8.83	2.01
Other Textiles	21.66	2.34
Leather	25.27	1.71
Footwear	5.59	2.37
Wood & Furniture	9.36	1.68
Paper & Printing	6.78	1.98
Chemicals	9.85	1.42
Metals & Machinery	11.83	2.94
Miscellaneous Manufacturing	12.60	1.68
Public Utilities	4.81	2.56
Building & Construction	10.61	2.35

Note: Unemployment by weeks worked = (52 - weeks worked)÷0.52

Source: Census, 1911 and <u>AJHR</u> (1911) H⊤11.

Thirdly, the Department of Labour survey was not clear on how holidays were regarded, and in particular whether paid holidays were counted as part of the weeks worked. They would not have significantly increased the unemployment figures had they not been included. It was rare in 1911 to have more than two weeks' holiday in a year, and this amounted to less than 4 percent of the total time available. We can conclude then that unemployment was significantly higher than the average of 1.97 percent suggested by the 1911 census data, and that it explains a major proportion of the discrepancy between the average earnings and wage rates shown in Table 16.2.

This is however, not strictly the case. Both the earnings and the average wage rates were lower in the 1910-11 survey than in the census or the <u>Statistics of New Zealand</u> figures. While wage rates did rise in the <u>Statistics of New Zealand</u> figures between 1910 and 1911, the rise was small (about 2 percent) and would not explain this discrepancy. We are therefore left with

TABLE 16.8

WAGE RATES AND EARNINGS, 1910-11

	(1) 1910-11 Earnings	(2) 1910-11 Wage Rates	(1) as % of industrial Census	(2) as % of Statistics of N.Z.
P.P.P.	£98.49	£135.35	86.73	n.a
Food & Beverages	105.40	117.60	98.62	86.15
Tobacco	89.50	111.81	93.23	n.a
Clothing	116.28	127.52	94.61	86.12
Other Textiles	93.59	119.41	80.19	79.06
Leather	89.59	121.58	86.72	86.64
Footwear	105.20	111.44	92.69	80.04
Wood & Furniture	98.62	108.72	88.60	73.94
Paper & Printing	105.80	112.62	80.86	77.64
Chemicals	117.83	130.12	75.83	n.a
Metal & Machinery	102.54	116.69	95.04	72.13
Miscellaneous Manufacturing	106.04	120.59	92.13	75.98
Public Utilities	158.86	166.28	125.36	n.a
Building & Construction	98.20	109.94	n.a	70.98

Notes: Earnings = Wages paid
                          Average number of workers

           Wage Rates = Average wages
                          Proportion of year worked.

Source: AJHR (1911) H-11 Appendix Table II, table 16.2 and
           Appendix Table 16.1.

a discrepancy of between 15 and 25 percent between the Statistics
of New Zealand figures and the best alternative source of informa-
tion of wage rates, which cannot be attributed to wages lost
through unemployment.   The Statistics of New Zealand series was
biased towards skilled workers, but this probably only explains
a small part of the higher figure.   Most of the higher wage
rate given in the Statistics of New Zealand figures was probably
due to the assumption of a 48 hour week.   Clinkard showed in
his study of ordinary working hours that maximum hours fell by
1.7 percent between 1901 and 1911, and it would seem likely that
the actual hours fell more than this.   Many occupations showed

a decline in hours from 54 per week in 1900 to 48 in 1914, or from 48 hours in 1900 to 44 in 1914, and the average was held up by one or two groups who had no change, as they generally worked the shorter hours in 1901.[10]   The wage rate series produced from the Statistics of New Zealand would therefore overestimate the level of growth in wage rates because this decline in hours worked had not been taken into consideration.   However the series also underestimated the growth in earnings because the loss of earnings from unemployment declined over time.

The last factor which we must consider when dealing with income trends is the effect of price changes on real income levels.   The 1880's was a period when prices generally declined but after 1895 there was a general inflation of prices.[11]   This inflation affected some groups of wage earners more than others, as relative prices changed.   Table 16.9 shows the trend in prices faced by the top and middle income earners over our period as a whole.   Both the low and high income earners experienced relatively high prices compared to the middle income group in most periods.   Low income earners were, however, given a real wage advantage by the relatively slow rise in food and housing prices between 1900 and 1910.   The high income earners were disadvantaged until the 1930's because they spent relatively less on those products whose prices rose slowly.   During the 1930's however, the fall in the clothing prices was sufficient to give high income earners a rise in real incomes relative to the middle group, while the slow fall in prices for basic goods disadvantaged low income earners.

The overall trend in prices in 1914 was a fall in prices between 1874 and 1896 and a rise thereafter.   Most of the decline in wages during the 1880's and early 1890's was therefore made up in real income terms as the cost of living fell.   The relatively fast rise in nominal incomes from 1896 onwards, however, overstates the rising prosperity of wage earners, as the cost of living rose.

The correction factors which would need to be applied to the Statistics of New Zealand series for this, the changes in

---

10.   Clinkard, ibid p. 913 and 917-932.

11.   M.N, Arnold "Consumer Prices, 1870-1919".   VUW Working Paper in Economic History 12 May 1982.

TABLE 16.9

CONSUMER PRICE MOVEMENTS,

RELATIVE TO THE MIDDLE INCOME GROUP

	Low Income	High Income
1875	101.8	101.9
1880	101.3	100.1
1885	100.8	100.5
1890	100.9	99.2
1895	100.5	98.8
1900	99.8	100.3
1905	99.6	100.2
1910	99.5	101.4
1915	101.8	101.8
1920	102.9	104.9
1925	100.7	101.1
1930	99.8	99.6
1935	101.2	99.7
1939	101.4	99.8

Note: The following expenditure patterns were used through-
out, based upon the household expenditure survey in
AJHR (1893) H-10 pp. 40-51.

	Low	Middle	High	Incomes
Food	57.18	52.93	51.98	
Clothes	15.15	16.48	24.32	
Housing	5.21	12.41	9.65	
Fuel & Light	8.51	8.46	6.56	
Miscellaneous	13.54	9.72	7.49	

Sources: M.N. Arnold ibid p.27 Appendix C
Miscellaneous Statistics, 1939. p.9.

hours of work and unemployment rates is shown in Table 16.10.
The final column in this table shows the overall trend in earn-
ings relative to wage rates for the period, as an index based on
1901. The wages paid in the 1870's and 1880's generally over-
state earnings as the cost of living was high, and unemployment
severely reduced incomes. Between 1890 and 1901 the earnings
are generally understated by wage rates by about 5 percent as
the cost of living had fallen. The trend from 1901 onwards is

for wage rates to increasingly overstate earnings, as the cost
of living rose and hours of work fell.

TABLE 16.10

CORRECTION FACTORS FOR EARNINGS RATES FROM WAGE RATES

	(1) Cost of Living	(2) Change of Hours	(3) Unemployment	(4) All Factors
1874	142.26	114.85	n.a	
1875	137.83	114.30	n.a	
1876	134.47	113.75	n.a	
1877	135.55	113.20	100.08	83.58
1878	137.23	112.65	102.71	84.31
1879	115.32	112.10	90.92	88.38
1880	120.03	111.55	89.29	82.98
1881	119.66	111.00	98.62	91.48
1882	122.40	110.45	98.94	81.20
1883	121.48	109.90	101.59	91.91
1884	117.84	109.35	95.56	88.68
1885	111.72	108.80	98.96	96.37
1886	110.25	108.25	88.81	87.20
1887	102.12	107.70	86.55	91.28
1888	103.35	107.15	85.90	89.06
1889	99.97	106.60	93.06	99.23
1890	97.61	106.05	97.36	105.78
1891	101.04	105.50	94.41	98.58
1892	95.09	104.95	93.71	103.43
1893	94.79	104.40	91.93	101.25
1894	92.85	103.80	87.81	98.17
1895	91.69	103.30	92.74	- 104.48
1896	95.01	102.75	96.83	104.72
1897	94.63	102.20	(97.46)	105.77
1898	95.36	101.65	(98.10)	104.57
1899	92.16	101.10	(98.73)	108.31
1900	94.17	100.55	(99.37)	106.10
1901	100.00	100.00	100.00	100.00
1902	102.32	99.45	(100.11)	97.30
1903	101.76	98.90	(100.23)	97.41
1904	101.70	98.35	(100.34)	97.03
1905	104.21	97.80	(100.46)	94.28
1906	105.27	97.25	100.57	92.91
1907	106.86	96.70	(100.69)	91.12
1908	107.14	96.15	(100.80)	90.46
1909	107.33	95.60	(100.92)	89.89
1910	108.63	95.05	(101.03)	88.40
1911	109.45	94.50	101.15	87.33

Notes: (1) C.P.I, 1901 = 100.
        (2) This assumes the average week fell from 48 hours
             in 1874 to 40 hours in 1911 in a straight line.
             This probably overstates the fall, especially
             prior to the turn of the century.

(3) This is an index of the loss of earnings through unemployment relative to 1901. It was constructed as:

$$\frac{100 - A}{100 - 3.08}$$

where A was the unemployment rate.
The years between the censuses between 1896 and 1911 have been linearly interpolated.

(4) $\frac{(2) \times (3)}{(1)}$

Sources: C.P.I. : Arnold _ibid_ p.28 Appendix D.
Unemployment Rates: Calculated as the average of the two quotations in Roth _ibid_ pp. 68-69

Table 16.11 shows real earnings indices for the major industrial classifications based upon the _Statistics of New Zealand_ series and the correction factors in Table 16.10. Most industrial groupings showed relatively little change over the 35 years of the series. The decline in nominal incomes has been largely reversed once the correction factor has been applied, and only the agricultural sector and building and construction show a marked decline in the 1880's depression. Most other industrial groups show no growth in income over the Long Depression period even though they show no decline. The agricultural sector showed the most marked growth in the period from 1901 to 1911, though as we noted in Chapter 15, this was largely confined to arable occupations. The transport, food and trading sectors also did well over this period, but most other groups experienced no real income growth over this period, and particularly in the latter five or six years of it. As this was regarded as a period of reasonable prosperity after the long Depression, this lack of real income growth may well have been the cause of the industrial unrest which characterised the period just before the First World War. It is clear in the next chapter that the slow growth of real incomes continued in the 1920's largely because the established system of arbitration awards was slow to react in periods of rapidly rising prices.

TABLE 16.11

REAL EARNINGS, 1877-1911   (1901=100)

	Arable	Pastoral	Total Agricultural	Mining	Food	Clothing	Leather
1877	86.16	78.52	84.19	103.99			
1878	84.27	90.27	84.23	79.01			
1879	91.26	127.86	95.48	83.06	76.90	104.46	111.78
1880	74.09	111.45	78.49	78.09	-	101.55	99.54
1881	92.38	92.91	91.35	104.35	-	102.07	-
1882	82.99	132.86	88.10	101.67	67.51	91.91	-
1883	96.51	101.67	95.94	82.91	-	100.95	-
1884	92.74	90.74	91.35	80.16	81.13	140.65	106.71
1885	91.28	92.58	90.25	85.92	94.50	104.90	113.53
1886	80.27	83.40	79.59	76.76	94.27	94.05	100.17
1887	77.75	84.48	77.61	83.31	96.29	89.63	102.09
1888	79.15	70.30	77.10	80.26	80.82	92.83	96.63
1889	91.15	94.61	90.67	97.38	88.76	96.09	97.70
1890	97.37	99.96	96.80	101.37	93.68	108.49	113.05
1891	89.50	97.87	89.94	91.18	103.99	103.28	103.77
1892	95.16	98.57	94.74	88.28	102.11	95.51	95.59
1893	90.45	99.11	90.80	86.74	107.34	99.46	101.65
1894	88.44	93.98	88.26	91.45	97.32	98.47	99.11
1895	88.74	99.00	89.17	99.68	105.62	104.27	103.87
1896	83.27	98.83	84.35	100.31	90.41	102.39	103.21
1897	87.07	102.77	88.72	102.54	93.92	110.90	107.76
1898	101.68	102.71	101.18	99.76	93.37	104.38	107.89
1899	104.05	133.74	109.55	112.02	97.70	107.18	116.59
1900	101.73	111.13	103.63	113.09	99.33	100.62	106.43
1901	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1902	95.48	101.83	97.21	103.77	97.57	100.91	104.54
1903	97.96	101.98	99.19	103.85	101.89	103.40	105.12
1904	104.43	103.88	104.56	100.56	107.37	108.01	105.30
1905	101.69	94.20	99.92	96.18	106.37	103.23	112.66
1906	99.99	102.30	101.14	105.73	105.29	102.18	98.31
1907	101.26	100.22	101.81	107.06	107.58	102.75	99.82

	Arable	Pastoral	Total Agricultural	Mining	Food	Clothing	Leather
1908	104.51	99.72	104.05	101.78	107.17	100.52	99.36
1909	108.14	100.38	106.68	105.90	107.56	98.72	97.25
1910	108.83	99.66	106.85	98.38	104.75	97.10	98.30
1911	106.49	102.73	107.35	98.05	104.44	99.65	98.48

TABLE 16.11 (Continued)

	Footwear	Wood	Paper	Metals	Miscellaneous Manufacturing	Building	Transport	Trade	Men Servants
1877				92.40			83.61		88.50
1878	94.55			100.16		93.26	84.48		100.15
1879	99.10			102.17		94.95	93.37		107.72
1880	93.76			91.93	82.58	81.33	86.35		88.30
1881	100.90			101.27	90.86	94.05	94.86		132.63
1882	87.05	93.35		92.45	81.36	84.59	86.58		120.81
1883	97.89	114.32		101.92	85.66	93.34	93.52		168.60
1884	99.98	79.83	101.02	99.57	86.26	91.89	109.52	93.80	102.36
1885	118.00	86.09	101.04	103.36	89.62	96.95	95.86	100.83	92.76
1886	102.99	76.26	97.05	93.46	82.30	84.16	90.07	91.99	84.04
1887	100.83	76.47	106.89	94.05	85.50	87.37	82.71	94.14	78.07
1888	89.77	74.78	92.94	90.77	82.59	81.85	97.97	86.97	83.35
1889	105.90	88.50	118.11	100.51	93.44	93.85	96.37	108.72	93.69
1890	116.76	93.57	117.01	110.63	101.56	101.09	117.26	111.54	98.08
1891	99.62	76.27	105.76	96.83	88.47	88.56	117.86	105.72	96.90
1892	104.82	79.92	108.24	104.90	88.80	93.67	102.51	102.62	97.39
1893	106.69	85.65	107.80	97.90	94.58	93.23	80.01	104.22	94.32
1894	100.11	85.45	96.45	88.88	91.18	88.19	88.03	89.65	79.34
1895	111.82	82.36	96.26	95.46	93.88	91.55	92.67	93.48	97.69
1896	98.92	86.82	102.63	98.58	-	95.67	102.59	98.12	89.98
1897	102.50	84.86	108.51	96.21	92.27	99.41	106.54	96.75	91.25
1898	102.32	83.70	104.44	106.68	97.04	102.75	102.06	103.80	100.47
1899	113.12	87.30	101.33	103.10	101.21	104.72	105.89	107.41	98.47
1900	111.17	107.54	105.42	105.59	108.08	107.73	130.64	105.32	108.14
1901	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
1902	95.54	97.44	97.28	98.74	98.85	101.62	97.81	110.03	98.15
1903	95.63	98.98	98.27	96.96	97.77	101.93	102.08	105.97	104.80
1904	101.65	95.62	101.45	97.25	95.40	102.95	108.43	112.53	97.54
1905	102.64	82.86	93.98	99.67	89.95	101.70	98.57	108.98	93.13

	Footwear	Wood	Paper	Metals	Miscellaneous Manufacturing	Building	Transport	Trade	Men Servants
1906	93.59	95.28	94.73	99.59	94.59	100.85	107.07	109.82	93.60
1907	95.88	92.98	98.69	99.46	93.56	102.49	103.27	103.37	93.23
1908	98.42	87.89	97.86	101.40	90.13	100.30	99.91	108.18	97.83
1909	97.40	91.31	100.35	97.39	88.89	100.20	108.16	109.05	98.35
1910	97.11	91.08	103.45	95.76	87.49	100.43	102.92	109.95	92.40
1911	98.47	91.78	97.25	100.47	88.62	98.69	112.68	106.85	96.28

Sources: Table 16.9 and Appendix Table 16A

APPENDIX TABLE 16A

NOMINAL WAGE RATES : MEN ONLY

Year	Arable	Pastoral	Total Agriculture	Forestry	Mining	Food	Clothing	Textiles	Leather
1874	21.54	36.13	23.95		48.19	-	57.59		-
1875	21.79	24.23	22.17		42.47	-	-		-
1876	22.17	25.35	22.64		42.27	-	-		-
1877	22.04	22.21	22.06		58.18	-	-		-
1878	21.37	25.31	21.88		43.82	38.20	58.99		60.53
1879	22.15	34.20	23.66		44.23	-	61.08		57.41
1880	19.09	31.75	20.61		44.47	-	55.69		-
1881	21.59	24.01	21.87		53.34	36.50	56.49		-
1882	21.85	38.68	23.76		58.55	-	54.82		-
1883	22.45	26.15	22.86		42.18	40.16	79.16		57.59
1884	22.36	24.18	22.56		42.27	43.05	54.33		56.38
1885	20.25	22.71	20.51		41.69	47.46	53.83		54.98
1886	19.68	22.61	19.99		41.16	46.31	49.01		53.53
1887	18.21	21.88	18.62		45.24	39.84	52.02		51.92
1888	19.00	18.66	18.96		42.14	39.27	48.33		47.12
1889	19.64	22.54	20.01		45.89	38.88	51.19		51.15
1890	19.68	22.34	20.04		44.81	46.31	52.29		50.38
1891	19.41	23.47	19.98		43.25	43.34	46.09		44.23
1892	19.67	22.53	20.06		39.91	46.54	49.03		48.05
1893	19.10	23.14	19.64		40.06	43.52	50.06		48.32
1894	19.26	22.63	19.69		43.56	44.38	49.81		47.58
1895	18.16	22.40	18.69		44.61	37.90	48.80		47.19
1896	17.00	23.31	17.64		44.79	38.98	52.33		48.76
1897	17.60	22.97	18.37		45.33	39.20	49.82		49.38
1898	20.79	23.22	21.19		44.61	39.60	49.39		51.52
1899	20.54	29.19	22.15		48.36	41.10	47.33		48.01
1900	20.50	24.76	21.39		49.84	43.86	53.08		50.63
1901	21.38	23.64	21.90		46.76	43.90	49.91		47.86
1902	20.98	24.74	21.88		49.87	44.02	51.76		51.42
1903	21.50	24.75	22.30		49.85	45.92	52.98		51.65

	Arable	Pastoral	Total Agriculture	Forestry	Mining	Food	Clothing	Textiles	Leather
1904	23.01	25.31	23.60		48.46	48.38	55.56		51.94
1905	23.06	23.62	23.21		47.70	49.53	54.65		57.19
1906	23.01	26.03	23.84	48.50	53.21	49.75	54.89	41.97	50.64
1907	23.76	26.00	24.47	51.52	54.94	51.83	56.28	49.33	52.43
1908	24.70	26.06	25.19	51.15	52.61	52.01	55.46	46.21	52.57
1909	25.72	26.40	25.99	51.24	55.09	52.53	54.81	48.79	51.78
1910	26.32	26.65	26.47	51.10	52.04	52.02	54.82	46.21	53.22
1911	26.07	27.81	26.92	56.65	52.50	52.50	56.95	58.09	53.97

Notes: The individual series of wage rates were weighted by the relative importance
of the occupation in the sector in the censuses between 1878 and 1936.   General
labourers were all assigned to the building and construction sector.

Sources: Statistics of New Zealand, 1874-1911

	Footwear	Wood	Paper	Metals	Miscellaneous Manufacturing	Building	Transport	Trade	Men Servants
1874				63.42			30.51		38.71
1875				60.45			25.20		26.58
1876				60.18			24.72		27.63
1877				59.62			24.61		24.29
1878	53.26			64.25		58.35	24.65		27.25
1879	53.25			62.32	59.86	56.67	25.99		27.96
1880	53.66			59.91	59.74	31.20	25.60		24.41
1881	52.38			59.87	60.27	54.23	25.51		33.26
1882	50.91	61.86		61.57	56.06	54.95	26.23		34.13
1883	50.58	66.93		59.97	58.51	53.57	25.03		42.08
1884	53.54	48.44	57.07	60.72	55.94	54.66	30.38	41.79	26.48
1885	58.15	48.07	52.53	58.00	56.77	53.07	24.47	41.34	22.08
1886	56.09	47.06	55.76	57.96	56.34	50.91	25.41	41.68	22.11
1887	52.46	45.08	58.67	55.72	55.78	50.49	22.29	40.75	19.62
1888	47.87	45.18	52.28	55.12	56.64	48.48	27.06	38.45	21.47
1889	50.68	47.99	59.63	54.78	57.72	49.89	23.89	43.29	21.66
1890	52.42	47.60	55.42	56.56	53.98	50.41	27.27	41.66	21.27
1891	47.99	41.63	53.75	53.12	51.64	47.39	29.41	42.37	22.55
1892	48.13	41.58	52.53	54.85	56.19	47.77	24.38	39.20	21.60
1893	50.04	45.52	53.34	52.29	55.87	48.57	19.44	40.67	21.37
1894	48.43	46.84	49.22	48.96	54.05	47.39	22.06	36.08	18.54
1895	50.83	42.42	46.16	49.41	-	46.22	21.82	35.35	21.45
1896	44.86	44.61	49.10	50.91	52.47	48.19	24.10	37.02	19.71
1897	46.02	43.17	51.40	49.19	55.82	49.58	24.78	36.14	19.79
1898	46.47	43.07	50.01	55.17	56.20	51.83	24.01	39.22	22.04
1899	49.60	43.37	46.87	51.48	61.27	51.00	24.05	39.18	20.85
1900	49.76	54.54	49,78	53.82		53.56	30.29	39.22	23.38

	Footwear	Wood	Paper	Metals	Miscellaneous Manufacturing	Building	Transport	Trade	Men Servants
1901	47.49	53.81	50.10	54.08	60.15	52.75	24.60	39.51	22.94
1902	46.63	53.89	50.09	54.88	61.11	55.09	24.73	44.68	23.14
1903	46.62	54.68	50.54	53.83	60.37	55.37	25.78	42.98	24.68
1904	49.75	53.03	52.38	54.20	59.14	55.97	27.49	45.82	23.06
1905	51.70	47.29	49.94	57.17	57.39	56.90	25.72	45.67	22.66
1906	47.84	55.18	51.08	57.97	61.24	57.26	38.35	46.79	23.11
1907	49.97	54.90	54.26	59.03	61.76	59.33	27.88	44.82	23.47
1908	51.67	52.28	54.20	60.62	59.93	58.49	27.17	47.25	24.81
1909	51.46	54.66	55.93	58.59	59.48	58.80	29.60	47.93	25.10
1910	52.17	55.44	58.63	58.58	59.53	59.93	28.64	49.14	24.00
1911	53.55	56.55	55.79	62.22	61.04	59.61	31.74	48.34	25.29

CHAPTER 17

WAGE RATES AND INCOME LEVELS IN NEW ZEALAND

1914 TO 1939

From 1914 onwards there was a marked increase in the information published by the Government Statistician on wages and income levels. For the first time indices were published showing the movements in minimum wages and retail prices, and from 1922 onwards efforts were made to extract statistical information from income tax returns. This was supplemented by an extension to the coverage of the industrial census so that more information was gained on wages and hours worked, and from 1919 onwards this census was held annually.

The result of this increase in information is that we can chart changes in income levels far more precisely in the post-war period than we could for 1870 to 1911. There was still a substantial bias however towards industrial wages, and there was still relatively little published on the wages of professionals or of service workers. Agricultural workers were treated rather better, as for most of the period they were under the jurisdiction of the Arbitration Court, and so included in the minimum wage series.

The minimum wage series is probably the best place to gain an overview of wage trends. Table 17.1 shows the overall movements in nominal minimum wage rates. It is clear from the table that by 1939 workers on the minimum wage were getting between 70 and 80 percent more cash in the hand. Most of this rise took place in the 1920's and the last few years of the 1930's, as the early 1930's saw a general drop in minimum wage rates of about 18 percent. The rise was very uniform across the industrial workforce, though those in the food, drink and tobacco category

TABLE 17.1

MINIMUM WAGE RATE INDICES

Year	Food, Drink & Tobacco	Clothing & Boots	Building & Const.	Wood & Manuf.	Paper & Printing	Metal & Engineering	Mining	Agriculture	Land & Transport	Shipping & Cargo	Domestic Service	All
1914	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1915	1020	1003	1004	1022	1000	1007	1010	1174	1003	1102	1093	1059
1916	1043	1039	1010	1082	1001	1030	1036	1209	1077	1145	1096	1091
1917	1088	1106	1061	1084	1078	1065	1080	1291	1101	1208	1106	1142
1918	1110	1160	1097	1159	1078	1128	1140	1361	1150	1247	1154	1191
1919	1143	1270	1206	1241	1218	1232	1165	1443	1273	1331	1198	1276
1920	1264	1408	1358	1425	1407	1402	1343	1504	1529	1468	1362	1423
1921	1360	1670	1538	1648	1640	1541	1538	1396	1654	1532	1586	1530
1922	1403	1641	1507	1603	1591	1495	1444	1352	1608	1481	1583	1502
1923	1351	1556	1441	1518	1540	1424	1414	1465	1590	1483	1516	1480
1924	1397	1569	1461	1543	1540	1424	1501	1476	1598	1490	1521	1501
1925	1430	1605	1471	1558	1612	1465	1542	1474	1664	1517	1529	1523
1926	1447	1626	1511	1567	1619	1465	1550	1502	1666	1522	1555	1545
1927	1457	1645	1529	1590	1620	1514	1560	1557	1691	1528	1578	1569
1928	1460	1676	1534	1627	1620	1514	1550	1785	1699	1528	1583	1620
1929	1463	1678	1537	1630	1620	1514	1550	1787	1699	1540	1583	1622
1930	1464	1678	1537	1627	1620	1514	1550	1759	1699	1581	1584	1622
1931	1385	1583	1444	1506	1534	1427	1466	1524	1588	1494	1489	1502
1932	1307	1508	1365	1433	1441	1341	1396	1196	1489	1428	1409	1378
1933	1265	1505	1338	1367	1398	1274	1383	1122	1445	1380	1344	1329
1934	1271	1510	1337	1346	1388	1272	1398	1148	1479	1390	1338	1338

Continued ....

Year	Food, Drink & Tobacco	Clothing & Boots	Building & Const.	Wood & Manuf.	Paper & Printing	Metal & Engineering	Mining	Agriculture	Land & Transport	Shipping & Cargo	Domestic Service	All
1935	1302	1515	1356	1371	1432	1293	1438	1176	1511	1455	1378	1368
1936	1403	1600	1459	1518	1540	1424	1505	1509	1621	1539	1506	1515
1937	1531	1691	1566	1642	1625	1529	1604	1791	1720	1657	1651	1652
1938	1640	1737	1672	1723	1699	1643	1665	1846	1757	1684	1685	1724
1939	1664	1823	1678	1765	1703	1686	1665	1867	1794	1695	1748	1754

Notes: 1914-18   All workers original base 1909-1913 = 1000
1919-27   All male workers, original base 1909-1913 = 1000
1928-1939 Adult male workers, original base, 1926-30 = 1000

Source: Miscellaneous Statistics (1924) pp. 32-33, (1929) p. 52, (1937) p. 13, and (1939) p. 14.

did not experience the rise of the other groups. Their good
years in the early 1920's were relatively brief, and the slow
growth of export prices appears to have hindered their income
growth. This was not true, however, of agricultural workers,
who had faster growth than average in the later 1920's. This
was at least partially due to rising prices, as this effectively
increased the value of full board added into this wage series.

The uniformity of the minimum wage rates was primarily the
result of the method of attaining awards outlining working con-
ditions in the Arbitration Court. The Court was prone to regard
two factors particularly heavily in the 1920's; relativity to
other similar workers, and cost of living rises. Both these
meant the Court provided similarity in award rises.

The Court was generally regarded by the Trade Unions as
being unduly slow in giving minimum wage rises in the 1920's,[1] and
this was the cause of some dissatisfaction with it. It is
certainly clear from the real minimum wage trends in Table 17.2
that minimum wages fell behind prices in the late 1910's.
Between 1914 and 1920 when the inflationary pressures of the
First World War were at their worst, real minimum wages fell by
almost 20 percent. The 1920's saw this decline gradually re-
versed, but it was done only slowly. Most industrial groups re-
gained their 1914 minimum wage level in 1926 or 1927. The con-
tinued, slower inflation of the 1920's meant that it was diffi-
cult for many unions to gain much headway under three year awards
and in this period the Court was not prepared to action increases
in response to increased prices until each three year award ex-
pired.

Table 17.3 shows that the 1930's were not in general as
difficult for those on minimum wages as the late 1910's. Indeed
only the agricultural workers, who from 1932 onwards, were no
longer under the Arbitration Court system, suffered the 20 percent
loss experienced by most workers in the earlier period. We will
see later however, that this apparent stability is probably mis-
leading. The losses in wages due to short time in the 1930's
were great indeed, and there was also the ever present threat of
unemployment.

---

1. See R.C.J. Stone A History of Trade Unionism in New
Zealand, (M.A. Thesis, University of New Zealand, 1948)

TABLE 17.2

REAL MINIMUM WAGE RATES (1914=1000)

Year	Food, Drink & Tobacco	Clothing & Boots	Building & Const.	Wood & Manuf.	Paper & Printing	Metal & Engineering	Mining	Agriculture	Land & Transport	Shipping & Cargo	Domestic Service	All
1914	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1915	951	936	937	953	933	939	942	1095	936	1028	1020	988
1916	899	896	871	933	863	888	893	1042	928	987	945	941
1917	845	859	824	842	838	828	839	1003	855	939	859	887
1918	778	813	769	813	756	791	799	954	806	874	809	835
1919	729	810	770	792	777	786	743	921	812	849	765	814
1920	712	793	765	802	792	789	756	847	861	827	767	801
1921	767	941	867	929	924	869	867	787	932	864	894	862
1922	879	1028	944	1004	996	936	904	847	1007	927	991	941
1923	855	985	912	961	975	901	895	927	1006	939	959	937
1924	871	978	911	962	960	888	936	920	996	929	948	936
1925	882	990	907	961	994	903	951	909	1026	935	943	939
1926	900	1011	940	974	1007	911	964	934	1036	946	967	961
1927	914	1032	959	998	1016	950	979	977	1061	959	990	984
1928	911	1046	958	1016	1011	945	968	1114	1061	954	988	1011
1929	915	1049	961	1019	1013	947	969	1118	1063	963	990	1014
1930	937	1074	984	1042	1037	969	992	1126	1088	1012	1014	1038
1931	960	1097	1001	1044	1063	989	1016	1056	1100	1035	1032	1041
1932	980	1130	1023	1074	1080	1005	1046	897	1116	1070	1056	1033
1933	999	1189	1057	1080	1104	1006	1092	886	1141	1090	1062	1050
1934	988	1173	1039	1046	1078	988	1086	892	1149	1080	1040	1040

Year	Food, Drink & Tobacco	Clothing & Boots	Building & Const.	Wood & Manuf.	Paper & Printing	Metal & Engineering	Mining	Agriculture	Land & Transport	Shipping & Cargo	Domestic Service	All
1935	977	1137	1017	1027	1074	970	1079	882	1134	1092	1034	1026
1936	1020	1163	1060	1103	1119	1035	1094	1097	1178	1118	1094	1101
1937	1041	1150	1065	1117	1105	1040	1091	1218	1170	1127	1123	1124
1938	1083	1147	1104	1138	1122	1085	1099	1219	1160	1112	1113	1138
1939	1056	1156	1064	1120	1080	1070	1056	1184	1138	1075	1109	1113

Notes: Table 17.1 divided by "all group" retail price index.

Source: Table 17.1 and Miscellaneous Statistics

TABLE 17.3

AVERAGE MALE WAGE RATES

RELATIVE TO MINIMUM MALE WAGE RATES

(1920 = 100)

Year	Food and Beverages	Clothing	Paper and Printing	Metal and Machinery	All Industrial Groups
1920	100	100	100	100	100
1921	108	94	104	107	114
1922	109	103	112	114	113
1923	112	149	111	108	110
1924	103	100	113	111	108
1925	107	101	113	112	111
1926	109	111	112	119	116
1927	109	108	110	113	116
1928	110	106	111	115	112
1929	107	109	109	116	111
1930	109	104	112	116	112
1931	118	112	115	120	120
1932	112	106	113	116	120
1933	113	97	110	113	119
1934	109	95	107	110	113
1935	106	94	104	111	111
1936	100	90	108	103	104
1937	98	93	111	110	106
1938	98	95	113	111	110
1939	101	94	116	113	113

Notes: Minimum Wages were compared to the nearest category
           and the Industrial Census.

Source: Table 17.1 and Industrial Census.

It is difficult to assess the relationship that existed between minimum and average wage rates, but the relationship undoubtedly changed across time. Table 17.3 shows this relationship for a few industrial classifications with the same name, in the industrial census. There is no guarantee that the categories in the minimum wage index are the same as those in the industrial census, but all the series shown here indicate a similar pattern. Average wage rates rose relative to minimum rates particularly in the early 1920's, when minimum wages were not keeping pace with the rise in the cost of living. The rise

was of the order of 10 to 15 percent of the differential that
had existed in 1920, and this level was maintained through the
late 1920's when minimum wage rates were again reaching their
1914 level.   Indeed the rise continued into the first two years
of the depression, but this was probably a reflection of firing
policies as employment dropped.   The relatively unskilled workers
and those new at the job were probably made redundant first, and
those who were left were those who, because of their skill and
long service, were receiving above award wages.   The latter
period of the depression saw most of the increase in differential
above the 1920 level disappear, and in the case of food and bev-
erages and the clothing sectors, the differential fell below the
1920 one.   All of this was however made up in the last few years
of the 1930's, and it would seem that overall, average wage rates
in this period were about 10 percent above the ratio to minimum
wages which prevailed in 1920.

The fluctuation between average and minimum wage rates im-
plies that wages were not as inflexible as the minimum award wages
would imply.   Indeed it would seem that even without the aboli-
tion of compulsory arbitration in 1932 wages could have been sub-
stantially reduced by employers.   It is difficult to see there-
fore the reason behind the extent of the worry about inflexible
wages which did exist.   As Table 17.4 shows, for industrial pro-
duction at least, the value added to output per pound of wages
paid rose substantially during the depression, and when the
general price deflation is taken into account this rise was even
higher.   By 1933 the value added per pound of wages paid was
almost 75 percent above the 1919/20 level suggesting that wages
had not been inflexible in the face of falling production.

Further evidence of flexible wages can be seen in the statis-
tics of individual industries.   Three case studies will be taken
here, brickmaking, shoe manufacturing and butter and cheese
factories.   They were chosen because while they were large em-
ployers in 1928/29, they had relatively few varieties of output,
and so real output and price indices for each series could be
easily constructed.   They are also indicative of the type of
manufacturing in operation in New Zealand, butter and cheese
making representing those industries orientated towards the export
of processed primary products, brickmaking being massed produced

TABLE 17.4

VALUE ADDED TO WAGES PAID

Year Ending 31st March	Nominal	Real
1920	1.543	1000
1921	1.554	983
1922	1.982	1361
1923	2.089	1424
1924	2.056	1366
1925	2.036	1326
1926	1.899	1213
1927	1.924	1256
1928	1.921	1248
1929	1.949	1269
1930	1.944	1295
1931	1.927	1391
1932	2.015	1572
1933	2.120	1743
1934	2.053	1662
1935	2.057	1606
1936	2.026	1534
1937	1.924	1309
1938	1.840	1265
1939	1.756	1160

Notes: Retail Prices were used to deflate the nominal
           series.

Sources: Industrial Census 1919/20 - 1938/39

intermediate goods, and boot and shoe manufacture being product-
ion for household consumption largely within New Zealand.

The people working in the brickmaking industry were undoubt-
edly the worst hit by the depression. By 1932/33 less than one
third of the number employed in 1928/29 remained in employment.
The brickmaking industry had reacted to the depression by cutting
production by over 80 percent with the result that prices held
up remarkably well, falling by at most 12 percent. But the cut
in production was larger than the fall in employment and wages,
leading to an increase in the effective cost of labour. As the
effective cost of labour also shows labours' proportion of the

TABLE 17.5

BRICKMAKING PRODUCTION IN THE DEPRESSION

	Number Employed	Average Wage	Real Output	Output Prices	Effective Labour Cost	Wage Overhang
1928/29	1233	£226.25	100.0	100.0	100.0	100.0
1929/30	1156	214.90	98.5	98.9	91.4	95.7
1930/31	946	226.11	86.5	102.3	86.6	97.1
1931/32	563	182.41	24.0	93.0	164.9	88.0
1932/33	405	183.13	17.8	98.7	151.3	83.0
1933/34	467	177.01	23.3	99.6	127.7	79.2
1934/35	615	181.21	41.8	91.3	104.7	87.9
1935/36	777	183.07	53.3	88.7	107.9	91.5
1936/37	909	209.06	62.1	105.2	104.3	88.0
1937/38	909	220.94	63.8	108.9	103.6	89.8
1938/39	1117	224.68	73.9	104.5	116.5	95.5
1939/40	1194	241.59	70.9	111.7	130.6	96.4

Notes: Wage Overhang = $(W/P - Q/N)$
          Effective labour cost = $(W/P)/(Q/N)$

          Where: W = wage rate, P = output prices
                  Q = real output and N = employment.

Source: Method : D. Pope "Wage Regulation and Unemployment
                   in Australia" Australian Economic History
                   Review XXII (Sept. 1982) p. 114-115.

          Statistics: Industrial Census 1928/29 - 1939/40.

output income, this implied that profits in the brickmaking in-
dustry declined relative to the wages paid.[2]   Since wages fell
substantially, this implies that profits fell even more.   Such
a drop in profits would undoubtedly have caused some proprietors
to consider lowering their wages.   This would not have been

2.   The effective labour cost = $(W/P)/(Q/N)$

                               = $\dfrac{W.N.}{P.Q.}$

                               = wage share in output

justified on the grounds of productivity losses, as productivity
dropped less than wages once the effect of price falls have been
taken into account. This is shown as the "wage overhang" in
Table 17.5, which measures the change in wage rates relative to
prices, compared with real productivity gains. Throughout the
1930's the "wage overhang" declined in the brickmaking industry
as the real output per employee rose faster than the average wage
corrected for output prices. In effect, then, the employees
were more productive over this period, and there was no real
justification for further cuts to their wages.

In contrast to the brickmaking industry, boot and shoemakers
reacted to the depression by increasing production. This was
probably a reflection of the market size of the firms. In
1928/29 there were 67 brickmaking establishments, most of whom
would have faced only a few competitors in their local market as
transport costs on bricks were high. There were however 75 boot
and shoemakers who had more potential to compete with each other,
and who were comparatively larger employers of labour. The in-
creased production was achieved by an almost static labour force,
who were however, being paid progressively lower wages. By
1935/36 wages had declined by almost 25 percent, while output had
increased by almost 64 percent. The effective cost of labour
was therefore declined as labour costs fell while productivity
rose. Profits from the trade were therefore rising. However
wage rates were not falling as fast as output prices, and the
rise in productivity was not sufficient to offset this. The
wage overhang rose therefore during the depression and by 1938/39
was 28 percent above the 1928/29 level. Given the rise in
profits it seems unlikely that this wage overhang would have led
to strong demands for more downward flexibility of wage rates,
especially as the increased output more than covered the fall in
prices.

In the third case study there was cause for concern about
the downwards inflexibility of wage rates. Despite falling wage
rates and increased output, both the effective cost of labour and
the wage overhang in the butter and cheese making industry in-
creased. Wages did not fall nearly to the extent of the 50 per-
cent loss in output prices, the maximum wage decline being only
12.5 percent. And while output increased labour input showed
signs of doing likewise despite the depression. Labour's pro-

TABLE 17.6

BOOT AND SHOEMAKING DURING THE DEPRESSION

Year Ending 31 March	Numbers Employed	Average Wages	Real Output	Output Prices	Effective Labour Cost	Wage Overhang
1929	2293	171.17	100.0	100.0	100.0	100.0
1930	2307	171.58	112.4	95.7	93.8	104.6
1931	2364	162.05	113.7	90.6	94.7	104.3
1932	2183	153.65	109.1	84.2	93.0	106.4
1933	2277	145.83	127.3	75.0	88.6	113.2
1934	2429	138.49	138.1	73.0	85.0	110.3
1935	2541	135.58	150.8	71.0	82.0	110.9
1936	2788	129.37	163.9	68.1	83.3	110.4
1937	3108	140.95	183.1	73.6	82.8	111.3
1938	3081	146.46	177.8	76.9	84.1	110.7
1939	3075	158.26	181.9	72.0	94.7	128.2
1940	3731	171.89	227.5	80.0	89.8	125.2

Method and Sources: See Table 17.5

portion of the output receipts increased therefore throughout the early years of the depression, and for most of the period remained 15 to 20 percent above the 1928/29 level.   And as productivity did not rise sufficiently to offset this rise in effective wages there was a substantial wage overhang by 1934/35.   There were good reasons therefore why the agricultural sector saw wages as being inflexible, and why the majority of the agitation around wage fixing was directed at inflexible agricultural wages. Butter and cheese workers were not withdrawn from the arbitration court, but other agricultural workers were, and wages fell faster than others as shown in Table 17.2.

The loss of the protection of a union and the arbitration court was probably only a minor reason for the relative decline of agricultural wages.   The agricultural sector was never greatly

TABLE 17.7

BUTTER AND CHEESE FACTORIES IN THE DEPRESSION

Year Ending 31 March	Numbers Employed	Average Wages	Real Output	Output Prices	Effective Labour Cost	Wage Overhang
1929	4288	220.38	100.0	100.0	100.0	100.0
1930	4228	226.45	110.3	88.7	103.5	115.9
1931	4128	218.55	113.5	68.6	122.6	144.8
1932	3991	208.01	116.8	65.2	115.4	145.0
1933	4137	202.65	139.0	55.2	115.6	166.8
1934	4346	192.81	149.2	49.3	120.6	177.8
1935	3787	201.92	142.5	52.2	108.8	175.7
1936	4062	206.93	147.1	65.4	92.5	143.4
1937	4318	239.18	154.5	72.1	98.1	150.5
1938	4128	252.12	145.1	79.1	96.0	144.6
1939	3944	270.11	131.9	86.1	99.3	142.3
1940	3859	278.35	142.6	86.4	92.3	146.1

Method and Source: See Table 17.5

unionised in the 1920's as its workers were scattered and diffi-cult to organise.   The decline is a reflection then of the rela-tive loss of earnings in the agricultural sector and the extent to which that loss was only partially passed on to manufacturing. Even in the manufacturing industries it was rare to have more than 50 percent of wage earners on the union roll, and as Table 17.8 shows union membership was declining over the 1920's and 1930's as inter-union struggles broke out, and as unions proved ineffect-ual against the Government in the depression.

The figures on union membership in Table 17.8 are the only reliable ones produced, however an approximation of the union membership can be obtained by comparing the union membership with the number of workers in the same sector in the industrial census. From this it is clear that most unions lost in terms of proportion of workers who were members in the 1930's.   Except for the cloth-

TABLE 17.8

(a) UNION MEMBERSHIP 1900-1935

(% of wage earners)

1900	8 percent	1916	24 percent
1905	11 percent	1920	26 percent
1910	19 percent	1925	24 percent
		1935	18 percent

(b) UNION MEMBERSHIP AS A PROPORTION OF WAGE EARNERS,

BY INDUSTRIAL GROUP, 1921 AND 1925

	1921	1926
Food and drink	65	61
Clothing and drapery	43	37
Textiles and Weaving	47	39
Building and Construction	54	65
Sawmilling and forestry	36	43
Paper and Printing	36	37
Metal-working and engineering	47	37
Other manufacturers	19	16
Mining and Quarrying	54	40
Agricultural and Pastoral	3	6
Hotels, restaurants	24	18
Land Transport	54	57
Shipping and cargo	85	67

Source: N.Z.O.Y.B. (1932) p. 724

ing and boot trade, where the decline apparently began about 1926, most of the loss occurred in 1931, 1932 and 1933, when unemployment was rife, and the unions appeared powerless in the face of the Coalition Government.   The unions which were particularly weakened by the decline were the moderate sized ones, who had before this between 200 and 1000 members.   The number of small unions grew proportionately as a result, but the proportion of unionists belonging to large unions with over 3000 members did not decline.   They, of course, benefited from the introduction

TABLE 17.9

UNION MEMBERSHIP

(By Industrial Group)

	Food & Drink	Clothing & Boots	Textiles & Weaving	Wood etc.	Paper & Print	Metal & Machinery
1924	54.57	61.30	42.68	40.53	35.60	46.55
1925	70.85	61.40	45.30	43.37	35.16	44.84
1926	79.40	69.46	43.95	45.00	33.73	44.28
1927	63.83	55.56	45.06	44.20	34.26	48.28
1928	63.57	51.70	44.05	41.63	33.68	47.44
1929	63.66	48.30	41.73	41.87	33.48	44.31
1930	69.49	46.39	44.19	46.16	34.23	44.83
1931	69.77	45.83	54.52	39.12	33.81	49.92
1932	68.31	37.95	37.07	34.33	33.81	46.47
1933	39.03	34.53	34.04	33.93	30.75	38.33
1934	51.34	34.83	29.10	32.91	31.85	29.35
1935	58.22	36.59		40.27	31.98	24.55
1936	103.81	85.47		104.28	43.86	76.72
1937	117.73	69.13		97.35	54.38	67.71
1938	119.03	69.18		93.82	47.45	53.68
1939	122.18	79.20		93.05	50.01	57.49

Note: Union Membership as at 31st December divided by
          workforce as at 31st March the following year as
          shown by the industrial census.

Sources: Union Membership, NZOYB (1924-1939)
          Labour Force : Industrial Census, as categorised
          by G.R. Hawke, 'Disaggregation of the Labour Force'
          (VUW Working Paper 1979/1) Table 3.

of compulsory unionism in 1936.

The trade unions were undermined by the large body of un-
employed men who were willing to work with or without union
support.   In that environment the unions could not win strikes,
and were unable to bargain effectively. . The unemployed were the
people who lost most in the depression.   As we have seen even
those on minimum wages in general maintained a similar standard
of living, but the unemployed did not.   Apart from the point
estimated for the worst period of the depression of 16 percent

TABLE 17.10

UNION SIZE, BY MEMBERSHIP

(Percentages)

As at Dec.	Under 50	50 - 100	100 - 200	200 - 300	300 - 500	500 - 1000	1000 - 2000	2000 - 3000	3000 +
1924	3.87	5.83	10.28	8.50	13.87	18.06	21.52	7.73	10.34
1925	3.46	6.02	9.30	8.15	14.44	19.46	22.34	7.66	9.17
1926	3.60	5.71	10.11	7.55	13.17	20.52	22.95	7.35	9.04
1927	3.57	5.89	10.11	6.21	14.93	16.55	24.63	9.09	9.02
1928	3.44	5.45	10.05	6.25	13.43	18.17	25.32	9.25	8.64
1929	3.71	5.71	9.91	6.85	11.79	18.14	23.84	11.12	8.93
1930	3.94	5.98	9.82	6.62	13.16	18.71	26.23	6.75	8.79
1931	4.75	6.26	8.80	8.37	12.42	22.76	20.51	7.45	8.68
1932	5.38	6.57	9.77	9.61	14.05	21.25	18.02	5.88	9.47
1933	5.83	8.30	9.41	13.88	14.20	22.64	13.41	2.90	9.43
1934	5.71	7.45	10.25	11.96	14.09	21.43	17.29	2.96	8.86
1935	5.22	7.46	8.41	9.07	17.84	15.19	23.89	3.03	9.89
1936	2.15	3.17	7.38	5.86	8.76	14.17	25.49	6.29	26.73
1937	1.64	2.33	5.49	4.95	8.04	12.42	15.11	12.71	37.31
1938	1.45	2.09	4.09	4.55	7.11	11.86	14.99	9.69	44.17
1939	1.29	1.93	3.52	4.57	5.92	10.59	16.76	9.71	45.71

Source: NZOYB, 1924 - 1939

in May 1932, there are not good estimates of the level[4] of un-
employment.   More information is available on the income lost
as short time working grew to exceed overtime.   This hit female
workers harder than male workers, and compounded the tendency for
their incomes to decline relative to those of men in the same
occupational group during the height of the depression.   Table
17.12 shows that particularly in fields where women dominated such
as food and beverages, clothing, and textiles, womens' average
earnings declined relative to mens' by between 2 and 6 percent of
the mens' average wage.   This decline continued in food and
beverages where womens' wages had been high relative to mens',

---

4.   J. Macrae and K. Sinclair "Unemployment in New Zealand
during the Depression of the late 1920's and early 1930's"
Australian Economic History Review XV (March 1975)
pp. 35-44.

TABLE 17.11

AVERAGE HOURS OF OVERTIME AND SHORT TIME IN INDUSTRY

(Per employee per year)

	Overtime		Shorttime		Net Overtime	
	Males	Females	Males	Females	Males	Females
1923/24	29.90	8.50	10.90	5.60	19.0	2.90
1924/25	30.04	13.04	12.65	13.75	17.39	-0.71
1925/26	33.93	12.54	12.54	11.50	21.39	1.04
1926/27	31.94	13.96	17.08	12.79	14.86	1.17
1927/28	33.83	14.17	25.71	11.72	8.12	2.45
1928/29	34.20	15.6	18.56	11.26	15.64	4.34
1929/30	32.8	16.4	15.32	13.01	17.48	3.39
1930/31	25.0	9.2	56.2	56.5	-31.20	-47.30
1931/32	22.1	13.4	89.6	92.1	-67.50	-78.70
1932/33	24.6	24.3	69.4	69.8	-44.80	-45.5
1933/34	24.5	24.0	56.1	49.2	-24.70	-25.2
1934/35	31.9	26.9	32.6	24.8	-0.70	2.1
1935/36	35.3	34.3	26.0	22.4	9.30	11.9
1936/37	36.0	30.0	15.0	4.0	21.0	26.0
1937/38	41.0	27.0	15.0	9.0	26.0	18.0
1938/39	45.0	23.0	10.0	11.0	35.0	12.0
1939/40	45.0	23.0	9.0	2.0	36.0	21.0

Source: Industrial Census 1923 to 1940.

but it was recorded in most of the other industrial groups at the
end of the 1930's.   The changes in womens' wages were however,
not nearly as marked as the changes which took place prior to
1914, and there was not a shift of occupation distribution as
there was in the earlier period.

The effect of the depression on margins for skill within male
occupations is not clear.   The trends in minimum wages vary be-
tween occupational group, and there is no sign of a consistent
pattern.   Baker's labourers' minimum wages fell relative to
baker's journeymen, but in the building industry labourers im-
proved their minimum wage position relative to carpenters.   It
would seem likely however, from the rise in average wages relative
to minimum wages, that unskilled workers faced a higher probability
of becoming unemployed.

TABLE 17.12

RATIO OF FEMALE EARNINGS TO MALE EARNINGS

(Percentages)

Year Ending 31 March	P.P.P.	Food & Beverages	Clothing	Other Textiles	Paper & Printing	Total
1920	54.43	37.28	40.10	50.51	42.79	44.95
1921	60.54	40.90	42.12	51.99	43.56	34.24
1922	56.45	37.08	38.98	51.60	42.80	44.51
1923	56.83	35.60	27.15	50.66	42.44	44.82
1924	57.27	39.38	43.20	52.02	42.88	47.20
1925	56.37	38.05	40.86	49.21	41.50	45.17
1926	47.05	37.78	37.76	44.86	42.80	43.43
1927	43.76	37.00	39.76	47.21	45.21	43.70
1928	45.77	35.91	38.87	48.61	45.35	43.17
1929	49.53	37.04	38.58	48.46	45.46	44.24
1930	44.64	35.84	40.27	49.18	44.10	43.51
1931	44.83	35.29	37.40	48.11	44.15	42.41
1932	42.77	36.59	38.28	44.47	47.63	43.40
1933	41.58	38.08	40.90	44.07	47.06	43.91
1934	46.91	34.64	41.44	47.10	47.22	44.91
1935	45.24	34.60	40.04	44.53	46.09	43.47
1936	42.12	34.65	39.53	46.99	42.25	42.01
1937	43.93	39.52	40.99	47.51	42.80	42.60
1938	40.80	39.07	41.71	47.13	42.63	41.98
1939	37.49	41.39	43.37	47.13	43.45	42.78
1940	34.89	43.90	43.36	48.64	43.36	44.53

Source: Industrial Census

Unfortunately, the overall effect of the depression on all personal income is not easy to reconstruct.   Table 17.13 shows an approximate level of average income returned for tax in the period.   It was constructed using the same method for determining the income of those who did not have to file a return as was used in Chapter 2.   The figures are however, less reliable than those we constructed for wealth.   The proportion of incomes classified as "missing" is much higher than for wealth, and it included some high income earners in the form of farmers who did not

have to pay income tax as they paid land tax. The method of
assuming a constant relationship to the exemption level is there-
fore less appropriate. Also, in the two crucial years of the
depression the figures were not published.

The trend in income and real income shown in the income tax
figures is similar to that of the minimum wage series with rela-
tively slow growth from 1922 to 1929, and then a sharp decline

TABLE 17.13

APPROXIMATE AVERAGE INCOMES RETURNED FOR TAX

Income Year Ending 31st March	Proportion "Missing"	Average Income	Ratio to Minimum Wages
1922	83.04	113.72	1000
1923	86.88	96.23	859
1924	86.52	101.59	894
1925	86.80	102.61	890
1926	86.56	104.67	895
1927	83.56	117.71	991
1928	83.23	120.16	980
1929	82.76	125.18	1019
1930	82.39	124.86	1017
1931	80.81	122.12	1074
1932	n.a.	n.a.	n.a.
1933	n.a.	n.a.	n.a.
1934	82.63	105.43	1041
1935	81.07	112.76	1089
1936	79.27	125.31	1092
1937	74.35	156.79	1254
1938	71.29	167.51	1284
1939	66.14	187.40	1411

Notes: The exemption from tax was £300 from 1916 to 1931/32,
          £260 from 1931/32 to 1933/34, and £210 from 1933/34
          onwards but those over £200 had to supply returns so
          this is used as the exemption level.

Sources: Miscellaneous Statistics (1922 to 1939),
          Labour Force : Interpolated from G.R. Hawke.
          Disaggregation of the New Zealand Labour Force
          1871 - 1936. VUW Working Paper in Economic History,
          (1979) 79/1 Table 1.

to 1934. The growth in the 1920's was however, substantially slower than that experienced by minimum wage earners, and the rise from 1934 to 1939 rather faster. This is probably a reflection of the relative trends experienced by the top 20 to 25 percent of income earners over the period as a whole. In particular, the trend probably reflects the fortunes of those dependent on profits for income.

TABLE 17.14

PROPORTION OF ASSETS HELD BY WEALTH GROUPS

Income Year Ending 31st March	Top 1%	Top 10%	Bottom 90%
1922	51	71	29
1923	42	71	29
1924	11	56	44
1925	26	61	39
1926	11	57	43
1927	18	57	43
1928	9	55	45
1929	11	58	42
1930	10	61	39
1931	7	59	41
1932	n.a.	n.a.	n.a.
1933	n.a.	n.a.	n.a.
1934	14	43	57
1935	13	39	61
1936	13	40	60
1937	8	44	56
1938	5	41	59

Notes: Calculated from income tax personal assessable income where total labour force was calculated by assuming a constant industrial labour force and average income as in Table 17.13.

Sources: As for Table 17.13.

The income tax schedules are not a particularly good source to use to determine the distribution of income. In 1922 only 23.60 percent of the labour force returned income tax schedules. This proportion tended to decline during the 1920's and 1930's. It was revived however by the wide reach of taxes introduced in

the late 1930's, so that in 1938 39 percent of the labour force filed tax returns. Distributional breakdowns from income tax data are therefore necessarily limited to the trends of the top income earners. Table 17.14 shows that those in the top 1 percent of income earners did not do well in the late 1920's and late 1930's. The gaps in the data source make it difficult to determine the trend in the severe years of the depression, but it would seem that the depression itself did not affect the top earners as much as the years preceding and following it. The decline in the top incomes in the late 1920's probably reflects the poor performance of the rural sector at a time when real wages were rising to the level of 1913. The poor rural incomes would undoubtedly have affected the statistics, as farmers with high incomes were caught for both land and income tax. It is possible that profits were also reduced in this period.

The failure of high incomes to revive after the depression was probably partly a reflection of the increased severity of tax in the higher income brackets. In 1922 those with £8,000 of income paid 19.07 percent of their assessable income in tax. By 1939 this had risen to 41.61 percent, and with this rise the returns to tax evasion and avoidance had obviously increased. It would however, seem likely that the return to prosperity did influence lower incomes more than higher ones. We have already seen that the real minimum wage rates of the unionised wage force rose very rapidly after 1936, and the evidence available suggests that incomes among these groups rose faster than the minimum wage rate. Net overtime hours worked by factories were far higher in this period than in the 1920's, and the demand for factory labour would appear to have been high despite the continued existence of a pool of unemployed. The prosperity of the lower and middle income earners would seem then to have risen faster than that of the very top income earners.

The people in the top 10 percent of income earners did experience a decline in their relative proportion of wealth, but this decline was small compared to the fall in the top 1 percent group. The decline was evident in the 1920's, but this group appeared to lose heavily over the two years of serious depression for which we have no information. After this, however, they retained the 40 percent of assets which they held in 1934, and did not show any downward movement in the late 1930's. The gain

from the top 1 percent moved to the bottom 90 percent group which was not covered sufficiently by the income tax provisions for statistics to be available to divide.

The rise in the income of the bottom 90 percent of earners was sufficiently strong so that real incomes rose rapidly in the late 1930's. By 1939 the real income losses of the 1920's and 1930's had been regained.

CHAPTER 18

LIFETIME INCOME AND WEALTH 1877 to 1939

In Chapter 10 we saw that intergenerational change tended
to reinforce the individual's status. The movements in occupa-
tions between generations tended to be within occupations with a
similar socio-economic standing, and such social mobility as was
present tended to be fairly equally divided between upward and
downward movements. It was not surprising then, to find that
our econometric evaluation of likely inheritance levels suggested
that most recipients would receive only a portion of their final
estate from their parents. This fraction increased as estate
sizes fell, at least partly because of the calculation techniques,
however, few wealth groups received over 100 percent of their
final estate in inheritance. We can expect therefore, that the
final wealth of the individual at death depended greatly upon
their lifetime income levels. In the New Zealand context then,
our findings on wealth and on income should be closely related.

There is relatively little information available on life-
time income levels. Until the 1926 census the Government tended
only to collect information on average levels of income and not
to worry about the life-cycle pattern. The one exception to
this was the tables published in the AJHR's from 1877 onwards,
which gave the name, position and current income of all Govern-
ment employees in the Civil Service, Post and Telegraph Depart-
ment, Railways and the Teaching Profession. Government employees
are obviously a particular subgroup of the community, and may not
follow the general income movements, particularly in occupations
where Government is the sole employer. However, as this was the
only available source of information an attempt was made to use
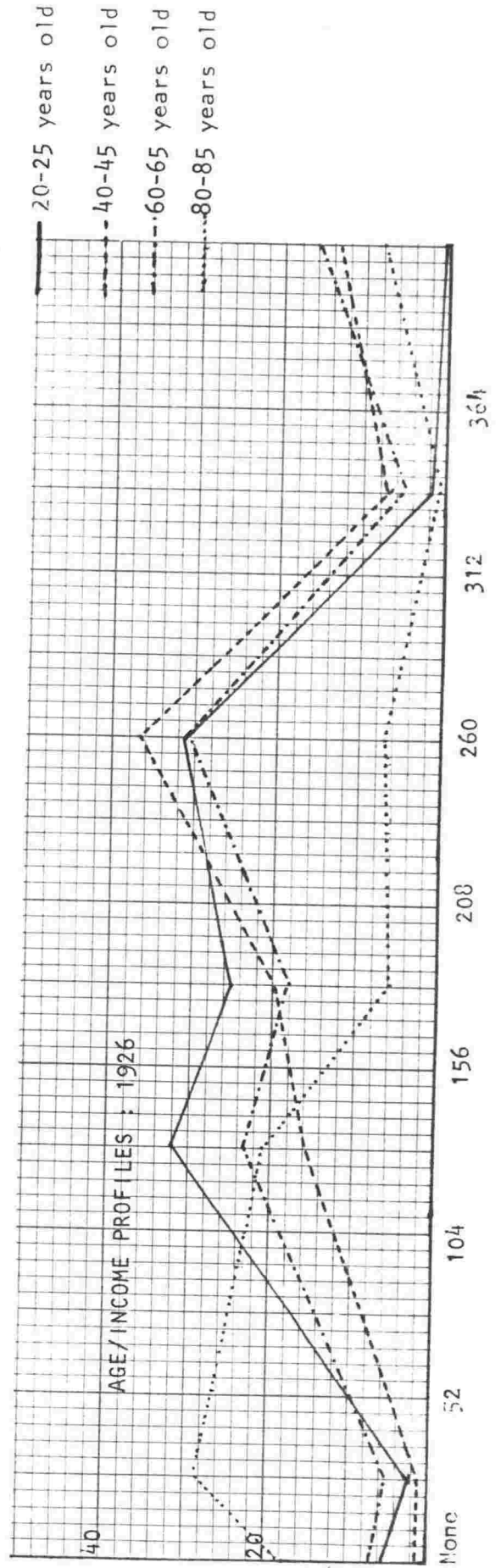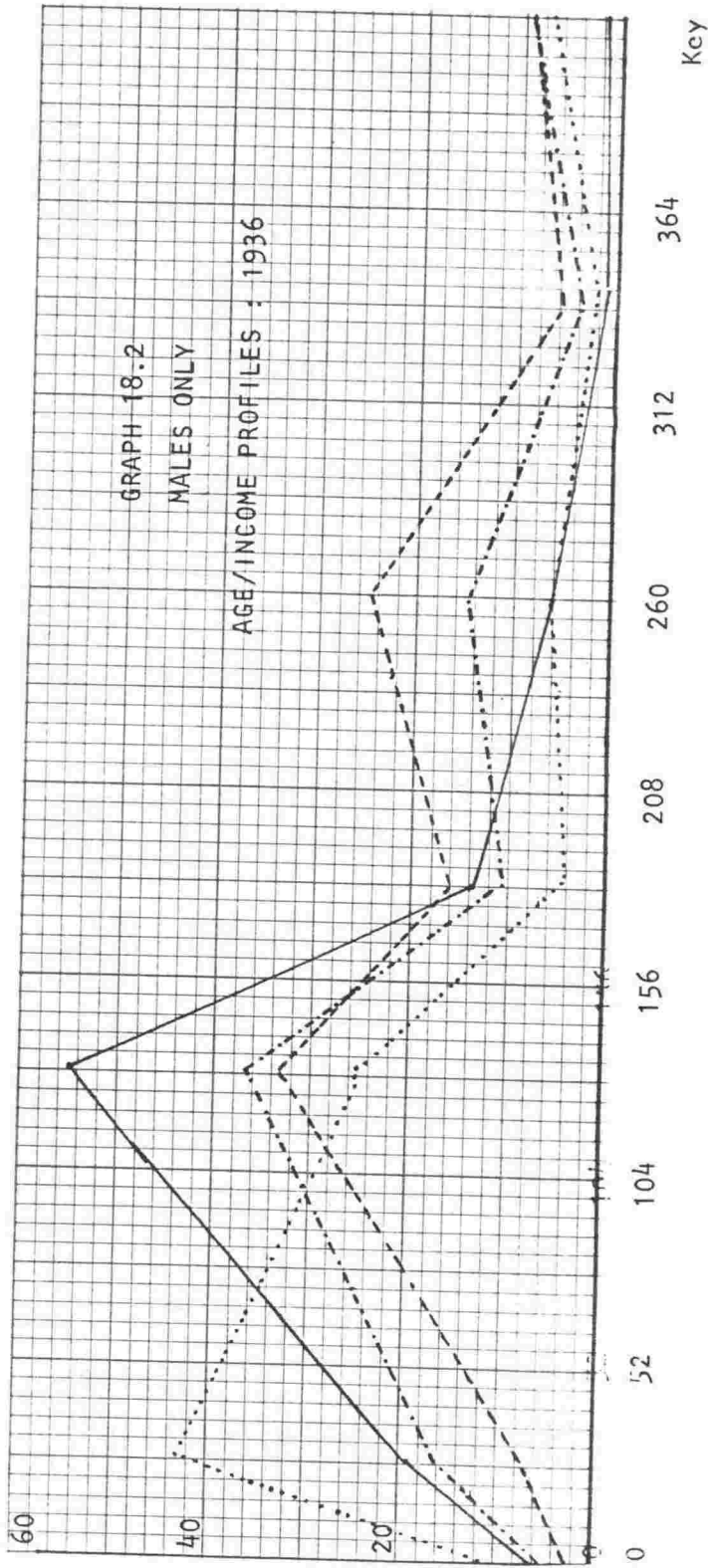
GRAPH 18.1

LENGTH OF SERVICE AND INCOME LEVEL
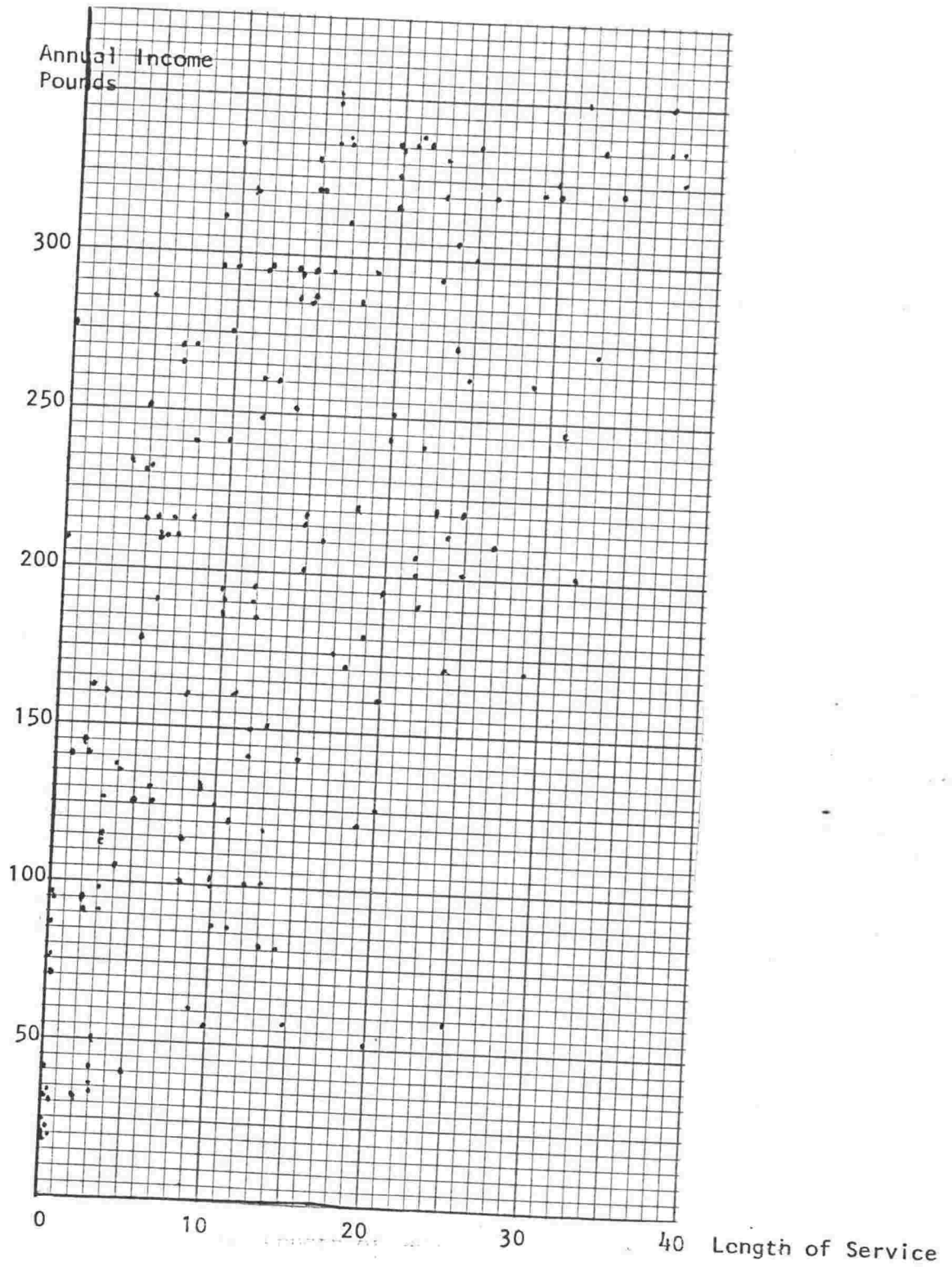
it in our study.   A sample of people was chosen to be traced
from one list to the next at ten yearly intervals.   Because the
lists were largely alphabetical the sample was chosen as those
whose surnames began with RA.   The R's had already been traced
for the nineteenth century teachers, and this list could be used
in our analysis.[1]   The use of the letter R appears to have re-
sulted in a random sample of teachers, and RA appeared to give
a random sample of these.[2]   The result was a collection of about
60 people who worked for the Government for longer than 10 years.
Unfortunately the lists did not clarify the basic question we
wished to answer.   The higher turnover of Government staff in
the period prior to 1930 meant that there were too few people in
our sample to discern the lifetime income trends of the different
occupational groups.   We could not therefore use the sample to
see the effects of different economic conditions on lifetime in-
come.   The effect of general economic conditions can therefore
only be guessed at from the two censuses which asked the entire
population for their income.   The comparison of the two censuses
suggests that the lifetime income of individuals and their pros-
pects for high wealth accumulation did vary markedly where the
individual was in their earning cycle when different economic
conditions hit them.

In both the 1926 and 1936 censuses the population was asked
to indicate the income range into which their annual income fell.
The income groups were almost identical in both censuses.   The
printed tables give an aggregate picture of the cross-section
trends of income across age groups.   The distribution of income
in each year is shown in Graph 18.2.   The different economic
climates of the two years is immediately apparent in the graphs.
The peak income group for all but the elderly in 1926 was the
£208 - £259 range;   in 1936 it was the £52 - £155 range.   The
lower average income level which this implies was shown in

---

[1].   The lists were compiled by, and made available by Professor
R.D. Arnold, Victoria University of Wellington.

[2].   For the justification of a letter-cluster sample see J.A.
Phillips, 'Achieving a Critical Mass While Avoiding an
Explosion : Letter-Cluster Sampling and Nominal Record
Linkage'.
J. of Interdisciplinary History IX(3) Winter 1979 pp.
493-508.

GRAPH 18.2

MALES ONLY

AGE/INCOME PROFILES : 1936

AGE/INCOME PROFILES : 1926

Key

20-25 years old
40-45 years old
60-65 years old
80-85 years old

Chapter 17.

Despite the dominance of the overall income trend, some age/income characteristics are apparent in Graph 18.2. It is important to begin by noting that all the age groups (except the 80-85 one) had a similar proportion of their personnel in each income category. The overall shape of the curves is similar, except in the case of the very elderly. This suggests that either most occupations had no age profile trend, or that these trends were off-setting. In fact, both these tended to be true. In professional occupations income tended to rise with age through to middle life. However, in manual occupations, income tended to decline with age as physical strength declined. This trend was however, less pronounced than that of the professional group, and tended to mean that the 40-45 age group had the lowest pro-portion of members in the lower income brackets and the highest proportion in the higher income brackets. This was the opposite pattern to that found in the 20-25 year olds, especially in 1936. The higher average incomes of 1926 seem to have been accompanied by greater income mobility for new labour force entrants. The tighter economic conditions of the 1930's had obviously materially affected the ability of new entrants to achieve rapid income growth.

The older age groups tended to have lower incomes, as they began to retire from the labour force. Despite the age profile of professional workers, which tended to still rise (though more slowly) from middle age onwards, the 60-65 year olds had generally a poorer profile than the 40-45 year olds. More of their members were in the low income brackets and less in the upper income brackets. This is again, especially true of the 1936 figures, suggesting that older members of the workforce, as well as new entrants, were particularly hard hit by the 1930's depression. The trend towards lower incomes with retirement is most clearly shown in the 80-85 year olds. They dominated the lowest income levels and had very few members still with an income above the mid-point of the range.

The final pattern worth noting from Graph 18.1 is that the highest income earners, those with £364 and over, tended to be drawn in both years from a similar proportion of all age groups except the 20-25 year olds. The 20-25 year olds had substan-tially fewer people proportionately in this income bracket.

GRAPH 18.3

INCOME/AGE PROFILES = 1926 MALES

(Percentages of each age groups earners)
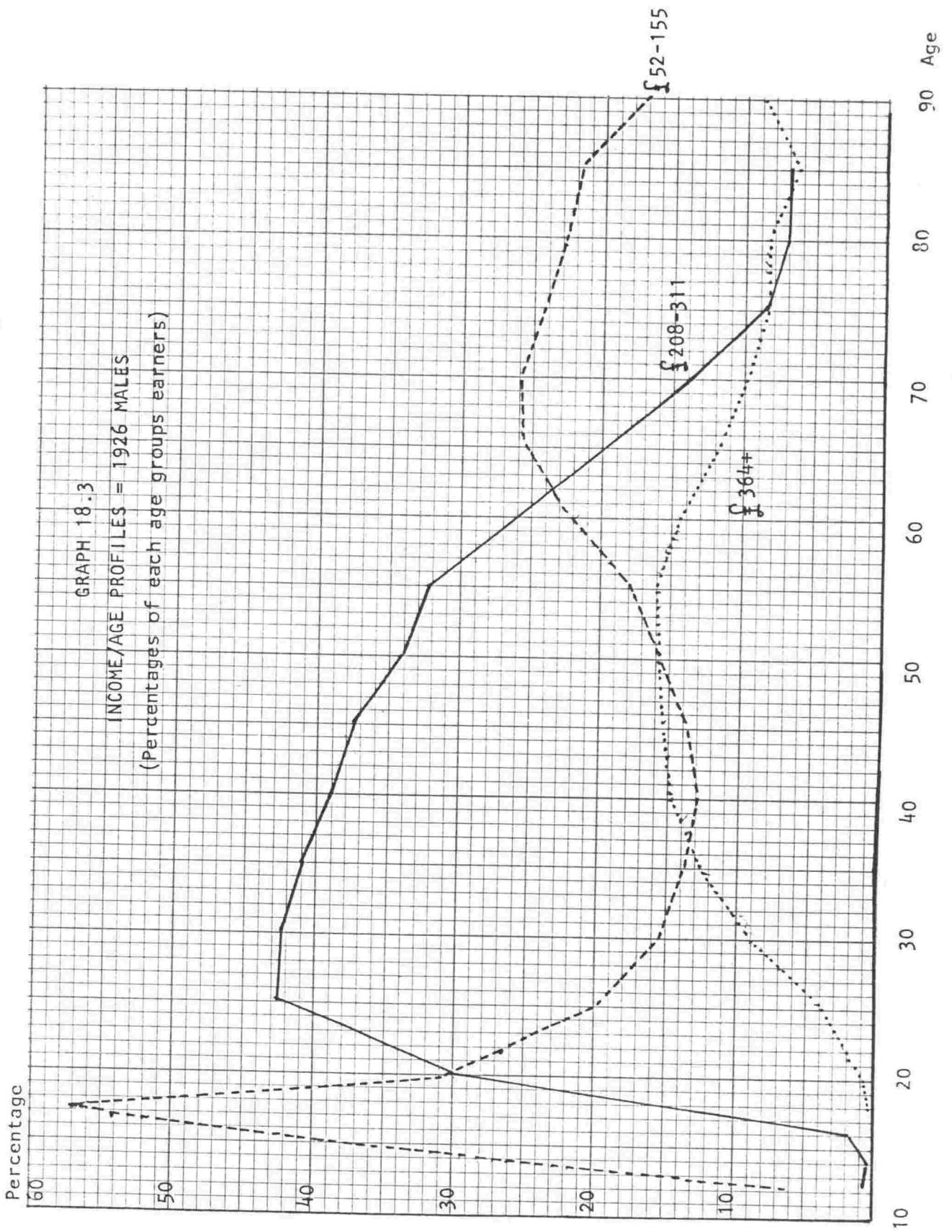
This suggests that high incomes were acquired by mid-life and then continued through to old age. This pattern would be consistent with a situation where the highest income levels were achieved only by those inheriting wealth. An inheritance was not normally received until mid-life, and the income from an inheritance would not diminish with age and retirement. Only if the wealth was poorly invested, or the recipient's expenditure exceeded the income it produced and lived off their capital, would the income diminish with age.

There was, however, a substantial decline in the proportion of income earners in the top income bracket between 1926 and 1936. The decline is relatively uniform in all age groups except the 80-85 year olds. The proportion of elderly people did not decline between the two censuses, while other age groups had a 40 to 50 percent drop in their proportion of members. This suggests that the top income earners had their incomes reduced more than average in the depression, and that this reduction was concentrated on those who were in the working age groups. The retired, and by inference, those living off invested wealth, would appear to have lost less. In 1936, then, the proportion of invested incomes in the top income bracket was probably higher than in 1926.

Graphs 18.3 and 18.4 show the proportion of each age group in the income brackets depicted. They represent then, the probability that a man of a particular age would be earning an income within that bracket. The comparison of the two graphs shows that the decline in the average income over the course of the depression was reflected in a rise in the proportion of each age group in the £52 - £155 income bracket. In 1926 this income bracket held less than 20 percent of the people of working age. The proportions were dominated by the £208 - £311 income group. By 1936 the lower income group was the most common for men of all ages. The proportions had risen the most for the middle age groups from the age of 30 - 60. The depression obviously reduced the increases which had in 1926 been associated with age and work experience. This was reflected, as we noted from Graph 18.1, with a decline in the proportion of those aged 30 to 60 in the top income bracket.

The effects of the depression on peoples' lifetime income profile can therefore be summarised as: firstly, the new entrant

GRAPH 18.4

INCOME/AGE PROFILES = 1936 MALES

(Percentages of each age groups earners)
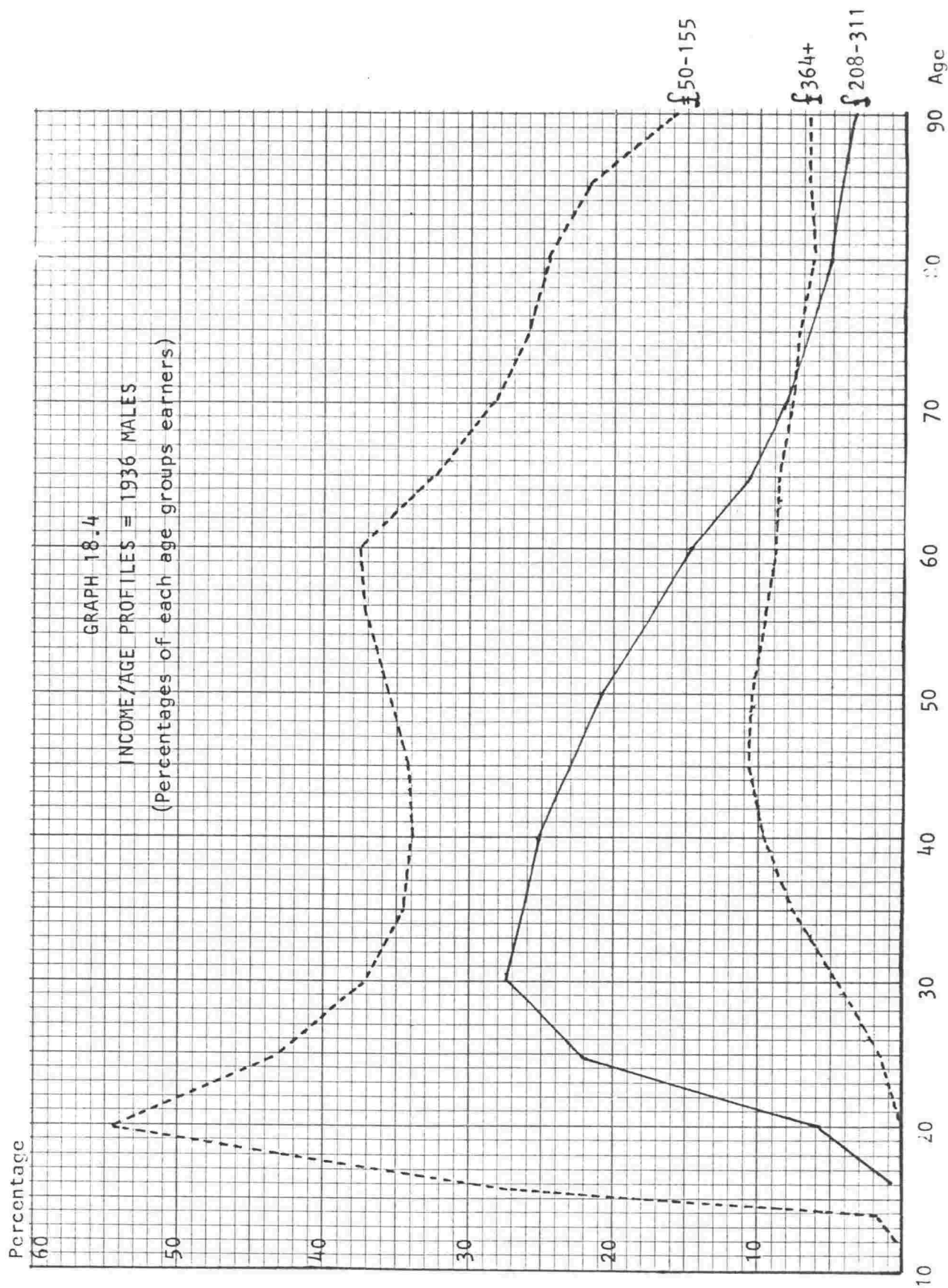
to the labour force had less chance of moving beyond the lowest income level; second, those in their middle working life had less chance of increasing income and indeed, a reasonable number of them suffered income loss; thirdly, those near to or at retirement suffered a particularly heavy loss of income; and finally, those who were dependent on investments to sustain a high income appear to have had little income loss, while those who received high incomes from employment faced a significant decline in their income. A period of poor general economic conditions would therefore seem to reduce the ability of all except those who already had substantial wealth to accumulate it, while a period of easier financial conditions, promoted upward income mobility for at least some of the population.

The influence of income on wealth can perhaps be partially seen by comparing the flow of income to occupational groups with the final wealth achieved by these groups. Both the income and wealth are of course in nominal terms. The income flows have not however been discounted at all. Income earned early in life is of course more valuable as it may be invested and so return additional income. If we had true lifetime income series then it would have been worth discounting the stream. As it is we have only average income levels and we know from the census information that these will over estimate the level of income in the early years. By not discounting at all we offset at least some of this over estimate of early income.

The calculations assumed that most of the people in our time period worked between the ages of 15 and 65, and that on average they were aged 70 at death. This meant that we had only a sufficient income series to link to the 1932 deaths (implying income from 1877 to 1927) and the 1939 deaths (implying income from 1884 to 1934). The results are given in Table 18.1.

The wealth figures in the table are based upon the probate sample which we used in our detailed analysis of wealth. This sample has enabled us to determine the ratio of lifetime income to wealth for the principal industrial groups. However, the wealth figures do not include any allowance for the estates not valued for probate, and as was demonstrated in Chapter 2, they will therefore overstate the average value of wealth achieved.

The figures in Table 18.1 suggest that people received on average about four times as much income as their final wealth.

TABLE 18.1

TOTAL LIFETIME INCOME

COMPARED TO WEALTH AT DEATH

(Percentages)

Industry	1932	1939
Agriculture	80.1	89.4
Mining	464.9	894.4
Food and Beverages	326.0	552.0
Clothes	749.3	800.3
Wood and Furniture	464.4	140.4
Paper and Printing	n.a.	967.2
Metals and Machinery	515.3	228.3
Building	624.0	789.9
Sea Transport	58.8	99.8
Services	597.0	149.8

Note: This assumes the 1914 income was the same as
           that in 1911.

Sources: See Chapters 15, 17 and 2.

The proportion was considerably lower in agriculture, sea transport and services, but this was probably because our income series in these areas were dominated by the unskilled and low paid workers.   These sectors were characterised by a wide split in wealth, and our income series is dominated by the poorer people, while our wealth series is dominated by the rich.   In the other sectors, where the distribution was more equal, the ratios are much higher.

The ratios are much higher for the 1939 year than for the 1932 one.   The exception is the wood and furniture sector which had an uncharacteristically high mean wealth level in 1939 as a result of some large estates.   The overall trend suggests that the lower income levels of the 1930's were not the main reason why wealth levels declined.   The 1939 cohort had to suffer at least some years of the depression while earning, whereas the

1932 cohort did not face this period at all during their working life. Yet the wealth of the 1939 cohort was less as a proportion of their income. If their wealth came from savings this implies that their savings were less. It is probable however, that this is a reflection of the pattern shown in Graphs 18.2 and 18.3, where the incomes of the older members of the workforce were disproportionately affected by the 1930's depression. Using the average income probably overstates the earnings of the 1939 cohort.

Unfortunately our income series do not reach far enough back in time to compare earning levels with wealth over a long period. We cannot therefore draw further conclusions on any trends in the relationship between earnings and final wealth at death.

CHAPTER 19

CONCLUSIONS

Chapter 14 has already summarised the main findings of this thesis about wealth and wealth-holders in New Zealand. The sources of information were more detailed in relation to wealth than they were for income so that more detailed and firmer conclusions could be drawn.

The chapters on income have dealt with only the major trends in income levels. The distribution of incomes has been left largely untouched because figures relating to the distribution were largely lacking. Income tax was not, in our period, paid by more than a small proportion of the population. The breakdown of the figures given there cannot do more than provide a detailed guide to fortunes of the top income earners, and a broad indication of the overall trends faced by the vast majority.

The average wage rates figures produced by the Government initially as publicity material for the 1870's immigration drive enabled us to see the broad trends experienced by the working person. Over the period 1874 to 1911 most occupations experienced a steady rise in real incomes, especially in the period from 1900 to 1911. In this period, as we found in Chapter 16, unemployment was falling and wage rates rising so that the real wage paid to workers was rising. From 1874 to 1900 rising unemployment and falling nominal wage rates more than offset the drop in living costs which came with the steady fall in consumer prices.

The nineteenth century also saw a number of other trends which have been shown by the figures in Chapters 15 and 16. The wages paid to women workers, as a proportion of the wages of men in similar jobs, tended to rise, especially after 1900. The rise appears to have been strongest in the domestic service

occupations, as women moved out into more prestigious jobs.
The higher wages undoubtedly reflected the shortage of domestic
servants, but social pressures were too strong for them to reverse
the outflow of workers. Women tended to be moving into teaching,
nursing and clerical work where reasonable academic qualifications
were needed. These jobs showed the most marked rise in wages
compared to the semi-skilled work of a tailoress. It increasingly
came to pay girls to forego a year or two of income to obtain
higher educational qualifications. This was not so true of boys,
as they had on-the-job training in many occupations.

The rewards to skilled labour, especially in the professional
and building sectors also rose for men. The most dramatic rise
was for the primary teaching profession which, in 1880, had pro-
vided an income equivalent only to that of a semi-skilled worker.
By 1910 it provided the best income for the jobs we surveyed.
Teachers undoubtedly benefited from the greater economic growth
experienced after 1895, and from the recognition of their pro-
fessional status by a national pay scale. Despite the rise in
the incomes of skilled building labour most of the margins for
skill in the economy appear to have declined as unemployment fell.
After 1900, in general, New Zealand had a much lower margin for
skill than that found by other studies in Australia and the
United States. This was one of the few pieces of evidence to
suggest that income, like wealth, was distributed relatively
evenly in New Zealand.

The 1920's and 1930's were a time of less growth in real
incomes. Minimum wage rates for men did not keep up with the
inflation during the first World War, and it was 1928 before the
1914 level of real minimum wage rates was reached. The 1930's
saw no growth in real wages prior to 1937, but this stability
was undermined for a large proportion of workers by the high un-
employment rates. The depression does not appear to have re-
sulted in "wage overhang". The ratio of value added to wages
rose on average during the depression, but this affected differ-
ent industries in different ways. The level of wage overhang
was very high in butter and cheese factories.

While the depression hit many people very hard through un-
employment and short time, it also did lead to a reduction in
the inequality of income. The limited evidence available from
the income tax statistics shows that whereas the bottom 90 percent
of the population had about 40 percent of the income in the late

1920's, by the late 1930's this had risen to about 60 percent. As with wealth, this decline was concentrated in the top 10 percent, while the very high income earners in the top 1 percent showed no decline until the economy lifted in 1937.

It is difficult to link the two periods to show how real incomes changed over the whole period. A rough estimate would suggest that real incomes rose by about three-fold in the period. This places it on a par with the rise in the level of wealth, and probably explains most of the rising estate values. As Chapter 18 explored, inheritance was only a small proportion of the assets accrued by an individual in New Zealand. Wealth at death depended most upon the lifetime income. The increasing equality of income as margins for skill fell and economic conditions favoured the majority of income earners, so too did the level of inequality of wealth. The trend was assisted greatly by the tradition of equal inheritance to all the children which meant that most of the wealthy men discussed in Chapter 13 left their children only moderate inheritances.

BIBLIOGRAPHY

MANUSCRIPTS

Department of Justice

    (a)   Births, Deaths and Marriages, Lower Hutt.
         Death Certificates, 1886-1939

    (b)   The High Courts in Whangarei, Auckland, Hamilton,
         Gisborne, New Plymouth, Palmerston North,
         Masterton, Wellington, Blenheim, Nelson, Christ-
         church, Timaru, Dunedin and Invercargill.
         Probate files for 1924, 1932 and 1939.

OFFICIAL PUBLICATIONS

    Appendices to the Journal of the House of Representatives
    1870-1939.

    Department of Statistics, Census, 1871-1936

    Department of Statistics, Census of Industries etc.
      1886-1939

    Department of Statistics, Miscellaneous Statistics,
      1921-1940

    Department of Statistics, New Zealand Official Yearbook
      1893-1942

    Department of Statistics, Statistics of New Zealand,
      1870-1920

    Department of Statistics, Vital Statistics, 1921-1940

    Great Britain, Local Government Board.
      Return of the Owners of Land in Great Britain
      London : Eyre and Spottiswood for Her Majesty's
      Stationery Office, 1875.

    New Zealand Property Tax Department.
      Return of the Freeholders of New Zealand, 1882
      Wellington : Government Printer, 1884.

CONTEMPORARY BOOKS AND PERIODICALS

    Anonymous,   Cyclopedia of New Zealand
                     Vols. 1-6, Christchurch Cyclopedia Co.
                     Ltd, 1897-1906.

    Daily Mail Year Book, 1901-1943

    Mercantile and Bankruptcy Gazette of New Zealand
      1886-1901, 1907-1917.

    Mercantile Record 1900-1906

ARTICLES AND BOOKS

    Arnold, M.N.   'Aspects of Finding a Wife in Nineteenth
                  Century New Zealand.'
                  VUW Working Paper in Economic History
                  82/1 Feb. 1982

Arnold, M.N.   'Consumer Prices, 1870 to 1919'
Victoria University of Wellington,
Economics Department, Discussion Paper
No. 12, May 1982

Arnold, R.D.   The Farthest Promised Land.
Wellington : Victoria University Press
1981.

Arnold, R.D.   'Women in the New Zealand Teaching Pro-
fession, 1870-to 1920 : A Comparative
Perspective.'
Unpublished typescript presented to the
Australian History Conference, August 1984.

Atkinson, A.B. and Harrison, A.J.
The Distribution of Personal Wealth in
Britain.
Cambridge : Cambridge University Press,
1962.

Atkinson, A.B.   The Economics of Inequality
Oxford : Clarendon Press, 1975.

Atkinson, A.B. and Harrison, A.J.
'Wealth and Personal Incomes"
Review of United Kingdom Statistical
Sources Vol VI.
Oxford : Pergamon Press, 1978

Atkinson, A.B. (ed)
Wealth, Income and Inequality :
Selected Readings.
Hammondsworth : Penguin Education, 1973.

Bubnys, E.   'Nativity and the Distribution of Wealth :
Chicago 1870'
Explorations in Economic History 19(2),
April 1982, pp. 101-109.

Champernowne, D.G.
The Distribution of Income Between Persons.
Cambridge : Cambridge University Press,
1973.

Clinkard, G.W.   'Wages and Working Hours in New Zealand,
1897-1919'
New Zealand Official Yearbook, 1919
pp. 861-934.

Easton, B.   'Income Distribution in New Zealand'
New Zealand Institute of Economic Research,
Research Paper, 28, 1983.

Elley, W. and Irving J.
'A Revised Socio-economic Index for
New Zealand.
New Zealand Journal of Educational Studies
XI, 1976, pp.25-36

Endres, T.   'Designing Unemployment Statistics in
                    New Zealand : a Case of Political
                    Arithmetic'
                    Australian Economic History Review XXII
                    Sept. 1972, pp. 151-171.

Fahey, C   'The Wealth of Farmers : A Victorian
                    Regional Study, 1879-1901'.
                    Historical Studies 21(82), April 1984
                    pp. 29-51

Gallman, R.   'Influences on the Distribution of Land-
                    holding in Early Colonial North Carolina'
                    Journal of Economic History, XLII (3),
                    Sept. 1982 pp. 549-576.

Gould, J.D.   'The Twilight of the Estates, 1891 to
                    1910'
                    Australian Economic History Review, X (1),
                    March 1970, pp. 1-26

Harbury, C.D. and Hitchens, D.M.W.N.
                    Inheritance and Wealth Inequality in
                    Britain.
                    London : Allen and Unwin, 1979

Harrison, A.   The Distribution of Wealth in Ten Countries.
                    Background paper to the Royal Commission
                    on the Distribution of Income and Wealth,
                    Report No. 7. London : Her Majesty's
                    Stationery Office, 1979.

Hawke, G.R.   'Disaggregation of the Labour Force'
                    VUW Working Paper in Economic History
                    79/1, 1979

Jenkins, P.   'Distribution of Intestacy'
                    New Zealand Universities Law Review
                    3 Oct. 1968, pp. 169-191.

Jones, A.H.   Wealth of a Nation To Be : the American
                    Colonies on the Eve of the Revolution
                    New York : Columbia University Press, 1980.

Katz, M.B.   'Occupational Classification in History'
                    Journal of Interdisciplinary History
                    3, 1972-73, pp. 63-88

Keal, J.R., Pope, C.L., and Wimmer, L.T.
                    'Household Wealth in a Settlement Economy,
                    1850-1870.'
                    Journal of Economic History, XL(3),
                    Sept. 1980 pp.477-496.

Macarthy, P.G.   'Wages for Unskilled Work and Margins for
                    Skill, Australia 1901-21.'
                    Australian Economic History Review,
                    XII(2), Sept. 1972, pp. 142-160

Macrae, J. and Sinclair, K.
                    'Unemployment in New Zealand during the
                    Depression of the Late 1920's and early
                    1930's'
                    Australian Economic History Review,
                    XV(1), March 1975, pp. 35-44

Marshall, L.   'Probate Records in New Zealand'
                    New Zealand Genealogist 9(87), Aug. 1978
                    pp. 151-153

Mitra, A.   The Share of Wages in National Income
                    Calcutta : Oxford University Press, 1980.

Phelps Brown, E.H. and Browne, M.H.
                    A Century of Pay
                    London : MacMillan, 1968

Phelps Brown, E.H.
                    The Inequality of Pay
                    Oxford : Oxford University Press, 1977.

Phillips, J.A.   'Achieving a Critical Mass While Avoiding
                    an Explosion : Letter-cluster Sampling
                    and Nominal Record Linkage'
                    Journal of Interdisciplinary History
                    IX(3), Winter 1979, pp. 493-508.

Pickens, K.A.   'Occupational Mobility in a Nineteenth
                    Century Colony'
                    Journal of Social History, 11(3) Spring
                    1978, pp. 404-412.

Pope, D.   'Wage Regulation and Unemployment in
                    Australia'
                    Australian Economic History Review,
                    XXII(2), Sept. 1982, pp. 103-126.

Roth, H.   'Unemployment Among New Zealand Carpenters,
                    1876 to 1900'
                    Australian Economic History Review,
                    XVIII(1), March 1978, pp. 64-74

Rubinstein, W.D.'British Millionaires, 1809-1949'
                    Bulletin of the Institute of Historical
                    Research, XLVII, 1974, pp. 202-223.

Rubinstein, W.D.'The Distribution of Personal Wealth in
                    Victoria, 1860 to 1974.
                    Australian Economic History Review
                    XIX(1), March 1979, pp. 26-41.

Rubinstein, W.D. Men of Property
                    London : Croom Helm, 1981.

Rubinstein, W.D. 'The Top Wealth Holders in New South
                    Wales, 1817-1939'
                    Australian Economic History Review
                    XX(2) Sept. 1980, pp. 136-152

Rubinstein, W.D. (ed)
                    Wealth and the Wealthy in the Modern World
                    London : Croom Helm, 1980.

Scholefield, G.H. (ed)
                    A Dictionary of New Zealand Biography
                    Wellington : Department of Internal
                    Affairs, 1940.

Smith, James D. Modeling the Distribution and Intergenera-
                    tional Transmission of Wealth.
                    Chicago : Chicago University Press, 1980

295

Soltow, L.   'The Census of Wealth of Men in Australia
                  in 1915 and in the United States in 1860
                  and 1870'
                  Australian Economic History Review,
                  XII(2), Sept. 1972, pp. 125-141.

Soltow, L.   'Male Inheritance Expectations in the
                  United States in 1870'
                  Review of Economics and Statistics
                  LXIV(2), May 1982, pp. 252-260.

Soltow, L.   Men and Wealth in the United States,
                  1850-1870
                  New Haven : Yale University Press, 1975.

Soltow, L.   Six Papers on the Size Distribution of
                  Wealth and Income.   A Conference on
                  Research in Wealth and Income.
                  New York : National Bureau of Economic
                  Research, Columbia University Press, 1969.

Tremain, D.J.   Occupational Prestige in Comparative
                  Perspective
                  New York : Academic Press, 1977.

Williamson, J.G. and Lindert, P.H.
                  American Inequality : A Macroeconomic
                  History
                  New York : Academic Press, 1980.

Winchester, Ian 'The Linkage of Historical Records by Man
                  and Computer : Techniques and Problems.'
                  Journal of Interdisciplinary History
                  107-124.

THESES

Campbell, R.J.   'Unemployment in New Zealand, 1875 to
                  1914'.
                  M.A. Thesis, Massey University, 1976.

Stone, R.C.J.   'A History of Trade Unionism in New
                  Zealand'
                  M.A. Thesis, University of New Zealand,
                  1948.

Toynbee, Claire   'Class and Mobility in Nineteenth Century
                  Wellington Province, an Exploratory Study
                  of Immigrants Arriving 1840-1880'
                  M.A. Thesis, Victoria University of
                  Wellington, 1979.