DISTRIBUTION OF WEALTH IN AUSTRALIA*

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This paper discusses the distribution of wealth derived from the Australian Survey of Consumer Finances and Expenditures, 1966–68, carried out jointly by Macquarie University and the University of Queensland. It analyzes the composition of net worth, assets, and liabilities by socio-demographic characteristics and over time.

INTRODUCTION

It is being increasingly realized that knowledge of the distribution of income alone is not enough to make any valid judgement about relative economic positions of individuals. Many aged people, for example, receive quite low incomes and yet they have sufficient wealth to fall back on in case of emergency. Thus, wealth backing is an important factor in determining the relative economic position of a person. It may be said that the distribution of income and the distribution of wealth together determine the relative levels of economic welfare of the population of a country.

There are essentially two types of statistical data that are used in constructing the empirical distribution of wealth. The first type is the survey data on the assets and liabilities of a cross-section of the population. For most countries, survey data on wealth are a rarity. Another chief source of information is estate duty statistics that are gathered by taxation authorities on the death of individuals with large estates.[1] The main defect of such data is that they refer only to the top wealth-holding population. The present paper is based on data from the Australian Survey of Consumer Finances and Expenditures 1966–68, which provides information on the assets and liabilities of a sample of families. The data have only recently been processed. This paper, the first of a number of papers planned to analyze consumer finances data, is concerned with the composition of assets and net worth of the families and the evaluation of the inequality of the distribution of wealth.

The outline of the paper is as follows. The second section of the paper describes the survey. The definitions of the concepts used are discussed in Section 3. In the fourth section, the analysis of the data begins with composition of net worth, assets and liabilities. Section 5 studies the extent of inequality of wealth and assets. The sixth section discusses the decomposition of the sample households according to some socio-demographic characteristics of the households.

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[1]For details of the method see Lampman [6], Atkinson [1], Atkinson and Harrison [2], and Lyons [7].

The seventh section analyses the temporal changes in the distribution of wealth since 1915 when the last census of individual wealth was done. Finally, in the last section, after a brief international comparison of the inequality of wealth, a few concluding remarks are made.

2. The Survey

The Australian Survey of Consumer Finances and Expenditures 1966–68 is an Australian-wide sample survey of the households carried out jointly by Macquarie University and the University of Queensland.[2] The actual interviews with the families were done in two different stages. The first stage of the investigations was an enquiry into the expenditures on different commodities made by the households. Gross family income and demographic characteristics of the families were also recorded at this stage. The number of complete responses obtained at this stage was 5459. At the second stage of the investigation the interviewers returned to those households who participated in the first stage of the survey. This time the objective was to obtain finances data, i.e., detailed information about household incomes from all sources, direct taxes paid, cash benefits received from the Government and various assets and liabilities of households. Only about 50 percent of the households that participated at the first stage of the survey responded at this stage. In all, 2,757 usable questionnaires were obtained. The finances data relate to the 1966–67 financial year. The present study is based on the data collected at the second state.

Since the response rate at the second stage of the survey is only 50 percent, there is high probability of getting large bias due to non-response. Fortunately, there were a few demographic variables common to both the samples which enabled us to carry out the following statistical test to detect such a bias.

Suppose the households are divided into k classes (according to household size or age of the head of household) and let n_{i1} and n_{i2} be the observed frequencies in the ith class in sample 1 and 2 respectively. Let Λ_{i1} and Λ_{i2}, $i = 1, 2, \ldots k$ be the probabilities of the cells in the two populations from which the samples are drawn; then the hypothesis to be tested is: $\Lambda_{i1} = \Lambda_{i2}$ for all i. The test statistic is[3]

$$\chi^2 = \frac{1}{p(1-p)}\left[\sum_{i=1}^{k} n_{i1}p_{i1} - n_1 p\right] \tag{2.1}$$

where

$$p_{i1} = \frac{n_{i1}}{n_{i1}+n_{i2}}, \qquad p = \frac{n_1}{n_1+n_2}$$

and n_1 and n_2 are the sample sizes at the two stages of the survey. The χ^2 defined in (2.1) has $(k-1)$ degrees of freedom.

[2]See Edwards, Drane and Yates [4].

[3]For a detailed description of the test see Rao [9], p. 399.

Tables 1 and 2 give the decomposition of the two samples according to the family size and the age of the head of household respectively. The computed χ^2 value for family size is 3.6 and it is not significant at the 5 percent level. The computed χ^2 value for age of the head of household is 23.67 which is significant at the 5 percent level. If we omit the first age group (under 30), the computed χ^2 value becomes 5.96 which is not significant at the 5 percent level. Thus we may conclude that the first age group (under 30) is under-represented at the second stage of the survey. We made the following adjustment to correct the bias due to non-response in the age group less than 30.

In the finances survey, there were 322 families in this age group, the frequency distribution of which is given in Table 3. One hundred and twenty families were added to the total sample of 2,757 so that the percentage of families

TABLE 1

PERCENTAGE DISTRIBUTION OF THE TWO SAMPLES ACCORDING TO HOUSEHOLD SIZE

Household Size (Number of Persons)	Expenditures Sample (Percentages)	Finances Sample (Percentages)
1	9.49	8.92
2	24.53	23.98
3	18.24	19.08
4	22.01	22.85
5	14.35	13.67
6	6.83	6.67
7	2.63	2.65
8 or more	1.91	2.18
Sample Size	5,443	2,757

TABLE 2

PERCENTAGE DISTRIBUTION OF THE TWO SAMPLES ACCORDING TO THE AGE OF THE HEAD OF HOUSEHOLD

Age	Expenditures Sample	Finances Sample
Under 30	15.37	11.68
30–34	11.10	11.43
35–39	11.65	11.68
40–44	13.34	13.71
45–49	11.57	11.39
50–54	9.37	9.97
55–59	7.13	7.80
60–69	12.40	13.09
Over 69	8.07	9.25

with household head age less than 30 becomes 15.37 which is the same percentage as in the expenditures sample. The breakdown of these additional families in different ranges of net worth is given in the third column of Table 3. Next we assumed that the disposable income, assets, net worth, and debts of these additional families in each net worth range equal the mean of these variables obtained from the finances sample for this age group. The distributions of assets, net worth, debts and disposable income were then derived from the adjusted sample of 442 families.

TABLE 3

NUMBER OF FAMILIES WITH AGE OF HOUSEHOLD HEAD LESS THAN 30

Range of Net Worth (A$)	Finances Sample (1)	Break-down of Additional 120 Families (2)	Adjusted Sample (1) + (2) (3)	Relative Frequency in all the Samples (4)
≤0	8	3	11	2.5
1–999	82	31	113	25.5
1,000–2,999	67	25	92	20.8
3,000–4,999	50	17	67	15.2
5,000–6,999	38	14	52	11.8
7,000–8,999	29	11	40	9.0
9,000–10,999	22	8	30	6.8
11,000–12,999	8	3	11	2.5
13,000–14,999	7	3	10	2.2
15,000–17,999	7	3	10	2.2
18,000–20,999	3	1	4	0.9
21,000–25,999	2	1	3	0.6
26,000–30,999	0	0	0	0
31,000 and over	0	0	0	0
Sample Size	322	120	442	100

It should be pointed out that we have made adjustment for non-response error only at the second stage of the sampling. The expenditures survey (the first-stage) itself may be subject to large bias due to non-response. Since the number of families originally approached is not known, the response rate at the first stage of the survey cannot be determined.

Apart from the error due to non-response, data may be faulty for several other reasons. Income and wealth data are generally believed to be subject to systematic errors or bias due to understatement. Respondents may conceal even the existence of certain assets by reporting them to be equal to zero. Some errors may be caused by inability of respondents to recall some of the purchases made during the year. There is also an unwillingness on the part of some people to disclose their assets fully. The individual bias of the interviewer may be another source of error.[4]

[4]An excellent description of the limitations of survey data is given by Podoluk [8].

3. The Concepts

The unit of reference in the survey is the household. In this study the words "household" and "family" have been used interchangeably. A household unit is defined as a group of individuals living in the same dwelling and using common cooking facilities. One exception to this is that a person boarding with a family, although strictly speaking a member of the household, is considered to form a separate household for the purpose of the survey.

The word "wealth" is used in the sense of "net worth," net worth being defined as the total value of assets held by the household minus total debt. Total value of assets includes the amount of cash held and bank deposits, the market value of all real properties and motor vehicles, the surrender value of all life insurance policies, equity of superannuation, the market values of shares and securities held, an estimated value of the household appliances covered by the survey and the value of unincorporated business. The survey did not cover all the household appliances. Only those that were bought during the financial year 1966–67 and those that were purchased before but for which hire-purchase repayments continued in the year 1966–67 were covered. It is obvious that many of the appliances that form a substantial part of the household assets are excluded. A similar restriction exists in the case of motor vehicles. Since motor vehicles are generally bought on hire-purchase, this would not introduce much error in the estimates of household assets.

There are a number of other assets that are not covered in the survey. Among these antiques, works of art, jewelry, values of livestock, copyrights, etc., are worth mentioning.

In the case of total debt, all conceivable debts are included except that some debts outstanding on life insurance policies may have been left out and personal loans obtained from friends are not included. Needless to say, in the case of all kinds of debts only amounts outstanding are included in the survey.

4. Composition of Wealth

Table 4 presents the distribution of net worth, assets and debts by size of net worth. According to this table, there are 2.32 percent families who have zero or negative net worth which means that their debts equal or exceed their assets. There is an unusually high concentration of families in the net worth range \$1–999. As we move along the higher net worth ranges the average value of assets rises steadily, but the average debt rises up to a point then declines somewhat and then rises again.

Next we examine the composition of household assets. The survey distinguishes nine kinds of assets, the breakdown of which is given in Table 5. Each component of assets is expressed as the percentage of total value of assets held by the families. In general the largest asset item is the home, which accounts for 60 percent of total assets. As we move along the higher net worth ranges, the value of the home as a percentage of total assets rises up to a point and then declines. The third item, motor vehicles, constitutes a higher percentage of assets in the low net worth ranges, but its importance diminishes as one moves up the net worth ranges.

TABLE 4

COMPOSITION OF NET WORTH BY SIZE OF NET WORTH

Range of Net Worth	Relative Frequency	Average Net Worth	Average Assets	Average Debts
$	%	$	$	$
≤0	2.32	−816	1,637	2,453
1–999	12.37	386	743	357
1,000–2,999	8.63	1,900	3,538	1,638
3,000–4,999	7.83	3,962	7,251	3,289
5,000–6,999	9.39	5,990	9,475	3,486
7,000–8,999	10.70	8,004	10,932	2,955
9,000–10,999	10.55	9,939	12,568	2,629
11,000–12,999	8.34	11,984	14,080	2,095
13,000–14,999	5.98	13,939	16,010	2,071
15,000–17,999	6.20	16,433	18,464	2,041
18,000–20,999	4.32	19,422	20,916	1,393
21,000–25,999	4.61	23,166	25,066	1,899
26,000–30,999	2.79	28,195	30,693	2,498
31,000 and over	5.59	55,624	57,947	2,322
Average	100	$11,625	$13,821	$2,196

Appliances are an insignificant item except for families with low net worth. It is interesting to note that cash and bank deposits as a percentage of total assets is quite high for the first three ranges then it becomes almost constant.

At this stage of the analysis it will be interesting to observe the composition of assets by the age of the head of the family, since age is considered to be one of the most important demographic factors in determining both size and composition of assets. Table 6 presents the composition of assets by five different age groups. The table shows that among families with younger heads, "own home," constitutes a higher percentage of total assets than among families with older heads. The value of motor vehicles as a percentage of total assets is also higher among the younger household heads than among the older ones. Cash and bank deposits constitute a substantial item in the age group below 30 and above 60. The proportion of assets in shares and securities increases with the age. For the families with head 60 years or older the percentage of assets in securities is almost 12. The proportion of assets in insurance and business increases with age up to 59 years and then declines. On the whole, age seems to be an important factor that is associated with the composition of assets. The size of total assets increases with age up to the age of 59 and then it falls.

The examination of the composition of debts presents a problem. The survey records hire-purchase debts on all kinds of assets, but in some cases purchases of some assets are not financed by finance companies but by personal loans obtained from banks, credit unions or some other sources. As a result, these loans are not represented by any assets. Therefore, in what follows we shall get only an approximate picture of the actual composition of liabilities of the families.

Table 6 presents the composition of debts in terms of the age of the household head. The table shows that debt on account of buying a home constitutes the

TABLE 5

COMPONENTS OF ASETS BY RANGES OF NET WORTH (PERCENTAGES OF TOTAL ASSETS)

Range of Net Worth	Own Home	Other Property	Vehicles	Appli-ances	Cash and Bank Deposits	Shares and Securities	Insurance	Super-annuation	Business	Total
Negative and 0	26.0	34.4	7.4	2.9	17.5	0	6.9	2.1	2.9	100
$1–999	28.8	1.2	20.9	7.5	26.7	0.6	8.3	6.0	0	100
1,000–2,999	51.8	0.3	12.6	2.9	17.6	0.6	5.7	4.0	0.8	100
3,000–4,999	69.3	2.0	6.1	1.4	9.6	1.3	3.6	6.2	0.5	100
5,000–6,999	77.8	3.1	4.4	1.1	6.3	0.3	3.2	3.5	0.3	100
7,000–8,999	80.4	0.9	4.1	0.9	5.6	0.9	2.6	4.2	0.4	100
9,000–10,999	76.8	2.0	4.2	0.7	6.3	0.9	3.2	5.4	0.5	100
11,000–12,999	77.1	1.5	3.6	0.7	6.8	0.9	3.0	6.0	0.3	100
13,000–14,999	74.2	2.7	3.5	0.8	6.7	1.1	3.1	6.7	1.2	100
15,000–17,999	70.8	3.3	3.6	0.7	6.7	2.6	3.1	8.4	0.9	100
18,000–20,999	65.5	3.0	3.1	0.5	9.0	4.3	4.4	7.6	2.7	100
21,000–25,999	56.5	7.5	3.2	0.5	8.8	4.5	4.1	11.3	3.6	100
26,000–30,999	47.9	6.3	2.9	0.5	9.0	8.4	4.4	15.0	5.7	100
31,000 and over	30.0	10.2	1.9	0.3	8.6	17.8	2.8	18.0	10.4	100
Total	60.0	4.8	3.7	0.7	8.0	6.0	4.5	9.8	3.6	100

TABLE 6

COMPOSITION OF ASSETS (%) BY AGE GROUP

Age Groups	Own Home	Other Property	Vehicles	Appli-ances	Bank Accounts	Securities	Insurance	Super-annuation	Business Assets	Total	Average Assets
Under 30	68.40	2.38	6.68	1.88	9.56	1.59	3.55	5.32	0.64	100	$7,245
30–39	64.41	6.91	4.13	1.07	6.27	3.01	3.61	7.01	3.60	100	12,270
40–49	60.72	5.18	3.79	0.76	6.38	4.02	4.00	11.38	3.77	100	15,168
50–59	54.30	5.14	3.60	0.52	7.34	6.34	3.68	14.00	5.07	100	16,925
60 and over	58.48	3.01	2.42	0.29	11.56	11.55	2.10	7.80	2.80	100	14,868
Total %	60.01	4.83	3.66	0.73	8.01	5.98	3.36	9.82	3.59	100	13,821

TABLE 7

COMPONENTS OF DEBTS (%) BY AGE GROUP

Age Groups	Own Home	Other Property	Vehicles	Applicances	Bank Loans	Budget Account	Other Debts	Total %	Average Debt
Under 30	88.4	3.0	3.7	1.5	0.2	1.9	1.3	100.00	$2,778
30–39	83.5	5.8	2.9	1.0	0.3	3.5	3.3	100.00	3,403
40–49	83.4	6.0	3.8	1.4	0.8	1.2	3.4	100.00	2,646
50–59	80.9	3.2	5.2	0.7	2.0	2.1	6.0	100.00	1,858
60 and over	75.7	5.3	4.9	2.0	4.6	1.1	6.4	100.00	407
Total %	83.5	5.0	3.7	1.2	0.9	2.2	3.6	100.00	2,196

highest percentage of total debts. As regards the composition of debts within various age groups, no definite patterns emerge. But the size of debt is very much influenced by the age of the head. It declines continuously with age.

5. Inequality of Net Worth and Asset Holdings

Table 8 presents the shares of deciles and the top 5 percent and 1 percent of families in disposable income, assets and net worth. The shares are calculated by ranking the families by the respective size of these variables. When the families are ranked by size of their disposable income, the bottom 20 percent receive 6.77 percent of income while the top 20 percent receive 37.68 percent. The ranking of families by size of their assets shows that the bottom 20 percent held only 1.24 percent of the total assets, while the top 20 percent held as much as 48.99 percent. Similarly, the bottom 20 percent of the families in terms of net worth have less than 1 percent of total net worth and the top 20 percent have about 53.1 percent of the total net worth.

TABLE 8

Decile Shares of Income, Assets and Net Worth of All Family Units Ranked by Size of Income, Assets and Net Worth, Respectively

	Disposable Income	Assets	Net Worth
1st Decile	2.23	0.16	−0.05
2nd Decile	4.54	1.08	0.96
3rd Decile	6.49	3.64	2.83
4th Decile	7.58	6.26	4.97
5th Decile	8.57	7.80	6.74
6th Decile	9.61	9.05	8.32
7th Decile	10.87	10.48	10.12
8th Decile	12.42	12.54	12.60
9th Decile	14.71	16.04	17.06
10th Decile	22.97	32.95	36.45
Top 5%	13.99	22.11	24.57
Top 1%	4.60	8.20	9.26
Gini-index	0.305	0.470	0.520

Figure 1 presents the Lorenz curves of disposable income, net worth and asset holdings. The horizontal axis represents the cumulative proportion of households and the vertical axis represents the cumulative proportion of disposable income, net worth and assets. Both the axes are of unit length. The diagonal line joining the points (0, 0) and (1, 1) represents perfect equality. The Lorenz curve of asset holdings lies between the Lorenz curves of disposable income and net worth. None of the three curves intersect throughout the income range. Thus, it can be concluded that net worth is more unequally distributed among family units than are disposable income and asset holdings. Further, disposable income is more equally distributed than asset holdings. It should be noted that for net worth, the Lorenz curve goes below the horizontal axis at the initial stage. This is because of the existence of families with negative net worth.

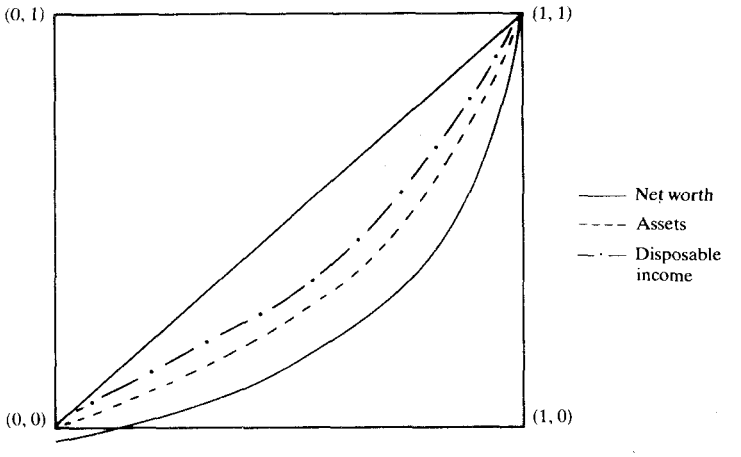

Figure 1. Lorenz Curve of Disposable Income, Assets and Net Worth

The Gini-index is one of the most widely used single statistics to measure the inequality of income and wealth distributions. It is equal to one minus twice the area under the Lorenz curve. When the families are ranked according to the size of their wealth or income the Gini-index can be shown to be equal to[5]

$$G = \frac{2}{(N-1)} \sum_{i=1}^{N} iY_i - \frac{(N+1)}{(N-1)} \tag{5.1}$$

where Y_i is the proportional share in wealth or income of the ith family. It is to be noted that if all the families have equal wealth, Y_i will be the same for all the families and will be equal to the $1/N$. Thus G becomes zero. On the other hand, if one family owns all the wealth and all other families have nothing, then G assumes a value of one. Formula (5.1) has been used to compute G which is reported in the last row of Table 7. The values of the Gini-index indicate the much greater inequality of the wealth distribution than of disposable income. The table also indicates that the net worth is more unequal in distribution than asset holdings.

TABLE 9

QUINTILE SHARES OF DISPOSABLE INCOME, ASSETS, DEBT AND NET WORTH OF ALL FAMILIES RANKED BY SIZE OF DISPOSABLE INCOME

Income Quintile	Disposable Income	Assets	Debts	Net Worth
1st Quintile	6.8	11.3	5.7	12.6
2nd Quintile	14.1	14.6	15.2	14.2
3rd Quintile	18.2	19.0	22.1	17.5
4th Quintile	23.3	19.8	27.9	19.0
5th Quintile	37.7	35.3	29.1	36.7
Top 5%	14.0	14.4	8.5	15.6
Mean	3,725	13,822	2,196	11,626

[5]See Das Gupta, Sen and Starrett [3].

Table 9 presents the shares of quintiles and the top 5 percent of families in disposable income, debt, assets and net worth. We note that while the bottom 20 percent of families (ranked according to their income) receive only 6.8 percent of total disposable income, the same families have 11.3 percent of total assets and 12.6 percent of total net worth. The top 20 percent of families (again ranked according to their disposable income) have almost 38 percent of total disposable income, whereas the same families possess only 35 percent of total assets and 37 percent of total net worth. It may be concluded that the distribution of wealth between income groups is somewhat more equal than the distribution of wealth between wealth holders. This implies that a family with low income may have sufficient wealth to fall back on in case of an emergency.

An examination of shares of income quintiles in total debt suggests that most debt is concentrated in the region between the 20th and 95th percentile. The bottom 20 percent families have a very low share of total debt. The share of debt up to 60th income percentile is lower than the shares of both assets and net worth and afterwards it becomes higher. The share of debt in the top 5 percent families is again lower.

6. Decomposition by Demographic Characteristics

6.1. *Age of the Head*

Since family wealth often represents accumulated past savings, it follows that, to a great extent, the size of wealth will depend on the period over which savings have been accumulated. The length of the period is directly related to the life cycle of the family or the age of the head of the family. Therefore, age of the head could be considered to be the most important demographic variable determining the size of wealth holding. Table 10 presents different inequality measures for five different age groups, as well as the mean wealth of each group.

First of all, let us consider the mean wealth in each age group which obviously increases with age up to the age of 59 and then it falls. There can be two reasons for the phenomenon. One is that after retirement, income of a person falls drastically.

TABLE 10

Inequality Measures and Mean Wealth by Age of Household Head

Inequality Measures	Age					
	Under 30	30–39	40–49	50–59	60 and over	Total
% Share of:						
1st Quintile	0.30	0.02	1.94	1.59	1.48	0.91
2nd Quintile	5.38	7.33	9.68	9.08	9.50	7.80
3rd Quintile	14.06	15.91	15.24	14.73	14.77	15.06
4th Quintile	27.38	24.37	22.69	21.91	21.21	22.72
5th Quintile	52.88	52.37	50.45	52.69	53.05	53.51
Top 5%	19.18	22.02	21.74	22.02	22.40	24.57
Gini-index	0.535	0.520	0.472	0.492	0.494	0.520
Mean wealth (A$)	4,467	8,867	12,522	15,067	14,461	11,625

As a result, the individual may start dissaving and hence the magnitude of wealth diminishes. The other reason may be that many retired persons start distributing their wealth among relatives in order to qualify in the means test.

Examining the share of quintiles of families within each age group, it is seen that for families with head aged less than 30 wealth is most concentrated in the fourth quintile compared to other age groups. At the same time the relative share of the top 5 percent is only 19 percent which is low compared to other age groups. The overall wealth inequality measured by the Gini-index is highest for the lowest age group and lowest for the age group 40 to 49.

6.2. *Sex of the Head*

In the analysis of poverty it is some time mentioned that there is a higher incidence of poverty among families with female heads. It is true that average female income is significantly lower than average male income. If wealth consisted of accumulated past savings only it could be expected that the size of average wealth of the families with female heads would be lower. Again, many of the families with a female head do not have any member in the work force. They entirely depend upon inherited wealth or on some kind of benefits. The incidence of inheritance is a random phenomenon. As a result it can be expected that inequality of wealth within the group of families with female heads will be higher than the inequality of wealth among the families with male heads. Table 11 presents the inequality measures and average net worth for the two groups.

TABLE 11

INEQUALITY MEASURES AND MEAN WEALTH BY SEX OF THE HOUSEHOLD HEAD

Inequality Measures	Male	Female	Total
% Share of:			
1st Quintile	1.17	0.04	0.91
2nd Quintile	8.06	4.14	7.80
3rd Quintile	14.76	16.10	15.06
4th Quintile	22.17	35.71	22.72
5th Quintile	53.84	54.01	53.51
Top 5%	26.29	22.64	24.57
Gini-index	0.514	0.551	0.520
Average wealth (A$)	11,991.47	9,141.11	

The table shows that the average net worth of families with female heads is about 76 percent of that of the families with male heads. From the values of the Gini-index it can be concluded that overall inequality of wealth among the families with female heads is higher than that among the families with male heads.

6.3. *Family Size*

Table 12 presents the inequality measures and average net worth for different family sizes. The last column in the table refers to the group of families of size eight

TABLE 12

INEQUALITY MEASURES AND AVERAGE NET WORTH BY FAMILY SIZE.

	FAMILY SIZE (NO. OF MEMBERS)							
	1	2	3	4	5	6	7	8 and over
Lowest Quintile	0.37	0.82	0.80	0.97	2.00	0.91	0.94	0.39
2nd Quintile	7.27	7.42	7.52	8.10	8.96	6.97	8.30	2.78
3rd Quintile	16.86	14.59	15.23	14.52	15.82	13.19	14.84	15.47
4th Quintile	25.28	21.98	22.19	22.75	23.05	20.35	22.15	29.58
Upper Quintile	50.23	55.13	54.26	53.66	50.18	58.57	53.77	51.78
Upper 5%	19.75	28.87	25.90	26.66	22.03	32.66	25.89	17.59
Gini-Index	0.500	0.500	0.523	0.515	0.474	0.554	0.507	0.539
Average wealth (A$)	9,733	12,137	10,953	12,665	11,154	13,354	9,858	8,525
Average per capita wealth (A$)	9,733	6,068	3,651	3,166	2,231	2,226	1,408	1,061

or more. The table shows that there is no obvious correlation between the average size of net worth and household size. This is understandable because family size influences the size of wealth insofar as the number of income earners in the family depends on the size of the family. But it is unlikely that, in a society with a predominance of nuclear families, this variable will be of any significance in determining the size of wealth. The last row in the table shows that the average per capita wealth decreases with the family size.

6.4. *Occupation of the Head*

Since occupation and income are related variables it is worthwhile to explore the possibility of a relationship between wealth and occupation. The sample is divided into eight broad categories of occupations. These are as follows:

1. Executive, Managerial and Professional
2. Vocational and Semi-Professional
3. Clerical and Sales
4. Craftsmen and Skilled Technical
5. Operative and Semi-skilled
6. Labourers and and unskilled
7. Self-employed (including farmers, fishermen and hunters)
8. Not in the work force.

The last category consists of retired heads who might have belonged to any occupation. The distribution of wealth in different occupation categories is given in Table 13 which shows that families with self-employed heads have the highest average net worth and the families working as labourers and unskilled workers have the lowest average net worth. Average net worth of the families with heads not in the work force is slightly above the national average. The values of Gini-index show that in general inequality of wealth within occupational groups is lower than overall inequality. Inequality is the lowest for the families with heads working as executives, managers or professionals. The inequality of wealth is highest for the families with heads not in the work force. From this table, it can be concluded that the higher the degree of specialization in the occupation, the lower is the degree of inequality of wealth.

7. Temporal Change in Inequality

In this section, we investigate the changes in the distribution of wealth in Australia over time. The main difficulty in this respect is the scarcity of empirical data, which is a feature common to all countries. The only data available in Australia are from a census done by the Commonwealth Statistician as far back as 1915—as part of the war census.[6] The basis of comparison is not perfectly satisfactory since the unit of reference and other concepts are different in the two sets of data. To start with, the basic unit in the 1915 Census is the adult male while in our survey it is the household. Secondly, the 1915 survey included only adults of

[6]The Australian census is described in Knibbs [5]. See also Soltow [10] for the analysis of 1915 census data.

TABLE 13

INEQUALITY MEASURES AND AVERAGE NET WORTH BY OCCUPATION OF THE HEAD

	Executive, Managerial, Professional	Vocational, Semi-Professional	Clerical, Sales	Craftsmen, Skilled Technical	Operatives, Semi-skilled	Labourers, Unskilled	Self-employed (including Farmers, Fishermen, Hunters)	Not in Work Force
Lower Quintile	2.75	1.37	1.52	1.72	0.80	0.03	1.63	0.25
2nd Quintile	9.47	7.41	8.45	9.51	6.88	5.65	7.47	7.47
3rd Quintile	15.57	14.17	15.74	16.60	16.35	18.30	12.61	15.81
4th Quintile	24.61	23.41	23.59	24.39	26.09	27.97	19.41	23.08
Upper Quintile	47.61	53.64	50.70	47.88	49.89	48.06	58.89	53.40
Upper 5%	28.35	22.72	21.80	19.90	20.18	17.92	30.73	26.00
Gini-Index	0.44	0.50	0.48	0.46	0.50	0.50	0.50	0.52
Mean NW	15,478	12,988	11,188	9,589	7,741	6,743	25,289	11,875

age 18 and above, but below 60 years. The word "wealth" in the Census data is used to denote the value of assets, where as we have used it in the sense of net worth.

Table 14 clearly indicates very substantial inequality of wealth in 1915 compared to the inequality in 1966–67. In 1915, the top 20 percent of the population held 90 per cent of total wealth. Again, the top 5 percent adults controlled more than 66 percent of wealth. At the lower end of the distribution, the bottom 20 percent of the population had almost no wealth and the bottom 40 percent had less than 5 percent of total wealth. It is, thus, obvious that the distribution of wealth in 1915 was extremely unequal.

TABLE 14

DISTRIBUTION OF WEALTH IN 1915 AND 1966–67
(PERCENTAGES)

Inequality Measures	1915	1966–67
1st Quintile	0.03	0.91
2nd Quintile	0.43	7.81
3rd Quintile	2.01	15.06
4th Quintile	7.80	22.72
5th Quintile	89.71	53.51
Top 5%	66.22	24.58
Top 1%	39.46	9.26
Gini-Index	0.861	0.52

It is appropriate to try to guess the causes of the decrease in the concentration of wealth in Australia since 1915. In 1915 Australia was a rural economy, where a few people had large land holdings. Since then the country has become industrialized, and the wage differentials between different occupations have substantially narrowed. The industrial capital has mostly come from overseas and the importance of rural property has diminished. The economy has experienced full employment for more than a decade. Another important factor is that Australians are perhaps the largest home owning community. About 75 percent of the families in Australia now own their own home. The equity in own home spread over 75 percent of the households reduces the degree of inequality substantially.

8. A BRIEF INTERNATIONAL COMPARISON

The main difficulty in making international comparisons of inequality of wealth is the scarcity of data. For most countries survey data on the assets and liabilities of families is a rarity. For some countries, estimates of wealth distribution are made from estate duty statistics. Since only a very small proportion of wealth holders pay estate duty, these estimates are not reliable. The other main difficulty in international comparison is that the definition of wealth varies from country to country. Hence, the validity of any international comparison is subject to question.

In a recent study, Podoluk [8] has analyzed the distribution of wealth in Canada using data from the Survey of Consumer Finances 1970. In this survey a very comprehensive list of wealth components was included in the questionnaire, including questions on investment in unincorporated business and privately held corporations. Since the unit of reference and other concepts in the Canadian survey are almost identical to the Australian survey, it will be appropriate to compare the wealth distribution obtained from the two surveys. The results are summarized in Table 15.

Table 15 indicates much higher inequality of wealth in Canada compared to that of Australia. It is interesting to note that the Lorenz curves for both assets and net worth in Australia are uniformly higher than the corresponding curves in Canada. In both the countries, the bottom 10 percent of families have negative net worth. The top 10 percent of families in Canada own about 54 percent of the total wealth; the corresponding figure for Australia is only 36 percent.

TABLE 15

DECILE SHARES OF ASSETS AND NET WORTH OF FAMILIES RANKED BY SIZE OF ASSETS AND NET WORTH RESPECTIVELY IN CANADA 1970 AND AUSTRALIA 1966–67

	Canada 1970*		Australia 1966–67†	
Share of	Assets	Net Worth	Assets	Net Worth
1st Decile	0.0	−0.9	0.2	−0.05
2nd Decile	0.2	−0.0	1.1	0.9
3rd Decile	0.6	0.2	3.6	2.8
4th Decile	1.4	1.1	6.3	5.0
5th Decile	3.2	2.8	7.8	6.7
6th Decile	6.3	5.2	9.0	8.3
7th Decile	9.6	8.2	10.5	10.1
8th Decile	12.7	11.8	12.5	12.6
9th Decile	17.5	17.7	16.0	17.1
10th Decile	48.5	53.9	32.9	36.4
Total	100	100	100	100
Gini-Index	0.668	0.724	0.47	0.52

*Source: The Survey of Consumer Finances, Canada, 1970.
†Source: Australian Survey of Consumer Finances, 1966–67.

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