COSEM

Poverty in Australia in 1990

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Abstract: The paper presents estimates of the total number of families in poverty in 1989/90, based upon the newly released 1990 Survey of Income and Housing unit record tape. Poverty rates for different types of families (such as the aged and sole parents) are also examined, using a range of different poverty lines. Estimates of how far families fall below the poverty line, both in aggregate and for different types of families, are also provided.

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1. Introduction

How many people were in poverty before and after the receipt of government cash transfers such as age pension or the payment of income taxes in 1990? This sounds an extremely simple question, but providing definitive answers is almost impossible. The crucial problem is how to define poverty.

Is a family in poverty if its income falls below some level necessary to purchase the basic necessities of life? Or is such a family still in poverty if it is able to purchase basic necessities but experiences an extremely low standard of living relative to the rest of the population? How do we set poverty measures which take adequate account of the number of people supported by the income earned-by one or two members of a family? Should we examine poverty at the level of the individual, the family or the household? Should we take assets such as cars and homes, or intra-family transfers between parents and student children, or even access to free or subsidised government services into account when attempting to determine who is in poverty? And, finally, over what time period should we measure poverty - as a family in poverty during the two weeks they are captured in an income survey might not be in poverty one month or one year later if an unemployed family member has found employment?

These sorts of questions have no easy answers and have perplexed those attempting to measure poverty in Australia and overseas. In Australia, the Henderson Poverty Lines established by the Poverty Commission in the mid 1970s and updated quarterly by\ the Melbourne Institute by movements in-household disposable income per capita have frequently been used to measure poverty (Johnson, 1987). However, the problems with using these poverty lines have been extensively discussed (eg.Saunders and Whiteford, 1989; Stanton, 1980) and the Henderson poverty lines have recently attracted strong criticism (Harding and Landt, 1992).

This type of exhaustive debate has not been confined to Australia. As Atkinson, one of the world experts in this field has commented, 'there is a diversity of judgements about how poverty should be measured and we need to recognize this diversity explicitly in the procedures adopted' (1989:3). In summary, definitive estimates of the number in poverty cannot be made, and the most that can be done is to identify very clearly the precise techniques used and the limitations of those techniques when presenting new poverty estimates.

Section 2 discusses the methodology used in this study. This includes details of the source data and its quality; the definition of income and of the income unit; and the poverty lines and range of equivalence scales employed. Section 3 analyses the number of families in poverty using the 'head count' measure of poverty, both for the population as a whole and by type of family. Section 4 utilises 'poverty gap' measures, showing how far below various poverty lines different types of families fall.

2. Methodology of this Study

Data Source and Quality

The following estimates are based upon the 1990 Survey of Income and Housing Costs and Amenities (SIH), which was conducted between October and December 1990. This survey has recently been released by the Australian Bureau of Statistics in a unit record format on computer tape, which allows very detailed examination of the data. The estimates thus embody any sampling and other errors present in the original data. For example, income from self-employment and social security cash transfers is typically understated in such surveys, and no attempt has been made by either the ABS or the Centre of Social and Economic Modelling (COSEM) to adjust for such factors.

The ASS has provided a weight variable for each of the 30,000 or so individuals who responded to the survey. This allows one to 'gross up' responses to produce estimates for the whole of Australia. Thus, for example, the ASS weight might tell us that a single female aged 25 who responded to the survey represented 600 comparable females in all of Australia.

However, extensive analysis by the Centre of Social and Economic Modelling suggests that there are major problems with the weighting procedures employed by the ASS. For example, if one uses the ASS income unit weights, the SIH produces 9 per cent more children aged 0 to 4 and 7.4 per cent more children aged 5 to 9 than exist in ASS benchmark data on the estimated resident population (Catalogue No 3201). Similarly, the SIH estimate of the number of employed married or unmarried females in particular age ranges is frequently 10 to 20 percent higher or lower than the comparable figures from the November 1990 labour Force Survey (Sadkowsky, 1992). This has important implications for any estimates of the number of families in poverty as, for example, the SIH data may overestimate the number of families with children in poverty. Discussions are continuing with the ASS about weighting procedures, and the estimates of poverty within this paper can only be regarded as broadly indicative, given the above concerns about data quality.

Definition of Income and Income Unit

The definition' of income is that used in the SIH, which comprises' wages and salaries, govemment cash transfers, other regular payments such as superannuation and maintenance, and derived weekly income received from 'own business, trade or profession, interest, rent and dividends' in 1989-90. Regular payments from relatives are included. Income flows from assets - such as imputed rent from owner occupied housing - are not included in the income definition, and neither are pensioner fringe benefits or other low income concessions. As the SIH does not have data about weekly income tax payments, all of the income and tax measures used are *annua/1989/90* figures. Secause income can fluctuate greatly from week to week, these annual figures could be expected to give a lower (but arguably more reliable) estimate of poverty than *current* (ie. previous two weeks) income and tax figures.

The type of income unit employed in any analysis of poverty is a critical issue which profoundly affects the results. Take, for example, a three person family consisting of a married couple with one high income breadwinner and a 19 year old son at university who earns $3000 a year at McDonalds. If the income unit is the household, then all three individuals will not be in poverty. If the income unit is the family and the son is not counted as part of that family because he is an adult or has some income of his own, then the parents will not be in poverty but the son will be. If the income unit is the individual, then only the high income breadwinner will not be in poverty, and the spouse and the son will both be in poverty. Generally, the broader the income unit within which income is deemed to be shared, the lower will be the estimates of poverty.

The following results use the ASS definition of income unit (termed the 'family' later in this paper), where an income unit consists of:

> a husband and wife (including defactos) and any dependent children where present, where dependent children are defined as people aged under 15 or aged 15 to 20 and full-time students;
>
> a sole parent with at least one dependent child; and
>
> single person income units. ie. all other persons not counted in the above two groups.

The trigger for dependency for children is thus age and study status, not income. A 19 year old daughter studying full time at university who lives at home and has earnings from part-time work is counted as a

dependant, and is part of her parent's income unit. However, a 21 year old daughter studying full time who lives at home and has no income at all is regarded as a separate income unit, as is an aged mother who lives in the home of her children. Sensitivity analysis to determine the difference which different definitions of the family income unit would make to poverty estimates will be carried out by COSEM in the near future.

A final issue is that even after the income unit has been defined, a judgement has to be made about whether to attribute income to the *income unit* or to *each individual within that income unit.* For example, if the total income of a family consisting of a husband, wife and 19 year old daughter was $15,000 and below a poverty line, would this mean that one family was in poverty or that three individuals were in poverty? To ensure that comparisons over time are not biased by sharp demographic change and changes in family size, it is theoretically most desirable to ascribe to each individual in a family the income of their family. However, partly because of concerns about the ABS weighting procedures, the following analysis has been conducted at the family level. The estimates are thus of the number of families in poverty, rather than the number of individuals in poverty.

Poverty Lines and Equivalence Scales Used

The use of equivalence scales, although the subject of some controversy, has to be employed in poverty analysis. It is, for example, ludicrous to suggest that a single person with an income of $15,000 suffers from the same degree of poverty as a couple with five children with an income of $15,000. A way therefore has to be found to define poverty levels for families of different compositions. Typically, a poverty line is defined for a benchmark family type, such as a single individual or a couple without children, and then equivalence scales are used to determine comparable poverty lines for other types of families.

There is no single equivalence scale which enjoys general acceptance within Australia or internationally. Yet the choice of equivalence scale has a critical effect upon poverty estimates, and the results can vary greatly depending upon the exact equivalence scale used (Buhmann et ai, 1988). The most that can be done is therefore to conduct sensitivity analysis, using a range of equivalence scales.

Following Mitchell (1991). the following results use two equivalence scales - OECD and Whiteford. The Whiteford scale is the geometric mean of 59 equivalence scales surveyed by Whiteford, based upon consumption surveys, government transfer programs or official poverty lines (1985:109). These two equivalence scales are compared in Table 1. The comparison shows that, for example, under the OECD equivalence scale, a couple without children requires 70 per cent more income than a single adult to reach the same standard of living, while a couple with two children requires 170 per cent more.

Table 1: OECD and Whiteford Equivalence Scales

	First Adult	Second and Subsequent Adult	Each Child
OECD	1	0.70	0.50
Whiteford	1	0.56	0.32 (1)

(1) Although this has been used in the following analysis, this was actually the average figure for the first child only in Whiteford's results - figures for subsequent children varied.

While much analysis in Australia has been conducted using the Henderson poverty lines, international research has tended to define poverty as those who fall below 50 percent of equivalent disposable median family income (eg. Smeeding et ai, 1988; Mitchell, 1991). In this study this benchmark has also been used and the poverty line has been constructed using the following steps:

disposable family income as shown on the 1990 SIH is divided by the equivalence scale (OECD or Whiteford) to produce equivalent family income;

all families are then ranked from the lowest to highest value for equivalent family income, and the middle (ie. median) observation is selected;

the poverty line for all adult equivalent units (AEU) is set at a proportion of this median (eg. 50 or 60%);

as this is effectively the poverty line for single adult families, poverty lines for other types of families are calculated by multiplying the AEU value by the relevant equivalence scale.

Table 2 illustrates how the equivalent median income poverty line is constructed for different family types, using the OECD equivalence scales. The median dispoSable annual income in' the" SIr-!' surVey after application of the OECD equivalence scales is $11274 ($12617 if the Whiteford scales are used), so using the 50% benchmark half of this figure is $5,637. After multiplying this benchmark figure by the OECD equivalence scales to work out the appropriate line for different family types, Table 2 shows that a family consisting of a couple with two children would be regarded as being in poverty under the OECD measure if its disposable income fell below $15,219 in 1989/90. Purely as a basis for comparison, the final two columns in Table 2 show the relevant Henderson poverty lines for September 1990 (updated since the mid 70s by movements in household disposable income per capita) for families where the head is and is not working. The OECD poverty lines are lower than the comparable Henderson poverty lines, which suggests that the following poverty estimates may be fairly conservative and would certainly produce lower estimates of the number in poverty than using the Henderson poverty lines indexed by HDIPC.

Table 2: Calculation of Poverty Lines Based Upon 50% of OECD Median Income Measure in 1989/90

Family Type	AEU Poverty Line in SIH	OECD Equiv Scale	Family Type Poverty Line	Comparable Henderson Poverty Line	
				head working	not working
Single person	$5,637	1.0	$5,637	$9,636	$7,816
Sole parent, one child	$5,637	1.5	$8,456	$12,371	$10,546
Couple without children	$5,637	1.7	$9,583	$12,891	$11,066
Couple, two children	$5,637	2.7	$15,219	$18,096	$16,276

3. Head Count Measures of Poverty

One of the most widely used measures of poverty is the *head count* measure. This is the number of families who fall below a particular poverty line. One of the major problems with this measure is that the estimates of poverty can vary wildly with quite small differences in the value of the poverty line. This is because large numbers of families are often clustered just below or just above any particular poverty line; consequently. even a small movement in the poverty line can bring hundreds of thousands of pensioners into or out of 'poverty'. Because of this extreme volatility, the following estimates are presented when the poverty line is drawn at 40, 50 and 60 percent of median income (using both the OECD or Whiteford equivaience·scales),.so that an assessment of the robustness of the results can be made.

Pre-tax/transfer poverty

Taking 50 per cent of median income as the poverty line, 34 per cent of families were in poverty *before the receipt of cash transfers,* using the OECD equivalence scales (Table 3). (It is important to note that these results cannot be directly compared to those of Mitchell (1990), because slightly different definitions of a dependent child were used in the two studies.) The percentage of families in poverty purely on the basis of their market incomes (ie. wages and salaries, self-employment and investment incomes) did not vary greatly, irrespective of whether the poverty line was set at 40, 50 or 60 per cent of median income. The percentage of families in poverty before the payment of cash transfers was almost the same using the Whiteford (rather than the OECD) scales.

Post-transfer poverty

The effectiveness of cash transfers such as age pension or Job Search Allowance in lifting families out of poverty is demonstrated in Table 3. The proportion of families in poverty *after receipt of cash transfers* dropped to 14.5 per cent using the 50 per cent of median OECD income poverty line - a reduction of more than half. The percentage of families in poverty after payment of cash transfers varied strongly with movements in the poverty line, indicating that a very substantial number of families receiving social security payments had gross incomes between 40 and 60 per cent of the median. The results using the Whiteford scales were again similar to those for the OECD scales, with the exception that the proportion in post-transfer poverty using the 60 per cent of median income measure was higher, reemphasising the clustering of income units around this income level.

Table 3: Poverty Rates Before and After Receipt of Government Cash Transfers in 1989/90

Poverty Level	OECD Equivalence Scales			Whiteford Equivalence Scales		
	Pre· transfer	Post-transfer	% Reduction	Pre-transfer	Post-transfer	% Reduction
· 40%' of median	31.9	11.7	63	32.3	11.9	63
· 50% of median	33.7	14.5	57	33.9	15.1	55
· 60% of median	35.7	18.9	47	35.9	23.1	36

Post-tax/transfer poverty

Another interesting question is whether the social security and income tax systems work in tandem or in opposition. That is. does the income tax system push back into poverty those families whom the cash transfer system has rescued from poverty or do the two major income redistribution mechanisms work well together? Table 4 suggests that the two systems are remarkably well integrated, as relatively few families fall below the poverty line as a result of the payment of income tax.

Table 4: Poverty Rates Before and After Payment of Income Taxes in 1989/90

Poverty Level	OECD Equivalence Scales			Whiteford Equivalence Scales		
	Pre-tax	Post-tax	% Increase	Pre-tax	Post-tax	% Increase
· 40% of median	11.7	11.7	0	11.9	11.9	0
· 50% of median	14.5	14.7	1.4	15.1	15.2	0.1
· 60% of median	18.9	19.3	2.1	23.1	23.7	2.6

While aggregate results provide some information, they tell us nothing about *what types of families* are poor before and after the intervention of the tax-transfer system. The following results show poverty rates for seven different categories of families. These are: 1. single aged of age pension age; 2. aged couples where the head is of age pension age; 3. couples with dependent children; 4. couples without dependent children; 5. sole parents; 6. single adults living *by themselves* with no other adults or children in the household; and 7. the residual 'other' category (which would include "unrelated 'single-adults' in-group 110uses).'It"must be emphasised that many of the income units falling into the 'other' category would consist of young people classified as non-dependent by the ASS but still living with their parents, such as tertiary students aged 21 and over or teenagers receiving Newstart Allowance or receiving low incomes from employment. For such groups, their low personal income might not be an accurate guide to their standard of living, because of income sharing within their family.

The task of redefining the family unit to include non-dependent children still living at home within the parental income unit - which involves reclassifying all members within a more extended family unit into the same income unit and then recalculating equivalent income for the new larger unit - is fairly complex and there has not been time to complete this analysis before this conference. It should be fully appreciated, however, that the estimates presented earlier of the aggregate number of families in poverty include the poor in this 'other' family types category.

Table 5 shows the number of families in the Australian population and how relatively important each type is. For example, there were almost 2.1 million families consisting of couples with dependent children, and they comprised just over 25% of all Australian families. The table also shows the proportion who were poor (using the 50% of OECD median income poverty line) before the receipt of cash transfers or the payment of income taxes. Some 689,000 single aged were in poverty, for example, based simply on their private incomes. This amounted to 25% of all income units in pre-tax/transfer poverty. The representation index is the proportion in poverty relative to the proportion of the whole population that type of family represents, so that a representation index of more than one means that family type is over-represented amongst the poor, while an index of less than one means that a particular family type is under-represented amongst the poor.

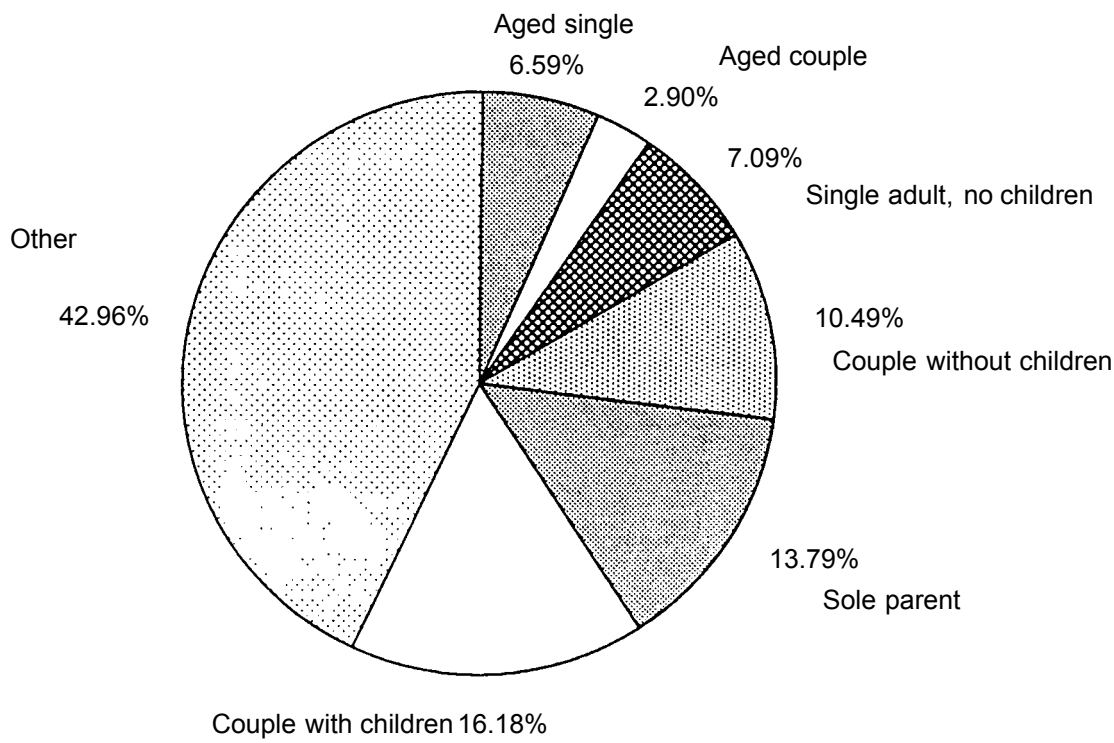
The representation index shows us that at the pre-tax/transfer stage, the aged and sole parents are over-represented amongst the poor. However, the payment of cash transfers makes a profound difference. After taking account of all cash transfers received and income taxes paid, sole parents are the most disadvantaged group. Some 165,000 sole parent families are in poverty, comprising almost 14 per cent of the post-transfer poor (Figure 1). The relative position of 'other' families has also changed sharply for the worse, with just over half a million such income units being in post-tax/transfer poverty. This indicates that, despite their low personal incomes, many in this group are ineligible for social security or education cash transfers (although, as mentioned earlier, the results for this group should be treated with caution).

Table 5: Number and Proportion of Different Family Types in Poverty (50% OECD) Before and After the TaxlTransfer System in 1989190

Measure	FAMILY TYPE							Total
	Aged Single	Aged Couple	Single, no children#	Couple, no children	Sole parent	Couple, with children	Other	
Entire population of Australia								
number '000	854	593	736	1439	383	2056	2108	8169
· % of population	10.5	7.3	9.0	17.6	4.7	25.2	25.8	100
Poor before taxes and transfers								
· number '000	689	407	199	237	261	256	706	2755
· poverty rate	80.7	68.6	27.0	16.5	68.1	12.5	33.5	33.7
· % of poor	25	14.8	7.2	8.6	9.5	9.3	25.6	100
Representation index	2.4	2.0	0.8	0.5	2.0	0.4	1.0	1
Poor after taxes and transfers								
· number '000	79	34	85	125	165	195	516	1199
· poverty rate	9.3	5.7	11.5	8.7	43.1	9.5	24.5	14.7
· % of poor	6.6	2.9	7.1	10.5	13.8	16.2	43	100
Representation index	0.6	0.4	0.8	0.6	2.9	0.6	1.7	1
Decrease in no in poverty	88.5%	91.6%	57.3%	47.3%	36.8%	23.8%	26.9%	56.5%

- Single individuals living in households by themsetves.

Figure 1: Composition of the Poor After Receipt of Transfers and Payment of Income Tax, 1989190



The payment of cash transfers, as one might expect, has the most profound impact upon the position of the aged. After the intervention of the tax-transfer system, only 79,000 single aged and 34,000 aged couples remain in poverty, together comprising less than 10 per cent of the post-transfer poor population. The number of aged in poverty is thus reduced by about 90 per cent by the social security system. This again confirms the findings by the OECD that poverty amongst the aged has decreased sharply in OECD countries in the past few decades, while other groups such as sole parents and young singles emerge as the new poor (1988) .

. This is emphasised by the results in Figure 2, which show poverty rates after the receipt of transfers and the payment of income taxes for different family types. Just under 45 per cent of all sole parent families are in poverty after the intervention of the tax-transfer system, indicating that this system has only reduced the number of sole parents in poverty by 37 per cent. Those individuals in the 'other' category have the second highest poverty rate, followed by single adults living by themselves without children. The poverty rate for aged couples is lower by a substantial margin than that for any other family category, while couples with and without children and aged singles all have poverty rates below 10 per cent.

While couples with children are not over-represented amongst the post-transfer poor relative to their numbers in the population, but they are nonetheless numerically significant, with 195,000 such families being in poverty, comprising 16.2 per cent of the post-transfer poor. As one might expect, more detailed analysis suggests that the likelihood of being in poverty increases with the number of children. As Table 6 indicates, while about eight per cent of married couples with one dependent child have post-transfer incomes below the 50% of OECD median income poverty line, this increases to 12 per cent for those with three children and 22 per cent for families with four or more children. These proportions are lower if one uses the Whiteford equivalence scales, as they assume a slower increase in income needs with increasing numbers of children. The poverty rates for sole parents also increase sharply as the number of dependent children rises. About twolthirds of sole parents with three or more children are in poverty, using this 50% of median OECD income poverty line.

Table 6: Proportion of Families with Children Below Poverty Line After Cash Transfers and Income Taxes in *1989190*

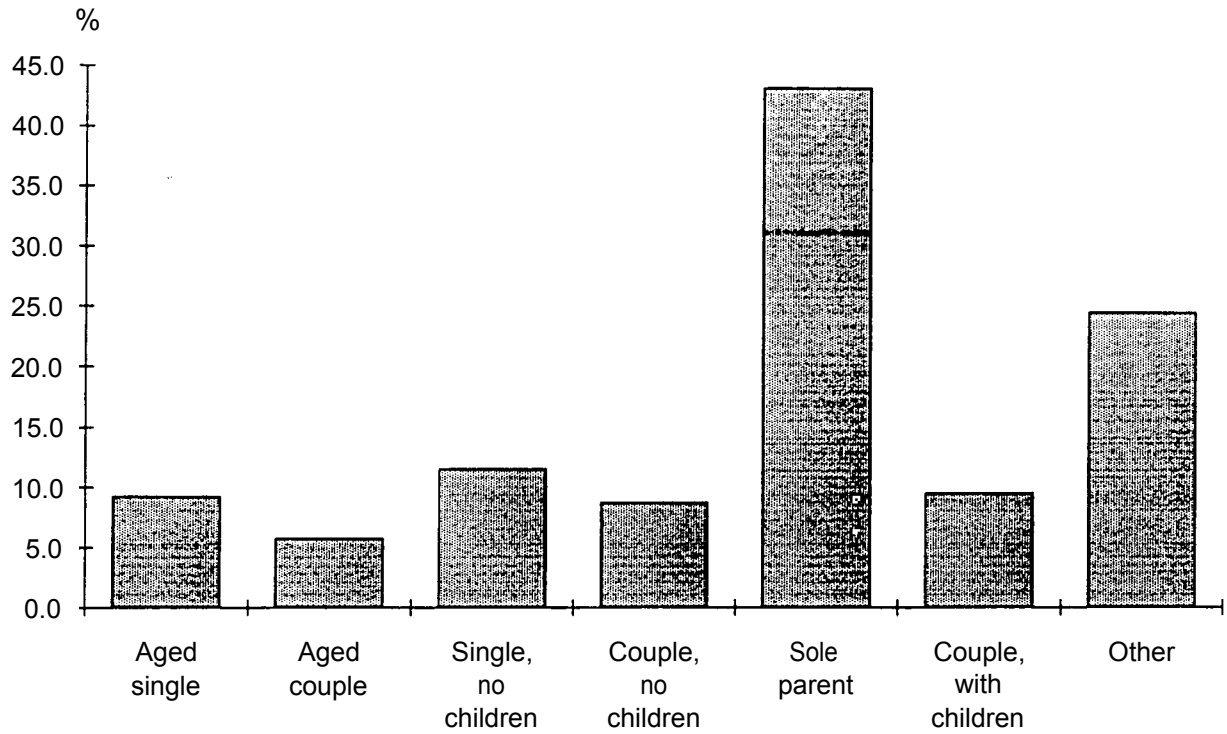
	50 % of OECD Poverty Line				50% of Whiteford Poverty Line			
Family Type	Number of Children				Number of Children			
	1	2	3	4+	1	2	3	4+
Married couples	8.5	7.0	12.1	22.3	7.9	5.7	9.0	16.7
Sole parents	34.5	47.7	62.3	66.8*	33.5	40.2	52.2	54.5*

* These cells contained only 27 and 23 observations respectively in the original SIH survey, so ese estimates may be subject to sampling error.

4. Poverty Gap Measures of Poverty

While head count measures of poverty are widely used, they are often very sensitive to where the poverty line is drawn. Consequently, many have concluded that *poverty gap* measures are superior (Mitchell,1991 :62). Such measures, which show how far below the poverty line families fall, have been shown in previous studies to be less affected by the choice of equivalence scale and to produce more robust results (Buhmann et ai, 1988).

Figure 2: Post Tax-Transfer Poverty Rates by Family Type in 1989/90



The average distance between family income and various poverty lines, for those families who are below the relevant poverty lines. is shown in Table 7. Not suprisingly, the poverty gap before payment of cash transfers is higher than after such transfers, falling from $6530 to $5460 on average for families below the 50% of median OECD income poverty line. The poverty gap again declines after the payment of income taxes. This at first appears counter-intuitive, but it is due to a small number of families who were above the poverty line at the post-transfer stage falling below the poverty line at the post-tax stage; such families are only a few dollars below the poverty line and thus reduce the average poverty gap for all families below the poverty line.

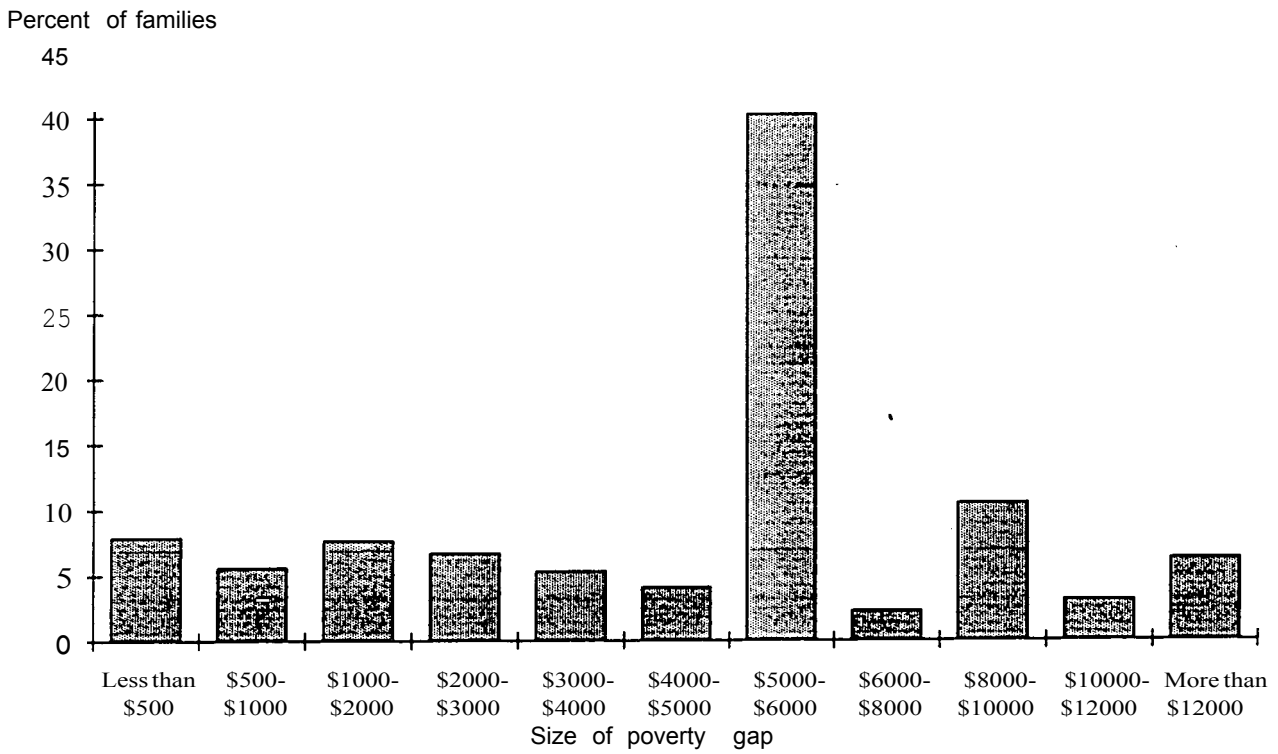
Table 7: Average Poverty Gaps Before and After Receipt of Cash Transfers and Payment of Income Taxes in 1989/90(1)

Poverty	OECD Equivalence Scales			Whiteford Equivalence Scales		
level	Pre-tax transfer	Post-transfer	Post-tax	Pre-tax transfer	Post-transfer	Post-tax
· 40% of median	5265	4900	4890	5410	4975	4975
· 50% of median	6530	5460	5410	6735	5370	5335
· 60% of median	7735	5675	5605	7995	4800	4705

(1) All figures rounded to nearest $5.

While the above figures simply show the average poverty gap. Figure 3 shows the frequency distribution for families falling below the 50% of OECD median income poverty line. About eight percent of all those families who fall below this line are less than $500 a year (or less than $10 per week) below the poverty line. A further six per cent are between $500 and $1000 a year below this poverty line. One of the most striking features of the graph is that 40 per cent of all income units below this poverty line are between $5000 and $6000 below the line, even after the payment of cash transfers. This represents almost 482,000 income units. and further analysis shows that fully three quarters of these income units belong to the 'other' family type category. As the relevant 50% of median OECD income poverty line for single adults was $5637, this suggests that there were probably about 360,000 'other' single person families with incomes of zero to $400 a year (Table 8). Many of these could be expected to be non-dependent children living with their parents.

Figure 3: How Far Families Fall Below Their Poverty Line (50% of OECD) After Taxes and Transfers



The analysis of poverty gaps is taken a step further in Table 8, which shows how far below the 50% of OECD income poverty line *different family types* fall. (In some cases there are only a handful of observations within these cells, so all estimates should be treated as indicative.) Of those aged single people who fall below the poverty line, about 12 per cent are less than $500 below and a further 19 per cent are between $500 and $2000 below. Are these people age pensioners? As a guide, Table 9 shows various annual social security rates paid in 1989/90. The single age pension rate in that year was $6923 while the poverty line for aged singles was only $5637. This suggests that any single person receiving the age pension would not be in poverty under the definition of poverty employed throughout this paper. This in tum implies that all of the single aged in poverty using the above measure were those who for some reason were not receiving any or full age pension. As Table 8 shows. almost half of the single aged in poverty were between $5000 and $6000 below the poverty line of $5637, which suggests that almost 40,000 aged singles had little or no income at all.

Table 8: Magnitude of the Poverty Gap by Type of Family, 1989/90

$ per year below poverty line (after transfers and taxes)	FAMILY TYPE						
	Aged Single	Aged Couple	Single, no children	Couple, no children	Sole parent	Couple with chHdren	Other"
	%	%	%	%	%	%	%
Less than $500	12.4	10.4	6.4	4.1	8.4	9.2	7.6
$500-$1000	6.6	8.9	4.9	4.1	9.8	4.0	4.9
$1000-$2000	12.0	10.7	6.9	4.0	14.7	8.5	5.3
$2000-$3000	6.0	14.4	5.7	4.2	9.8	8.8	5.1
. $3000-$4000	6.4	16.0	3.1	5.9	9.5	3.5	4.1
$4000-$5000	9.2	3.1	3.7	2.7	3.9	6.2	3.0
$5000-$6000	46.5	6.9	69.4	2.0	5.6	5.6	70.0
$6000-$8000	0.0	8.0	0.0	2.9	6.5	7.8	0.0
$8000-$1ooOO	0.9	21.6	0.0	70.2	11.8	5.3	0.0
$1oooo-$12000	0.0	0.0	0.0	1.0	15.2	6.3	0.0
More than $12000	0.0	0.0	0.0	0.0	4.9	34.9	0.0
TOTAL	100	100	100	100	100	100	100
Number	79,000	34,000	85,000	125,000	165,000	195,000	516,000

Table 9: Comparison of Social Security Rates and 50 'Percent of Median OECD Income for Selected Family Types

Family Type	DSS Payment (1)	OECD50% Poverty Line	Difference
Aged single	6923	5637	1286
Aged couple	11541	9583	1958
Single. without children	6448	5637	811
Couple without children	11541	9583	1958
Sole parent			
· 1 child	9290	8456	835
· 2 children	11010	11274	-264
· 3 children	12729	14093	-1364
Couple with children			
· 1 child	13261	12401	860
· 2 children	14980	15220	-240
· 3 children	16670	18038	-1368

(1) This is the relevant DSS payment eg age pension in the case 01 the elderly and sole parents and unemployment benentlor those 01 workforce age.

Similarly, the 50% OECD poverty line for aged couples was $9583, while the age pension for married couples was $11,541. This again suggests that those aged couples who fell below the poverty line were not receiving social security payments. Of those couples in poverty, 30 per cent were less than $2000 below their poverty line (which implies an annual income of around $8000 or so), while almost one fifth had zero or negative incomes, and thus fell more than $9000 below their poverty line. (All of the figures for aged couples should be treated with extreme caution - as only 34,000 such couples were even in poverty, the above figures are subject to very high sampling error and can only be treated as very broadly indicative.)

The same story was again apparent for single adults without children living by themselves. While those receiving junior and intermediate unemployment or sickness benefit would have been below the relevant poverty line of $5637, all of those aged 21 or more receiving benefits would have been above the poverty line. Once again, about 70 per cent of those non-aged singles below the poverty line appeared to have zero income - and yet were still living in a household by themselves. For couples without children, all of those receiving social security would have been above their poverty line of $9583, while 70 per cent again seemed to have zero income.

Sole parents were more dispersed below the poverty line. As Table 8 suggests, sole parents with two or more children receiving social security (excluding any rent assistance) would be below the poverty line by increasing amounts as the number of children increased. Couples with children were also dispersed below their poverty line ahhough, again, about one third appeared to have zero income.

These results were so suprising that they prompted the question of whether they were mainly due to a large number of self-employed with low or negative incomes. While there is room for debate about whether the incomes of self-employed families accurately reflect their economic circumstances, and about the morality of excluding them from any analysis of poverty, the proposition appeared worth examining. To test this issue, the same analysis was run again, with families with negative self-employment incomes or self-employment incomes of less than $5000 in 1989/90 excluded. The poverty lines were, however, left at the same level as when all of the population were included.

Table 10 shows the number of families in poverty by family type in the original analysis and with low income self-employed families excluded. Although the total number of families in poverty drops by *n*,000 when low income self-employed families are ignored, the effect only seems to be really marked for couples with children, whose numbers fall by almost 40,000. Analysis of the change in the poverty gap for all of those families below the poverty line, presented in Table 11, indicates minimal change from the exclusion of the very low income self-employed.

Table 10: Number of Families in Post- TaxlTransfer Poverty When Low Income Self-Employed Excluded

Poor after taxes and transfers	FAMILY TYPE							Total
	Aged Single	Aged Couple	Single. no children#	Couple, no children	Sole parent	Couple, with children	Other	
				'000				
Including self-employed	79	34	85	125	165	195	516	1199
Excluding self-employed	78	31	80	113	161	157	501	1122
Difference	1	3	5	12	4	38	15	77

Table 11: Analysis of Poverty Gap When Low Income Self·Employed Excluded

Poverty Level	Self-Employed Included			Self-Employed Excluded		
	Pre-tax transfer	Post-transfer	Post-tax	Pre-tax transfer	Post-transfer	Post-tax
.40% of median	5265	4900	4890	5245	4880	4870
. 50% of median	6530	5460	5410	6505	5405	5360
.. 60% of median	7735	5675	5605	7695	5570	5505

(1) All figures rounded to nearest $5.

It is difficult to know how to interpret these results. It is possible that incomes have not been reported accurately in the ASS survey, or that there is some other sampling or non-sampling error. Another possibility is that for some reason a significant number of families are either not claiming or are not entitled to social security or education cash transfers. The above figures are based on annual incomes, so the results are not due to families receiving little or no income for a few weeks. Even with the very low income self-employed families reclassified as 'not poor', the results suggest that about one in eight families are in poverty. If one makes both this assumption and, in addition, completely ignores all individuals belonging to the (possibly quesitonable) 'other' family category, then the results still suggest that about one in 10 families belonging to the remaining six family types are in poverty.

5. Conclusions

It is extrordinarily difficult to define and measure poverty, and there is limited agreement among the experts about exactly which techniques and measures should be used. Given this, the most that can be done is to specify very clearly the procedures used and to ensure that there is no pretence that estimates are sacrosanct. Following international practice, most of the poverty estimates in this paper were based upon calculating a poverty line which consisted for single adults of half of the median equivalent family disposable income for 1989/90, as measured by the 1990 Survey of Income and Housing. Poverty lines for other types of families were calculated by adjusting this benchmark poverty line by both the OECD and Whiteford equivalence scales.

On this basis, the results showed that before any account was taken of cash transfers and income taxes, the aged and sole parents had the highest poverty rates. However, cash transfers were exlremely effective in lifting the aged out of poverty but less effective for sole parents. As a result, after taking full account of the taxltransfer system, the highest poverty rates were experienced by sole parents, those in the 'other' group (eg. unrelated adults living together or non-dependent students living with their parents), and single adults without children living by themselves. Sole parents were particularly disadvantaged, comprising only 4.7 per cent of the whole population but almost 14 per cent of the post-taxltransfer poor. While couples with dependent children had low poverty rates, they still comprised a substantial 16 per cent of the post-tax/transfer poor, while couples with children and the aged each accounted for another 10 per cent of the post-tax/transfer poor. Poverty rates increased steadily with the number of children.

In an attempt to test how sensitive poverty estimates were to the exact placement of the poverty line and to assess how deeply families were in poverty, 'poverty gap' estimates were also calculated. This showed that about 30 per cent of aged and sole parent families had incomes less than $2000 a year below their particular poverty line. Incomes for those below the poverty line in other family categories were less evenly distributed.

with roughly 70 per cent of single adults, couples without children and the 'other' family category appearing to have zero income. Single adults and couples, with no or one child, would have had incomes above their respective poverty lines if they were receiving social security payments, which suggested that many of those in poverty were not eligible or not claiming such payments. In an attempt to test whether these results were due to a large number of very low income self-employed families, the analysis was re-run with such families excluded. This appeared to make relatively little difference to the number in poverty and even less difference to the size of the poverty gap.

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