# ‘Inflation – it pays to have the numbers’: the distribution of income in Australia 1968-1986

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## Abstract

*This paper examines the distribution of income in Australia since 1968 when the first major official survey on the distribution of income[1] was undertaken by the Commonwealth Bureau of Census and Statistics. This survey followed long lapses since earlier official studies on the cost of living and income in the years 1911 and 1915. The results have been compared with the distribution of various forms of taxation incomes from 1968 to 1986, collated by the Department of Public Finance and published by the Commonwealth Bureau of Census and Statistics (after 1974 the Australian Bureau of Statistics).*

*The analysis finds, as intuitively suspected, that the distribution of taxation incomes shows greater equality than ABS income distributions over the period. Whilst acknowledging significant comparability issues in ABS data, the trend in taxation incomes appears similar to trends in ABS income distributions generally with a notable exception. A divergence in the relationship occurred in the 1970s. It is contended here that the divergence may be the consequence of an inflationary distortion affecting the tax and transfer system.*

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[1] ABS, 1975, *Income Distribution* 1968-69, Parts 1 (Ref.No.17.6), 2 (Ref.No.17.8) and 3 (Ref.No.17.12). Consolidated and revised edition, Cat.No.6505 (Ref.No.17.17) issued in October, 1975. No Cat No.

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## Introduction

Economists concern themselves with the equality of the distribution of income in society for reasons of welfare, justice and equity. There are many different philosophical sources for the study of equality. The Rawlsian social contract[2] views a minimum restriction on the freedom of individuals as desirable, so long as agreement to protect the basic rights of all is respected and implied in the institutional framework of society. Utilitarianism is an empirical theory of ethics which contends that efficiency in economic utility will eventually maximise both economic goods and satisfaction for the greatest possible number of beneficiaries. An interest in minimising inequality is based on the assumption that in order for the economic system to continue to function well, excessive inequality is to be avoided lest the costs of disadvantage burden existing institutions and hinder economic progress.

This paper will examine the equality of the distribution of income in Australia for the period 1968 to 1986. A major shortcoming of early ABS income distribution studies (IDS) is the sporadic nature of their publication. Official income distribution surveys (IDS) were only conducted every four years from 1968 through to 1990. Over the period the ABS also made significant methodological changes that affected the long term comparability of official income and expenditure studies. From 1968 to the late 1990s the ABS introduced new units of measurement, altered the definitional boundaries of other units of measurement and changed both the scope of income and expenditure surveys and survey methodologies used. Siminski et al, collaborating with the ABS in order to improve the comparability of official income and expenditure data, constructed a detailed summary of concepts, definitions and methodological changes affecting the confidentialised unit record files (CURFS) of both income and expenditure survey data from 1975 to 1999.[3]

2 Rawls, J. 1972, A Theory of Justice, Clarendon Press, Oxford.

3 Siminksi, P. Saunders, P., Waseem, S. and Bradbury, B., 2003, ‘Assessing the Quality and Inter-Temporal Comparability of ABS Household Income Distribution Survey Data’, SPRC Discussion Paper No.123. p.4

A primary concern is the absence of information on the years between the official income distribution surveys for the period 1968 to 1986. However, an alternative source of income data is available annually throughout the period in question. The taxation records of the Commonwealth Department of Finance may help to shed light on income equality for these missing years. The number of persons reflecting in tax return statistics is also much larger, being in the millions, compared to the tens of thousands and later hundreds of thousands surveyed by the ABS, lending statistical weight to a comparison.

The specific objective of this study is to ascertain whether, between 1968 and 1986, there is a relationship between the general trend in the distribution of ABS survey income and the distribution of taxation incomes. This study acknowledges the work of Leigh[4], who examined the equality of the distribution of various tax income types for the period 1947 to 2000. This study will focus on a narrower period of history, trace the history of early ABS income distribution studies outlining the major methodological concerns, provide a comparative analysis of Commonwealth Department of Finance taxation records to ABS Income Distribution studies and explain the results in an historical context.

This study differs from Leigh's in that it does not include an estimate for the value of income earned by non tax payers, that is, those who fall below the taxable threshold. Leigh, using gender disaggregated taxation data and incorporating an imputation for the value of non taxpayers, found that 'the distribution of family income (per ABS methodology) was closely proxied by the distribution of adult male (taxation) incomes over four decades' from 1942 to 2001.[5]

The tax data analysed here is not gender disaggregated. An advantage of analysing non gender disaggregated tax data without any imputations for non taxpayers is that the effects of economic crisis on the equality of taxable income received by the workforce can be seen with greater clarity. A greater proportion of non taxpayers are likely to be welfare recipients. The value of such welfare payments may demonstrate greater rigidity during periods of economic adjustment, than particular forms of tax income such as wages and salaries or income from self employment. The period in question was volatile and witnessed both high inflation (stagflation) in the 1970s and recession in the 1980s. It is

4 Leigh, A. 2005, 'Deriving Long Run Inequality Series from Tax Data', *The Economic Record*, *Vol 8*, *No.255*. August. pp.S58-70.

5 Ibid. p.S59

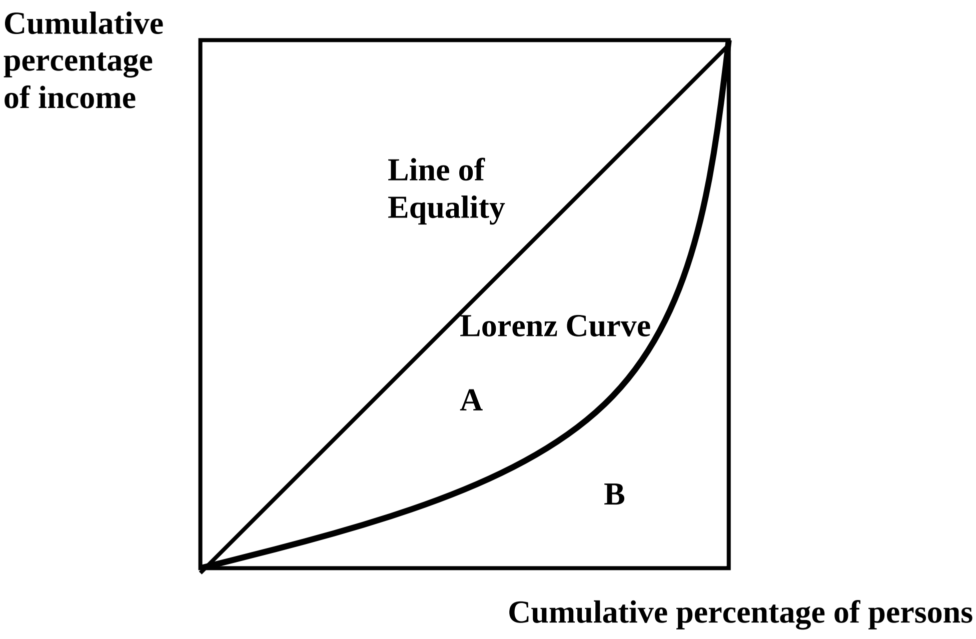
suggested that the equality of certain types of tax income may, therefore, demonstrate greater sensitivity to economic fluctuations than survey income, which includes larger proportions of welfare payments relatively. The main form of tax income examined here is 'taxable income' which excludes exempt income such as certain types of social welfare payments and is the income remaining after all allowable deductions on which tax is then applied.

In this analysis Brown's Gini coefficient of concentration[6] will be used to measure both the equality of ABS income survey data and taxation income data. The Robin Hood Index and percentile ratios will be employed to examine only the taxation data for the purposes of situating the results in an historical context of unstable cyclical activity.

The Gini coefficient of concentration is the most common measure of the equality of the distribution of income. It is the ratio of the area between the line of equality and the Lorenz curve to the area of the triangle below the line of equality. This is represented by **A / (A + B)** in Diagram 1. Lorenz curves illustrate the relationship between a cumulative procession of persons expressed as a percentage on the horizontal axis and the cumulative percentage of total income received by those persons on the vertical axis. The 45 degree line of equality represents a situation where, at each given percentage of the procession of persons, the corresponding cumulative percentage of income has been distributed. For example, if income is perfectly equally distributed, 20% of persons would earn 20% of total income, 40% of persons would earn 40% of total income and so on. The closer the Lorenz curve to the line of equality, the smaller will be the Gini coefficient. If income is perfectly equally distributed the Lorenz curve will equal the line of equality and the Gini coefficient will equal zero. If income is grossly unequally distributed the Gini coefficient will approach 1.

[6] Brown, M. 1994, 'Using Gini-style indices to evaluate the spatial patterns of health practitioners: Theoretical considerations and an application based on Alberta data', Social Science Medicine 38:9, pp.1243-1256.

**Diagram. 1**




Brown's Gini coefficient of concentration[7] is expressed as;

$$G = 1 - \sum_{i=0}^{k-1} (Y_{i+1} + Y_i)(X_{i+1} - X_i)$$

Where Y is the cumulative proportion of total income earned at a particular income category in a range and X is the cumulative proportion of total persons at a particular income category in a range.

The Robin Hood index [8] measures the maximum vertical distance between the line of equality and the Lorenz curve. It can be defined as the proportion of income that would have to be redistributed from income groups above the mean to income groups below the mean to achieve an equal distribution. The higher the Robin Hood index, therefore, the greater is the level of inequality.

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[7] Brown, M, 'Using Gini-style indices' pp.1243-1256.

[8] As cited in Kennedy, B, Kawachi, I and Prothrow-Stith, D. 1996, 'Income Distribution and Mortality: Cross Sectional Ecological Study of the Robin Hood index in the United States', British Medical Journal, http://www.bmj.com/cgi/content/full/312/7037/1004 accessed 10th November, 2006. unpaginated.

Percentile ratios are ratios of the total income of particular percentile groups within the distribution. For example, the P90/10 ratio takes the total income of the 9th decile as a ratio of the total of income earned by the 1st decile. The ratio shows how many times greater the total income of the 9th decile is relative to the 1st decile. Changes in percentile ratios over time demonstrate the relative gains or losses of particular deciles within a distribution and can explain whether the gap between the rich and the poor is narrowing or widening.

Historically, the analysis of income equality is based on data that excludes groups who may form part of the more severely disadvantaged such as those with no employment, no fixed address, or those who are institutionalised for the simple reason that their data is often difficult to collate. However, we should keep in mind that information on the changing composition of such groups often exists outside official measures and yet is essential to a proper understanding of changes in equality over time. As noted by Sen;

The Athenian intellectuals discussing equality did not find it particularly obnoxious to leave out the slaves from the orbit of discourse and one reason why they could do it was because they could get away with it.[9]

In this analysis I acknowledge that I shall be doing a similar thing by excluding those individuals whose income is too low to fall within the scope of taxation legislation. Non taxpayers may ordinarily be assumed to have lower incomes than the tax threshold yet this may not always be the case due to the non reporting of income arising from the cash economy, the extent of which is difficult to measure. The income from official income surveys is always superior to taxable income for the measurement of overall income equality in society precisely because it includes gross cash income from all sources. Gross income is income before tax exemptions and deductions for expenses incurred in gaining assessable income. 'Cash income'[10] includes income from wages and salaries, self-employment, government cash benefits and pensions, investments and other regular income such as workers compensation payments, maintenance payments or educational grants. Therefore the equality measure that results from surveyed incomes will include many more of those whose incomes fall below the tax threshold.

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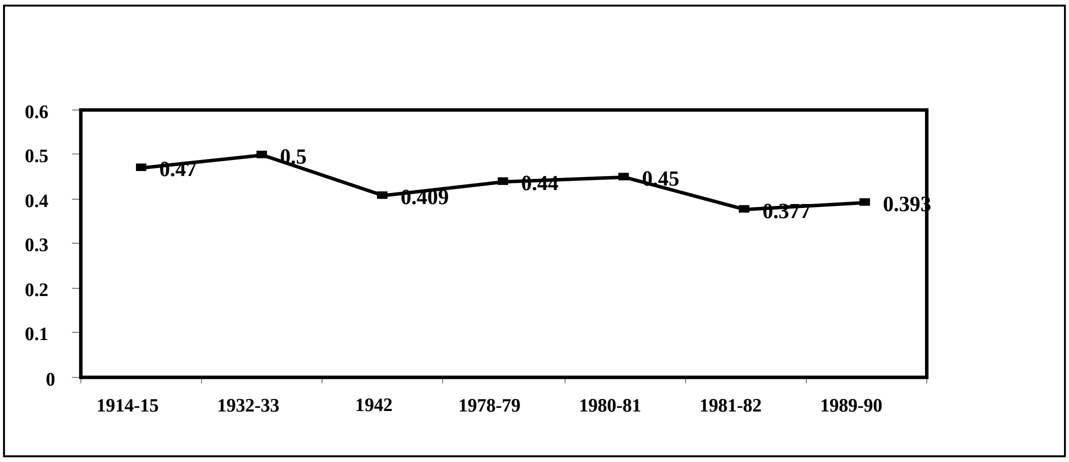
9 Sen, A. 1972, *On Economic Inequality,* Clarenden Press, London, p.1.
10 Siminksi et al, 'Assessing the Quality and Inter-Temporal Comparability' p.51

## Income distribution in Australia; an historical overview

The long term trend in the distribution of income in Australia can be seen in Figure 1. The equality of income distribution in Australia deteriorated between 1915 and 1933 due to slower economic growth in the 1920s followed by the Great Depression. Income equality improved in the late 1930s corresponding to recovery from the depression and the commencement of the WW11 war effort. A prolonged period of higher post war economic growth with significant post war welfare initiatives enhanced equality, with a deterioration becoming apparent once more in recent decades.

**Figure 1**

*The Distribution of Income in Australia*




Source: Compiled from Saunders (tables 1,2,3,4) 1993 adding Saunders own findings[11].

Various studies suggest that the distribution of income became significantly more unequal after the 1980s (Harding[12], Saunders[13], Blacklow[14]). Blacklow found that 'real equivalent disposable income inequality rose throughout the period 1975-76 to 1998-99'.[15] "Equivalent" pertains to adjustments made to data to reflect economies of scale gained

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[11] Saunders, 'Longer Run Changes', pp.353-366.

[12] Harding, A. 1996, 'Recent Trends in Income Inequality' in P. Sheehan, B. Grewal and M. Kumnick (eds) *Dialogues on Australia's Future*. In Honour of the Late Professor Ronald Henderson , Centre for Strategic Economic Studies, Victoria University, pp. 283-305

[13] Saunders P. 1993, 'Longer Run Changes in the Distribution of Income in Australia', *Economic Record*, Vol. 69, pp. 353-66

[14] Blacklow, P. 2002, *Expenditure and Income Inequality in Australia 1975-76 to 1998-99*, School of Economics, University of Tasmania p.1-38.

[15] Ibid. p.31

within households in proportion to their needs. For example, the OECD equivalence scale[16] assigns a value of 1 to the first household member, 0.7 to any additional adult and 0.5 to a child. A family of two adults and one child would therefore have an equivalence scale of 2.2. The underlying assumption is that the family has needs 2.2 times greater than those of a single individual, rather than 3 times greater based on a headcount of persons.

Harding noted some deterioration across a range of income measures with the exception of equivalent before housing disposable income, where there was no change for the period 1982 to 1994.[17] Equivalent before housing disposable income is income after tax but before expenditure on housing costs such as rent or mortgages as housing costs can differ substantially across different regions. Harding found that the middle decile lost ground to the top decile who enjoyed 'increases in their after inflation market incomes of about $100 a week'[18] commenting;

> The most affluent 10 per cent of Australians ranked by the equivalent before-housing income of their household received an estimated 26 per cent of all earned income in 1993-94. This was a striking increase, reflecting a one third growth in their share since 1982.[19]

Saunders found that 'inequality varies in the short run with cyclical conditions in the economy.'[20] The cyclical volatility of the 1970s (stagflation) followed by the recession of 1981-83 was a significant factor in rising inequality after 1980. Saunders found that the distribution of family income became more unequal between 1969 and 1990[21]. The Gini coefficient rose from 0.33 to 0.38, with the relative position of lower decile families deteriorating, as illustrated by the P90/P10 ratio and the P50/P10 ratio increasing from 1.911 to 2.136 and from 4.756 to 6.423 respectively. [22] The widening of the gap between the richest and poorest deciles is also evident in U.S. census data over the same period, with

16 OECD. *Equivalence Scales*. http://www.oecd.org/dataoecd/61/52/35411111.pdf accessed 9th November, 2006.

17 Harding, A. 1997, 'The Suffering Middle: Trends in Income Equality in Australia, 1982 to 1993-94', *The Australian Economic Review*, vol. 30, No.4, Tale 3, p.346.

18 Harding, 'The Suffering Middle' p.348

19 Ibid. p.347

20 Saunders, P. 1993, 'Economic Adjustment and Distributional Change; Income Equality in Australia in the Eighties', *SPRC Discussion Paper No.47* pp.26-27

21 Survey income and tax incomes followed the Australian tax year, dated 1st July to 30th June. For simplicity the tax year will be referred to as the latter year, eg 1969 for the 1968-69 year.

22 Saunders, P. 2001, 'Household Income and its Distribution', *Year Book Australia*, 2001, ABS Cat No. 1301.0, http://www.abs.gov.au/ unpaginated.

the P90/10 ratio increasing from 2.22 to an astonishing 10.44. The U.S. P50/P10 ratio declined marginally from 4.38 to 4.01.[23] However, it is necessary to be circumspect in international comparisons of this nature. If the majority of the world's highest income earners are U.S. based citizens then the U.S. P90/P10 ratio may not be comparable to Australia's for the simple reason that both the 1st and the 9th deciles may have significantly higher incomes than the equivalent Australian deciles. The relative costs of living in the two countries may also not be sufficiently close to enable a fair comparison. In fact, the Henderson Inquiry into Poverty in 1974 was criticised for basing relativities in the poverty line on the 1954 New York Budget Standard at a time when Australian low income families spent a 'lower proportion of all expenditure on food and a higher proportion on transport'. [24]. Notwithstanding, long term trends in the U.S. and Australian ratios remain relevant for their ability to show the incremental changes in equality in developed nations over time.

**History of official income distribution studies; 1968 to 1986**

There are significant methodological, definitional and scope differences in the official IDS studies affecting longer term comparability. The exclusion of particular surveyed groups from the analysis is of concern. The excluded tended to be from traditionally low income earning groups. Exclusions affected the main annual income tables from which the published Gini coefficient, the official measure of income equality, was drawn. As noted by Bradbury 'more persons and income units were excluded under Income Distribution Surveys than Surveys of Income and Housing Costs (SIHC)..and this is particularly significant for annual income'.[25] The SIHC was a later development in survey methodology, conducted intermittently after 1980, that included questions on housing costs for the first time.

The 1968-69 IDS was carried out in November 1969 at one half of the dwellings included in the quarterly population survey. It included half of one percent of the Australian population of approximately 12.2 million[26] being approximately 61,000 persons. The

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23 Jones, A.F and Weinberg, H.D. 2000, 'The Changing Shape of the Nation's Income Distribution; Consumer Income'. U.S.Census Bureau, Cat no. 60-204, p.5.

24 Social Policy Welfare Secretariat, 1981, *Report on Poverty Measurement*, Australian Government Publishing Service, Canberra, p.211.

25 Bradbury, B. 1992 'Unemployment, Participation and Family Incomes in the 1980s', *The Economic Record*, Vol. 68, No. 202, December, p.338

26 ABS Cat. no. 3105.0.65.001 Australian Historical Population Statistics.

geographical areas 'included all rural and urban areas in all States and Territories, including sparsely settled areas'.[27] The scope included individuals aged 15 years and over residing in private dwellings such as houses and flats as well as non private dwellings such as hotels and motels. A family was defined as 'two or more persons living in the same household', including the head of the family and any persons who had a relationship with the head, for example a wife, son, ancestor or brother'.[28] The interviews extended over four weeks and required interviewees to recall their income details for the 1968-69 year in approximately 50 per cent of questions. Records were referred to in the remaining 50 per cent of questions. Those residing in institutions, for example, the hospitalised, or inmates of gaols or boarding schools were excluded.[29] IDS surveys followed in 1974, 1979, 1982, 1986 and 1990. In all there were six IDS surveys which were fully superseded after 1990 by the Survey of Income and Housing Costs (SIHC).[30]

In the 1974 IDS, "income units" were added as a unit of measurement in addition to families and individuals.[31] All people were treated as belonging to an income unit comprising one or two adults, with or without children, and income was assumed to be shared only within the income unit. These income units cannot be compared to families, as families were defined in terms of 'two or more persons living in a household'.[32] Income units included more 'one person income units' defined as 'people who are not married and have no dependent children'. Examples of single person income units included 'adult working offspring still residing at home and lodgers'.[33]

Non response was a feature of the IDS surveys however this may have been exacerbated by early survey form design. In the 1979 survey forms, there were two responses possible to most of the questions regarding income or tax; "don't know" (proceed to next question) or "amount." Some questions were followed with "as you don't know the answer, can you provide an estimate?" with two subsequent response boxes of "amount" or "don't know."[34]

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[27] Siminksi et al, 'Assessing the Quality and Inter-Temporal Comparability', p.41

[28] Siminksi et al, 'Assessing the Quality and Inter-Temporal Comparability' p.41

[29] ABS, 1975, *Income Distribution* 1968-69, Consolidated and revised edition, Cat.No.6505 (Ref.No.17.17) October, Explanatory Notes pp.4-7.

[30] ABS *Income Distribution, Australia, various.*

[31] ABS, 1978, *Income Distribution, 1973-74*, Part 3, Supplementary Tables.

[32] ABS, 1977, *Income Distribution* 1973-74, Part. 2 , Cat. No. 6503.0, issued 5th February, 1977. p.4

[33] ABS, 1982, *Income Distribution Australia 1978-79*, Supplement to Social Indicators No.3, Issued 20th August, Cat. No 4108.0, p.14

[34] Copies of 1979 survey forms provided by Jan Gatenby, ABS.

Understatement of income is a feature of income surveys generally. In 1976 the ABS noted that respondents 'tended to understate government social service benefits in income surveys'.[35] In addition, studies have found investment and property income to be 'significantly under reported.'[36] The under reporting in these cases may be due respectively to a sense of shame in disclosing welfare income or fear of possible linkages of survey data with taxation authorities.

Migrants were excluded from all tables in the 1979 IDS if they arrived in Australia after September, 1978 (exclusion amount approximately 110,000).[37] These new migrants were not excluded from individual tables in 1968 and 1974. Income units whose female head had lived with her husband for more than twelve weeks during 1978-79 but was not doing so at the time of the survey, for example, the separated, divorced or widowed, were excluded from all income unit tables. This resulted in the exclusion of 31,000 one parent income units and 39,000[38] one person units. By the 1982 IDS, females who changed their marital status at any time during the reference year[39] were excluded from all tables on annual income.[40] Males under the same criteria were not excluded.

ABS methodology embedded 'the assumption of dependence' in survey formalities.[41] In IDS methodology 'the income unit head was the male partner of a couple'.[42] As males have historically had greater access to labour force earnings, the ABS unit of measurement for both married and de facto family units as well as couple income units stayed with the male head in the reference year[43]. Yet Australia was changing in the 1970s and 1980s. More women were working and 'the divorce rate was increasing', whilst 'marriage rates were falling'.[44] The assumption of female dependence on the male 'head of family' permeated many institutional procedures of the period and was not unique to ABS survey methodology.

35 ABS, 1976, *Income Distribution* 1973-74, Part. 1, Cat. No. 6502.0, issued 5th May, 1976. p.6
36 ABS, 2000 (b), *Household Expenditure Survey Australia: User Guide 1998-99*, Cat. No. 6527.0, ABS, Canberra p.5-6
37 ABS, 1982, *Income Distribution Australia 1978-79*: Supplement to Social Indicators No.3, Cat.No.4108.0 Issued 20th August, 1982. p.1.
38 Ibid. p.41.
39 June 30, 1981 to June 30 1982.
40 ABS, 1984, *Income and Housing Survey; Income of Individuals, Australia, 1981-82.* Cat. No 6502.0 p.2.
41 ALRC, 1993, Commission into *Equality before the Law; Women's Equality*, The Australian Law Reform Commission (ALRC) 69, Part II. http://www.austlii.edu.au/au/other/alrc/publications/reports/69/vol2/
42 Siminksi et al, 'Assessing the Quality and Inter-Temporal Comparability' p.47
43 The year surveyed for annual income.
44 Jones, M.A. 1980, *The Australian Welfare State*, George, Allen and Unwin, p.128.

As late as 1991, the Australian Law Reform Commission identified the outdated assumption of female dependence in social security legislation;

> The federal government is aware that Social Security arrangements for unemployed people still largely reflect (conditions) in the 1940s. The provisions of the Social Security Act (1991) assume that only one person in a couple will be actively looking for work with the other partner, usually the wife, economically dependent on her partner.[45]

The impact of exclusions became more pronounced in surveys after 1978. By the 1986 IDS, female exclusions amounted to 262,000 females and 262,000 income units. Youth exclusions amounted to 250,400 youth and 211,200 income units by virtue of being persons aged 15 years or older who attended school full time for at least part of the reference year.[46] Migrant exclusions amounted to 70,300 persons and 58,400 income units by virtue of arrival in Australia at any time during the reference year.[47] The changing criteria for exclusion over time resulted in the omission of progressively larger numbers of persons from annual income tables. There is a substantial body of research showing that women tend to be poorer after separation or divorce (Smith and Weston[48], Sheehan and Hughes[49], Funder and Kinsella[50], Weston, R[51], McHugh and Millar[52]) and that youth have lower bargaining power in the workplace and lower earnings (Eardley[53], O'Brien[54], Commission

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45 Parliament of Australia '*Working nation: policies and programs'* AGPS Canberra 1994, 143 as cited in ALRC, 69, Part II.

46 In the 1986 IDs this was June 30 1985 to June 30 1986.

47 ABS 1987, 1986 *Income Distribution Survey Australia; Preliminary Results*, November (Replaces *Income and Housing Survey – Income of Individuals, Australia Preliminary* 6501.0).p.16. point.16.

48 Smyth, B and Weston, R. 2000, 'Financial Living standards After Divorce: A Recent Snapshot', *Research Paper 23,* AIFS,Melbourne, December, pp. 13-14

49 Sheehan, G. and Hughes, J. 2001, 'Division of Matrimonial Property in Australia', *Research Paper 25*, AIFS, Melbourne.

50 Funder, K. and Kinsella, F. 1991, 'Divorce, Change and Children: Effects of Changing Family Structure and Income on Children', *Family Matters*, December 1991, pp.20-23. Funder, K. 1993, 'Women's post-separation employment and reliance on social security', in Funder, K., Harrison, M. and Weston, R. 1993, (eds), *Settling down: Pathways of Parents after Divorce*, Australian Institute of Family Studies, Melbourne

51 Weston, R. 1992, 'Trapped in Poverty', *Family Matters*, April 1992, pp.5-7.

52 McHugh, M. and Millar, J. 1996, 'Sole Mothers in Australia; Supporting Mothers to Seek Work' *SPRC Discussion Paper No. 71*, November, p.5.

53 Eardley, T. 1998, 'Working but Poor? Low Pay and Poverty in Australia'. SPRC Discussion Paper No. 71,
p. 4.

54 O'Brien, M. 2006, 'The Youth Labour Market In Australia – Implications

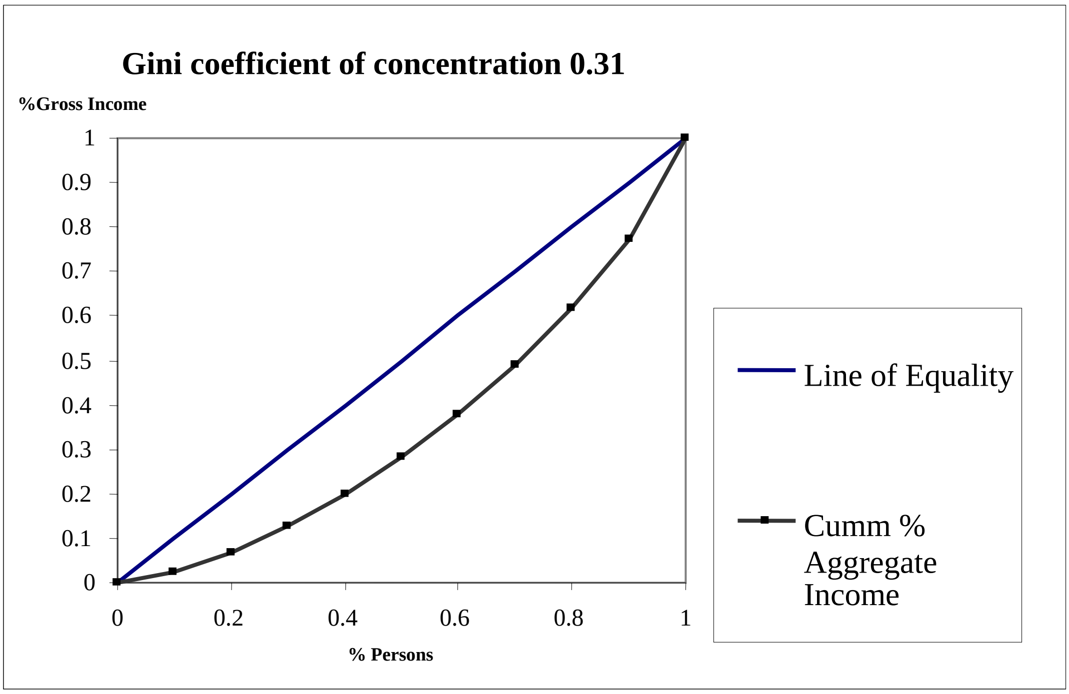
for Children and Young People,[55]). The effect of excluding the traditionally poorer is likely to result in a lower measure of inequality. The problem with a conservative measure is that it is counterproductive if the measure is to be employed for the purposes of developing policies to minimise economic disadvantage.

**Analysis of ABS income distributions and taxation income distributions; 1968-1986**

Referring to Figure 2, the equality of the distribution of 1973-74 ABS family income was calculated using Brown's Gini as 0.31. The official published Gini was 0.31. This procedure was repeated over a number of published IDS tables and produced a result either the same as, or very close to the published Gini coefficients [56] confirming the acceptability of the use of this formula for the analytical component of this study.

**Figure.2**

*Income Distribution 1973-74 by Decile Shares of Family Income*




Source: ABS Income Distribution 1973-74, Part 2, Reference no.17.8 p.11.

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From Work Choices Legislation', *Paper presented to the 14th International Employment Relations Association (IERA) Conference*, 19th to 23rd June, Hong Kong. p. 12.

55 The Commission for Children and Young People, 2006, 'Submission to the Australian Fair Pay Commission on the Federal Minimum Wage', 28th July, 2006. pp.7, 8.

56 ABS, 1977, *Income Distribution 1973-74, Part 2 (Families)*, Reference No.17.8. p.11.

**Table 1**

*Gini Coefficient of Concentration – Various Income Bases, 1968-1986*

| **Year** | **1. ABS** Family Income | **2. ABS** Income Units | **3. ABS** Income Recipients | **4.ABS** All Females | **5. ATO** Taxable Income | **6. ATO** Actual Income | **7. ATO** Net Income |
|---|---|---|---|---|---|---|---|
| 1968 | | | | | 0.3140 | 0.3347 | |
| **1969** | 0.3184 | | | | 0.3180 | 0.3378 | |
| 1970 | **0.3133** | | | | 0.3190 | 0.3393 | |
| 1971 | **0.3133** | | | | 0.3216 | | 0.3389 |
| 1972 | **0.3133** | | | | 0.3218 | | 0.3383 |
| 1973 | 0.3160 | | | | **0.3218** | | **0.3291** |
| **1974** | 0.3082 | | | 0.516 | 0.3060 | | 0.3198 |
| 1975 | **0.3072** | | | | **0.3060** | | **0.2966** |
| 1976 | **0.3072** | | | | 0.2709 | | 0.2733 |
| 1977 | **0.3072** | | | | 0.2722 | | 0.2748 |
| 1978 | 0.3062 | | | | 0.2706 | | 0.2711 |
| **1979** | | 0.3872 | 0.4330 | 0.469 | 0.2710 | | 0.2710 |
| 1980 | | **0.3903** | | | 0.2688 | | 0.2697 |
| 1981 | | **0.3903** | | | 0.2762 | | 0.2774 |
| **1982** | | 0.3934 | 0.4352 | | 0.2830 | | 0.2838 |
| 1983 | | **0.3986** | | | 0.2843 | | 0.2850 |
| 1984 | | **0.3986** | | | **0.2830** | | **0.2907** |
| 1985 | | **0.3986** | | | 0.2955 | | 0.2964 |
| **1986** | | 0.4038 | | | 0.3052 | | 0.3053 |

Source: ABS Income Distributions 1968 to 1986, Commonwealth Income Tax Assessments 1968-1986. Note.[57]

Examining ABS income categories in Table 1 first (Columns 1 to 4), it is important to note that comparability issues arise. The Gini coefficient was calculated only from tables where either decile proportions of both persons and income, or decile proportions of persons and

57 In order to draw a comparison between the ABS income distributions and the more regular annual taxation data ABS Gini coefficients were estimated as the midpoint between two survey years. The bold numbers in Table 1 indicate estimates and the years in bold type indicate the actual date of an ABS income survey. Some years of taxation data were not available and have been similarly estimated.

the group means of each income range and total aggregate income were published. No assumptions have been made regarding either the mean or median group incomes. On this principle there were no ABS income categories that continued consecutively over the entire period of analysis. Estimates have been made for years where no official IDS surveys were conducted by averaging the Gini coefficients of the two survey years either side.

Table 1 (Column 1) shows there is a very slight improvement in income equality for all families between 1968 and 1978. Comparing the 1978 results to 1982 and 1986, there is a decline in equality for all income units seen in Column 2. The inequality of all individuals in Column 3 is higher than the inequality of both families and income units. The use of income units  produces higher inequality measures than the category ‘families’ precisely because it includes more single person units who do not have the benefit of two potential incomes. Female income in Column 4 demonstrates the highest level of inequality of all ABS income categories.

Referring to the taxation income categories in Table 1, there were three forms of income articulated in Department of Finance records; “actual income” (Column 6), “net income” (Column 7)  and “taxable income” (Column 5). The aggregate of actual income has the greatest monetary value, followed by net income, then taxable income. Actual income is defined as ‘gross income including exempt income less expenditure incurred in gaining that income.’[58] Net income is defined as ‘total assessable income less total deductions for expenses incurred in gaining assessable income.’[59] As exempt income is not assessable income, the main difference between actual and net income is the amount of exempt income. In 1982 a number of government benefit payments were either fully or partially exempt from tax[60] including family allowances, supporting parent’s benefits and particular repatriation pensions. Taxable income is ‘the income remaining after deducting from assessable income all allowable deductions’.[61]

The primary purpose of the tax system is to raise revenue for the government and a secondary purpose is to reduce the inequality of disposable income. The degree of

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58 Commonwealth Bureau of Census and Statistics (CBCS), 1971, Official Year Book of the Commonwealth of Australia. No 57. Public Finance Records p.585.

59 Australian Bureau of Statistics (ABS), 1973, Year Book No 59. Public Finance Records p.572

60 Jones, *The Australian Welfare State*, p.166.

61 ABS, 1974, Year Book No 60. Public Finance Records p.592

redistribution is an ethical choice that each member of a society must decide based on their preferences for a more or less equal society. Excessive redistribution may reduce the incentives for entrepreneurial initiative yet too little redistribution can impair social cohesion. As noted by Stilwell, ‘economically, the danger is that growing inequality undermines the potential for economic co-operation between capital and labour’ and erodes ‘the necessary conditions for economic efficiency’. [62]

Taxable income is the income remaining as a residual of gross income adjusted for exemptions and deductions on which tax is then levied. Comparison of taxable income to either actual income or net income in Table 1 should reflect any redistributive effects of taxation legislation concerning tax exemptions and deductions. Assuming these particular tax rules have some redistributive function (in addition to the redistributive function of progressive income tax rates), the Gini coefficients for taxable income should be lower than those for net or actual income.

Figure 3 illustrates all values calculated in Table 1. A ‘redistributive gap’ can be seen in Figure 3 from 1968 to 1974 with the Gini coefficients for both actual income and net income higher than those for taxable income. This suggests that tax exemptions and deductions had an ‘equality increasing’ effect from 1968 to 1974 yet minimal effect after. “Actual income” ceased publication after 1970 yet “net income” and “taxable income” merge after 1975 with only a tiny redistributive effect evident comparing Columns 7 and 5 in Table 1 at the 2nd and 3rd decimal places.

In Figure 3, the equality of taxable income and ABS family income is very close from 1969 to 1974. This tends to support Leigh’s[63] findings that family income was closely proxied by adult male tax incomes. This relationship can also be explained with reference to the low participation of females in the workforce prior to the early 1970s. Family income in many cases would have consisted of only the breadwinner adult male income. The close relationship can, however, be questioned after the 1970, given the rise in female labour force participation[64] and single parent families which increased from 6% of all families in

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62 Stilwell, F.2003, ‘Why Bother About Economic Inequality?’, Address of the Chair, the Evatt Foundation's Breakfast Seminar on ‘Australia's Retreat from Egalitarianism.’ 8th July.

63 Leigh, A. 2005, ‘Deriving Long Run Inequality’. pp.S58-70.

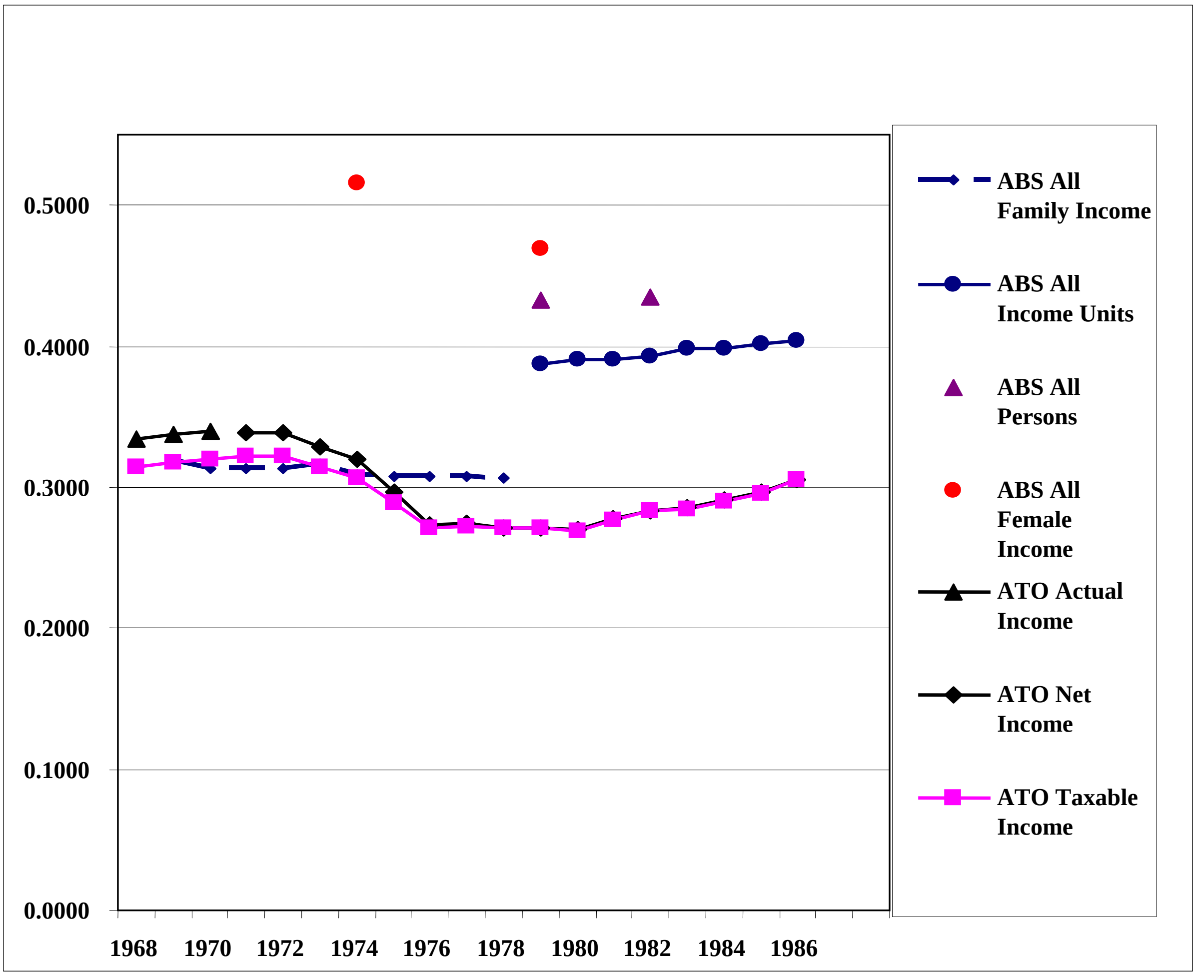
64 Evans, M.D.R and Kelley, J. 2004, ‘Trends in Women’s Labour Force Participation; 1984-2002’, Melbourne Institute of Applied Economic and Social Research, Working Paper No. ISSN 1328-4991, ISBN, 07340 p.1

1976 to 9% by 1991[65]. ABS methodology however continued to embed the concept of the male head of family, and many newly separated females were excluded from the analysis of family income notwithstanding that they may have been earning income in the reference year and had primary care of offspring as is the norm. In this sense ABS methodology may have been deficient in capturing a true picture of family income.

**Figure 3**

*Gini Coefficient of Concentration Various Income Bases, 1968-1986.*

*A Comparison of ABS measures to Taxation measures.*




Source: ABS Income Distributions 1968 to 1986, Commonwealth Income Tax Assessments 1968 to 1986.

65 ABS, 1994, 'Australian Social Trends', Cat. no. 4102.0

Taxable income demonstrates greater equality than all ABS measures from 1974 on, tending to settle into a regular pattern of being slightly over 10 points lower than the Gini coefficients for income units after 1978 (comparing Column 5 to Column 2 in Table 1). The trend in the 1980s for taxable income and income units is very similar with both showing a gradual rise. This confirms one objective of this study; that there is a relationship in the general trend of the equality of tax income and ABS survey income, supporting the findings of studies previously discussed. The reasonably consistent gap between the two measures confirms a second objective; that the Gini for taxable income as presented is useful as a benchmark for evaluating income equality for the years where no IDS surveys were conducted.

Taxable income shows a relatively sharp fall in inequality between 1973 and 1978. This apparent improvement in the equality of tax income is unmatched by any similar change in ABS measures, with the exception of the female statistics. The ABS female data, however, can be explained by the unprecedented rise in female labour force participation in the 1970s with more females previously outside the statistics now included for the first time. This increase in the equality of taxable income, however, needs to be interpreted with great caution. In the 1970s three main forces come into play; inflation, significant tax and welfare changes and demographic influences. Inflation is likely to be the most important factor of the three, delivering to the Whitlam Government in 1975 what would have appeared at the time to be a windfall in tax revenues;

> In one year of the Labor Government income tax revenues rose 46% while inflation was only 16.9 % reflecting the impact of inflation on progressive income tax rates.[66]

In the 1970s the aged were a sizeable demographic in terms of their political influence, with ‘those aged over 50 forming 34.5% of the voting population’.[67] With the high inflation (stagflation) of the 1970s many found their retirement savings being eroded. As noted by Jones, the Whitlam Labor Government after 1972;

[66] Jones, *The Australian Welfare State,* p.172
[67] Ibid. p.91

> 'removed the means test on most aged pensioners and generously extended the means test on the remainder. It is likely that political pressure from the aged would have induced a Liberal government to move in the same direction.[68]

Table 2 shows that cash benefits paid to the aged accounted for 48.53% of the total social security and welfare budget in the 1975-76 year; an increase of 6.9% on 1970-71 values. Over the same period assistance to families and children fell by 41.7%.[69] There was no assets test 'so wealthy pensioners could easily arrange their affairs to obtain the pension,'[70] for example by receiving capital gains as opposed to income.

**Table 2**

*Federal Social Security and Welfare Cash Benefits Paid to Persons*

| **% Total Social Security and Welfare Cash Benefits paid to persons.** | **1970-71 %** | **1971-72 %** | **1972-73 %** | **1973-74 %** | **1975-76 %** |
|---|---|---|---|---|---|
| Assistance to aged persons | 45.38 | 46.65 | 47.89 | 49.87 | 48.53 |
| Assistance to ex servicemen | 18.44 | 17.96 | 16.10 | 15.53 | 14.13 |
| Assistance to the incapacitated | 9.54 | 9.74 | 10.21 | 10.11 | 9.58 |
| Unemployment and sickness benefits | 1.81 | 3.04 | 4.15 | 4.60 | 11.23 |
| Widowed and deserted spouse benefits | 6.99 | 7.11 | 7.51 | 7.81 | 7.19 |
| Assistance to families and children | 15.99 | 15.31 | 14.00 | 11.84 | 9.23 |
| Other social security | 1.84 | 0.19 | 0.14 | 0.13 | 0.11 |

Source: ABS Official Year Book of Australia No.61, 1975 and 1976, Public Finance, p.569.

The increased tax revenues did, however, enable the expansion of other welfare programs. Family allowances were introduced in 1976. In 1973 supporting mother's benefit 'was introduced to single mothers not entitled to a widow's pension and extended to single

68 Ibid. p.310.
69 ABS, 1976. *Official Year Book of Australia* No.61, 1975 and 1976, Public Finance, p.569.
70 Jones, *The Australian Welfare State*, p.113.

fathers in 1977'.[71] Low income families gained from these changes but the benefits may not have lasted very long. Inflation peaked at 17.6 %[72] in 1975 but substantial price increases in food and energy had greater impact on lower income groups. The 1970s tax scales carried little adjustment for inflation, forcing those on lower incomes into higher tax deciles. In the 1976-77 tax year 'indexation was introduced by the Fraser Government but by 1979-80 only half indexation was maintained due to the cost'.[73] The aged and service pensions continued to be generously indexed. However other benefits were not indexed, such as family allowances for low income groups, access to public housing and public housing rents and educational assistance. Unemployment benefits were insufficiently indexed.[74]

By 1980 the impact of high inflation and the political response to it resulted in the reallocation of welfare resources toward the aged. As a percentage of the total population, as distinguished from the voting population, the aged 'formed only about 15 percent.' Children up to the age of 14 years 'comprised 39 per cent of the population'.[75] Yet by 1980 the aged pension was almost universal with '87% of the aged on the pension'[76] and in the same year;

> The State paid an average of $2859 per capita to the aged through the aged pension scheme while paying only $225 a child through family allowances.[77]

During the period in question, aged pensions, with the exception of certain repatriation disability type payments, were subject to tax. Therefore, provided an individual's income exceeded the tax threshold, the aged pension would increase taxable income.[78] Aged pension benefits added to the retirement income of persons who may already have been sufficiently well off for tax eligibility would raise the incomes of lower, middle and quite possibly higher deciles, particularly given such wide application of the benefit. Less of the accumulated savings of the aged would need to be consumed. Interest returns were high and

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71 ABS, 1987, 'History of Pensions and Other Benefits in Australia, *Year Book of Australia*, Article contributed by Department of Social Security, Social Security and Welfare Chapter, pp. 380-382.
72 ABS, 2006, 'Consumer Price Index', Cat. no 6401.0 Tables 1 and 2.
73 Jones, *The Australian Welfare State*, pp.171-178.
74 Ibid. pp.171-178.
75 Ibid. p.119
76 Ibid. p.115.
77 Ibid.
78 Ibid, p.166.

real interest rates became positive in the late 1970s rising ‘to the unprecedented level of 8% in 1981-82’.[79] The combination of accumulated savings earning higher interest rates would result in higher income flows for the aged cohort.

The impact of wage inflation in the 1970s pushed lower wage earners into higher tax deciles yet many such individuals were likely to have been experiencing substantial falls in real income given the disproportionate rise in food and energy costs and the impact of higher taxes. As taxation authorities noticed that fewer individuals were falling into the lower income ranges each year, the income range amounts would be adjusted upwards. This would occur in response to tax return aggregates each year. Therefore the upward adjustment of income ranges by the ATO would likely lag behind by possibly one or two tax years. Between the 1972 year and the 1981 year the lowest taxable income range was raised five times from under $599 to under $5000. In contrast, from the 1981 year to the 1986 year the lowest income range actually fell from under $5000 to under $4956.[80] A lagged impression of income shifting from the lower deciles toward the middle of the distribution during the inflationary years would result. The apparent improvement in the equality of taxable and net income from 1972 to 1978 as seen in Figure 3 is therefore likely to be little more than an inflationary distortion.

Leigh found a similar rise in the equality of the pre tax incomes of adult males from 1969 to 1976 and a fall after the 1980s. Leigh also found a sharp rise in equality from 1951 through to 1958 following a dramatic fall in the 1950 year[81]. Inflation may also play a role in this spike. Inflation approached 18% in the April-June quarter of 1951 exceeding 20%[82] for the two years of the Korean War boom. However the inflation in this decade was short and sharp. The initial sharp deterioration in equality in the 1950 year is accounted for mainly by the extraordinary wool prices received by farmers[83]. As noted by Atkinson and Leigh, the Korean War wool boom ‘had a positive effect only at the very top’[84]. However, the question remains, was wage inflation also responsible for the apparent “improvement” in

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79 Jones, *The Australian Welfare State*, pp.178.

80 ABS Year Books various, ‘Commonwealth Income Tax Assessments’, various.

81 Leigh, A. 2005, ‘Deriving Long Run Inequality’, Table 1, p.S65

82 McFarlane, I. 2006, ‘The Golden Age’. Lecture 1. *The Boyer Lectures.* *http://www.abc.net.au/rn/boyerlectures/stories/2006/1769918.htm* unpaginated.

83 Jones, F.L. 1975, ‘The Changing Shape of Australian Income’, p. 31.

84 Atkinson, A.B. and Leigh, A. 2006, ‘The Distribution of Top Incomes in Australia’, Centre for Economic Policy Research, Australian National University, Discussion Paper no. 514, March, p.10

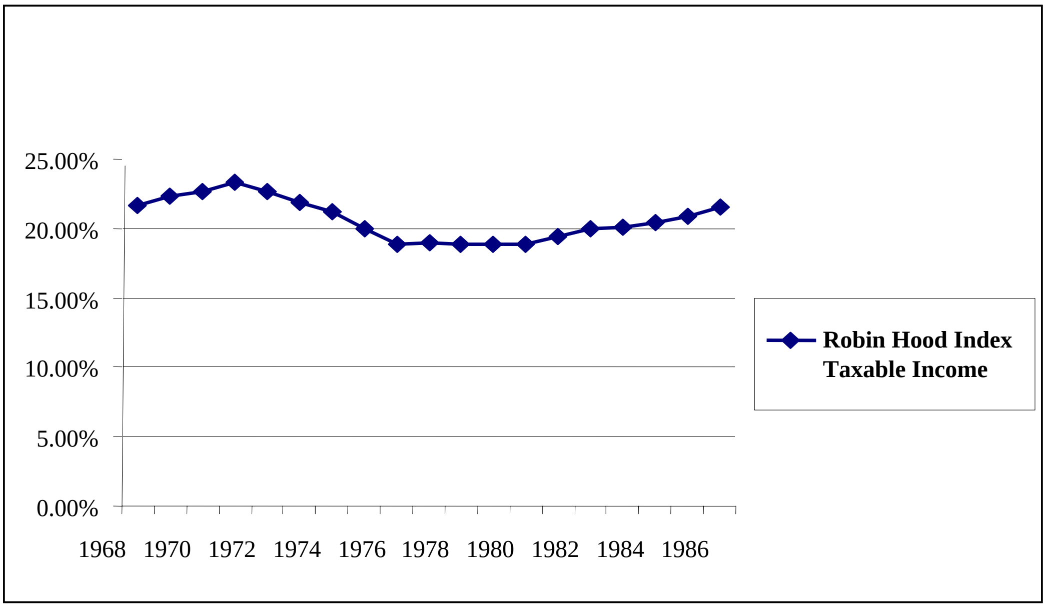
equality from 1951 to 1958? A comparison of the two inflationary decades of the 1950s and 1970s is required, however, is outside the scope of this paper.

**Analysis of the data using the Robin Hood index**

Figure 4 illustrates Table 3 data and plots the Robin Hood indices for taxable income from 1968 to 1986. As the Robin Hood index is derived from the position of the Lorenz curve it can be expected to trace a similar pattern to that of the Gini coefficients in Figure 3. This graph again reflects a possible inflationary distortion with the index falling between the years 1971 and 1977 giving the questionable impression that equality 'improved' in a period of very high inflation. After 1980 the index rises reflecting the impact of the 1981-83 recession, yet the measure still retains slightly greater equality in 1986 compared to 1971.

**Figure 4**

*The Robin Hood Index for Taxable Incomes 1968 – 1986.*




Source: Commonwealth income tax assessments 1968 to 1986.

**Table 3**

*Robin Hood Indices 1968-86*

| Year | **1. ABS Family Income** | **2. ABS Income Units** | **3. ABS Income Recipients** | **4. ABS All Females** | **5. ATO Taxable Income** | **6. ATO Actual Income** |
|---|---|---|---|---|---|---|
| 1968 | | | | | 21.70% | 23.56% |
| **1969** | 22.50% | | | | 22.37% | 23.77% |
| 1970 | | | | | 22.62% | 23.60% |
| 1971 | | | | | 23.37% | |
| 1972 | | | | | 22.62% | |
| 1973 | | | | | **21.88%** | |
| **1974** | 22.31% | | | 39.50% | 21.15% | |
| 1975 | | | | | **19.98%** | |
| 1976 | | | | | 18.81% | |
| 1977 | | | | | 18.99% | |
| **1978** | | | | | 18.91% | |
| **1979** | 32.10% | 28.50% | 32.10% | 35.50% | **18.87%** | |
| 1980 | | | | | 18.83% | |
| 1981 | | | | | 19.40% | |
| **1982** | | 29.00% | 32.40% | | 19.96% | |
| 1983 | | | | | 20.04% | |
| 1984 | | | | | **20.44%** | |
| 1985 | | | | | 20.84% | |
| **1986** | | 29.60% | | | 21.52% | |

Source: ABS income distributions 1968 to 1986, Commonwealth income tax assessments 1968 to 1986.

## Analysis of taxable incomes using decile shares and percentile ratios

Table 4 represents the decile shares of the taxable income of individual returns for the tax years 1970 to 1986. The change in percentile shares is shown at two points of comparison; 1985 relative to 1970 and 1985 relative to 1981. Comparing 1985 to 1970 shows that the highest decile lost the greatest share, yet the 9$^{th}$ decile gained most of this share. When the share of the highest decile is lost to the 9$^{th}$ decile, one has to question whether it may not be due to the benefits of access to more sophisticated taxation expertise. For example, the more affluent of the period were ‘more likely to benefit from fringe benefits like superannuation’.[85]

**Table 4**

*Decile Shares of Taxable Income 1968-1986*

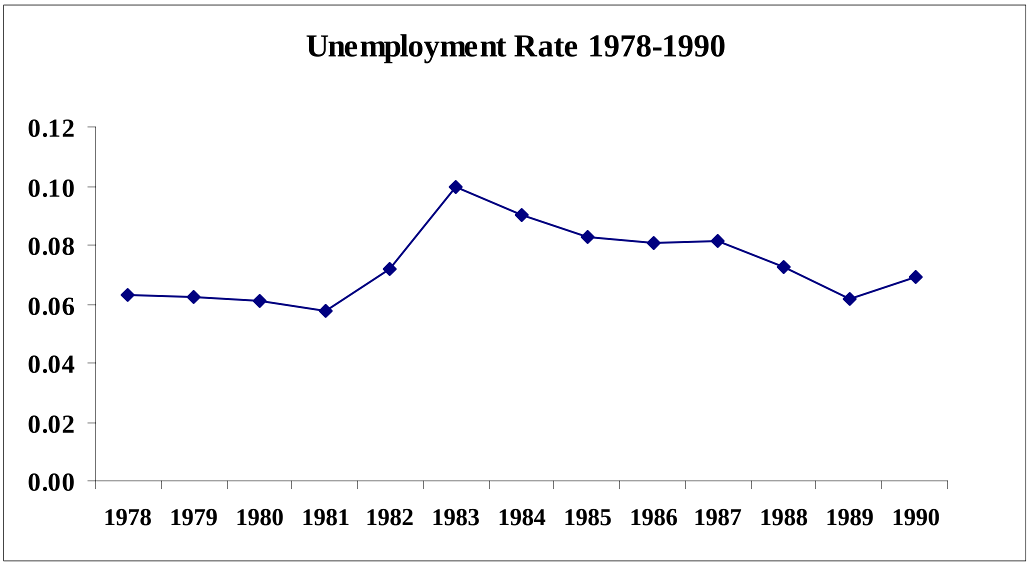
| **Deciles**<br>**Taxable Income of Taxable Individuals 1969-70 to 1985-86** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Decile** | **1969-70** | **1973-74** | **1977-78** | **1980-81** | **1982-83** | **1985-86** | **Change 1985/1981** | **Change 1985/1970** |
| **1** | 2.6% | 3.1% | 3.9% | 3.8% | 3.5% | 3.1% | **-0.6%** | **0.6%** |
| **2** | 4.3% | 4.7% | 5.1% | 4.9% | 4.7% | 4.4% | **-0.5%** | **0.0%** |
| **3** | 5.9% | 6.1% | 6.4% | 6.3% | 6.1% | 5.7% | **-0.5%** | **-0.2%** |
| **4** | 7.2% | 7.3% | 7.5% | 7.5% | 7.4% | 7.2% | **-0.3%** | **0.0%** |
| **5** | 8.3% | 8.3% | 8.6% | 8.6% | 8.6% | 8.5% | **-0.2%** | **0.2%** |
| **6** | 10.0% | 9.3% | 9.6% | 9.6% | 9.7% | 9.6% | **0.1%** | **-0.3%** |
| **7** | 10.1% | 10.5% | 10.7% | 10.8% | 10.9% | 11.0% | **0.2%** | **0.9%** |
| **8** | 13.0% | 11.9% | 12.1% | 12.3% | 12.5% | 12.6% | **0.3%** | **-0.4%** |
| **9** | 13.6% | 14.2% | 14.2% | 14.4% | 14.7% | 15.1% | **0.6%** | **1.5%** |
| **10** | 25.0% | 24.5% | 21.9% | 21.9% | 21.8% | 22.8% | **1.0%** | **-2.1%** |
| **P90/10 ratio** | **5.29** | **4.52** | **3.65** | **3.84** | **4.16** | **4.80** | | |
| **P90/50 ratio** | **1.64** | **1.71** | **1.65** | **1.68** | **1.71** | **1.78** | | |
| **No Returns** | 5,372,501 | 5,420,004 | 5,568,298 | 5,973,733 | 6,104,878 | 6,966,074 | | |

Source: Commonwealth income tax assessments 1968 to 1986.

Comparing the change from 1981 to 1985 in Table 4, the fifth and all lower deciles lost share to the 6th and all higher deciles, with the highest decile gaining the most. As seen in Figure 5, the unemployment rate in August 1981 was 5.6% rising rapidly to a peak of 9.9% in August 1983, before falling steadily to 5.7% in August 1989[86] .

85 Jones, *The Australian Welfare State*, pp.131.
86 Bradbury, B. 1992 ‘Unemployment, Participation and Family Incomes in the 1980s’, *The Economic Record*, Vol. 68, No. 202, December, p.328.

**Figure 5**




Source: constructed from ABS Table 6202.001.0.55.001.

The loss of income share from all lower deciles illustrates the well documented effect of recessions on equality (Butlin[87], Boehm,[88] Saunders[89]). There is downward pressure on wages and employment. The least skilled and the lowest paid are likely to be the first to lose their jobs. As can be seen in the change from 1981 to 1985, the percentage loss of income share sequentially increases from the 5$^{th}$ to the 1$^{st}$ decile of the distribution showing that the lowest paid lost more in the 1981-83 recession and all incomes below the middle lost while all incomes above the middle gained, with the highest decile gaining the most. The change in percentile shares of taxable income demonstrates the effect of a cyclical downturn on those more likely to be in the workforce with great clarity.

These findings tend to support Bradbury's findings that the recession of 1981-83 did not fall equally across ABS income unit categories. Sole parents encountered the greatest loss with their unemployment rate increasing by 8 percentage points between 1982 and 1984. By 1989 they had only regained 4.8 percentage points. Single adults fared the next worst

87 Butlin, N.G. 1983, 'Trends in Australian Income Distribution: A first Glance,' Department of Economic History, Research School of Social Sciences, ANU, Working Paper no.17. September p.2.
88 Boehm, E.A. 1993, 20th Century Economic Development in Australia, Longman Cheshire, p. 336
89 Saunders, 'Economic Adjustment and Distributional Change' p.26

with an increase in unemployment of 5.4% whilst couples without dependants fared best experiencing only a 2.3% increase in unemployment.[90] Those who are single or marginally attached to the labour force are more likely to suffer unemployment in recessions. Couples with no family commitments may have greater freedom to work longer hours to fill the gaps left by redundancies. This may be one explanation for the rise in income shares of those deciles above the middle between 1981 and 1985.

The P90/10 ratio, which shows the ratio of the income share of the 9$^{th}$ decile to the lowest decile, falls from 1970 to 1978 and then rises after 1981. However, it remains lower when comparing 1986 to 1970. The P90/50 ratio also rises after 1978 exceeding the 1970 level in 1986, showing that the 9th decile did not lose as much ground as the middle decile.

**Conclusion**

The comparison of taxation incomes to ABS income distribution studies undertaken in this paper has confirmed what was intuitively suspected. Taxable income demonstrates a higher level of income equality than official survey incomes. Tax deductions can affect higher income deciles, particularly at income levels where payment for taxation expertise can act to minimise taxable incomes. Tax exemptions and the tax threshold also remove individuals at lower income levels from the distribution completely. Essentially what results is a smoothing of the distribution.

After 1980, the Gini coefficients for taxable income settled at slightly more than 10 points below the Gini coefficients for income units yet the gap is reasonably consistent. Both show a similar rising trend in this decade. Taxation income can be usefully employed to reduce the uncertainty arising from the dual problems of intermittency and lack of methodological continuity in official income distribution studies over the period 1968 to 1986. It is not, however, suggested here that the measure of the equality of taxable income can or should be viewed as substitute for official measures of income equality. Tax income is inadequate for this task without an imputation for non taxpayers of the type undertaken by Leigh[91]. The various forms of tax income can, however, be used as a benchmark for general trends in income equality notwithstanding and tax data provides a particularly rich

90 Bradbury, 'Unemployment, Participation and Family Incomes', p.336
91 Leigh, A. 2005, 'Deriving Long Run Inequality' pp.S58-70.

source, given the regularity of annual publication and the population size from which the statistics are drawn.

Taxable income can reasonably be expected to comprise a greater proportion of "pure" wage and salary income and a lesser proportion of welfare income than surveyed income, due to the combined effect of tax exemptions and the tax threshold. This would suggest that taxable income has a lesser resilience to the effects of cyclical disturbance, being market reliant to a greater extent, permitting the impact of cyclical volatility on the income equality of the workforce to be seen with greater clarity. The image is indeed sharp with the early 1980s recession. All deciles of taxable income earners below the middle lost income share but they lost it in ranked order sequentially by value, with the poorest losing the most. This gives credence to studies[92] that suggest the poor prefer policies that reduce unemployment, whilst the rich prefer policies that reduce inflation.

In the 1970s the equality of taxable income improved markedly in a period of high inflation (stagflation), defying any reasonable assumption to the contrary. Equality started improving in the early years of the 1970s well before inflation peaked in 1975 and continued rising to 1981, whereupon it changed direction with the onset of the 1981-83 recession. The apparent improvement in the equality of taxable income is the reverse of the traditional response of the Gini coefficient to recessions. Recessions have an 'equality decreasing' effect yet high inflation appears, in the distribution of taxation incomes, to have an 'equality increasing' effect. This rise in equality however, was not all it appeared to be. It was only a glimpse of Chimaera, daughter of the monster Typhon, and the harbinger of storms and shipwrecks; a conjuration caused by the trace of footsteps climbing the income ranges of the distribution, impelled by wage inflation, and then further reinforced by a particularly wide dispensation of a government cash benefit.

Welfare and taxation resources designed to reduce disadvantage are, like the allocation of other state resources, subject to the prevailing economic and political winds and the clamour of various competing groups. In an inflationary environment like the 1970s, the redistribution system becomes even more sensitive to political manoeuvrings with greater potential for inequity to arise through the failure of government to adequately index

[92] Jayadev, A., 2006, 'Differing preferences between anti-inflation and anti-unemployment policy among the rich and the poor', *Economics Letters*, Vol. 91, Issue 1. pp.67-71.

welfare benefits or to generously index some and others less so. Wage inflation can also deliver a sudden windfall in tax revenues which may, in the absence of perfect foresight, be somewhat incautiously distributed to politically influential cohorts. In the 1970s some of the more affluent elderly did rather well out of such a distribution. Yet was it at the expense of families with children and others more deserving of assistance?

Market volatility has a natural inclination to disturb the balance of political power due to changing voter perceptions of the level of government effectiveness in managing economic crises. The risks faced by policy makers intensify in such periods which sustain a greater likelihood than usual that short term political aspirations will prevail over the service of more equitable and resourceful economic strategies. Any resulting inequities may also, over time, come to be perceived by the populace as normal and persist in future decades, augmenting trends of rising inequality such as transpired after 1980.

As recognised by Plato;

'Democracy... is a charming form of government, full of variety and disorder; and dispensing a sort of equality to equals and unequals alike.'[93]

[93] Plato. *The Republic.* XXIX - Socrates - Adeimantus

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