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Proceedings of Joint Conference with the New Zealand Planning Council
Wellington, New Zealand
10-11 November 1988

edited by

Peter Saunders and Adam Jamrozik

Welfare Research Centre
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FOREWORD

The economic and social structures of Australia and New Zealand have always shared many common features. Both have been strong trading nations, relying on agriculture and other primary produce, as well as raw materials and minerals as a source of export earnings. Both have retained strong economic and political ties to the United Kingdom. Both have indigenous people struggling to maintain their political and cultural identity in societies where the mainstream has followed trends in Britain and, to a lesser extent, North America. Finally, both have a similar demographic structure, but one that is strikingly different from most European countries, being characterised by a population comprising more younger people and far fewer elderly people than their European counterparts.

Events in Australia and New Zealand in the eighties have further strengthened the perception of similarity in the experience of both countries. With Labor Governments elected to office in the first half of the decade, both faced a similar immediate economic problem of how to confront a loss of traditional export markets in an international economy far more open to competitive forces than in earlier decades. Trade protection of the agricultural and other key sectors - the traditional response in both countries - appeared no longer to be a feasible option either economically or politically. In the event, the new governments adopted broadly similar economic strategies characterised by deregulation, fiscal restraint and public sector reform. These policies have not been pursued at no cost to social policy, and in both countries there has been considerable disquiet at the possibility that social justice has been the victim of policies driven by the dictates of economic rationalism. The papers in this Report represent the beginning of an attempt to assess the extent to which this has been the case. A fuller account will need to wait several more years, although it will hopefully be prepared in due course.

These broad similarities suggested that there was much to be gained for both countries from a careful study of the policies and experiences of the other. This was the motivation that led to the organisation of the seminar whose proceedings are contained in this Report. As Director of the Social Welfare Research Centre, I had the opportunity to visit Wellington, New Zealand to speak at a Conference on Income and Wealth Distribution in New Zealand in August 1987. During my visit, I discussed the idea of a follow-up seminar with Peter Rankin and Judith Davey from the New Zealand Planning Council, and the broad structure of the seminar was finalised in early 1988.

In selecting a theme for the seminar, we decided to concentrate on one which extended the earlier Wellington Conference, but which also embraced broader social policy issues. We also wished for a balance between material that would be comparative in nature, and other material that focused on specific social policy concerns in each country. I hope that this Report is testimony to the success with which both objectives were achieved.

I would like to take this opportunity to express appreciation on behalf of the Social Welfare Research Centre to all of our colleagues in New Zealand whose efforts ensured the success of our first trans-Tasman venture. I would like to thank in particular Peter Rankin, Judith Davey and Michelle Boag of the New Zealand Planning Council for their assistance with organisation of the seminar, and all those whose participation helped to ensure its success.

Peter Saunders
Director
Social Welfare Research Centre

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INTRODUCTION AND WELCOME

Peter Rankin
Director
New Zealand Planning Council

Welcome.

On behalf of the Planning Council, *Te Kaunihera Whakakaupapa mo Aotearoa*, I welcome all of you. Some of you came to a seminar we held last year on Income Distribution. I welcome you back to this seminar which broadens the focus to social policy and to an even wider range of difficult challenges.

At last year's seminar we had a number of overseas visitors - including some Australians who had some surprisingly useful and relevant things to say. So this year our seminar is really a joint venture with the Australian Social Welfare Research Centre and I welcome particularly our Australian colleagues.

I also want to extend a warm welcome to Dr Michael Cullen, who was originally invited to speak in his capacity as Minister of Social Welfare. Now we can welcome him in an additional role. Dr Cullen has recently been appointed as a member of the Planning Council and I'm particularly pleased to welcome him to this first public occasion in that role.

Tena koutou katoa
naumai haeremai
Haeremai ki ta tatou hui
Nga hoa nga hoa mahi,
naumai haeremai,
Nga hoa o tawahi, nga kangaroos
Naumai haeremai ki kiwi land:
Haeremai kia korererero whakaaro
Kia pai ai ta tatou haere
i te huuarahi kei mua i a tatou
Ehara, i te huarahi ngawari
engari...
ma te aroha pea, ka taea.
Na reira, naumai haeremai
tatou katoa.

I say we have a difficult road because we are in the midst of extraordinary pervasive changes. Some of them are changes in our society and in the world context which had been going on since the 1950s which we seem to have tried to ignore or push away for a long time - and now they have caught up with us and we are having to cope with them in a rush.

Some of the changes are part of that rush to adapt - changes we are making to catch up after a long period of non-adjustment.

The result is an agglomeration of changes which is very confusing - and the debate around them can be very confusing.

Let's remember in that confusion that the responses of different individuals and communities range across a wide spectrum.

At one end there are those who react well to change, and starved of it for a long time, enjoy it and revel in change so much that they forget to question the direction of change and whether it is leading us where we want to go.

Others prefer stability and find change so disturbing that they want to reject it and return to no change - forgetting the direction that was leading us.

For example, I hear many people talking now as though increasing unemployment and inequity is a new experience brought on by the changes of the 1980s. But the growth in unemployment and inequality has been developing inexorably since the 1960s. If we could go back, how far back would we have to go to find what we want.

Similarly some of those who have argued for change seem to have a blind faith that now that we've got it, change will automatically take us where we want to go, that full employment and a just society are just around the bend. I don't believe that - I think we do have to accept change but not passively - we have to accept the challenge of managing change and using it to achieve our objectives for social policy.

Some of my colleagues tease me with being an incurable optimist because I tend to concentrate on the positives of what's ahead. But to me that's the only realistic thing to do. It's like rafting down the Motu. If you're spinning around in an eddy or being tossed around in whitewater, there's not a lot to be gained either by staying twirling round in the eddy or by swearing at how you got to be in the whitewater. The only useful thing to do is to figure out how to use the twist and the toss to point yourself in the direction you want to go.

That's what I hope we can concentrate on at this seminar. The context of our discussion on social policy certainly has plenty of whirlpools and whitewater. Let's hang onto our objectives and direction; let's have an open mind about how to reach them, and see if we can figure out the routes, mechanisms, processes that are effective for reaching them in the 1990s.

I can promise you a stimulating two days. Let's see if we can make them constructive.

Kia ora tatou katoa.

OPENING ADDRESS

The Honourable Dr Michael Cullen
Minister of Social Welfare
New Zealand Government

I was delighted to receive the invitation to give the opening address at this seminar on social policy and inequality.

The topic that you will be considering for the next two days is one which draws on two distinct areas in which I have a professional interest - both as the Minister of Social Welfare in a reforming government, and as a social historian.

That it makes sense to have a joint seminar on social policy in Australia and New Zealand is no accident. Out two countries have similar social and political traditions, and share a largely common origin in the modern era - although citizens on both sides of the Tasman like to maintain a jocular rivalry on certain points of national identity. The nature of our social welfare systems, too, has developed along remarkably similar lines.

Viewing our two systems in isolation, in our particular corner of the south-west Pacific, it is often easier to focus on the points of difference that successive governments have formulated. The similarities are striking, however, when one compares the systems that our two nations have put in place with the welfare systems of Western Europe of North America.

The close correspondence in the social and political makeup of our two nations, and in the economic conditions experienced, lead to a similar range of problems and issues being faced in our two countries. The social policy responses being considered on each side of the Tasman can at times also reflect a striking identity.

However, this is not a speech about diplomatic entente, or CER, and I do not wish to spend all my time talking about Trans-Tasman comparisons. Nor would I wish to compare the relative success rates of each government, because that is something I am expecting this seminar to do. Instead I would like to offer you some perspective on the nature of the social policy problems we face.

In New Zealand the first major period of social policy reform took place in the late 19th Century. The first steps towards the development of the modern welfare state were instituted in the old age pension legislation of 1898. Behind this legislation lay a growing social problem - the ageing of large numbers of settlers who had migrated into New Zealand during the immigration boom of the 1860s and 1870s. After the long economic depressions of the 1880s and early 1890s, many among these first generation settlers were facing severe hardship. The elderly who could no longer work were the first group whose needs for income support to alleviate the distress of poverty were recognised by government, as legitimate beneficiaries of state support.

Those in retirement are still today the principal recipients of social security assistance. Income support provision for those groups experiencing poverty and hardship were next expanded significantly by the incoming Labour Government of the 1930s. The structure of welfare benefits established in the Social Security Act of 1938 still remains the basis for income support measures today. The new welfare state, in addition to boosting payment levels for benefits and pensions, also made wider and more generous provision for the support of children through Family Benefit. It put a major emphasis on access to free or subsidised provisions for health, education and housing. Importantly, it was also the era in which full access to social security benefits was extended to the Maori people.

Compared with what had preceded it, and even by international standards, the people of New Zealand experienced several decades of egalitarian prosperity and economic security through to the 1970s. The social assumptions underlying the formation of the welfare state in the 1930s were of a male breadwinner supporting an economically dependent wife and children. Care of the young, and of the dependent elderly, was very much seen as the responsibility of women at home, with full, male employment. While there are undoubtedly significant groups within society today who would argue that this is still a desirable model, it is much less true of the overall social pattern.

The social and economic factors that must be addressed by governments and social policy planners today are very different from those which faced the architects of the two earlier waves of social reform in New Zealand. The economic position of women has altered substantially. Most women now work in the cash economy for the largest part of their adult lives. We are also moving into a situation where the majority of married women with dependent children are in the paid workforce. As a consequence, the majority of two parent households have much higher cash incomes, with a greater demand for child care.

At the same time, there has been a rapid growth of single parent households. These now represent close to a fifth of all households with children. Most of these households are headed by women, and many are dependent on social welfare benefits for their livelihood. Many of these single parents and their children are disadvantaged on a wide range of measures, and have difficulty re-entering the economic and social mainstream.

A second group which has experienced significant problems are low income families with children. These are mostly - but not entirely - one income households where child care responsibilities make it difficult or impractical for the second adult to get paid employment. This group was one of the main targets for the government's Family Support and Guaranteed Family Income schemes.

Tax and income transfer policies alone are not the only measures which can be utilised by government to ensure that all citizens receive an adequate income, and to redress unacceptable levels of inequality. Some of the more serious and socially damaging aspects of inequality relate to issues largely outside the sphere of income maintenance.

One very clear example of this is the stream of poorly educated and socially disadvantaged youth who come out of our school system and seem to be on a conveyor belt which is carrying them into long term unemployment. They simply lack the skills for employment - and very often also for life management - which are needed in a modern society. Providing a basic income level to this group is, on its own, not enough. Measures which include education and training and community development are needed to assist this group, as well as reforms in the income maintenance system such as the Youth Support Scheme which comes into effect next year.

Among the economic and social factors which must be addressed by governments and social policy planners today is the recognition that public perceptions of need, and of the legitimacy of the state's role in income support, have also shifted significantly. Social cohesion, and the existence of a broad 'middle ground' of public opinion on social policy directions, appears more fragile in the 1980s than in previous decades.

Resentment of beneficiaries as 'undeserving' or as 'idle bludgers' is a long-standing undercurrent of social attitudes. The unemployed and sole parents especially have been stigmatised in this way - despite the fact that social security for these groups has been part of the structure of the welfare state since its foundation in the 1930s. Interestingly, the later additions to the social welfare system of universal benefits for the elderly and children have been much more readily accepted, despite the fact that these items are a far greater burden on the public purse.

The Royal Commission on Social Policy recommended several major extensions of the state's commitment to income maintenance, notably through the proposal for a new 'carer's benefit' to be paid to women caring for dependent children or the elderly. At the same time, other voices have questioned whether existing levels of social security provision are too generous.

Let me quote you the following editorial from the Marlborough Express:

> *Are we becoming a race of beneficiaries?*
>
> *Statistics show that New Zealand is fast becoming a handout state in which growing numbers rely on social welfare for their existence.*
>
> *If the situation gets much worse, the country could find itself bankrupted by a social system that believes in paying people to do nothing.*

Rising unemployment has clearly created additional strains on the social consensus that holds our welfare system in place. New Zealand is far from alone in learning to cope with high levels of unemployment. It is an unpleasant experience that we share with all OECD nations. Opinion polls consistently show that New Zealanders are deeply concerned about unemployment. Nevertheless, it is saddening that some people would still prefer to blame those individuals who have the misfortune to lose their job, using the time-honoured labels of laziness and choosing to live off the state.

Some of these attacks on welfare recipients have been unscrupulously presented as pseudo-statistical analysis. Recently I was intrigued to read in my morning newspaper that a firm of professional economic consultants known as Infometrics had calculated that a single person with an income near the minimum wage would earn only $9.00 per week more than the dole. These professional economic consultants cited the statutory minimum wage as $185.75 for a single adult. They quoted the unemployment benefit that a single adult would receive as $9.00 less than that - $176.52. Curiously, the actual level of the unemployment benefit that is paid out by my department is $134.02 a week for a single adult aged 20 or older. That is $42.50 less than the amount Infometrics claim a beneficiary receives, and $51.73 less than the statutory minimum wage figure cited by the firm.

These economists went on to assert that a solo parent with 2 children will 'reap' $19.00 a week more in benefit than the Guaranteed Minimum Family Income would ensure them as a member of the workforce. They neglected to add that a solo parent could only 'reap' this weekly income if they had a part-time job on top of their benefit paying $80 a week, had declared this additional income at the wrong tax rate, and were receiving more in Family Support payments than they were legally entitled to.

This kind of shoddy attempt to stigmatise welfare recipients as undeserving, and living in luxury at someone else's expense is, regrettably, only too readily accepted by the public at large. In fact, the editorial from the Marlborough Express which I referred to earlier in my address went on to quote approvingly the very same claims made by Infometrics as proof of the country's problems. The spread of nonsense of this kind is one more reason why I am delighted to be able to open today's seminar proceedings.

New Zealand clearly needs informed and thorough study of the workings of our social security system, and the effects of our social policies. We need the findings of such study to be readily available and easily understood.

Governments cannot govern in a vacuum. Nor, in spite of the recent controversy over tax advertisements, can they control public debate and discussion of policy issues. But it is extremely helpful to good government if the policy debate that occurs is rational and informed, and not fed entirely by prejudice and social divisions.

May I wish this seminar every success in its proceedings. I look forward to receiving its conclusions.

INCOME INEQUALITY AND REDISTRIBUTION IN AUSTRALIA AND NEW ZEALAND: AN INTERNATIONAL COMPARATIVE ANALYSIS*

Peter Saunders,✦ Garry Hobbes✦ and Helen Stott✧

1. INTRODUCTION

Both Australia and New Zealand have traditionally been regarded as egalitarian nations when compared with other similar countries. Although the statistical evidence to support this is surprisingly slim, the view has persisted throughout much of this century. It has also contributed to an unwarranted complacency in social policy in both countries as well as an undeserved egalitarian respect from others. This situation is, however, beginning to change as a consequence of two developments. The first relates to increased concern within both countries in the last decade that inequality is increasing. With high and sustained levels of unemployment, poverty has re-emerged as a major social policy issue here as it has in the rest of the Western industrialised world. In Australia and New Zealand, these concerns have been further reinforced by the uncertainties and social disruptions caused by a process of rapid and fundamental change in the structure of both economies. Increased occupational and locational vulnerability has been an obvious consequence of structural adjustment policies. Accompanying these trends has been the perception of increased inequality in both income and wealth which is manifested in the upper tail of the distributions. Here again, some part of this trend probably reflects broader economic developments, but these have been reinforced by tax policies in both countries that have lowered income tax rates on high income groups and continued to tax wealth and capital gains lightly, if at all.

The second development is that recent research, for Australia at least, that has begun to question the view that the degree of inequality is in fact lower than elsewhere. In a recent comparative analysis of income inequality in Australia and six other countries Saunders and Hobbes (1988) concluded as follows:

> *Thus, earlier research which placed Australia high on the international league table of income equality is not confirmed by these results. Although Australia ranks in the middle in terms of inequality at the bottom of the income distribution, it emerges on the basis of some indicators as a country characterised by considerable inequality at higher income levels.* (Saunders and Hobbes, 1988, p.19)

The aim of the current paper is to extend the analysis undertaken by Saunders and Hobbes to include New Zealand in order that its income distribution can also be evaluated on a comparative basis. As will become apparent, considerable effort and care has been taken to ensure that the data on which the analysis is based are, as far as is practically possible, comparable across countries.

Previous comparative work on income distribution has relied on published data and thus been constrained by the fact that such data, having been produced for national purposes and thus using national definitions and concepts, has not been ideal for comparisons between countries. Such research has, however, pointed to both Australia and New Zealand as exhibiting a greater degree of income equality than other advanced economies. Lydall's analysis of the distribution of employment incomes in twenty five countries led him to conclude as follows:

> *The broad picture seems, then, to be that, amongst non-communist countries, the degree of dispersion of pre-tax employment income is related roughly to the degree of economic*

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* The views expressed in this paper are not those of the institutions with which the authors are associated.

✦ Social Welfare Research Centre, University of New South Wales.

✧ Department of Statistics, New Zealand.

development, although Australia and New Zealand are exceptionally equal on this criterion. (Lydall, 1968, p. 157)

Similarly, Sawyer's famous comparative study published by the OECD showed the Australian income distribution to be more equal than in many other OECD countries (Sawyer, 1976). This conclusion has, however, been questioned subsequently by several authors who have raised doubts about the quality of the Australian data used in Sawyer's study (Stark, 1977; Ingles, 1981). Drawing on these studies Easton - while clearly aware of the deficiencies in the data and the implied need to treat the results with caution - concludes that in the mid-seventies, the income distribution in New Zealand was more equal than in other advanced countries (Easton, 1980, 1983).

Income distribution analysis in both Australia and New Zealand has been greatly facilitated in recent years as better quality data have been produced by the relevant national statistical agencies. In Australia, the Australian Bureau of Statistics (ABS) is now conducting a regular income distribution survey and making the results available in both published form and through the public release of a unit record tape based on the survey. In New Zealand, the Department of Statistics has since 1973 been conducting and publishing the results of its annual Household Expenditure and Income Survey. In both countries, these and related data have been used to investigate many important aspects of income distribution and redistribution, as evidenced in the recent ABS Study on **The Effects of Government Benefits and Taxes on Household Income** (ABS, 1987) and, in New Zealand, the New Zealand Planning Council study **For Richer or Poorer. Income and Wealth in New Zealand** (New Zealand Planning Council, 1988).

The following analysis utilises data for Australia from the **1981-82 Income and Housing Survey** and for New Zealand from the **1981-82 Household Expenditure and Income Survey** to analyse aspects of income distribution and redistribution in both countries within a comparative framework that incorporates similar analysis for six other countries. The comparative framework used is that developed over the last five years as part of the Luxembourg Income Study, which is described briefly in the following section. Section 3 canvasses some of the methodological issues addressed in the research, while the results are presented and analysed in Section 4. Finally, Section 5 draws together the main conclusions from the analysis.

2. THE LUXEMBOURG INCOME STUDY

Following both concern over the lack of comparable income survey data and a dramatic increase in interest in income distribution by researchers and policy analysts, the Luxembourg Income Study (LIS) began under the sponsorship of the government of Luxembourg in 1983. The purpose of the LIS project was to gather in one central location, the Centre for the Study of Population, Poverty and Public Policy (CEPS) in Walferdange, Luxembourg, sophisticated microdata sets which contain comprehensive measures of income and economic well-being for a set of modern industrialised welfare states. Over the following two years, microdata sets were gathered in Luxembourg for seven countries participating in the project - Canada, Germany, Israel, Norway, Sweden, the United Kingdom and the United States. On the basis of these data sets, around 1980 was selected as the initial period for the LIS project, with all countries providing data as near to this date as possible. New data sets are currently being assembled in Luxembourg, using 1985-86 as the preferred year for the second stage of the LIS project.

Once the data sets were assembled in Luxembourg, they were reorganised with the advice of country coordinators so as to conform wherever possible to the standardised LIS definitions, concepts and structures. This does not mean that every item on every data set is rendered comparable. What it does mean, however, is that if a particular LIS variable is available for country A it should be comparable to the same variable on any other country file. While it has not proved possible to create a complete set of common variables, each represented on every file, it has been possible to ensure that the basic variables required for distributional analysis such as factor income, market income, gross income, net income and equivalent income are defined to common standards.

Analysis to date of the data from the original seven countries in the LIS project has included comparative aspects of poverty, income distribution and redistribution, the economic status of the elderly, children and one parent families, and the costs of children and equivalence scales (Smeeding et al., 1985; O'Higgins, Schmaus and Stephenson, 1985; Hedstrom and Ringen, 1987; Hauser and Fischer, 1985; Smeeding, Torrey and Rein, 1987; Buhmann, Rainwater, Schmaus and Smeeding, 1988; Smeeding, 1988). Twenty two Working Papers have been released by the LIS project, the first batch of which are about to be published in book form. A second volume is in preparation for release in early

1990, focusing on a comparative analysis of the redistributive consequences of cash and non-cash income provisions in eight countries.

Within the last two years, the scope of the LIS project has begun to expand rapidly. Under the sponsorship of the ABS and the Social Welfare Research Centre, Australia formally joined the project in 1987. Other countries now involved include Denmark, Finland, France, Luxembourg, the Netherlands and Switzerland, while further expansion to include Hungary, Italy, Japan and Poland is in the planning stage. Table 1 summarises the existing LIS data bases for the six countries that will be discussed in this paper. (The original LIS research on income distribution also included Israel although they have not been included in this analysis.) Also shown in Table 1 are the Australian and New Zealand data sets employed in the following analysis.

The four basic LIS cash income concepts are factor income, market income, gross income and net (or disposable) income. Factor income is defined as the sum of wages and salaries, self employment income, and cash property income. Market income is derived by adding employment-related (occupational) pensions to factor income. Gross income is equal to the sum of market income, public cash benefits, private transfers (e.g. alimony and child support) and other cash income. Finally, net or disposable cash income is derived by deducting personal income tax and mandatory employee (and self employed) social insurance contributions from gross income.

The three basic income unit definitions conventionally used in income distribution analysis are the household, the family and the individual. In seeking to achieve exact comparability, constraints have been imposed by the way in which some of the data sets have been structured. The New Zealand and German data sets, for example, are based on a household concept and cannot be disaggregated into family subcomponents or sub-units. Furthermore, those data sets based on the family unit do not always employ the same definition of the family. These differences are not, however, of great significance; even the New Zealand and German household definitions produce relatively few multiple family households. The basic income unit used is thus the family, defined to include individual adults or couples, with or without children. As will become apparent, while the family unit is employed in the analysis to correspond to the unit where income is assumed to be pooled, the individual is also used as the unit when measuring and describing the income distribution.

3. METHODOLOGICAL ISSUES

The methodology adopted in this paper relies heavily on the LIS analysis of income distribution and redistribution already undertaken by O'Higgins, Schmaus and Stephenson (1985). We have attempted to reproduce for Australia and New Zealand their original comparative analysis which covered six countries. This has involved reorganising the Australian and New Zealand data to conform to the standardised LIS definitions and reproduce as closely as possible the analysis undertaken by O'Higgins et al. for Canada, Germany, Norway, Sweden, the United Kingdom and the United States. The data reorganisation and analysis has been undertaken for Australia and New Zealand, respectively, by the Social Welfare Research Centre and the New Zealand Department of Statistics. While this approach has the great advantage that the framework for analysis is already in place, it is constrained to reproduce the analysis for which the original researchers have published results. A more detailed and extended analysis must await both Australia and New Zealand making their data tapes available to the LIS project. (It is worth noting, however, that the analysis is currently being repeated for Australia and New Zealand using data for 1985-86.)

It was necessary to estimate income tax liabilities for both Australia and New Zealand as these were not available on either data tape. In both cases, difficulties were encountered in estimating eligibility for deductions and rebates. For Australia, tax rebates were allocated to eligible families on a randomised basis to reflect the overall pattern of rebate receipts indicated in the published Taxation Statistics for 1981-82. For New Zealand, tax was estimated using the Simulation System for Evaluating Taxation (ASSET) model developed by the Department of Statistics. For both countries, subsequent comparisons with the published tax return statistics indicated that the tax imputation models were not a major source of error. (More details are provided in the Appendix to Saunders and Hobbes (1988) for Australia, and in Broad (1982) for New Zealand.)

TABLE 1: AN OVERVIEW OF LIS DATASETS

Country	Dataset Name, Income Year (and Size)(a)	Population Coverage(b)	Basis of Household Sampling Frame(c)
Australia	**Income and Housing Survey 1981-82** (17,000)	97.5(e)	Quinquennial Census
Canada	**Survey of Consumer Finances, 1981** (37,900)	97.5(e)	Decennial Census
Germany	**Transfer Survey, 1979**(d) (2,800)	91.5(f)	Electoral Register and Census
New Zealand	**Household Expenditure and Income Survey, 1981-82** (3,500)	94.8(e)	Quinquennial Census
Norway	**Norwegian Tax Files, 1979** (10,400)	98.5(e)	Tax Records
Sweden	**Swedish Income Distribution Survey, 1981** (9,600)	98.0(e)	Population Register
United Kingdom	**Family Expenditure Survey,**(d) **1979** (6,800)	96.5(g)	Electoral Register
United States	**Current Population Survey, 1979,** (65,000)	97.5(e)	Decennial Census

Notes:
(a) Dataset size is the number of actual units surveyed.

(b) As a percent of total national population.

(c) Sampling frame indicates the overall base from which the relevant household population sampl was drawn. The actual sample may be drawn on a stratified probability basis, e.g., by area or age.

(d) The United Kingdom and German surveys collect subannual income data which is normalised annual income levels.

(e) Excludes institutionalised and homeless populations. In some countries, some far northern ru residents (Intuits, Eskimos, Lapps, etc.) may be undersampled.

(f) Excludes foreign-born heads of households, the institutionalised, and the homeless.

(g) Excludes those not on the electoral register, the homeless, and the institutionalised.

The basic income relates to the family or income unit as a whole, the question arises of what adjustments are required to derive a measure of equivalent income that takes account of differences in family size. The use of country-specific equivalence scales was rejected by the LIS researchers on the grounds that they would obscure the extent to which differences in the distributions of equivalent income were simply a reflection of the equivalence scales used. Thus, a common set of equivalence scales was used which allocated a value of 0.5 to the first individual in any unit, a value of 0.25 for each individual from the second to the ninth (so that a nine-person unit has an equivalence factor of 2.5), and a value of 3.0 to all units with ten or more members. It is worth emphasising that the use of this equivalence scale will induce biases into the results if, in fact, it is more appropriate to give children a lower weight in the scale than adults. Thus, for example, if income unit size increases primarily because of the presence of extra children rather than extra adults, use of the chosen scale will tend to overstate the 'true' equivalence factor for larger sized income units and thus understate the 'true' equivalent income of these income units.

The use of equivalence scales reflects the fact that income units are of different size. There remains the question of how different sized income units should be weighted when measuring income inequality, a point initially addressed by Danziger and Taussig (1979). Atkinson (1983) has noted that there are three possible weightings for an income unit comprised of N members. They can be weighted as one unit, or as N units, or as N* equivalent adults (where N* relates to the equivalence scale discussed earlier). Furthermore, the total income of the income unit can be assumed to be received by the income unit as a whole, or divided equally among each of the income unit members, or divided among each equivalent adult within the income unit. This leaves nine ways in which the income distribution can be described, depending on which combination is selected of the three different choices of income unit weighting procedures and the three choices of income received.

Of the nine possibilities canvassed by Atkinson, O'Higgins et al. rejected those that treat the family as N* equivalent units, on the grounds that equivalent individuals do not exist, even though families or individuals have an equivalent income. They preferred two of the remaining six possibilities, the distribution of family income among families, and the distribution of equivalent income among individuals. The first of these has the advantage that it has been used in the past in most analyses of income distribution and thus allows comparisons with other research to be undertaken. The second measure has the advantage that individuals, rather than income units, are given equal weight in characterising the distribution, thus implicitly giving increased emphasis to larger families, i.e. giving more weight to children, when describing the distribution.

There remains, finally, the issue of the basis on which income units are ranked in order to derive measures of inequality. The normal procedure here, if the family is taken as the unit, is to rank families by total family income. This has the disadvantage that, for example, the bottom quintile of the distribution relates to the bottom fifth of **families**; it may contain more (or less) than the bottom fifth of the population of **individuals**. This problem can be avoided by ranking on the basis of family income, but defining the quintile boundaries on the basis of individuals. Thus the bottom quintile would be those twenty per cent of individuals living in income units with the lowest family incomes. This latter procedure has been used when describing the distribution of equivalent income, i.e. families are ranked on the basis of family equivalent income, but the quintiles are defined so that each contains one fifth of individuals, ranked according to the equivalent incomes of the families to which they belong.

4. EMPIRICAL RESULTS

4.1 Income Sources

Table 2 shows, for each country, the relative importance of each income source and direct taxes by measuring each as a percentage of average gross income. This table reflects the overall income and fiscal structure of each country and indicates the importance of the market and fiscal sectors in determining the overall structure of income inequality. In Australia, Canada and the United States, factor income (and as a consequence market income, given the low levels of occupational pensions) accounts for over 88 per cent of gross income. In New Zealand factor income accounts for 86 per cent of gross income, followed by 84 per cent in Norway, about 80 per cent in Germany and the United Kingdom and 71 per cent for Sweden. Within factor income, Australia has the highest percentage of non-wage and salary income, well above all other countries except Germany and New Zealand. Market income thus plays a major role in shaping the overall income distribution in all countries, but particularly in Australia, Canada, New Zealand and the

United States. Government cash transfers account for less than 10 per cent of gross income in Australia, Canada and the United States, and just over 12 per cent in New Zealand. At the other extreme lies Sweden, where transfers amount to more than 29 per cent of gross income. In between is a mixed group of countries, comprising Germany, Norway and the United Kingdom where transfers amount to between 14 and 17 per cent of gross income. It is already clear from this analysis of income structure that a significant difference emerges between European and non-European countries, although New Zealand and Norway have similar gross income structures.

The importance of government transfers is a guide to the significance of income tax and employee social security contributions in the income structure, although this is also dependent on the overall tax structure in each country. Together, these direct taxes account for about 15 per cent of gross income in Canada and the United Kingdom, around 20 per cent in Australia, Germany and the United States, 25 per cent in New Zealand and Norway, and close to 30 pe cent in Sweden. New Zealand's income tax share is very high, exceeded only by Sweden. It reflects the importance o income tax in the overall tax structure in New Zealand in the early eighties. Australia's income tax share is also high particularly given its low level of government cash transfers, again a reflection of the tax structure. Taken together government cash benefits and direct taxes as a percentage of gross income indicate the potential impact that governmen income maintenance and direct tax policies may have on the distribution of income. In addition, the significance o wages and salaries as a source of income indicates the potential impact of wages policy in shaping the overall income distribution. The following three sub-sections investigate the result of these (and other) factors on income inequality.

4.2 The Distribution of Family Income Among Families

Table 3 presents the distribution of gross and net family income among quintiles of families, with Gini coefficient provided for each distribution. Despite the limitations of the Gini coefficient as an inequality measure in providing a unambiguous ranking of the distribution (Atkinson, 1970), it will be used along with the income shares of the lowe and highest quintiles in the following discussion as indicators of relative inequality for comparative purposes. All thre indicators suggest a very similar ranking of countries in terms of the inequality of gross income among familie Sweden stands alone as clearly having the most equal distribution. At the other extreme lie Germany and the Unite States which have the highest degree of inequality. In between, in increasing order of inequality, are New Zealand Norway, the United Kingdom, Canada and Australia. Overall, New Zealand's income distribution in very close to th of Norway, while Australia's - with the exception of the income share of the lowest quintile - is closer to that o Germany and the United States than it is to that of the group of countries in the middle of the range. On this measur income in New Zealand is considerably more equally distributed among families than it is in Australia. It is interestin to note that the inequality ranking of countries does not correspond to the importance of government cash benefits i gross income (Table 2). For example, in Germany government cash benefits are almost twice as high relative to gro income as in the United States, yet they appear together at the bottom of the income inequality ranking. In contras government cash benefits are of a similar magnitude relative to gross income in Germany and the United Kingdom, y income inequality is considerably greater in Germany.

The lower half of Table 3 shows the distribution of net income among families. Using the same inequality indicators before, the general ranking of countries is broadly similar to the gross income picture, although the detailed rankin are more dependent on which measure is used. Both New Zealand and Norway now move closer to Sweden in terms having the lowest degree of inequality. On the basis of all three indicators, the United Kingdom ranks next. Canad ranks fourth and Australia fifth on the basis of the Gini coefficient and the share of the top quintile, although th ranking is reversed when the income shares of the lowest quintile are compared. As before, Germany and the Unit States emerge as the two countries with most inequality, although their ranking is dependent upon which of the thr indicators is used. New Zealand is again characterised by less income inequality among families than Australia.

The last line of Table 3 provides an indication of the redistributive impact of direct taxes, calculated as the percenta reduction in the Gini coefficients for gross and net income. It is worth emphasising, however, that the basis for ranki families differs in the two halves of Table 3 and this needs to be borne in mind when interpreting these results. T measure indicates that direct taxes in fact have the greatest equalising effect in New Zealand, followed by Norway a Sweden, i.e. in the three countries where the distribution of gross income is already most egalitarian. There is also considerable equalising effect of direct taxes in both Australia and the United States, primarily due to the reduc income share of the top quintile. In the remaining three countries - Canada, Germany and the United Kingdom - redistributive impact of direct taxes is much lower.

TABLE 2: THE RELATIVE IMPORTANCE OF INCOME SOURCES AND TAXES AS A PERCENTAGE OF AVERAGE GROSS INCOME

Income Component	Australia	Canada	Germany	New Zealand	Norway	Sweden	United Kingdom	United States
Wages and Salaries	69.9	75.7	63.1	70.8	69.9	64.5	72.0	75.8
Self-employment Income	13.5	5.4	16.7	10.7	11.1	3.7	4.5	6.7
Property Income	5.3	7.2	1.1	4.8	2.7	2.7	2.7	5.8
Factor Income	88.7	88.3	80.9	86.3	83.7	70.8	79.3	88.3
Occupational Pensions	1.1	1.8	2.3	0.7	1.2	0.0	2.5	2.6
Market Income	89.8	90.1	83.3	87.0	84.9	70.8	81.7	90.8
Government Cash Benefits	9.4	9.1	16.5	12.1	14.1	29.2	17.2	8.0
Private Transfers/Other	0.8	0.8	0.2	0.9	0.9	0.0	1.1	1.2
Gross Income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Income Tax	18.6	15.2	14.8	26.5	19.1	28.5	13.6	16.5
Employees Social Security Contributions	0.0	0.0	7.7	0.0	6.2	1.2	3.3	4.5
Net Income	81.4	84.8	77.5	73.5	74.7	70.2	83.1	79.0

TABLE 3: THE DISTRIBUTION OF FAMILY INCOME AMONG FAMILIES

	Australia	Canada	Germany	New Zealand	Norway	Sweden	United Kingdom	United States
	Distribution of Gross Family Income among Quintiles of Families							
Lowest quintile	4.6	4.6	4.4	5.7	4.9	6.6	4.9	3.8
Second quintile	10.0	11.0	10.2	11.4	11.4	12.3	10.9	9.8
Third quintile	16.5	17.7	15.9	17.6	18.4	17.2	18.2	16.6
Fourth quintile	25.2	25.3	22.6	24.7	25.5	25.0	25.3	25.3
Top quintile	43.7	41.4	46.9	40.5	39.8	38.9	40.8	44.5
Gini coefficient	0.399	0.374	0.414(a)	0.353	0.356	0.329	0.365	0.412
	Distribution of Net Family Income among Quintiles of Families							
Lowest quintile	5.6	5.3	5.0	6.9	6.3	8.0	5.8	4.5
Second quintile	11.4	11.8	11.5	12.9	12.8	13.2	11.5	11.2
Third quintile	17.1	18.1	15.9	18.5	18.9	17.4	18.2	17.7
Fourth quintile	25.2	24.6	21.8	24.6	25.3	24.5	25.0	25.6
Top quintile	40.7	39.7	45.8	37.2	36.7	36.9	39.5	41.0
Gini coefficient	0.357	0.348	0.389(a)	0.307	0.311	0.292	0.343	0.370
Redistributive Factor (%)(b)	10.5	7.0	6.0	13.0	12.6	11.2	6.0	10.2

Note: (a) The German data contain a relatively large proportion (2.7 per cent) of income units with zero o negative reported income. These have been excluded when calculating the Gini coefficient.

(b) The redistributive factor is defined as the absolute difference between the Gini coefficients for gross and net income, expressed as a percentage of the gross income Gini coefficient.

4.3 The Distribution of Equivalent Income Among Individuals

The income distributions presented in Table 3 take no account of family size. In welfare terms, it makes a great difference whether those families in the lowest income quintile are single adults or larger families with children. In order to derive income distributions which have a closer correspondence to the distribution of economic welfare, it is necessary to consider the distribution of equivalent rather than unadjusted income. This has been done using the equivalence scales discussed earlier. Also as noted earlier, the distribution of equivalent income has now been expressed in terms of quintiles of individuals, although the ranking of the distribution has been undertaken on the basis of (gross or net) equivalent family income. The lowest quintile, for example, thus contains the 20 per cent of **individuals** who are in **families** with the lowest equivalent incomes. The resulting distributions for gross and net equivalent income are presented in Table 4.

The effect of adjusting income by equivalence scales (and re-ranking families on the basis of equivalent gross income) is to reduce inequality in all countries, although the extent of the reduction varies across countries. The share of equivalent income of the bottom quintile is greater in all countries than the bottom quintile's share of unadjusted income, particularly in Germany, Norway, Sweden and the United Kingdom. The share of the top quintile also declines in all countries when equivalent gross income is compared with unadjusted gross income, most notably in Germany and Sweden. When the corresponding net income distributions are compared, the share of the top quintile declines by almost 6 percentage points in Sweden, by about 3 percentage points in Canada, Germany, Norway and the United Kingdom. In contrast, in New Zealand the top quintile's share of equivalent income is almost the same as its share of unadjusted income, while in Australia the share of the top quintile in equivalent income **exceeds** the top quintile share of unadjusted income by almost 2.5 percentage points. Indeed, the share of the top quintile in the distribution of equivalent net income is greater in Australia than in all other countries.

The inequality ranking among countries of the distribution of equivalent income is broadly similar to the pattern already described for unadjusted income. Whichever indicator is used, Sweden ranks as the most equal country (on the basis of both gross and net equivalent incomes), followed always by Norway and then the United Kingdom. The ranking of the remaining five countries varies according to which inequality indicator is used, as well as whether gross or net equivalent income is considered. Canada and New Zealand always rank first or second amongst these five countries, while the United States generally ranks fourth or fifth. The relative positions of Australia and Germany vary according to which specific indicator is used. By and large, therefore, the inequality rankings of countries established earlier for unadjusted income are not materially affected by the analysis of the distributions of equivalent income. Sweden clearly remains most egalitarian, followed by Norway, the United Kingdom, New Zealand and Canada. The ranking of the remaining three countries - Australia, Germany and the United States - depends on the indicator selected.

Australia and New Zealand now appear much closer together in terms of the distribution of (gross and net) equivalent income. The main difference between the two countries lies in the share of the top quintile, particularly after-tax, which is significantly larger in Australia (43.1%) than in New Zealand (37.0%). New Zealand now shows up less favourably in comparative terms than indicated by the earlier analysis of the unadjusted income distributions. In understanding why this is the case, it is important to emphasise that the results in Table 4 assign greater weight to larger families (i.e. mainly those with more children) than the results in Table 3. Further investigation of the data revealed that the shift in New Zealand's relative position primarily reflects the fact that average family size in New Zealand in the lowest quintile of both gross family income and gross equivalent income is greater, due to more families in these quintiles having children, than in the other countries studied. This fact, combined with the use of an equivalence scale that does not distinguish between adults and children (see page 11 above), serves to push more larger families into the lowest quintile in New Zealand than elsewhere. This factor may be reinforced by the fact that the New Zealand data are based on households not families, so that the number of recorded single person units is lower than it would be if a family unit definition were used.

TABLE 4: THE DISTRIBUTION OF EQUIVALENT FAMILY INCOME AMONG INDIVIDUALS

	Australia	Canada	Germany	New Zealand	Norway	Sweden	United Kingdom	United States
Distribution of Equivalent Family Gross Income among Quintiles of Individuals								
Lowest quintile	6.2	6.7	7.2	6.9	8.1	9.4	7.9	5.1
Second quintile	11.0	12.6	12.1	12.1	13.6	14.6	13.0	11.4
Third quintile	16.9	17.5	16.0	17.0	17.9	18.5	17.9	17.1
Fourth quintile	24.9	24.0	21.3	23.8	23.4	23.3	23.7	24.2
Top quintile	41.3	39.2	43.4	40.1	37.0	34.2	37.5	42.1
Gini coefficient	0.351	0.327	0.352(a)	0.334	0.289	0.249	0.297	0.371
Distribution of Equivalent Family Net Income among Quintiles of Individuals								
Lowest quintile	8.1	7.6	7.5	8.2	9.9	10.6	9.0	6.1
Second quintile	11.4	13.3	12.7	13.5	14.8	16.1	13.5	12.8
Third quintile	14.4	17.9	16.1	17.6	18.4	19.1	18.0	18.1
Fourth quintile	23.0	23.8	20.7	23.7	22.9	23.1	23.4	24.4
Top quintile	43.1	37.4	43.0	37.0	34.1	31.1	36.1	38.6
Gini coefficient	0.305	0.299	0.340(a)	0.288	0.243	0.205	0.273	0.326
Redistributive Factor (%)(b)	13.1	8.6	3.4	13.8	15.9	17.7	8.1	12.1

Notes: See Table 3.

Since the distributions of equivalent net income represent the best approximation of the distribution of monetary economic welfare, they deserve particular attention. What is most striking about these results is the low degree of inequality in Sweden, as evidenced by the Gini coefficient of 0.205 and the closeness of the income shares of the bottom and top quintiles. Across countries, the equivalent net income share of the bottom quintile ranges from 6.1 per cent in the United States to 10.6 per cent in Sweden. Australia and New Zealand both fall in the middle with the share of the bottom quintile equal to 8.1 per cent and 8.3 per cent, respectively. The share of the top quintile in equivalent net income ranges from 31.1 per cent in Sweden to 43.1 per cent in Australia. The share of equivalent net income going to the middle sixty per cent of families is close to 55 per cent in Canada, New Zealand, the United Kingdom and the United States. It is just over 56 per cent in Norway and over 58 per cent in Sweden. In Germany it is 49.5 per cent, and in Australia 48.8 per cent. Thus in Australia the medium-ranking share of the lowest quintile, combined with the high share of the top quintile has left the income share of families in the middle of the income distribution well below that in most of the other countries. The distribution of equivalent income is more equal in New Zealand than in Australia, particularly after tax. However, the two countries appear much closer together than they did on the basis of the distributions of unadjusted income. The major difference between the two distributions is in the top quintile, where inequality of net equivalent income is much greater in Australia than in New Zealand. Counterbalancing this, the share of the second and third quintiles is significantly higher in New Zealand than it is in Australia. In terms of the other countries studied, both the Australian and New Zealand distributions are closer to that of Canada than of any other country.

The redistributive factors shown in Table 4 exhibit a similar pattern across countries to those presented in Table 3. Redistribution is now greatest in Norway and Sweden, which have the most equal distributions before tax. Australia, New Zealand and the United States again also have quite large redistributive factors, yet in two of these countries the Gini coefficient after tax exceeds the before tax Ginis in Norway and Sweden, while it is only marginally lower after-tax in New Zealand than before-tax in Norway. The estimated redistributive impact is lower again in Canada and the United Kingdom, and particularly low in Germany where direct taxes cause the Gini coefficient for equivalent income to decline by only 3.4 per cent.

4.4 Sources of Inequality

It is useful to begin the analysis of the sources of inequality by using data with a single income ranking scheme. Thus, the following results are based on rankings by family gross income, but weight each individual equally. Although in conceptual terms the use of equivalent income data has much to recommend it, this procedure has not been followed because in practice equivalencing transformations of the data obscure the impact of various income sources on overall inequality. Table 5 sets out the quintile shares of individuals in factor, gross and net income once ranking has been undertaken on the basis of family gross income. Inequality in the distribution of factor income is particularly marked in Germany, where inequality at both extremes is greater than elsewhere. The range of factor income inequality shows great variation across countries. For example, the ratio of the top quintile share to the lowest quintile share of factor income varies from 5.1 in Sweden to 19.4 in Germany. Australia and New Zealand both have high values for this ratio (10.8 and 10.2, respectively), ranking second and third. Both also rank next to Germany in terms of the factor income share of the lowest quintile. There thus appears little comfort in these results for those who argue that the income distribution generated by the market in Australia and New Zealand is more equal than in other similar countries. Indeed, the reverse appears a better description of reality.

The distribution of gross income among individuals shows a similar pattern across countries to the results already discussed, although with a lower degree of inequality overall. Focusing on the income shares of the lowest and highest quintiles, Sweden exhibits greatest equality, followed by Norway and the United Kingdom. The ranking of the remaining countries depends on which summary indicator is selected. Australia, Canada and New Zealand each have relatively low shares for both the lowest and top quintiles, Germany is characterised by considerable inequality favouring the top quintile, while the United States has the lowest share to the bottom quintile. The significant equalising effect of government cash transfers is apparent from comparisons of the inequalities in gross and factor income. Inequality in gross income is much less than that of factor income in all countries, and the variation across countries in the distribution of gross income is also less than for factor income.

TABLE 5: THE DISTRIBUTION OF INCOME AMONG INDIVIDUALS

(Income shares of quintiles of individuals ranked by family gross income)

	Australia	Canada	Germany	New Zealand	Norway	Sweden	United Kingdom	United States
Distribution of Factor Income among Quintiles of Individuals								
Lowest Quintile	3.5	5.4	2.3	3.7	4.4	6.5	4.0	4.2
Second Quintile	14.9	14.9	13.8	13.5	17.0	18.5	15.0	12.8
Third Quintile	20.2	19.2	17.1	19.0	19.6	18.8	19.9	19.2
Fourth Quintile	23.6	24.5	22.0	26.0	24.2	23.0	24.9	25.1
Top Quintile	37.7	36.0	44.7	37.8	34.9	33.2	36.3	38.8
Distribution of Gross Income among Quintiles of Individuals								
Lowest Quintile	9.1	9.5	10.7	9.7	12.0	13.7	10.9	7.5
Second Quintile	16.0	15.6	14.7	14.3	17.8	20.5	15.6	14.3
Third Quintile	18.9	18.7	16.2	18.0	18.4	18.6	18.7	18.8
Fourth Quintile	21.6	23.0	20.1	23.7	21.6	20.1	22.9	23.6
Top Quintile	34.3	33.2	38.2	34.3	30.3	27.1	31.9	35.9
Distribution of Net Income among Quintiles of Individuals								
Lowest Quintile	10.9	10.8	13.1	11.6	14.7	16.4	12.4	9.0
Second Quintile	17.2	16.4	15.3	15.7	18.6	21.2	15.9	15.9
Third Quintile	19.3	18.8	16.0	18.6	18.6	18.3	18.6	19.5
Fourth Quintile	21.5	22.6	19.3	23.3	21.0	19.9	22.4	23.6
Top Quintile	31.1	31.4	36.2	30.8	27.2	24.2	30.6	32.0

Notes: (i) In each part of the table, individuals are weighted equally but ranked by family gross income.

(ii) The Gini coefficients are not presented since the income unit (the family) is not congruent with the unit weight (the individual).

The ratio of the gross income share of the highest to lowest quintiles ranges from 2.0 in Sweden to 4.8 in the United States. Australia again ranks second last on this measure, with a ratio of 3.8, although this is only slightly higher than the corresponding ratios for Germany (3.6) and Canada and New Zealand (both 3.5). The lowest quintile of individuals receives more than 10 per cent of gross income in all countries except Australia, Canada, New Zealand and the United States, while the highest quintile of individuals receives less than 35 per cent of gross income in all countries except Germany and the United States. Finally, it is interesting to note, with the exception of Germany, the extreme similarity in all countries of the gross income share of the third quintile. For the remaining seven countries, the third quintile's gross income share varies from 18.0 per cent in New Zealand to 18.9 per cent in Australia. In fact, with the exception of both Germany and Sweden, the gross income share of the middle three quintiles shows remarkable stability across countries, varying from 56.0 per cent in New Zealand to 57.8 per cent in Norway. The low gross income share of the middle three quintiles in Germany (51.0 per cent) reflects the inequality already noted in the top quintile, while the high gross income share of the middle quintiles in Sweden (59.2 per cent) reflects Sweden's relative equality across the whole income distribution. The distribution of net income among individuals ranked by family gross income shows a similar pattern of inequality across countries as the earlier results. Sweden, Norway and the United Kingdom, in that order, exhibit greatest equality and the United States most inequality. New Zealand follows the United Kingdom, and next comes Australia and Canada whose distributions are very similar at both extremes. The ranking of these two countries relative to Germany is indeterminate, since Germany has a greater share of net income going to both the lowest and highest quintiles. The inequality of net income in Australia at the top end of the income distribution is now less marked than was indicated in Table 4. It is important to stress however, that Table 5 differs from Table 4 not only because equivalencing transformations are not used in Table 5, but also because families are ranked by different income concepts in each table. The share of net income going to the middle three quintiles again shows remarkable stability across all countries with the exception of Germany. Elsewhere, the combined share of the 60 per cent of individuals in the middle of the income distribution range from 56.9 per cent in the United Kingdom to 59.4 per cent in Sweden. In Germany the relevant share is 50.6 per cent. Thus in seven of the eight countries studied, the net income share of all those individuals in the middle of the distribution does not markedly differ from the share they would receive if net income were shared equally across the whole population.

Table 6 provides information on the composition of the lowest and highest gross income quintile shares of individuals when ranked according to the gross income of the families to which they belong. Each entry in the table indicates the percentage of gross income which goes to each quintile in the particular form of income indicated. Examination of the lowest quintile shows the significance of government cash benefits in the determination of overall inequality. The main exception to this is Germany, where cash benefits are a significant income source in the lowest quintile but overall inequality is also considerable. This highlights the fact that income inequality in Germany is at the top rather than the bottom of the income distribution. There are considerable country differences in the lowest quintile in the importance of wages and salaries as a source of gross income. Both Australia and New Zealand rank low in this regard, exceeding only Germany. Clearly, whatever the wages system is able to do to secure greater income equality higher up the income distribution, its impact in the lowest quintile is quite limited. It needs to be remembered, however, that the results in Table 6 in part reflect the demographic composition of the quintiles and further work needs to be done to establish the significance of this before any definitive conclusions can be drawn. In all countries except Canada, less than 5 per cent of gross income goes to the bottom quintile in the form of market income. In conjunction with the earlier comments, it is apparent that income maintenance policies are easily the most important vehicle for reducing inequality at the lower end of the income distribution.

Turning to the composition of gross income in the highest quintile, while wages and salaries are now a considerable source of income, they are not sufficient alone to explain the pattern of inequality. (This is not so for the second, third or fourth quintiles, where wage and salary income plays the dominant role in the pattern of inequality.) There are many considerable differences across countries in the contribution to gross income of the other forms of market income, i.e. self-employment income, property income and occupational pensions. Their combined contribution to gross income is 1.3 per cent in Sweden, 2.8 per cent in the United Kingdom, 5.8 per cent in Canada, 6.8 per cent in the United States, 6.9 per cent in Norway, 8.4 per cent in New Zealand, 9.9 per cent in Australia and 14.7 per cent in Germany. Self-employment income is a particularly important source of gross income (and, by implication, a factor contributing to inequality) at the upper end of the income distribution in Australia, New Zealand and Germany. The importance of self-employment income in the top quintile in Norway also helps explain why the Norwegian income distribution is less equal than in Sweden.

TABLE 6: THE COMPOSITION OF GROSS INCOME IN THE LOWEST AND TOP QUINTILES OF INDIVIDUALS

Income Source	Australia	Canada	Germany	New Zealand	Norway	Sweden	United Kingdom	United States
Lowest Quintile:								
Wages and Salaries	2.2	3.6	1.5	2.4	2.9	3.6	2.4	3.0
Self-employment Income	0.4	0.4	0.3	0.2	0.3	0.4	0.3	0.2
Property Income	0.5	0.8	0.2	0.6	0.5	0.6	0.5	0.5
Occupational Pensions	0.1	0.4	0.5	0.1	0.4	0.0	0.8	0.3
Total Cash Benefits	5.7	4.2	8.3	5.9	7.6	9.1	6.7	3.2
Gross Income	9.1	9.5	10.7	9.7	12.0	13.7	10.9	7.5
Top Quintile:								
Wages and Salaries	23.9	26.3	21.9	24.5	22.4	22.1	26.3	28.0
Self-employment Income	7.2	2.5	13.8	6.2	5.9	0.9	1.5	3.5
Property Income	2.3	2.9	0.5	2.0	0.9	0.4	0.9	2.7
Occupational Pensions	0.4	0.4	0.4	0.2	0.1	0.0	0.4	0.6
Total Cash Benefits	0.4	0.8	1.6	0.8	0.8	3.6	2.6	0.8
Gross Income	34.3	33.2	38.2	34.3	30.3	27.1	31.9	35.9

Note: The quintiles are derived by ranking individuals according to the gross income of their family. The income and benefit shares are based on the family totals in each quintile. The gross income figures include private transfers and other cash income which are not shown in the details.

5. SUMMARY AND CONCLUSIONS

This paper presents results on income inequality in Australia and New Zealand which have been derived so that they are comparable with results for a range of other countries. It needs to be emphasised that the data used in this exercise are in some cases almost a decade old, a reflection of the unavoidable delays in the release of survey unit record tapes in each country and their reorganisation on a standardised basis. The paper has been primarily concerned with presentation of a number of indicators of income inequality with relatively little attempt to explain the similarities and differences that emerge. The content of the analysis has been constrained by the framework of the earlier research on which this paper has relied very heavily. However, now that Australia is participating fully in the Luxembourg Income Study, it will be possible to use the standardised unit record tapes to explore further the issues raised here and begin to test alternative hypotheses on the causes of inequality and the impact of redistributive policies. It is to be hoped that New Zealand may soon decide to join the LIS project.

On the basis of all of the inequality indicators and income concepts used in the paper Sweden always emerges as the country characterised by greatest income equality. On almost all measures, Germany and the United States have most inequality. The ranking of the remaining five countries depends somewhat on the precise measure used. Most, however, place Australia sixth out of the eight countries on the international league table of income equality. New Zealand's ranking is particularly sensitive to whether income is unadjusted or expressed in equivalent dollars by adjusting using standardised equivalence scales. On the basis of unadjusted income, New Zealand ranks high in terms of income equality, both before and after tax, exceeded only by Sweden, and has a very similar distribution to that in Norway. On this basis, the New Zealand income distribution is markedly more equal than that in Australia. Once equivalent income is considered, however, the New Zealand distribution appears less equal than that in the United Kingdom, very similar to that in Canada, but still slightly more equal than that in Australia. The main difference between the Australian and New Zealand income distributions appears to be in the top quintile, whose share of total equivalent income is considerably greater in Australia than in New Zealand. Overall, however, the results in this paper imply that neither country can be accurately described as relatively egalitarian, at least amongst the countries considered here.

It is interesting to note that in two of the countries (Sweden and Norway) where incomes appear more equal before government transfers and taxes are considered, transfers and taxes exhibit the greatest redistributive effects. This seems at first sight at odds with a mode of thinking all too familiar on both sides of the Tasman, which sees a need for redistributive policies only where unacceptable income inequalities are generated by the market. The problem with this line of thought is that it implicitly assumes that the distribution of income produced in the market is independent of the redistributive policies introduced to ameliorate inequality. What is required is a greater awareness and appreciation of the arguments all too familiar in the Nordic and other European countries that stress the fundamental interdependence of both the generation of market outcomes and the redistributive policies introduced to influence market outcomes. Recognition of this, combined with a greater understanding that it is **income inequality**, rather than **income redistribution** that is of ultimate concern, would do much to improve social policy discourse and analysis in both Australia and New Zealand.

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LABOUR MARKET PROGRAMS AND INCOME SUPPORT: THE AUSTRALIAN EXPERIENCE

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I. INTRODUCTION

Government policy on labour market intervention is a central factor in social policy analysis. The importance of the state of the labour market to the realm of income support is an issue which has attracted little attention in recent debates on social policy development and determination. It is an area of central concern in the current economic policy debates in times of high unemployment (at least in post-1945 terms) and severe constraints on government expenditure. Governments realistically have three options in relation to labour market policy; active direct intervention (i.e. labour market programs), passive direct intervention (i.e. 'band-aid' income support for the unemployed), and indirect intervention (i.e. less direct methods of improving individuals labour market prospects, e.g. via the education system). The challenge for governments is to strike the appropriate balance between these three forms of intervention in the current context of severe fiscal constraints on governments wanting to dampen inflationary pressures. Active direct intervention is the most costly (i.e. in terms of government expenditure) in the short term, yet if successful produces less reliance on the social security system for income support in the longer term. Indirect intervention implies a lower degree of control over labour market outcomes, while passive income support via adequate levels of Unemployment Benefit is often seen as politically attractive in the short term.

In Australia, the Commonwealth Government is the major provider of labour market programs either directly or via tied funding to the states.[1] However, expenditure on labour market programs (LMPs) represents a very small proportion of labour market related government expenditure. Following Kirby (1985, p. 63 on), labour market related expenditure includes all government expenditure on post-secondary education, direct income support for the unemployed, and labour market programs. Post-secondary education represents the major form of indirect labour market intervention in that virtually all of such education is undertaken to improve individuals employment prospects in the labour market. Expenditure on income support for the unemployed is passive direct labour market intervention reflecting at least in part the consequences of insufficient or inappropriate active direct labour market intervention.[2] Table 1 indicates total annual expenditure by the Commonwealth on these three components of labour market related intervention for the period 1973 to the present. Figures 1 and 2 present the same information graphically in nominal and real terms respectively.

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1. Throughout this paper attention is directed to Commonwealth labour market programs. Although the states do provide labour market programs of their own, the amount of money involved is relatively slight. For example, according to Kirby (1985, Table 43) in 1982/83 combined expenditure on labour market programs of all states was $113m, of which New South Wales and Victoria accounted for $94m.

2. There is no unique 'boundary' between government expenditure relevant to the labour market and expenditure not relevant to the labour market. The 'boundary' adopted here has the advantage of being clearly defined, easily understood, and encompasses the areas of major expenditure.