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# **Child poverty: A review**

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Bruce Bradbury  
Social Policy Research Centre  
University of New South Wales

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### **For more information**

Publications Unit  
(RC&C Section)  
Strategic Policy and Knowledge Branch (TOP CW2)  
Department of Family and Community Services  
Box 7788  
Canberra Mail Centre ACT 2610

Phone: (02) 6244 5458

Fax: (02) 6244 7020

Email: [publications.research@facs.gov.au](mailto:publications.research@facs.gov.au)

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## Summary

This review addresses five main questions:

- ▶ How should we define child poverty?
- ▶ Should it be a focus of policy concern?
- ▶ How should it be measured?
- ▶ What causes it?
- ▶ What policy strategies can be used to combat it?

### Defining child poverty

Poverty is defined here as an **unacceptably low standard of living**. This encompasses both a statement about empirical conditions as well as a political judgement about the standard of acceptability.

The standard of living can be viewed as either a uni- or multi-dimensional concept. Though authors such as Sen have considered multiple dimensions of poverty, most statistical measurements are based on the simpler uni-dimensional concept of the degree of access to economic resources. This report focuses on the ‘economic’ concept of poverty. At the same time, it is recognised that economic resources are only one aspect of child wellbeing.

With a uni-dimensional concept of poverty, it is possible to define a ‘poverty line’—a threshold of resources below which someone is defined to be poor. It is common to categorise poverty lines as either **absolute** or **relative**. Absolute poverty lines are set so that the income level represented by the line can purchase the same volume of goods in different places or times. (Less common is to use the term absolute to refer to a particularly low poverty line). Relative poverty lines are usually defined as some fraction of the average living standard of a community. They are thus closely related to inequality, though only inequality in the bottom half of the income distribution is relevant for median-based lines.

The rationale for a relative poverty line arises from considering the socially-based nature of consumption. In rich societies, consumption norms are higher, and so a higher level of consumption is required to participate in ordinary community life. Moreover, the distinction between relative and absolute poverty lines is not as great as their definitions might suggest. In particular, richer countries tend to set high absolute poverty lines than poorer nations. For example, both the United States (US) and Russia have official ‘absolute’ poverty lines (that is, usually updated in line with price changes only). However, if the US poverty line is applied to Russia in the 1990s, we find that 98 per cent of Russian children are poor. In fact, the official Russian line is set at a much lower level, with only 25 to 35 per cent of children poor in 1995—a rate of poverty which is not that dissimilar to that of the US.

These different definitions arise from the fact that poverty has both an empirical and ethical/political dimension. To be effective as a policy-targeting instrument, poverty lines need to be set at a level that provides a feasible goal for social policy.

Typically, researchers define children as poor when their family or household has a particularly low income. This is only a very indirect indicator of the consumption level of children. Children receive goods and services purchased from this income; they receive goods and services directly from outside the household (for example, child care, education and health services) and they receive care from their parents.

Research on these resource flows is limited and piecemeal. Consumer equivalence scales contain some information on the share of household resources received by children, but this is limited in scope. There is strong evidence from a number of countries that children receive a greater share of household resources when income is received by mothers rather than fathers.

The direct provision of services such as education and health care is another way to target assistance directly to children. It is true that in some economic models of the household, it does not make any difference whether resources are provided as cash to the parents or as services direct to the child. However, in families when parents are not altruistic, or do not act in accord with community norms, direct service provision may increase children's consumption.

One way for a family to be lifted out of poverty is if the parents spend more time in employment. However, this may be associated with a decrease in parental time spent caring for children, and the child may possibly be worse off. This depends on the extent to which employment reduces parental leisure (or non-child related home production) rather than caring time. It also depends on the quality of non-parental sources of care. Some US research suggests that a mother's employment is associated with relatively small changes in the most important aspects of child care (as opposed to the 'child-minding' aspects of child care). It would be valuable to explore this issue with the (higher quality) Australian time-use data. Other US research provides evidence that child outcomes do not decline when lone mothers enter employment. These studies do not examine pre-school children, and there is some limited evidence of detrimental effects for older children.

From a measurement perspective, one approach to this issue is to base poverty measurement on parental **full income** rather than actual income. Full income is the maximum income that parents could earn if they all worked in the labour market for some fixed maximum amount of hours. It is thus a measure of the parents' opportunities to earn income. Their actual income, on the other hand, is determined in part by choices of how much time to devote to the labour market versus home production and caring work. In theory, full income could be used to target assistance to those families with the most restricted opportunities, without prescribing the labour market choices that parents should make.

However, there are valid reasons for continuing with the conventional measurement of poverty using actual income. The most important of these is that we cannot observe all the factors that influence labour supply.

In addition, child poverty measurement should ideally deduct from household income those components of life-cycle saving (for example, superannuation contributions, the investment component of housing expenditure) which benefit parents rather than children directly.



## Does child poverty matter?

There are several reasons why researchers and policy-makers might find child poverty of particular concern. Child poverty may be considered undesirable in the same way as for other population groups, we may have particular innate feelings of protection for the young, or we may suspect that some adults may be poor because of decisions that they have made (whereas children have little choice over their economic situation).

The most common reason advanced for a focus on child poverty, however, is that children represent an investment in the future. This raises controversial questions of fact. Though there is ample evidence of a strong association between childhood living standards and later outcomes, in rich societies the evidence for a direct causal link between the two is less clear.

Several theories have been advanced for why income might influence the development and later outcomes of children. ‘Investment’ theories point to the impact of income on children’s consumption of market-purchased goods—which is then hypothesised to influence later life outcomes. ‘Parental stress’ theories point to the impact of poverty on parental stress levels, parental capability to provide quality caring and hence child development outcomes. The ‘role-model’ theory places less stress on income per se, and more on the role of employment in communicating favourable cultural norms to children.

Despite these theories, Susan Mayer (1997, p2) argues that once basic needs are met:

... parental incomes are not as important to children’s outcomes as many social scientists have thought. This is because the parental characteristics that employers value and are willing to pay for, such as skills, diligence, honesty, good health, and reliability, also improve children’s life chances, independent of their effect on parents’ income.

According to Mayer, income may lift the material standard of living of children, but has little influence on test scores or behaviour, educational attainment, labour-market success or teenage fertility.

There is no doubt that simple correlations between childhood poverty status and later outcomes overstate the impact of poverty. However, other US researchers examining similar data interpret their results differently. Levy and Duncan (2000) find a significant impact of income, with the largest impact on young children. Nonetheless, their empirical results are consistent with those found by Mayer.

In other words, childhood family income seems to have some impact on later outcomes, though the effect is much smaller than found from simple correlations. Whether this counts as a large or small effect is a matter of interpretation.

These issues are particularly relevant to the evaluation of policy interventions that increase parental employment and income. In the US, a number of experimental design studies have evaluated programs for lone mothers. On average, programs that increased employment without increasing incomes had no impact on child outcomes. (As noted above, this can be seen as a positive outcome, as it implies that the loss of parental caring time was not, on balance, detrimental). Programs that led to increases in incomes had positive impacts on child achievement, though these were small compared to the overall level of disadvantage of children in these families.

Finally, it is important to remember that a concern with later outcomes is only one reason why we might be concerned about child poverty. The living standards of children, as children, also count.

## Measurement

Almost all Australian estimates of poverty rates have been based on relative poverty lines. Once established, these poverty lines have been updated in line with an estimate of changes in community living standards.

One recent debate has centred on the use of median or mean community incomes to estimate trends in average living standards. Arguments can be advanced for both approaches.

Less controversial, but equally important for statistical outcomes are the ways in which multi-person income units are analysed. Poverty measurement generally assumes that all people within a given ‘sharing unit’ have the same living standard. In Australia, research over the last three decades has tended to use a widening definition of the sharing unit—in line with changes in income support policies.

As well as assuming sharing, poverty and inequality research typically assumes that people living together can take advantage of joint consumption, and that children generally need less than adults. These assumptions are summarised in the form of ‘equivalence scales’, which show the relative incomes required by families of different types.

The literature on the estimation and interpretation of equivalence scales is large. Nonetheless, little consensus has arisen, and hence it is important to test the sensitivity of research results to the equivalence scale.

Equivalence scales are closely related to the concepts of intra-household allocation discussed in Section 1 of this paper. Given an accepted equivalence scale, and under plausible simple models of household allocation we can place lower and upper bounds on children’s consumption within the household. More specifically, the consumption of children in the household will be greater than the ‘additional costs of a child’ but less than the equivalent income of the household. The former relationship comes from the fact that children share in the household’s joint consumption. The second relationship comes from the fact that equivalent income is best interpreted as a measure of adult consumption, and children generally consume less than adults.

Although equivalent income is the conventional indicator used to measure child poverty status, this is an overestimate of the child’s consumption level. Nonetheless, this does not mean it is an inappropriate measurement approach. Equivalent income is best thought of as an indicator of the parents’ consumption level. Children receive less, but they also need less.

Though most poverty measurement focuses on income, a large part of children’s consumption comes via services such as child care, education and health. Equivalence scales, by implication, take these services into account, and so including these benefits in the measure of resources would not automatically lead to a lower level of child poverty. However, if access to services varied across the population, ignoring this might lead to estimates that did not identify the most needy.

The best way to value non-cash services depends on factors such as the extent to which service quality varies and the variation across the population in accessing close substitutes (for example, care for children provided by non-resident family members). One approach is to attempt to value the service use and then add this to equivalent income. The other approach is to deduct from income those expenditures that are closely related to the freely provided non-cash service. For example, out-of-pocket child

care and health care expenditures could be deducted from family income. Either adjustment also requires a corresponding adjustment to the poverty line.

In some cases, it may also be appropriate to subtract major life-cycle saving expenditures from household income when measuring child poverty. Expenditure on superannuation and, to a certain extent on housing, represents expenditure that will benefit the parents rather than the children.

Whilst a low level of children's consumption at any time is a matter for concern, this is even more problematic the longer the poverty spell lasts, and the more likely it is to recur. With longitudinal data increasingly available, research in this area has increased substantially in recent decades. These data can provide valuable insights into the processes associated with entry to and exit from poverty. Nonetheless, cross-national comparisons show that these data are unlikely to dramatically change the conclusions drawn from cross-sectional research of the countries, regions and population groups most affected by poverty.

Estimates of poverty are used for two main purposes. The first is analytical—to compare poverty levels and to identify the causal and outcome variables associated with poverty. A second objective is to use poverty rates as an explicit policy target. Whereas some degree of measurement error is tolerable when poverty measurement is used analytically, the latter use places much greater demands on the data.

In Australia, different data sources have led to quite different estimates of poverty. The reasons for this difference are still not fully understood. Alternative survey methodologies should be explored to obtain more robust standard of living estimates in apparently very low-income households.

In the context of international comparisons, broad comparisons seem to be reasonably robust using different measurement techniques. This is partly because there is more variation between nations than there is within nations over time.

## The proximate causes of child poverty

The proportion of children in poverty will be determined by the threshold of acceptability (the poverty line), their household income, and the income needs of their household. Household income primarily comes from the wage income of each member together with social benefits. To see how these factors can feasibly vary, it is useful to examine variation over both time and space (that is, historical and cross-national variation).

Though this is a more important issue in poorer nations, family size (that is, family need) is still an important correlate of poverty in rich nations. In the US, 57 per cent of poor children live in families with three or more children. In Australia, the corresponding figure is just under 50 per cent. This is due both to the higher needs of the larger households and their lower parental employment rates.

In the US, high teenage fertility rates are also a major policy concern. Though Australian rates are lower than in the US, they are still higher than those of many European nations.

This is associated with higher rates of lone parenthood (though increased divorce and separation are also important reasons for the growth in lone parenthood). In the US, the increase in the proportion of children living with only one parent has been a major reason for the increase in child poverty. Across nations, however, lone parenthood

explains little of the variation in national outcomes (though children in lone-parent households are always poorer).

Australian evidence since the early 1980s suggests that income transfers can have a significant impact on child poverty (at least when using an absolute poverty line). Across OECD countries, it seems that income transfers have become more effective in reducing child poverty. In many countries, poverty based on market incomes alone rose faster than poverty based on all the income of the household (that is, including benefits). It should be noted, however, that one potential explanation for this is that higher transfers led to a reduction in market incomes (via labour supply effects).

In general, none of the countries with high levels of social expenditure had a high child poverty rate. However, some countries such as Japan, France and Germany had much lower child poverty rates than other countries with similar expenditure levels.

Much of this residual variation stems from variations in the extent to which the parents of children are able to derive income from the labour market. In this regard, the English-speaking nations (the US, the United Kingdom (UK), Canada, Ireland, Australia) perform poorly. These countries, which overall have moderate to high poverty rates, are also the countries where the bottom fifth receive the lowest share of their income from the market.

In Australia, the main reason for the low market income of families with children is joblessness. Despite having a below-average unemployment rate, Australia has the third-highest level of parental joblessness across 17 OECD countries. The proportion of Australian families with children who are jobless has been increasing steadily since the early 1980s. Both the increase in joblessness within family type and the increase in lone parenthood contributed to the overall rise in joblessness.

Despite increased wage inequality in Australia, the poverty rate for children with at least one full-time employed parent remains low. In addition, many low-wage workers do not live in poor households (because of the incomes of other family members).

Nonetheless, across nations, the correlation between child poverty rates and the prevalence of low wages is extremely high. This association is the opposite of what might be expected based on labour demand relationships. Two hypotheses can be advanced for this correlation. The first is based on labour supply relationships. When wages are low, labour supply may be low and/or benefits must be kept low to maintain incentives. At the same time, high benefits effectively place a floor under wages. The second hypothesis is that wage inequality and low benefits both arise from fundamental attitudes about tolerance of inequality.

Some support for the latter hypothesis is found in comparisons of poverty among children and the elderly. The fact that these are correlated, despite the very different income sources of the young and elderly, suggests that both may be influenced by the same general social characteristics.

In summary, Australia's relatively high rate of child poverty can be seen as stemming from high levels of lone parenthood and joblessness, together with medium levels of wage inequality and social expenditure.

## Policy strategies

Child poverty strategies can be grouped into three policy categories, which:

- ▶ direct resources to children and their families
- ▶ seek to influence parental fertility and marriage
- ▶ seek to improve labour market outcomes for the parents of children.

Services are the most direct way of targeting support directly to children, and hence education, health and family support services are likely to continue to be central to efforts to improve the wellbeing of children. However, there are some aspects of children's consumption that are best provided by parents, and so income transfers will also continue to be a major part of any anti-poverty strategy. This includes state-mandated private transfers such as child support—though there are strong constraints on the ability of this alone to provide for children.

A major concern of policy-makers is that income transfers may undermine incentives for self-provision. However, even if there is 'leakage' of this type, it is unlikely to be strong enough to fully undermine the impact of income transfers. No country with a high level of social expenditure has a high child poverty rate.

In the US, policies to influence fertility and marriage have been a central part of their child poverty strategy. Though the US is not unique in having a high lone parenthood rate, its high teenage fertility rate is unique among rich countries. In Australia, teenage fertility rates are less than half the level of the US (though still higher than in many countries of western Europe), and the proportion of poor children who live in lone-parent families is lower. Nonetheless, policies to address the situation of children with young or lone-parent mothers should still be an important part of an Australian child poverty strategy.

Parental joblessness is a key proximate determinant of child poverty, particularly in the wealthy English-speaking countries. Though policies to increase growth and reduce unemployment are part of the solution, they are not the total solution.

Policy discussion on this issue has focused around labour demand/labour supply trade-off. On the one hand, lower wages for the low-skilled will increase labour demand. On the other, higher wages relative to benefits will increase labour supply.

In the US, a number of policy reforms over the past decade have sought to increase labour supply among the parents (particularly mothers) of poor children. These policies have included the expansion of in-work benefits (the Earned Income Tax Credit (EITC)), as well as additional regulation of welfare recipients. The policy changes have been successful in reducing welfare caseloads and increasing employment, but increases in incomes have been more modest, and the most disadvantaged may have seen their living standards fall.

The general success of recent US anti-poverty policies has led some researchers to propose a similar policy strategy for Australia. For example, wage-tax tradeoffs have been proposed to increase labour demand whilst maintaining living standards. To the extent to which these policy proposals are targeted to the most disadvantaged, this is because of the family-based means testing of policies such as the EITC. However, this targeting brings other problems in terms of disincentives for second earner employment. In a dynamic perspective, when people are gaining and losing jobs and relationships are dissolving and re-forming, this could lead to an increase in poverty

rates. An alternative strategy of providing support services to maintain high employment rates among all mothers liable to fall into poverty may be a more viable strategy.

Governments throughout the world have assumed that parental employment (particularly mothers' employment) is good for children. They have assumed that parental employment will mean increased consumption to the family and its members, reduced financial stress, social approval and the teaching of work habits, all of which will improve child wellbeing. However, these benefits must also be weighed against the costs that arise from the loss of parental caring time and increased time pressure on parents. Most evaluations suggest that the benefits of employment outweigh the costs.

In any case, sustainable child poverty strategies must accord with broader community values, especially those of the taxpayers who are required to fund such strategies. Many in the community believe that paid work is valuable over and above any income it brings. In addition, most parents work and therefore expect others to work as well. This suggests that it is easier to maintain political support for disadvantaged families if this support reinforces the role of employment.

# 1. Defining child poverty

This review of the literature on child poverty is oriented around five questions;

- ▶ What is child poverty?
- ▶ Why should we be concerned about it?
- ▶ How should we measure it?
- ▶ What causes it?
- ▶ What policies/strategies can be used to reduce child poverty?

The five sections of this paper address these questions in turn.

## 1.1 The concept of poverty

The definition of poverty has been subject to extensive, occasionally useful, discussion. (Piachaud & Sutherland 2000, p. 2)

In poverty research, there has been much debate around questions of definition. This is not surprising, as poverty is a concept that embodies both statements about an empirical condition, but also a value position about the state of the world.<sup>1</sup>

In this report, a definition of poverty is thus adopted which shares these two aspects. A person is defined to be poor if they have an **unacceptably low standard of living**. What is, or is not, acceptable is an ethical judgement for individuals and a political judgement for societies. In this report, the focus is on providing the analytical tools to support a clear consideration and debate about the theoretical and practical issues associated with the measurement of (child) poverty and the policy strategies used to address this problem.

The debate on poverty measurement has revolved around both aspects of the definition adopted above—the standard of acceptability and the definition of the standard of living. Since this general debate about poverty is also relevant to the question of child poverty more specifically, we summarise this here.

### Standard of living

In the poverty research literature, most (but not all) economists tend to consider ‘the standard of living’ as a uni-dimensional concept. People have a high or a low standard of living and it is possible to say that one person’s living standard is higher than that of another person.<sup>2</sup> Many sociologists, political scientists (and some prominent economists) are more likely to consider living standards as a multi-faced ‘way of living’, and poverty as disadvantage along multiple dimensions.

Most statistical accounts of poverty use the simpler uni-dimensional concept—based on the degree of access to economic resources. People are poor when their level of access to these resources (relative to their needs) is judged particularly low. In this simple framework, (which is the main approach used here) economic resources are the key input, and resources relative to needs are used as the summary measure of a person’s living standard.

Some researchers, however, see this as a less than ideal summary of a multi-faceted reality. Ringen (1987), for example, describes income as an ‘indirect’ indicator of poverty. Direct indicators of poverty are to be found in the detailed evidence of what

people consume and how they lead their lives. In a similar fashion, Atkinson (1987) describes a multi-dimensional approach to poverty measurement in terms of consumption targets for a number of specific goods. This is related to the concept of ‘merit goods’ and the concept of ‘specific egalitarianism’ introduced by Tobin (1970). For example, minimum targets of food, clothing, shelter, education and health services might be considered necessary for full social participation, and people might be considered poor if they were constrained from reaching any one of these minimum targets.<sup>3</sup>

Sen’s (1985) ‘capability’ approach is also essentially multi-dimensional. He argues that while income (or economic resources more generally) may be used to obtain goods, the standard of living should be judged by the capabilities that can be achieved when using these goods. These depend on both goods and the personal, social and physical environment. For example, the goods required to attain the basic transport requirements for normal living will depend on the physical characteristics of the region, the social norms for travel, as well as the individual’s health and fitness.<sup>4</sup> In the context of child poverty, we might consider a range of factors associated with child development and consequent capacities in adult life, as key capabilities with which we should be concerned.

In the Copenhagen World Summit for Social Development (1995), the United Nations adopted a definition of poverty that was heavily influenced by Sen’s conceptualisation.

Poverty has various manifestations, including lack of income and productive resources sufficient to ensure sustainable livelihoods; hunger and malnutrition; ill health; limited or lack of access to education and other basic services; increased morbidity and mortality from illness; homelessness and inadequate housing; unsafe environments; and social discrimination and exclusion. It is also characterized by a lack of participation in decision-making and in civil, social and cultural life. ... Absolute poverty is a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to social services. (United Nations 1995)

From the perspective of the uni-dimensional concept of poverty, many (but not all<sup>5</sup>) of these ‘manifestations’ of poverty could be seen as either causes, outcomes or empirical indicators of poverty. In this sense, much of the difference between the uni- and multi-dimensional models of poverty is simply that of terminology. Many factors that are encompassed within the multi-dimensional model are considered as outcomes or correlates of poverty when the uni-dimensional model is used.

This difference of approach, however, does mean that a multi-dimensional approach does place more emphasis on a multi-dimensional policy response—including a wide range of policies in income support, health, housing, social discrimination, and so on. It also implies that providing solutions in one area (for example, income support) will not be sufficient to offset deficiencies in other areas (for example, poor access to health services).

The case for such a multi-dimensional approach is strongest when markets are poorly developed (for example, the poor cannot purchase health services even if they have money), or when the preferences of the policy-maker are different to those of people who are given assistance (the ‘merit good’ argument).

There is also a body of research that uses multiple indicators, but describes these in terms of a single underlying concept of poverty (possibly in parallel with a multi-dimensional approach). The well-known study *Poor Britain* by Mack and Lansley (1985)<sup>6</sup> asked individuals a wide range of questions about the extent to which they could afford



various items judged to be necessities by the population as a whole. Whilst the information collected was multi-dimensional, they chose to summarise their results by comparing the extent of deprivation with income levels, finally concluding with a poverty line that was set in income terms.

Similarly, the Irish *Living in Ireland Survey* (Nolan 2000) also uses multiple indicators of living standards, but the underlying concept is one of access to economic resources. This survey collected information on access to a range of items and asked whether lack of access was due to lack of resources. As in the *Poor Britain* study, the survey also tested public opinion on what constituted the things that ‘every household or person should be able to have and that nobody should have to do without’. An overall index of poverty was then obtained by combining information on household income together with the extent of deprivation of a number of basic items.

This research has influenced recent debates in the UK over how to best measure child poverty. There, the Prime Minister’s commitment in May 1999 to eradicate child poverty within a generation has opened up a debate over how best to monitor and assess progress achieved towards this commitment. The UK Department for Work and Pensions released a consultation document in which four alternative frameworks for monitoring progress in reducing child poverty are identified. These are:

- a small number of multi-dimensional ‘headline indicators’ such as low income, worklessness and poor health
- a single index that combines the above into one measure
- a measure of consistent poverty that combines relative low income and material deprivation (following the Irish approach)
- a core set of indicators of low income and consistent poverty (Department for Work and Pensions 2002).

The document invites submissions on the relative merits of these four alternatives and a process is in train for reviewing the submissions with a view to reaching an agreed approach.

Even though this approach is open to the use of multiple indicators for the measurement of poverty, it is still consistent with a single underlying concept of poverty based on a low level of access to economic resources (relative to needs). This is the concept of poverty adopted in this paper. This is not to deny the importance of elements that are difficult to value in monetary terms (for example, political and civil rights, interpersonal relationships) but merely to define a narrower scope within which to apply the term ‘poverty’. The absence of poverty, as defined here, is only one among many factors that contribute to child wellbeing. This economic concept of poverty has the advantage of conceptual simplicity and is a concept that is, in principle, amenable to measurement.

In practical terms, most poverty researchers, even if they use a multi-dimensional conceptualisation of poverty, use a single index of living standards when undertaking statistical measurement of poverty. In some cases this index might take into account resources obtained in many fields of life (for example, public goods, health services, and so on) but it is nonetheless typically assumed that these can be valued in a comparable way and summed together into a single index.

The scope of the resources that should be included in this measure is an important

issue, and is discussed further in Section 1.2. However, several points of terminology should be noted at this point. First, the concept of economic resources (or simply ‘resources’) used here is, in principle, very broad. The concept encompasses all resources consumed by children that could be transferred between people. Monetary income is a starting point (and the focus of many of the empirical results) because it permits the purchase of consumption goods from the market. Other services, such as child care, also fall within this concept since they can be provided by a wide range of suitably trained people. For the most part, we treat access to resources and **children’s consumption** as identical concepts.<sup>7</sup> Other factors such as parental love and affection are not included in this concept of resources because these are specific to a given relationship and not transferable. Both the methods of measurement and of policy intervention with respect to the interpersonal features of children’s lives are very different to the resources considered here.

### Poverty line

If poverty is treated as a single-dimensioned (and continuous) concept, then it is possible to talk of a ‘poverty line’, a threshold level of resources below which someone is defined to be poor. Nonetheless, the use of a poverty line is not a necessary feature of poverty research. For example, we could view poverty as a continuous concept, with deprivation increasing at an increasing rate as resources fall. The poverty line is not even required for descriptive analysis of poverty. One can define population groups of interest using other criteria (for example, lone parents, or children at the bottom of the income distribution<sup>8</sup>) and compare indicators of their living standards with those of the population as a whole. This analysis does not require the definition of any particular person as ‘poor’, but in many respects leads to the same conclusions as research using a specific poverty line.

On the other hand, the use of a poverty line has advantages as a means of clearly communicating the results of poverty research,<sup>9</sup> and most research on poverty does indeed use such a threshold. However, there is significant disagreement over the principles used to set the poverty line, and how the line should change over time or between different countries.

A common terminology is to categorise poverty lines as either absolute or relative. These concepts relate primarily to the question of how the line is adjusted to apply to different times or places. However, they are also related to the method used to set the value of any reference line (considered further below).

Absolute poverty lines are set so that the income level represented by the poverty line can purchase the same volume of goods or services in different circumstances. Over time, they are typically adjusted by consumer price indices, and across countries, by purchasing power parity indices.<sup>10</sup> More precisely, an absolute poverty line might be defined as a **fixed consumption poverty line**, as it permits an individual to attain a fixed level of consumption. This is the sense used in this paper.

This use of the term ‘absolute poverty’ is not universal, however. The United Nations Copenhagen declaration quoted above (following Sen) uses the term ‘absolute’ to refer to an extreme form of poverty characterised by a minimal consumption level.

Relative poverty lines are usually defined as some fraction of the average living standard of the community to which they apply. Most commonly half the median (equivalent) income is used, though fractions of mean income are used in some cases. Relative poverty rates are thus closely related to inequality, though only inequality

within the bottom half of the income distribution is relevant for the median-based lines. The Copenhagen declaration concept of ‘overall poverty’ encompasses many of the features of relative poverty.

The rationale for a relative poverty line arises from a consideration of the socially-based nature of consumption. In Sen’s conceptualisation of living standards and poverty introduced above, the capabilities that goods confer depend on the social environment. To return to the transport example, in some societies a good pair of shoes might be sufficient to attain the basic community norms of mobility, whilst in other societies a motor vehicle is required to attain the same degree of participation in normal life. This concept of relative poverty dates back at least as far as Adam Smith (1776) who refers to the different forms of clothing required to ‘live decently’ in different societies. A relative poverty line is thus much closer to concepts of social exclusion and hence more likely to be used when the objective of social cohesion features highly on the political agenda.

In practice, poverty lines in common use in poor countries tend to be absolute—both in terms of their adjustment over time and their very low level. In richer nations, both relative and absolute poverty lines are in common use.

One problem with the use of a term like ‘absolute’ to describe constant consumption poverty lines is that, in richer nations in particular, these constant consumption poverty lines are usually set very much in line with average living standards—even if this is not explicit in their definition. For example, both the US and Russia have official ‘absolute’ poverty lines (that is, usually updated in line with price changes only). If the US poverty line is applied to Russia in the 1990s, however, we find that 98 per cent of Russian children are poor (Bradbury & Jäntti 1999). In fact, the official Russian line is set at a much lower level, with only 25 to 35 per cent<sup>11</sup> of children poor in 1995—a rate of poverty which is not that dissimilar to that of the US.

That these absolute lines should be set at such a different level should not be a surprise when we remember that poverty has both an empirical and ethical/political dimension. To define someone as having an unacceptably low living standard implies that this person requires some form of special assistance. It is not politically realistic to define the whole population as having special needs for assistance unless living standards are extremely low. Similarly, in an affluent society, an approach that defined everyone who was not starving as above the poverty line would be considered uncaring and equally politically unrealistic.

Whilst the methods used for comparing absolute and relative poverty levels across countries are essentially the same as comparing poverty levels over time within a single country, a case can be made that this symmetry of analysis is not entirely warranted. If the primary case for a relative poverty line lies in the extent to which a person is able to participate in ‘normal’ society, then it is necessary to consider how these norms are generated. In periods of income growth, for example, it is plausible that norms may lag behind incomes. So an absolute line, or a line somewhere between the relative and absolute line, may be more appropriate for comparisons of poverty trends over time.

There has been some research on this issue in Australia and the US, based on data collected by the Morgan Gallup Opinion poll. Though information on time trends in community attitudes with respect to poverty per se do not exist, it is possible to examine the trend of a closely related concept. Saunders and Bradbury (1991) examined the responses to a question on how much a family of four requires to ‘keep

in health and decency'. They found that the average answer to this question doubled in real terms from 1950 to 1988. For every 1 per cent increase in community incomes, answers increased by between 0.75 to 1 per cent (depending on the econometric specification). Similar results for the US were found by Rainwater (1974) and Kilpatrick (1973). This suggests that, over the long run at least, adjustments to a poverty line which is intended to be in line with community attitudes should be closer to the trends in income growth rather than simply the trends in price increases. See Nolan (2000) for a discussion of the appropriate way to deal with short-term poverty line adjustment in periods of high income growth (in Ireland).

The case for relative poverty lines is possibly stronger for cross-national comparisons because we might expect that living standard norms in nation-states are independently formed. However, this also may become less appropriate in the face of the globalisation of consumption patterns (for example, via the dominance of the US in the mass media). More important, when national boundaries are being explicitly broken down as in the European Union, nation-state based relative poverty lines are becoming less relevant.

The concepts of 'absolute' and 'relative' poverty lines described above only refer to the method for adjusting the poverty line in different circumstances. There is even less consensus on the best methods for setting the value of the reference poverty line.

Usually, the approach used to set the basic line is related to the method used to update it (though this is not technically necessary). The arguments for relative poverty lines, for example, imply that the poverty threshold should be set as some constant fraction of average living standards. There is no theoretical justification, however, for the use of any particular fraction. When conclusions are thought to be sensitive to the precise level of the poverty line, researchers often undertake sensitivity testing using different fractions.

Users of absolute poverty lines, on the other hand, have often attempted to derive a more soundly-based footing for adopting a particular level for the poverty line. There is no avoiding that setting a poverty line is a value-based or political decision, which is related as much to political willingness to see poverty as a problem as it is to any objective standard. This political willingness depends on value judgements of the relative weights given to the wellbeing of different members of society, views on the costs of anti-poverty policy, and also on the perceptions of the public and policy-makers of the actual living conditions of the poor.

Research in the 'budget-standards' tradition has sought to shed light on the latter. This research has generally attempted to provide a partial or complete listing of the commodities required to reach a normatively defined adequate standard of living and then derive an estimate of the cost of this basket. This tradition dates back to the work of Rowntree in the late 19<sup>th</sup> century. For Australian work in this area, see Saunders (1998c).

The US poverty line continues to be calculated based on a methodology developed some 30 years ago. This originally involved the specification of a food budget developed by nutritional experts, which was then multiplied by three to allow for non-food costs. Citro and Michael (1995) have proposed an overhaul of this approach in which the poverty line for the reference family is set at around the 30th percentile of spending on food, clothing and shelter plus a small (15 to 20 per cent) inflator to cover other expenditures. This poverty line would tend to rise in real terms over time, but at a

slower rate than the overall growth in incomes (and might be adjusted by price rises over shorter periods).

Finally, there is the question of the degree of poverty. Once an index of resources and a poverty threshold has been set, it seems reasonable to assume that a person well below the poverty threshold will be worse off than a person just below the threshold. A large literature exists on the best way to construct poverty indices to take account of this.<sup>12</sup>

The volume of work on this topic in the economic literature essentially reflects that this is an area that is tractable to mathematical analysis, rather than the relative importance of this question compared to the definition of the measure of resources or the poverty threshold. Indeed, one might argue that the emphasis in the economic literature on these methods might be misplaced, given the generally accepted problems with the measurement of incomes at the very bottom of the income distribution. Because of such practical measurement concerns, most descriptions of poverty rates tend to focus on the simplest indicators such as the poverty rate (the proportion of people who are poor), and this focus is maintained here.

## 1.2 Resource sharing within the household

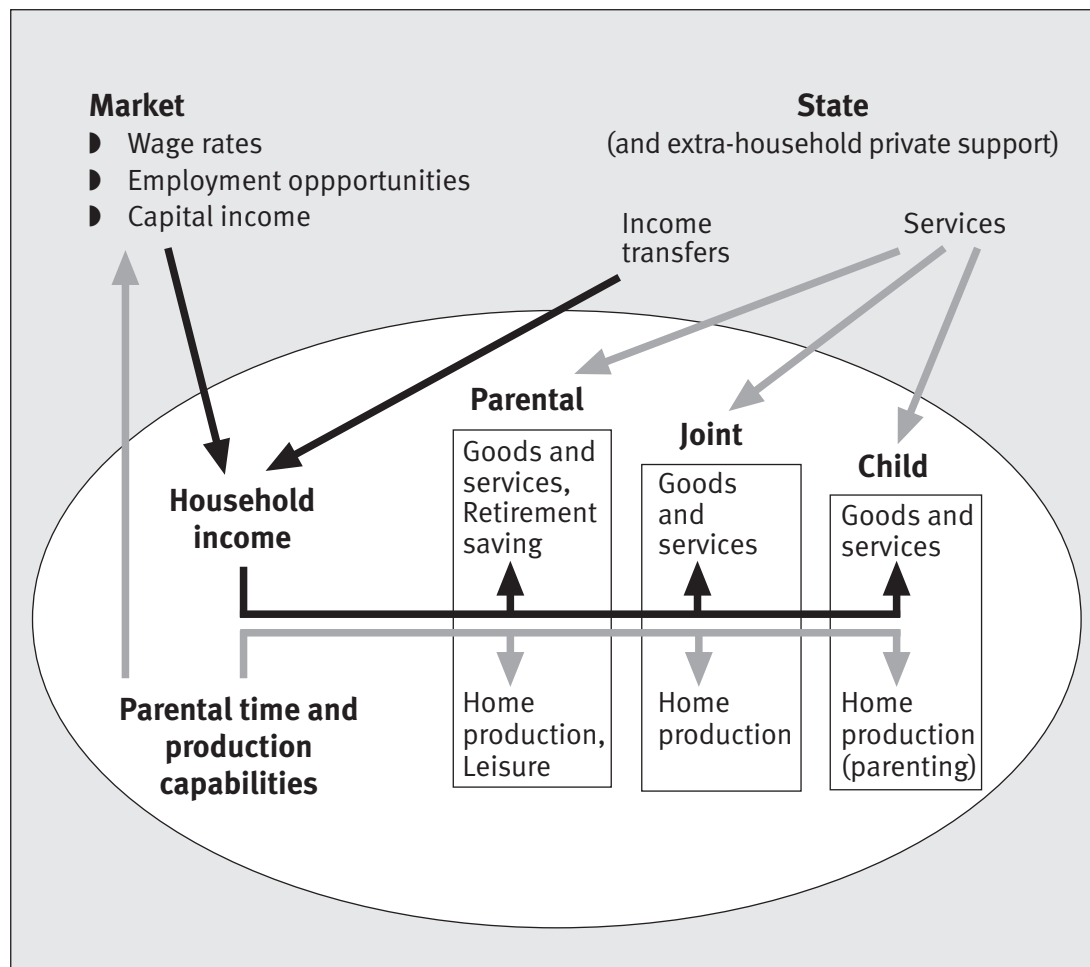
This paper is about **child** poverty. Typically, researchers define children as poor when their family or household has a particularly low income. What do we know about the validity of the implied assumption that family income is the best indicator of child living standards? To examine this question, we need to consider the various factors influencing the intra-household allocation of resources.

A schematic overview of some of the key resource flows of relevance to children in industrialised and post-industrialised societies is shown in Figure 1.1. Children generally live in households, and most of the resources of society that accrue to children are mediated via within-household allocation patterns.

The adult members of a household face an external environment, which includes the conditions of the labour market and the availability and conditions of support from the state, family members outside the household, friends and non-government organisations. The external conditions faced depend on the characteristics of the family members, for example, their wage-earning capacities.

Given the constraints of this environment, parents make decisions leading to the consumption outputs shown. The time of the adult household members is divided between employment, home production for the parents, home production for children (which includes caring for children), joint home production and leisure (defined here to include maintenance activities such as sleep). In some circumstances more than one task can be undertaken simultaneously. The monetary income obtained from employment and other sources is used to buy market goods. Some of these are purchased for the adults, some for the children, and some are consumed jointly within the household (household ‘public’ goods). In practice, most purchase decisions lead to all three consumption outputs. Thus expenditure on more expensive housing, for example, to live in a more desirable suburb, will be joint in the sense that all members benefit from the location without excluding other members. However, the location may also be chosen to satisfy the needs of particular family members (for example, to be near a good school).

**Figure 1.1** The allocation of resources within the household—a schematic representation



Home production can vary in both quantity and quality (for example, the way in which children are cared for).

Some of the monetary resources of the household can be devoted to saving (or current consumption can be financed from dis-saving). Whilst precautionary saving can be thought of as benefiting all family members, major life-cycle saving such as superannuation or (the saving component of) home purchase will typically not provide consumption benefits to the children **as children**. To the extent to which children benefit, this will be in terms of a reduced need to support their parents when they themselves are adults. This issue is discussed further in Sections 1.5 and 3.5.

Whilst most resource flows to children are mediated via the household, there are some external services supplied directly to the members of the household, and over which parents have limited control. The most important of these are education and health care services.

Research on how income is allocated within the household is limited and piecemeal. In general, we cannot observe the share of household resources received by children, and we do not have firm guidelines as to the relative needs of adults and children. The literature on consumer equivalence scales gives us some indication of the resource allocation within the household, but this information is quite limited (see Section 3.3 below).

There is certainly evidence that households do not behave the same as individuals who have access to the same resources. Labour supply patterns in particular do not follow the patterns that would be predicted on the basis of ‘unitary household’ models (Alderman et. al 1995). Particularly important from the perspective of children is the relationship between income receipt by the parents and expenditures on children.

Research by Lundberg, Pollak and Wales (1997)<sup>13</sup> using UK data suggests that mothers and fathers have different preferences for household spending, and that their personal income provides them with bargaining power that helps them achieve their goals. They examine the policy change in the late 1970s when child allowance was changed from a tax deduction (mainly increasing father’s disposable income) to a cash payment paid to mothers. Associated with this policy change they observed a substantial increase in spending on women’s and children’s clothing relative to men’s clothing. For a two-child family, the policy change led to a £400 per annum redirection of income from husbands to wives. Holding expenditure on men’s clothing constant, expenditure on children’s clothing increased by around £52, or one-eighth of the change in income.<sup>14</sup>

These research results suggest that to simply use household or family income as an indicator for the level of child commodity consumption can be misleading. However, much more detailed research would be required before this finding could be applied to poverty measurement. It is likely that the patterns of intra-household allocation vary substantially across countries, and possibly over time within the same country, because of differing gender relationships and family financial arrangements (for example, the prevalence of joint bank accounts). Applying a uniform distributional rule would thus be inappropriate. Moreover, the **variance** in the share of consumption accruing to children may be just as important as the mean level. Indeed for relative poverty measurement it may be more important (Bradbury & Jäntti 1999).

### 1.3 Service provision to children

Another aspect of intra-household allocation is important in understanding the impact of direct service provision on child welfare. That some services are provided directly to children is sometimes used to argue that services provide a superior means of targeting resources to children than do income transfers to parents.<sup>15</sup> However, this will not necessarily be the case. In the simple ‘altruistic’ model of Becker (1981), parents allocate resources within the household in accordance with their views on the relative needs of members. If, for example, external resources are transformed from cash transfers into direct services that the family would otherwise have purchased, then the family will reduce their purchases by the same amount, leading to the same intra-household consumption patterns as before.

For direct service provision to children to lead to an actual change in children’s consumption—that is, different to what would have occurred if a cash transfer had been made to parents instead—it is necessary for one of the following to hold.

- The service would not otherwise have been purchased (or would have been purchased in lower quantities). This could occur either because this was the parents’ preference or because the service did not exist in the market.
- Bargaining rules operate within the household so that the simple altruistic model does not hold. For example, the amount devoted to the child’s education might be a function of the mother’s share of income. If transfers to the father are reduced and services to the child increased, this could lead to a net increase in children’s

consumption. Some evidence for this type of behaviour has been found in the US, where households receiving food stamps consume more food than households receiving cash equivalents. Breunig et. al (2001) argue that, since this phenomenon occurs in multi-adult but not single adult households, it probably reflects intra-household bargaining effects.

The strongest argument for the provision of direct services to children is that some parents may not be altruistic, or may not follow community norms of care for their children. In this case, direct provision will be an effectively targeted means of assisting these most disadvantaged children.

## 1.4 Home production and caring

Whilst the focus of most poverty research is on the money income of the household, money income is not necessarily an exogenous constraint, nor the only determinant of children's consumption. In the economic model of household allocation outlined above, households face an economic environment characterised by the opportunities in the labour market (for example, wage rates and job availability) together with the support available from the state and (extra-household) family. Central to this economic model of decision-making is that individuals have choices with respect to their labour supply.

In this model, income is therefore a choice variable rather than a constraint. In this context, it does not seem sensible to measure poverty using income as the yardstick. A focus on the factors constraining household living standards would instead be based on what is commonly described as **full income**—the income level attainable under full workforce participation.

A small number of studies have measured poverty based on full rather than actual income. In some studies, full income also encompasses other resources such as the imputed flows from consumer durables.<sup>16</sup> Given the concordance of this model with the economic theory of consumer demand, it is surprising that this approach is not more common. For those working, wage rates are not much more difficult to measure than wage income, and methods for imputing wage rates for non-workers are commonly used in labour economics.

The main reasons for **not** using full income stem from the constraints on labour market choice and the presence of unobservable characteristics. For people who are unemployed and are unable to find employment,<sup>17</sup> the marginal value of their leisure or home production time may be much less than their wage rate. Many researchers who do attempt to estimate full income thus assume that the shadow wage for the unemployed (and the disabled) is zero (for example, Travers & Richardson 1993). It is arguable whether this extreme position is the best estimate of the marginal value of non-work, though it might be considered a reasonable first approximation.<sup>18</sup>

Another reason for assuming a low (or zero) shadow wage relates to unobservable characteristics. Whilst it is possible to estimate likely wage rates based on observed characteristics such as age and education, those who are not employed (whether through choice or unemployment) may have characteristics which imply the wage they could receive in the market will be lower than for other people with the same observable characteristics. In principle, this issue could be addressed via more detailed measurement, asking questions, for example, on wages in previous jobs. In the absence of this data, there seems to be a case for using actual rather than full income when measuring poverty and income distribution across the adult population.



In the context of child poverty, however, questions of parental labour supply assume particular importance and cannot be dismissed so easily. As noted in the schematic presentation above, the two key components of child resources are goods and services (either purchased on the market or received from other sources by the household) and the caring services that parents provide to their children (including other types of home production that benefit children).

If household income increases because a parent enters the labour market, this may be associated with a reduction in time spent caring for children. Hence, it cannot be automatically assumed that the increase in income associated with increased employment benefits the child. On the other hand, if household full income increases (for example, because of increases in parental wages rates) it is more likely that this will flow through to increased consumption by children. In this case, parents have the choice of working (and caring) the same amount whilst receiving a higher income.<sup>19</sup>

Evaluation of this issue is difficult and no research has attempted a comprehensive analysis. The impact of parental employment on children's consumption depends on several allocation decisions within the household.

The first question is the relationship between employment and caring time. Does an increase in parental (particularly mother's) time in employment lead to a reduction in caring time for the child, or does it appear as reduced parental leisure and home production in other areas?

Baydar, Greek and Gritz (1999) provide some results for young mothers, using data from the US National Longitudinal Survey of Youth. They find that, on average, increased working time is associated with reduced parenting time but the impact is mainly on supervision rather than interactive care. Controlling for other factors, an increase in the number of hours in employment was associated with a small reduction in time spent in interactive care of children and larger reductions in time spent in physical care and passive supervision. On average, each hour of employment on a given day was associated with a decrease in interactive care of about four minutes, a decrease in time spent in physical care by about seven minutes and a decrease in passive supervision of 17 minutes.

These changes need to be seen in the context of the average patterns. In this study, working mothers, on average worked for about seven hours (this is just for days on which they worked), and their average time spent on interactive care was 2.7 hours. Hence, a drop in their working hours to zero is predicted to lead to an increase of about 17 per cent in time devoted to interactive care. Similarly, physical care and passive supervision would increase by 34 and 43 per cent respectively.

The small degree change in interactive care suggests that mothers are able to shield children from many of the time costs of working. However, there are significant limitations with this study. The study did not fully account for the fact that time spent on work and care arise from the same decision-making process and, most importantly the recall data used for the time-use measurement are far from ideal. Replication and extension of this type of analysis on (the superior) Australian time-use data would seem to be warranted.

A second research question relates to the substitution between parental and other sources of care. Higher levels of employment can be associated with higher levels of support from the state (via subsidised child care) and purchases of child care via the income earned from employment. Here the issue is primarily one of the quality rather than the quantity of care, and the needs of children of different ages.

Attempts to evaluate the impact of labour market participation for disadvantaged children in particular are discussed further in Section 2.2. In summary, this existing research suggests that requiring groups such as lone mothers to enter employment does not necessarily have a detrimental effect on younger school-age children. Generally, the studies generally do not examine outcomes for pre-school children, and there is some suggestion that there may be detrimental effects for older children.

Do these considerations suggest that we should use mother's full income rather than their actual income as a component of an overall index of household resources when measuring child poverty? As for poverty measurement more generally, there are several possible justifications for the more conventional focus on money income.

- *The employment of mothers may be constrained by labour demand rather than supply.*

Most non-employed mothers are defined in labour force surveys as 'not in the workforce' rather than unemployed. Whilst some may be discouraged workers, the pattern does not support this rationale.

- *Income support systems may mean that the shadow wage for non-working mothers is very low.*

For mothers in families relying on income support, the high effective marginal tax rates associated with benefit withdrawal may mean that the likely increase in their family income if they were to work would be very low. In other words, their full income will not be that different to their money income.

- *Unobservable differences in skill levels explain much of the difference in participation.*

The same arguments apply here as for poverty measurement more generally. The estimates of full income obtained by estimating wage rates for non-workers may be incorrect because non-workers have lower skill levels than their observable characteristics would suggest. This is particularly likely when using data sets that do not include extensive information on past labour market experience. For the most disadvantaged families, who are most likely to be at risk of poverty, this argument is reinforced by evidence that shows strong correlations in labour market outcomes between husbands and wives.<sup>20</sup> Available research on this topic suggests that correlations in skill levels between husbands and wives may explain at least part of this association.

- *Unobserved differences in labour market participation costs.*

In a similar vein, some parents may be not working because they face higher costs of labour market participation. In the context of child poverty, an important issue here is the cost of child care. Many families can have both parents in employment with only minimal child care costs by re-arranging working hours and by using relatives or friends to provide care.

These hard-to-observe variations in caring support are presumably one reason why many countries (such as Australia) provide support both to mothers who stay at home (for example, via tax deductions for the working spouse or income pooling for tax purposes) as well as providing support to employed mothers who use paid child care (via child care subsidies). Such a policy regime could be compared to a more

straightforward regime in which support was provided to all families with children, irrespective of mother's employment status. In terms of qualitative outcomes, the key difference between this and the actual system is that the latter does not provide support to those mothers who are able to participate in the labour market without the need for additional child care support.<sup>21</sup>

In terms of poverty and wellbeing measurement, the existence of these unobserved variations in costs means we would expect that, if two families have the same full income but one has less employment, then the one with less employment probably has access to fewer resources.

## 1.5 Saving and child poverty

Another set of issues of child poverty measurement, particularly when comparing different countries, concerns patterns of household saving and the allocation of monetary resources between household members.

In the intra-household allocation model described above, child welfare is equated with children's consumption—defined broadly to include caring as well as commodity consumption. However, many poverty researchers would argue that the economic concept of income (rather than consumption) is a more appropriate indicator for poverty measurement. Income (defined broadly) represents the economic opportunities available to the household from which people can choose to consume or save.

In the context of child poverty, however, the argument for income carries less weight. By definition, the difference between the economic concepts of income and consumption is saving; and the most important forms of saving relate to life-cycle consumption decisions. Household savings that are used to purchase assets (such as housing) or retirement pensions (for example, superannuation) provide much of their benefit after the children have left the household. Hence, the benefits that the children obtain from this saving are only indirect (via reduced burdens to support their parents when they become adults). On the other hand, the reduction in household current consumption associated with this saving is likely to have an impact on the current living standard of the children. Similarly, if a household is able to dis-save by reducing the value of their assets or go into debt, this will also provide consumption benefits to the children. Any costs of this (for example, via reduced inheritances from parents) are likely to occur when the child is grown up, and hence these do not fall under the rubric of factors influencing child living standards.

Note that this argument does not apply to all asset purchases, but only to the savings component of these purchases. For example, home purchase can be associated with significant consumption benefits to children, in terms of both dwelling quality and locational characteristics. However, to the extent to which the cost of this purchase is higher than the cost of renting an equivalent dwelling, then this purchase may be associated with lower levels of children's consumption in other areas.

These considerations imply that when measuring child poverty, we should deduct at least the main aspects of life-cycle saving. We consider the implications of this for the measurement of poverty in Section 3.5.

## 1.6 Conclusion: Intra-household allocation and poverty measurement

Given the complex nature of intra-household allocation, it is a very difficult to provide simple guidelines for the best way to incorporate considerations of intra-household allocation into the definition and measurement of child poverty.

We do not know what share of household resources is received by children, nor do we have objective criteria for establishing the relative needs of children. However, if we wish to establish some social evaluation function for measuring the welfare of children, it seems reasonable to take as a starting point that the allocation pattern in the ‘average’ household is the best description of a given society’s views on the relative needs of adults and children. In this sense, therefore, we might consider the adults and children in the ‘average’ household to have the same living standard. This is the underlying assumption of the poverty estimates that we present later in this paper.

The research described above, however, suggests that there may be substantial variation in actual allocation patterns of monetary resources in households around this average. Allocation within the household may vary according to the relative bargaining position of different household members (we have some research evidence for this) as well as for a myriad of other reasons (for which we only have evidence for the extremes of mistreatment).

For the measurement of child poverty and child wellbeing more generally, an equally important question in industrial and post-industrial societies is about patterns of parental time-use. The basic economic theory of the household suggests that we should focus on the opportunity sets facing households when we seek to compare the living standards of their members (including children). This would suggest a focus on household full income (for example, via parental wage rates) rather than either time spent on particular activities or on the monetary income received by the household.

However, many of the determinants of household opportunity sets are difficult to observe. They include unobserved parental characteristics that influence their potential wage, unobserved factors influencing the cost of employment (for example, the availability of cheap child care), and unobserved differences in parental preferences for intra-household allocation.

One possible strategy for future economic research might thus be to focus more on identifying the characteristics that determine the relationship between observed household opportunities and children’s consumption. However, this is not likely to be easy.

Another strategy is to focus more directly on components of children’s consumption. This might include statistical measurement of the quantity and quality of child care received, as well as information on the allocation of financial resources within households.

Finally, for many purposes it may be most useful to focus on the relationships between policy interventions and final child **outcomes** such as health and educational attainment.<sup>22</sup> Such an approach ‘skips over’ the potential role of intermediate factors such as child living standards and poverty.

## 2. Does child poverty matter?

Why should child poverty be a particular concern to researchers and policy-makers? There are several reasons. To begin with, we might be interested in child poverty for the same reason we are interested in poverty generally—it is undesirable that anyone should suffer from the deprivations of poverty.

This is reinforced by the social insurance objective of easing financial stress during periods of the life-cycle with low resources and/or high needs. Thus, from this perspective, child poverty should be a particular concern in exactly the same way that we are concerned about poverty among the elderly—and indeed among parents.

For older children in particular, who are seeking to find their place in the outside world, the underlying principles of relative poverty in particular may have strong relevance. This comes out strongly in the work of Roker and Coleman (1998). As one of their 14-year old interviewees in a family relying on UK state benefits said:

... for me it's about not being part of things, not having the money to live normally like other people. Everything I do or I want to do, even like really small things, is decided by money, or by not having it anyway. (Roker & Coleman 1998, p.17)

However, for young children whose life is predominantly within the household, once basic needs are met, money may appear to be **less** important than for other groups in the population. Other household resources may be more important for them, particularly the amount and quality of child care. As noted above, proxies for these resources should ideally be included in measures of child poverty.

These reasons for a concern with child poverty mirror the reasons for a concern with poverty more generally. However, there are also reasons why the issue of child poverty might have particular ethical and political resonance beyond that for other demographic groups. Most basically, innate feelings of protection towards the young may provide firmer political footing for supporting children's living standards.

A desire to assist children might also be motivated by a lower degree of generosity towards others. In particular, poverty for adults may in some cases be a result of their own choices now or in the past. To the extent to which poverty is due to lack of saving, lack of investment in human capital or low labour supply, those who have avoided poverty by making sacrifices may view the poor as less morally deserving of support. Since children are not involved in making these choices, this opprobrium does not attach to them.

The most common reason advanced for the greater emphasis on child poverty, however, is that children represent an investment in the future. It is a prime responsibility of current policy-makers to ensure that the outcomes of the future adult population are not disadvantaged by a lack of resources today. However, this raises controversial questions of fact. Though there is ample evidence that shows a strong association between childhood living standards and later outcomes, in rich societies the evidence for a direct causal link between the two is subject to significant dispute. The evidence on this issue is examined below.

## 2.1 Does money matter for children's outcomes?

Does money influence outcomes for children? In the light of the discussion above, we need to consider this question in two parts. In this section, we examine research on the impact of income holding other things constant (in particular employment). This is relevant, for example, to the question of the impact of an increase in income support payments. In Section 2.2 we go on to review research on the impact of increases in parental employment on child outcomes. As discussed in Section 1.4, because employment impinges on parental time, income increases from this source might potentially be associated with **decreases** in child welfare.

Susan Mayer in her influential book *What Money Can't Buy* (1997) looks at the extent to which increases in parental income (in the US) are likely to lead to improvements in children's longer-term outcomes. There are two main types of theories as to why incomes (and economic resources more generally) might influence children's outcomes. Mayer summarises these under the titles of the 'investment' and 'good-parent' theories.

The investment theory, dominant in economic studies of the family, is usually expressed in terms of parent's expenditures on their children.<sup>23</sup> In the context of the intra-household allocation model introduced above this is typically concerned with the allocation of commodities to children. (In some applications, it is generalised to include the allocations of parental time to child caring). For most models of intra-household allocation, an increase in household resources will be expected to lead to an increase in children's consumption, though some resources will also be directed to the adults in the household.

Goods and services accruing to children can have both a current period consumption and a human capital investment function. Whilst both might be considered important for child welfare, the literature focuses on investment outcomes. (The example given above of the exclusion felt by low-income teenagers probably fits more into the children's consumption category). Examples of child-related expenditure that might be considered important for child outcomes include basics such as food and clothing, pedagogical expenditures (books, learning aids, cultural activities, and so on) and ancillary expenditures such as transport. In modern, geographically-stratified cities perhaps the most important expenditure related to child outcomes is housing expenditure, as this provides access to locationally-specific factors such as schooling and peer groups.

The 'good parent' theories, as Mayer calls them, are predominant in psychological research. In the context of the allocation model discussed above, these relate most to the **quality** of the parenting activity. Mayer identifies two variants. The parental-stress version argues that poverty is stressful for parents and this 'diminishes parent's ability to provide "supportive, consistent, and involved parenting"' (Mayer, p. 48, quoting McLoyd 1990). In turn, this can interact in a reinforcing fashion with other risk factors such as low birth weight, poor environment or poor health.

An alternative 'role-model' version places less emphasis on income per se, and more on the cultural norms that parents transmit to their children. This theory, closely related to the 'culture of poverty' hypothesis, suggests that increasing income support can have negative impacts on child outcomes as it reinforces a culture of dependency.

However, these theories are not the only reason why we might observe an association between parental incomes and child outcomes. As Mayer emphasises, it is possible that these two factors are correlated because they are both influenced by other factors.

Whilst agreeing that additional parental income may often improve children's chances for success, she argues that, once children's basic needs are met,

... parental income is not as important to children's outcomes as many social scientists have thought. This is because the parental characteristics that employers value and are willing to pay for, such as skills, diligence, honesty, good health, and reliability, also improve children's life chances, independent of their effect on parents' income. Children of parents with these attributes do well even when their parents do not have much income. (Mayer 1997, pp. 2–3)

Mayer uses five types of evidence to justify this conclusion.<sup>24</sup>

- ▶ Studies examining the association between incomes during childhood and later outcomes find that welfare income has a lower impact on children's life chances than income from employment. This supports the hypothesis that there are some unobserved characteristics which differ between families receiving different types of income (or that employment has a direct effect).
- ▶ Outcome events for children or young adults (for example, dropping out of school) are associated with parental incomes in periods **after** the event, even when controlling for parental income before the event. This suggests that a substantial part of the association of income with outcomes is due to some unmeasured stable characteristic of the household that influences outcomes rather than income directly having an impact. Similarly, the outcomes for siblings who were children when their parents had different income levels do not seem to vary by much.
- ▶ The links between parental income, purchases of child-specific goods, parenting practices and child outcomes seem particularly weak (Mayer does not examine expenditures on household public goods such as housing).
- ▶ Increases in parental incomes over time do not seem to be mirrored in better outcomes (both in aggregate and for different income groups).
- ▶ Cross-state variations in family income support do not seem to be correlated with outcomes (controlling for other variables).

All of these research methods have limitations for addressing this question. However, the consistency of outcomes leads Mayer to conclude that

I argue that when parents' income increases, children's material standard of living improves. But this improvement has little influence on children's test scores or behavior, on their educational attainment or labor-market success, or on teenage girls' chances of having a baby or becoming a single mother. (p. 14)

The implications of this conclusion depend on the definition of 'little'. There is certainly strong evidence that conventional estimates, which do not control for unobserved parental characteristics, overestimate the effect of income.<sup>25</sup> Many of the estimates which do attempt to control for these unobservables, estimate effects around half as large as conventional estimates. These are often imprecisely estimated and not significantly different from zero. However, this also means that we cannot reject the hypothesis that the effect of income exists, even if it is not as large as simple estimates suggest.

Other US researchers<sup>26</sup> examining similar data tend to interpret their results differently. Levy and Duncan (2000) review recent studies which control for unobserved family effects and conduct their own analysis of the impact of income on schooling outcomes using sibling outcomes to control for family effects. They find that income does have a

significant effect, with family income having the largest impact on young children.<sup>27</sup> This last result is consistent with that found in the more conventional analysis of child outcomes (Duncan et. al 1998), and appears to provide some support for the ‘good parent’ hypothesis described above. That is, parents have most impact on their children’s outcomes when the child is young, and parental income can be important via (hypothesised) factors such as parental stress.

Nonetheless, the results of Levy and Duncan are consistent with the conclusions of Mayer. The effect that Levy and Duncan find, though statistically significant, is reasonably small. Multiplying family income by 2.7 times leads to an extra 0.5 to 1 years of schooling for the child.

Our conclusions on whether the cup is half full or half empty are complicated further by the fact that there are also multitude of child development outcomes. Just as research is unable to measure all the inputs, it is also unable to measure all the outputs. It is conceivable therefore, that the impacts of child poverty, whilst only small to moderate on any one outcome may be felt across a whole range of life outcomes.

## 2.2 Evaluations of the impact of north American anti-poverty policies on children’s outcomes

The research results discussed above consider the impact of childhood family income on children’s outcomes. Where possible, this research has attempted to describe the impact of income whilst holding parental (or at least mother’s) labour force status constant. This is important, because, as noted in Section 1.4, an increase in parental employment might have a direct impact on children’s consumption via reductions in parenting time.

This poses a dilemma for anti-poverty policy. Increasingly, many countries are turning to employment as the solution to child poverty. As well as increasing incomes, parental employment is hypothesised to produce favourable role models. This policy trend is evident in the recent welfare reform initiatives in Australia, the US and the UK. Arguably, the success of many European countries in maintaining low levels of child poverty is due to their success in maintaining parental employment (see Section 4 below).

In the US and Canada, several large scale experiments have been undertaken over the last decade evaluating policies designed to increase employment among lone parents. Morris et. al (2001) review 11 studies that examine the impact of welfare reform initiatives on outcomes for children (see also Duncan & Chase-Lansdale 2000). The children in these studies were aged between three and nine when the policy intervention designed to increase their mother’s employment took place. They were followed up two to three years later and outcome measures such as school achievement, behaviour and health were evaluated. All studies used a random assignment experimental design.

All of the program interventions led to an increase in the mother’s employment. For interventions that relied on mandatory employment participation or time limits, the increase in parental income was often minimal (because of child care costs and low wages). Other programs included employment subsidies, leading to a substantial increase in income. There was substantial variation in child outcomes which depended on the precise features of each program.



On average, programs that increased employment without increasing incomes had no impact on child outcomes. Some programs had small positive and some small negative outcomes. Programs that led to increases in incomes as well as employment generally had positive impacts on child achievement. However, these were small compared to the average level of disadvantage of these children. As noted above, most of these studies included children from pre-school to upper primary school age (to use Australian terminology). There was insufficient evidence to draw conclusions on outcomes for children aged below three.

Two studies that looked at older children did find some negative outcomes of increased parental employment (though the effect size was not large). Brooks et. al (2001) hypothesise that these negative results for older children are due to either reduced quality of parent-child relationships (because of increased parental stress), reduced parental supervision or an increase in adolescents' responsibilities within the family. Their review of the experimental evidence finds some degree of support for all three hypotheses.

Taking these results at face value, they seem to support the hypothesis that money does matter, although the magnitude of impact is still unclear. Any loss of parenting time associated with employment generally had negligible impacts on child outcomes, except possibly for older children. This conclusion is likely to be sensitive to the precise nature of the care substitutes, but the overall result is generally encouraging for anti-poverty policy. When money income did increase along with employment, child outcome measures improved for pre-adolescent children, though there remains a concern about impacts on older children.

These studies have only addressed outcomes over a relative short time span (two to three years). However, in combination with the research results discussed in Section 2.1, they provide some grounds for optimism that programs which increase family incomes will have favourable long-term outcomes for children. But the strength of the impact may be lower than simple observations might suggest.

Finally, it is important to recall the points raised at the beginning of Section 2. A concern with children's later outcomes is not the only reason we should be concerned with child poverty. The living standards of children, as children, should also count.



### 3. Measurement in practice

The statistical measurement of child poverty usually begins by defining an index of the economic resources available to children. Children with particularly low levels of resources are defined to be poor. Section 3.1 briefly reviews the more common means of setting the poverty line in Australian research. Sections 3.2 to 3.6 then examine those measurement practices that are of particular relevance to child poverty. Section 3.7 then considers the limitations of poverty measurement and the role of measurement in policy targeting.

#### 3.1 The poverty line in Australia

For most of the 20<sup>th</sup> Century, poverty research in Australia was closely tied to the policy issues associated with wage setting. Several pieces of research prior to the 1970s built on the concepts embodied in the Harvester judgement of 1907 and research in the UK by Seebohm Rowntree (see Saunders 1998b). The most prominent research was conducted by Ronald Henderson and colleagues in the late 1960s, which formed the basis for the poverty line adopted by the Commission of Inquiry into Poverty (chaired by Henderson).

The Henderson Commission poverty line was derived from this earlier work and set at the level of the 1966 basic wage plus child endowment for a reference family of two adults and two children—updated in line with changes in average earnings. Because this did not take account of income taxation, this was replaced in the early 1980s with an updating method based on the national accounts measure of household disposable income per capita. In turn, this has been criticised because it includes some income components that are not included in the surveys used to measure poverty (imputed rents and superannuation), and also because it does not take account of changing household size (Saunders 1996).

This poverty line, as most other poverty lines used in Australian research, is thus relative rather than absolute. Other relative poverty lines used in Australia have tended to follow the common international practice of setting the poverty line at some fraction (usually half) of average equivalent income. Most commonly half the median income has been used, though half mean income has been used in some cases (for example, Harding, Lloyd & Greenwell 2001).

The half-median income measure has the practical advantage of being unaffected by the problems of measuring income at the top and bottom of the income distribution. Moreover, it might be argued that the half-average measure is inappropriate because it depends on the incomes of the very rich. An increase in the income of the highest income person in Australia, for example, would raise the poverty rate. On the other hand, it might be argued that the increase in total national income associated with this income increase means the country could afford to have a higher poverty threshold. Ultimately, methodological decisions such as this must rest on value judgements.

Most recent poverty research in Australia has simply taken a poverty line in common use (such as the Henderson or half-median) and applied it to the data under analysis (either by updating or direct calculation). The SPRC Budget Standards study was an exception. This study returned to the earlier tradition of work pioneered by Rowntree when direct judgements were made about the expenditures needed to maintain a given standard of living. This study did not define a poverty line as such, but rather a ‘low cost’ and a ‘modest but adequate’ standard. The low cost standard was considered as ‘below which it would become increasingly difficult to maintain an acceptable standard of living because of the increased risk of deprivation and disadvantage (Saunders 1998c, p. 6).

### 3.2 Sharing units and the equivalence scale

As well as decisions about the placement of the poverty line, poverty measurement requires a number of decisions, which though technical in nature, can have a major impact on the results of the research. In particular, the treatment of multi-person income sharing units raises a number of issues.

Typically, estimates of child poverty use the income of the child's household or (co-resident) family as an indicator of child's (and the parents') living standard. This assumes that all members of the family share the same standard of living. As was discussed in Section 1.6, a case can be made that this is a sensible summary of social welfare—for the average family at least. However, the literature surveyed in Section 1.2 tells us that we might expect substantial variation in the relationship between household or family income and children's consumption. For example, the UK research cited there suggests that we might expect children's consumption to be higher when mothers have greater financial control than fathers.

In principle, a child's standard of living may be influenced by the income (and wealth) of all people associated with that child. In practice, Australian research has often used the 'income unit' or nuclear family of spouses and dependent children as its assumed sharing unit. Adult children are treated as separate income units, even when living with their parents. In part, this convention came about because researchers were following the lead of the administrative means test in Australian income support policy. Over the past two decades, as education duration has increased and policy-makers have increased the age at which children cease to have their benefits income-tested on their parents income, statistical collections have followed suit by increasing the age of dependency for children.

Internationally, the co-resident family (including adult children resident in the same household) or the household have been the more common units used for inequality and poverty analysis. All these approaches are defensible as approximations to a very complicated reality of intra- and inter-household patterns of sharing.

Almost all research on poverty and inequality uses an 'equivalence scale' to adjust household or family income to arrive at an estimate of the living standards of the household members. This takes account of the number of people dependent on the income, their relative needs (children need less than adults), and the potential for joint consumption of many commodities (two need less than twice one).

Some economists have argued that because adults choose their family composition, these equivalence scales should not be used when evaluating the welfare of the adult household members. From this perspective, equivalence scales might be useful in summarising the effective level of adult commodity consumption, but they are not appropriate as an indicator of adult welfare more broadly. Whether this view is held or not, this argument is not relevant to children, as they play no part in this decision-making process (see Bradbury 2001 for a survey of this debate).

There is an enormous literature on the best way to estimate consumer equivalence scales. For surveys see, Whiteford (1985), Nelson (1993), Deaton and Muellbauer (1980) and Buhmann et. al (1988). One firm conclusion is that there is no ideal way to construct these scales. All involve assumptions of varying degrees of validity and transparency. When comparing poverty rates, it is possible to undertake sensitivity testing to test whether the conclusions are robust to plausible variations in the equivalence scale assumption.<sup>28</sup>

### 3.3 Equivalent income and children's consumption

There are two approaches to the interpretation of the consumer equivalence scales used in poverty research. On the one hand, they may simply be considered as statements of social preference about the needs of different types of families. Alternatively, they may be considered as estimates of relative needs (for commodity consumption) that reflect the underlying technology of intra-household allocation and joint consumption.

Most research that has attempted to estimate consumer equivalence scales has adopted the latter approach (the exception is the literature on subjective equivalence scales). However, much of the research on sensitivity testing has tended to be agnostic as to the rationale for equivalence scales and simply used them as a statement of social preference. These positions are not inconsistent—social norms about relative needs may be based on knowledge of household technology.

If equivalence scales do reflect household allocation and sharing technology, then they also contain information about children's consumption. This is the case, even though we cannot directly observe children's consumption within the household. There is a close relationship between the concept of cost inherent in equivalence scales, the intra-household allocation of resources and children's consumption. In particular, under plausible simple models of household allocation we can draw on the information contained in the equivalence scale to place lower and upper bounds on children's consumption within the household. This relationship is shown more formally in Appendix A. However, the key conclusions can be simply summarised.

Under reasonable assumptions children's consumption will be **greater** than the 'additional cost of a child' as indicated by the equivalence scale. This is because children share in the public consumption of the household, and this does not impose costs on the parent(s). For example, the arrival of a child in the household may require no increase in the size of the kitchen. Such common areas provide benefits to children, but do not contribute to the costs of children reflected in the equivalence scale.

At the same time, it is also reasonable to assume that children's consumption will generally be **less** than equivalent income. This is because the objective of the equivalence scale is to show the income required so that people in different household types have the same commodity-based<sup>29</sup> welfare level. For example, the equivalence scale might assume that a lone mother with one child requires an income 30 per cent higher to have the same effective consumption level as a single woman with no children. Equivalent income is thus an index of the effective consumption level of the woman when she is supporting a child. However, children consume less than adults and so children's consumption will be less than the equivalent income level.

However, this difference does not mean that the common practice of using equivalent income to measure child wellbeing and poverty is incorrect. Even though the child in the above example is consuming less than the mother is, this does not mean that the child is worse off. Children are allocated a smaller share of household economic resources because it is assumed (by their own parents, and parents generally) that they need less.

Nonetheless, this is relevant when we consider the relative magnitude of the other sources of child resources that accrue directly to children.

### 3.4 Non-cash benefits

Non-cash benefits (mainly provided by the state) form a large component of child and household consumption. Moreover, the nature of the services provided to families with children form a major part of policy discussion over the solutions to child poverty. Is it feasible and/or desirable to include these benefits in the measurement of child poverty?

Smeeding et. al (1993) estimate the volume of non-cash benefits in education, health and housing in several countries, and review the conceptual and practical issues involved in making these estimates. They emphasise the important role that health and education benefits, in particular, play in redistributing resources to those life-cycle stages when people need most assistance.

Education benefits, in particular, are of great importance to children (and their families). However, this does not necessarily mean that if we include education benefits in the measure of household resources that we should expect to find that child poverty is now relatively low compared to that for adults without children. This is because the consumer equivalence scales used to summarise the needs for income in different family types are calculated on the assumption that the pre-existing pattern of educational expenditures is maintained. If families had to purchase their education services, then we would expect the relative needs of families with children to be higher.

Indeed, if we assume that the actual pattern of educational expenditures follows the need for such expenditures, then the adjustment to needs would precisely cancel out the increased income. Thus, poverty rates would be the same whether measured on a cash income or an income plus non-cash benefits basis (Bradbury 1998).

Nonetheless, this might not be a realistic assumption, particularly if non-cash benefit receipt varied significantly between families (or across countries, or over time). In Australia, important features that vary considerably across families are usage of child care services, and of public and private schools. In principle, the subsidies associated with these services could be valued and added to the index of living standards.

However, the inclusion of non-cash benefits in this way would not necessarily aid the identification of the most disadvantaged children. It is possible that the needs for services such as child care may vary because of factors which are not observed by the researcher. To return to the example noted above, some families may have friends or relatives available to care for their children and hence use little in the way of child care resources. Though such a family will be consuming fewer state resources, we cannot assume that this implies that they are worse off.

Putting this point another way—if private and state transfers are close substitutes, including one but not the other in a measure of consumption may lead to estimates of living standards that are more biased than estimates that leave both out.

An alternative approach is to use cash income as the starting point but to deduct from income the household expenditures on those goods that are close substitutes for these non-cash benefits. That is, deduct child care expenditures, school fees, out-of-pocket health expenditures, and so on. Whilst not an ideal measure of consumption opportunities this may well be the most feasible way to include non-cash benefits in the measurement of poverty.<sup>30</sup> In the context of Australian data, the Australian Bureau of Statistics (ABS) Household Expenditure Survey (HES) already contains most of the data required to make this adjustment.<sup>31</sup>

The ‘after housing costs’ approach to the measurement of poverty employed in the Henderson poverty line might also be considered in this light. That is, it adjusts for the non-cash benefits associated with public or owner-occupied housing by examining the expenditure required once these costs are met.

The key limitation of these deduction-type approaches is that they do not take account of consumption variation. For example, in the case of housing, this approach tells us nothing about the quality of the housing consumption in different households. In this case, when quality of consumption varies so much, adding the non-cash value of housing services is probably the most appropriate approach.

### 3.5 Savings and poverty

In the discussion of the issues associated with intra-household allocation, it was argued that we would normally wish to exclude savings from any measure of child economic wellbeing. That is, we should focus on household (and hence child) **consumption** rather than **income**. Note this does not necessarily imply that household **expenditures** are the best indicator of children’s consumption. Because of the short duration of expenditure data collection (for example, often over two weeks), expenditure data may be a poor indicator of consumption.<sup>33</sup> Coupled with income data being typically cheaper to collect, this means most measurement of poverty, and child poverty in particular, takes as a starting point the cash income of the household or family.

However, in many working-age families, part of this income is used to provide savings for retirement. This can take the form of monetary savings, investments, purchases of long-lived durables (particularly home ownership), and increases in entitlements to state and privately run pensions. The different institutional forms for saving can have implications when we compare poverty rates in different countries.

In many countries, saving is predominantly via compulsory (employer and employee) social insurance contributions. In calculating disposable income, these contributions are deducted from gross income along with income taxes. In other countries, such as Australia, a larger proportion of saving takes place in the market, particularly via home purchase and employee contributions to superannuation. These are not deducted from gross income.<sup>34</sup>

Bradbury and Jäntti (1999) describe the resulting biases that may arise when using relative poverty lines to compare countries with different savings mechanisms. In those countries with substantial employer and employee contributions, median disposable incomes will be low, because a substantial amount of savings has been deducted from this amount.<sup>35</sup> However, in countries with private saving median incomes will be higher, although both consumption and a comprehensive measure of income which included saving could be identical.<sup>36</sup>

This means that a half-median poverty line will be set at a lower level in the social insurance country. If poor households in both countries have few savings of any sort, then this will imply a higher poverty rate in the private saving country, even though the distribution of consumption levels in the two countries may be identical.

Bradbury and Jäntti (1999) also examine data on cross-national patterns of saving via home ownership. They conclude that among families with children at least, there is now insufficient difference among most OECD nations for this to have a major impact on cross-national comparisons of child poverty rates. Nonetheless, there may be important implications for within-country poverty patterns.

A preferred index of resources used for the measurement of child poverty should therefore exclude the most important aspects of life-cycle savings. In the Australian context this means the exclusion of the investment component of home purchase and employee contributions to superannuation.

### 3.6 Time

Whilst a low level of children's consumption at any point in time is a matter for concern, this is all the more problematic the longer the poverty spell lasts, and the more likely it is to recur. With the increasing availability of longitudinal data, research in this area has increased substantially in recent decades.<sup>37</sup> Duncan (1997) discusses five key statistics that should be collected:

- short-run poverty (average monthly child poverty rates)
- longer-run poverty (total time spent in poverty over a multi-year period)
- short-run benefit dependence (average monthly social assistance recipiency rates)
- longer-run benefit dependence (total time spent on social assistance over a multi-year period)
- intergenerational benefit dependence (correlations for parents' and children's receipt).

Even when longitudinal data are not available, time remains an important issue in the interpretation of cross-sectional estimates of child poverty. An important question is the period over which income should be measured. If families are able to smooth consumption over time, then the longest period available will provide the best indicator of living standards.<sup>38</sup> On the other hand, Australian income tests on pensions and benefits typically have quite short time horizons, implying an expectation that smoothing is not very feasible for low-income families.

In the context of Australian income surveys, this suggests the use of short periods (such as the current income definition used in many surveys). However, this leaves the problem of how to identify those families that have low incomes precisely because they can smooth consumption (for example, self-employed drawing down on assets). Bradbury (1997a) discusses the measurement of living standards among Australian self-employed families.

Even if preventing short-term spells of poverty remains as an important goal of policy, there are still good reasons to believe that longer (or repeated) poverty spells are worse than shorter spells. Ideally therefore, a comparison of poverty among different demographic groups, or between countries, should be concerned with mobility rates in and out of poverty as well as the poverty rate at any one point in time. Despite this in-principle view, evidence from other countries suggests that for many comparisons, information on poverty duration is unlikely to change our conclusions about the relative degree of hardship faced by different groups.

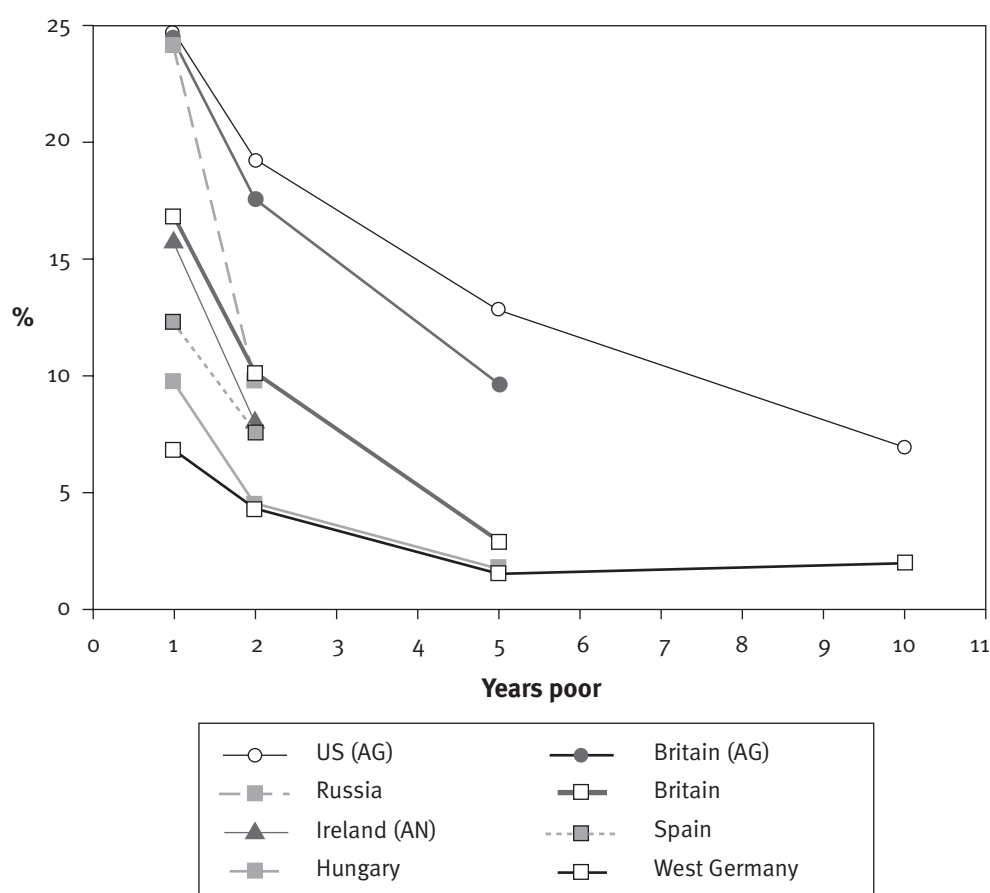
Figure 3.1 compares short and long-term measures of (relative) child poverty in seven industrialised countries (comparable data are not yet available for Australia). This figure shows the proportion of children poor in one year, in two out of two successive years and in five out of five years, and the proportion of children below the poverty line in 10 out of 10 years. Child poverty rates in any one year vary considerably across these countries, from 7 per cent up to almost a quarter. (The high rates for the US and the Britain (annual gross income (AG)) measure are partly due to the non-incorporation of income tax in the poverty estimation).



The proportion of children experiencing poverty in successive years is naturally lower than in a single year, and there is some degree of convergence as the period lengthens. However, with one exception, the ranking of child poverty rates across these countries remains unaltered as we increase the duration of poverty measurement. Countries (and income measures) with higher poverty rates in one year still tend to have higher poverty rates when measured over two, five or 10 years.<sup>39</sup>

The exception that proves the rule is Russia, where the extremely high single year poverty rates is reduced to a level comparable to that of Britain, Ireland and Spain when measured over two years. However, the economic circumstances of Russia in the mid-1990s were exceptional, with high economic uncertainty and volatility.

**Figure 3.1** Cross-national comparisons of short and long-term child poverty



**Notes** Children are defined as poor in a given year when their equivalent household income falls below half the median equivalent income of all people in that country in that year. The figure shows the proportion of children poor in one year, poor in two out two subsequent years and so on. Most estimates are based on net current income (after-tax income over a month, except for Spain which is over three months). Estimates denoted by (AG) are based on annual gross income (that is, not deducting tax). The estimate for Ireland is based on annual net income (AN). Note that for Britain both net current and AG results are shown.

**Source** Bradbury, Jenkins and Micklewright 2001, Table 4.7

For many of these countries, only short periods of data are available, and it is possible that conclusions about rankings based on persistent poverty might differ from those based on short-term poverty when we are able to examine more countries over a longer time. Nonetheless, at the level of detail available so far, it seems that cross-national patterns of poverty dynamics are reasonably uniform across rich nations (Duncan et. al 1993; Bradbury, Jenkins & Micklewright 2001). There is no evidence that the higher relative poverty rates in the US are offset by higher rates of mobility, despite the commonly invoked rhetoric of the US being a much more dynamic society.<sup>40</sup>

Information on living standards over longer periods will undoubtedly be useful in aiding our understanding of the dynamic aspects of poverty—those factors associated with entry to and exit from poverty. This in turn will provide an important grounding for policy measures designed to influence these transitions. However, existing evidence suggests that such additional data will be unlikely to dramatically change the conclusions drawn from cross-sectional research of the countries, regions and population groups most affected by poverty.

### 3.7 Poverty targeting and the limitations of measurement

Estimates of poverty are used for two main purposes. The first is analytical; to compare poverty levels and to identify the causal and outcome variables associated with poverty. A second objective is to use poverty rates as an explicit policy target. If we view poverty as constituting an **‘unacceptably low standard of living’** it is entirely natural that poverty estimates should serve as a direct motivator for policy and a measure of its success.

This application has enjoyed brief episodes of prominence in Australian history. The Poverty Inquiry of the mid-1970s (Commission of Inquiry 1975) established a ‘Henderson Poverty Line’, which, whilst never officially adopted by any Australian government, was for a time at the forefront of discussion and evaluation of welfare policies. In the 1987 election, Prime Minister Hawke pledged that ‘by 1990 no child need live in poverty’.

Whilst subsequent Australian governments have avoided the adoption of poverty targets, recent years have seen a resurgence of interest in poverty and particularly child poverty reduction as a target. Poverty reduction targets were a feature of the US Clinton administration’s welfare policy, and more recently, both the UK and Irish governments have adopted the reduction and abolition of child poverty as a key policy objective. In 1999, Tony Blair stated, ‘Our historic aim will be for ours to be the first generation to end child poverty ... It is a 20 year mission’ (Blair 1999). This follows the setting by the Irish government of 10-year poverty targets for the whole population in 1997 (Nolan 2000). Benchmarks are under continuing evaluation by European Union members (Vleminckx & Smeeding 2001). The current debate in the UK on how to best operationalise a poverty target was discussed in Section 1.1 above.

Atkinson (1998) has argued for adopting poverty targets and publishing regular reports on progress in the same way as for other key socio-economic indicators such as the unemployment rate. Atkinson emphasises the need for the presentation of a range of information. However, the policy salience of such targets does depend on the existence of a defensible ‘headline poverty rate’ (paralleling other indicators such as the headline unemployment or inflation rate). As Nolan (2000) points out, the degree of consensus over the conceptual and practical measurement of poverty is significantly less than that over the measurement of unemployment or the price level.

Whilst it is possible to envisage that poverty reports could encompass a small number of alternative definitions of the poverty threshold, the challenge is to deal with the myriad of measurement issues considered above. In the Irish example, the poverty measure adopted encompasses both income measures as well as direct measures of deprivation. In principle, both these measures are relative concepts. The income measure of poverty is based on a fraction of mean income, whilst it is intended that the deprivation measures will be changed to incorporate different aspects of consumption as living standards change over time (though this ‘re-basing’ has yet to occur) (Nolan 2000).

Probably the most important practical reason for the inclusion of deprivation-based measures is lack of confidence in income alone as a satisfactory measure of resources. This is because of the reasons mentioned above, plus the very real possibility of measurement error and mis-reporting of income. This latter issue has not received a great deal of attention in poverty measurement literature, but is of crucial importance if income poverty measures are to be used as policy targets (or components of such targets as in the Irish case).

This is partly because most of the academic writing on poverty measurement has focused on the analytical applications of poverty measures. When describing trends or comparing different population groups, some degree of measurement error is acceptable as long as it is uncorrelated with the explanatory variable of interest (for example, time or demographic characteristics). Similarly, a number of methods have been developed to assist researchers to form analytical conclusions about trends and differences in poverty rates that are robust to alternative definitions of poverty.<sup>41</sup>

However, policy targets place stronger demands on data. This is most obviously the case if the target is to explicitly eliminate poverty. Nonetheless, even if the target is simply to ensure that the trend is downward, substantial measurement error can undermine confidence in the validity of the target itself. Even more important, if poverty measurement is to be used to direct policy interventions, then we need confidence that measurement error is minimal. Poor measurement can mean that scarce resources are provided to the wrong groups or that those most in need are not helped.

### **Australian poverty trends**

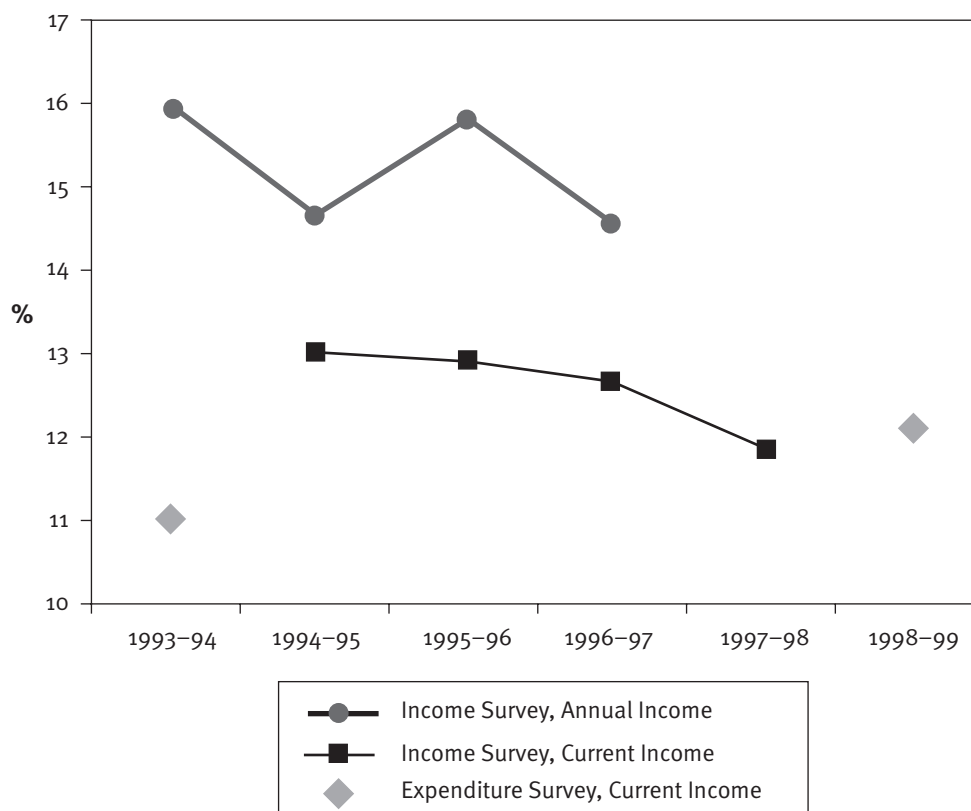
An example of the problems to be faced in measuring poverty in Australia can be found in Figure 3.2.

This figure shows 10 different estimates of child poverty calculated for Australia in the 1990s. The same poverty definition is used in each case, with the only difference being the source of the income data. The 1993–94 and 1998–99 estimates use the income data from the ABS Household Expenditure Surveys (HES). The other data points are all from the ABS Surveys of Income and Housing Costs (SIHC). The SIHC is a continuous survey with interviews taking place every month. Households are asked both about their current incomes and about income during the previous financial year (current income from business and investments is based on the annual data). A household interviewed in July 1997, for example, would be included in the ‘current’ income data for 1997–98, and annual income data for 1996–97.<sup>42</sup>

The most obvious feature in this figure is the wide variation in poverty estimates using different data definitions. The higher poverty rate for annual income is of particular concern as we would normally expect to find this to give a lower estimate of poverty than the current income measure (because of the annual averaging of month-to-month fluctuations in income over the year).

If poverty targeting is to be seriously considered in Australia, these ambiguities in the basic income data must be resolved. The SPRC is currently engaged in a research project with the ABS attempting to resolve the differences described above. However, it may be possible to develop alternative survey instruments that are more suitable for poverty targeting.

**Figure 3.2 Australian child poverty rates during the 1990s—estimates using different data sources**



**Notes** Source: ABS—SIHC and HES confidentialised unit record files (CURFs), various years. The poverty line is 50 per cent of the median equivalent household disposable income of all people. The equivalence scale is the square root of household size. Children are people under age 18. Annual income estimates exclude households with one or more income units not in annual income scope (as defined by ABS). Expenditure survey for 1998-99 is the August 2002 version. (Calculations by the author.)

The sample size underlying each estimate is between 2300 to 2600 households with children (1993-94 HES is larger). This implies 95 per cent confidence intervals of the order of  $\pm 1.5$  to 1.8 percentage points (based on simple random sampling formula with a 30 per cent increase in the confidence interval to allow for the survey design effect).

In all income surveys, there is always a substantial fraction of the population with income substantially below that of minimum income support payment rates. In many cases, these families are maintaining an adequate living standard by running down savings, or by receiving irregular income in forms that are difficult to measure (such as via capital gains generated in businesses). In other cases, it is speculated that people may have income within the survey scope, but be reluctant to report all their income. For example, people who have reported their labour force status as employed may then fail to report that they are receiving an income support payment when they reach the income questions later in the questionnaire. (Even if the rules of the payment do permit employment, they may be unsure of this).

If poverty targeting were to be seriously considered, an appropriate first step would be an investigation to see if these measurement problems can be resolved. One approach would be to extend the standard survey methodology to further probe the consumption support for those reporting low-income levels. This might include:

- simple probes asking people with very low incomes how they support themselves (for example, usually have higher income, with reasons for current income pause; running down savings; reliance on friends and/or relatives)
- a re-assurance about the statistical use of the data followed by further income probes.
- explicit questions to identify those classes of people that we might expect to have low resources but who are not receiving the full level of income support (for example, because of residence restrictions, breaching conditions, assets test exclusions)
- questions about expenditure.

An alternative would be to attempt to measure consumption levels via expenditure data. This would probably require an extension to current expenditure survey methods. The ABS surveys, for example, measure expenditure on most items over only a short period (two weeks for most households). This means that consumption of consumer durables such as clothing can be entirely missed from such a collection, and someone who has not been shopping for the last two weeks may be recorded as having a very low consumption level. In this case, one would need to supplement the expenditure questions with questions about the stock of durables of such items. Given the already large respondent burden associated with the expenditure surveys, this might not be feasible.

### **International comparisons of child poverty**

It is interesting to compare the variability in Australian poverty estimates with those obtained in other countries. Table 3.1 compares estimates of child poverty obtained from two recent cross-national studies.

Both these studies calculated child poverty using conventional income-based estimates and the same calculation methodology (see the notes to the table for details). However, the data collection strategies for the two studies were somewhat different. The UNICEF (2000) study used data from the Luxembourg Income Study (LIS). This study uses national survey databases, but attempts to make them as cross-nationally comparable as possible. The Förster (2000) study used informants, familiar with their national data, who calculated income distribution statistics using instructions provided by the OECD.

In general, we might expect that the latter approach would be the best way to obtain estimates of trends over time within countries, whereas the LIS approach might be preferred for cross-national comparisons at one point in time. However, idiosyncratic problems with all datasets suggest that we should not make too much of this distinction.

The Australian data in these two studies match that described in the previous section. The 1996–97 poverty rate in the UNICEF study is the same as the ‘Income Survey, Current Income’ rate in Figure 3.2 and the 1993–94 poverty rate is the same as the ‘Expenditure Survey, Current Income’ estimate.<sup>44</sup>

Overall, the estimates of child poverty obtained in the two studies are very similar, but often not identical. In both the UK and Finland, where the estimation year was the same, and the calculations were based on the same data collection, the poverty rate

was over 2 percentage points higher in the UNICEF study. This points to the potential role of the other methodological decisions that researchers must make in using income data. For most other countries, the poverty estimates are very similar in the two studies. This is the case even for those countries using data from different surveys. The exception is Ireland (where the estimates are three years apart).

Even for those countries where the child poverty estimates differ most between the two surveys, this difference is small compared to the cross-national variation in poverty rates. The rank position of the UK and Australia does not change, Ireland only changes by one position, and Finland by two positions between the two studies. Overall, the correlation between the two measures is 0.98, and the rank correlation is 0.96.

**Table 3.1** Comparison of recent international estimates of child poverty

COUNTRY	UNICEF (2000)		OECD (FÖRSTER 2000)		UNDERLYING DATA SOURCE	DIFFERENCE		
	YEAR	POVERTY RATE (RANK)	YEAR	POVERTY RATE (RANK)		YEARS	POVERTY RATE (RANK)	
United States	1997	22.4 (1)	1995	23.2 (1)	S	2	-0.8	(0)
Italy	1995	20.5 (2)	1993	18.8 (2)	S	2	1.7	(0)
United Kingdom	1995	19.8 (3)	1995	17.4 (3)	S	0	2.4	(0)
Ireland	1997	16.8 (4)	1994	13.4 (5)	S	3	3.4	(-1)
Canada	1994	15.5 (5)	1995	14.2 (4)	S	-1	1.3	(1)
<b>Australia</b>	1996-97	12.6 (6)	1993-94	10.9 (6)	D	3	1.7	(0)
Germany	1994	10.7 (7)	1994	10.6 (7)	S	0	0.1	(0)
Hungary	1994	10.3 (8)	1997	9.7 (8)	S	-3	0.6	(0)
France	1994	7.9 (9)	1994	7.1 (10)	S	0	0.8	(-1)
Netherlands	1994	7.7 (10)	1994	9.1 (9)	D	0	-1.4	(1)
Denmark	1992	5.1 (11)	1994	3.4 (13)	D	-2	1.7	(-2)
Belgium	1992	4.4 (12)	1995	4.4 (11)	D	-3	0.0	(1)
Finland	1995	4.3 (13)	1995	2.1 (15)	S	0	2.2	(-2)
Norway	1995	3.9 (14)	1995	4.4 (11)	S?	0	-0.5	(3)
Sweden	1995	2.6 (15)	1995	2.7 (14)	S	0	-0.1	(1)

Notes Child poverty is defined in the same way in both studies. The poverty line is 50 per cent of the median equivalent household disposable income of all people. The equivalence scale is the square root of household size. Children are people under age 18. For most countries (in both studies), incomes are measured over 12 months. In Australia, the UK and Ireland incomes are measured on a 'current' basis (in both studies). In Sweden (both studies) and Belgium (OECD), incomes are aggregated across 'tax units' rather than households. Both studies also presented results for Greece, Turkey and Mexico, but the UNICEF estimates were based on those in the OECD report.

Sources UNICEF (2000) and Förster (2000).

In this context, the differing estimates of Australian child poverty shown in Figure 3.2 are quite large—particularly in 1993-94 when the gap is 5 percentage points (the gap is only 2 percentage points in 1996-97). If the 'Income Survey, Annual Income' measure had been used in the OECD (Förster) study, Australia would have moved up the ranking by three places. However, changing income definitions in 1996-97 (that is, the date of the Australian data in the UNICEF study) would have made no difference to the Australian poverty ranking.

## 4. The proximate causes of child poverty

What causes child poverty? Following the existing literature, we mainly focus here on the determinants of income poverty. If children are defined as poor when their household income is low relative to their needs, then the proportion of children in poverty will be determined by the threshold of acceptability (the poverty line), their household income, and the income needs of their household.<sup>45</sup> Household income, in turn, can be represented as:

$$y = M + S + P$$

Where  $M$  is market income (wages, interest income, investment income, etc),  $S$  is social transfers net of income taxes (social assistance and social insurance, less income tax and social insurance contributions) and  $P$  is private inter-household transfers (for example, child support). Market income, in turn, can be represented as:

$$M = \sum_i^n w_i h_i + K$$

Where  $n$  is the number of workforce-age adults in the household,  $w$  is their hourly wage,  $h$  is their hours worked and  $K$  represents other sources of income derived from the household's capital holding. The proximate determinants of the extent of child poverty in a given society will therefore depend on:

- the definition and measurement of the poverty threshold
- the income needs of the household (for example, household size, and the number of other children in the household)
- social transfers and taxes
- family composition (particularly the presence of one or two parents)
- the distribution of wage rates (particularly in the bottom half of the wage distribution)
- the employment patterns of parents (in particular whether there is at least one full-time employed parent in the household).

Though it is most natural to think of child poverty as a dependent variable and these variables as the proximate determinants, it is also valid to examine the association between child poverty and these factors using **children** (that is, fertility) as the dependent variable. That is, by examining the factors that determine whether or not a child will be born into a poor family (or one with characteristics that make poverty likely).

In developing countries, policies to limit family size are a major component of anti-poverty policy. Though this issue does not feature strongly in the literature in richer countries, the correlation of child poverty with family size can be substantial. In the US, 57 per cent of poor children live in families with three or more children (compared to 37 per cent of all children) (Greenstein 2000). Similarly, in Australia, almost half of poor children in Australia live in families with three or more children.<sup>46</sup> This is due both to the higher needs of these large households and their lower employment rates.<sup>47</sup>

In the developed nations, the average age of mothers has been increasing over the last 50 years. This has tended to increase the average household income of children. In the US, a major concern however, has been the growth in the birth rate to young unmarried mothers (Blank 1995). However, this issue is not as important in other OECD countries.

In Australia, the percentage of births attributable to women aged 15 to 19 is around 5 per cent—less than half the rate in the US. Other English-speaking countries have rates similar to Australia, whilst northern European countries have lower rates of teenage fertility. (OECD 1996).

Once children are born, the income decomposition framework outlined above provides a useful structure for examination of the proximate causes of child income poverty. However, it is important to recognise that effective policy intervention also requires an understanding of the factors influencing these proximate determinants, as well as the way in which these factors interact within the general equilibrium of the economy and overall socio-political system. We touch on some of these underlying causes and interactions below and in Section 5.

Moreover, it is not sufficient to simply show how child poverty rates are statistically derived. It is trivial to say that if you increase employment, wage rates or social transfers to disadvantaged families with children, then you will reduce child poverty. The key policy question is how to make these changes within the fiscal, economic and political constraints facing governments. One way to evaluate a feasible set of options is to examine variability in economic systems. There are two ways of doing this—by examining changes in outcomes over time or by examining regional variations (of which national variations are the most appropriate, given the formulation of policy at the national level). We draw on literature using both sources of variation in examining these proximate sources of variation in child poverty rates.

## 4.1 Lone parenthood

Having only one workforce-age parent available, whose employment is constrained by caring responsibilities, means that children living in lone-parent households are almost inevitably more likely to be poor. Whilst income transfers, child support payments, and employment assistance all help, no country has managed to ensure that the chances of poverty are equalised between children with one and two co-resident parents.

Hence, if the rates of lone parenthood and marital dissolution could be reduced, this would be expected in turn to reduce the overall proportion of children living below the poverty line. When the rate of lone parenthood has risen substantially, this has been seen as a major cause of increases in child poverty rates. Lerman (1996), for example, examines trends in US child poverty rates between 1971 and 1989. Over this period, the proportion of children living in lone-parent families almost doubled (and the proportion of these with never-married mothers increased significantly). Using a variety of simulation methods, he concludes that this increase more than explains the observed increase in child poverty over this period.

However, from the perspective of cross-national variation, the impact of lone parenthood is quite small. Bradbury and Jäntti (1999) examine (relative) poverty rates for the children of lone parents in 25 industrialised countries. They calculate the national child poverty rates that would eventuate if all countries had a fixed 10 per cent of their children living in lone-parent families.<sup>48</sup> If this was the case, then the national child poverty rates of countries such as the US and UK with high proportions of lone-parent families would drop by over 2 percentage points. However, in the context of the large differences in child poverty rates in different countries (see Table 3.1) this is only a small change. The ‘league table’ of child poverty performance across these 25 nations would hardly be altered by such a change.



Nonetheless, in Australia it remains the case that the proportion of children in lone-parent families has steadily grown over the past three decades, and lone parent families are more likely to be poor.

Whether the US experience or the cross-national pattern is most relevant to child poverty in Australia depends on the extent to which historical or cross-national evidence provides a better guide to the feasible range of policy options. Would it be easier to wind the demographic clock backwards and reduce the proportion of children living in lone-parent families? Or would it be easier to follow the example of those countries with high rates of lone parenthood which have managed to achieve relatively low rates of poverty in these families?

## 4.2 Social transfers and market incomes

For children in all types of families, social transfers are an important component of anti-poverty policy. Given the fiscal and incentive constraints under which these policies operate, how effective can they be in alleviating poverty? Again, it is useful to examine this both from the perspective of changes over time and differences between countries.

Harding and Szukalska (2000a) calculate child poverty trends in Australia between 1982 and 1995–96. Using relative poverty lines defined as fractions of either average or median incomes, they find that child poverty rates fell significantly over this period. These results contrast with those of Bradbury and Jäntti (1999) who found a small rise in child poverty rates over the same period, but are in a broad concurrence with the OECD results shown above.

The Harding and Szukalska results are derived from the ‘current’ income definition collected in the ABS income surveys,<sup>49</sup> the Bradbury and Jäntti results from the annual income definition in the same surveys, and the OECD results from the income information in the ABS expenditure surveys. There are problems with all these data sources, and research on this question is continuing.<sup>50</sup> In the meantime, some caution is required in interpreting these trends.

Nonetheless, the results of Harding and Szukalska are of interest in examining the determinants of changes in child poverty in Australia. They ascribe most of the decline in poverty to substantial real increases in income support payment rates.<sup>51</sup> They estimate that real median current incomes were essentially the same in 1995–96 as in 1982 (see their Table 1). This means that their relative poverty line can also be treated as an absolute poverty line—with the line fixed in real terms. With such a poverty line, real increases in benefit payment rates must decrease poverty if there are no changes in other factors.

At the same time as benefits increased, however, there were decreases in employment rates among families with children and an increase in the proportion of children in lone-parent families (see Table 4.1). This table, calculated from their results, allows us to undertake some counter-factual calculations to estimate the relative importance of these different factors in influencing changes in poverty rates.

**Table 4.1** Child poverty in Australia, 1982 and 1995–96

	PERCENTAGE OF ALL CHILDREN		POVERTY RATE		PERCENTAGE OF POOR CHILDREN	
	1982	1995–96	1982	1995–96	1982	1995–96
Marital status of parents						
Couple	92	87	11	7	77	76
Lone parent	10	16	30	12	23	24
Total	100	100	13	8	100	100
Number of parental earners						
Nil	13	16	50	21	48	42
One	51	42	7	6	27	31
Two	40	43	8	5	24	27
Total	100	100	13	8	100	100

Source: Calculated from Harding and Szukalska (2000a), Tables 3 and 4, estimates based on a half-median poverty line (which was approximately constant in real terms).

Over the period, child poverty dropped from 13 to 8 per cent of children. If the proportion of child in lone-parent families had stayed at the 1982 level, however, the poverty rate would have dropped by about 0.4 percentage points further. Similarly, if the numbers of earners in each family had stayed at the 1982 level, the drop in poverty would have been about 0.3 percentage points further. To directly evaluate the impact of benefit levels would require a more sophisticated simulation. Nonetheless, increases in benefits were probably the main reason for the change in poverty within each family type or within each employment group.<sup>52</sup>

Thus we might conclude that changes in benefit rates did indeed make a substantial impact on child poverty, and over this period at least, the impact was much larger than the impact of demographic or labour market factors.

An increase in the ‘effectiveness’ of income transfers (and tax policies) appears to be a widespread trend. Oxley et. al (2001) compare trends in child poverty with trends in ‘pre-tax and transfer’ child poverty over the decade prior to the mid-1990s. Pre-tax and transfer poverty is calculated by assuming that families have only their market incomes and do not pay any income taxes or receive any income transfers. Market income is assumed to remain unchanged. In only two cases out of 12, OECD countries (Germany and the Netherlands) did pre-tax and transfer poverty rise at a significantly slower rate than child poverty. In two cases, the growth rate was identical. In all other cases, poverty rose at a slower or similar rate (or declined at a faster rate) than poverty based on market incomes only. On this measure at least, tax and transfer systems appear to be becoming more effective at dealing with poverty.

They do caution however, that an alternative interpretation for this result is that increases in transfers may have led to behavioural responses, which have increased pre-transfer poverty (for example, higher transfer levels may have enabled family break-up or lower job search effort).

While some ‘leakages’ of this type may occur, in the context of cross-national variation, they do not negate the impact of social expenditures. In general, countries with higher levels of welfare effort tend to have lower child poverty rates. UNICEF (2000) describe the relationship between national child poverty rates and the aggregate volume of state transfers to people of working age (see Table 4.3 below for this data). Workforce-age

social expenditure as a percentage of GDP varies widely across rich nations, from around 15 per cent for the Nordic countries to under 5 per cent for the US, Japan, Italy and Greece. None of the countries with high levels of social expenditure has a high child poverty rate.

However, there remains substantial variation in outcomes among the low-moderate expenditure countries. Japan (in 1992) achieved low child poverty rates despite low levels of expenditure. France and Germany had similar levels of expenditure to the UK but had much lower child poverty rates. In the case of France, at least, this may be partly due to greater targeting of benefits to families with children.

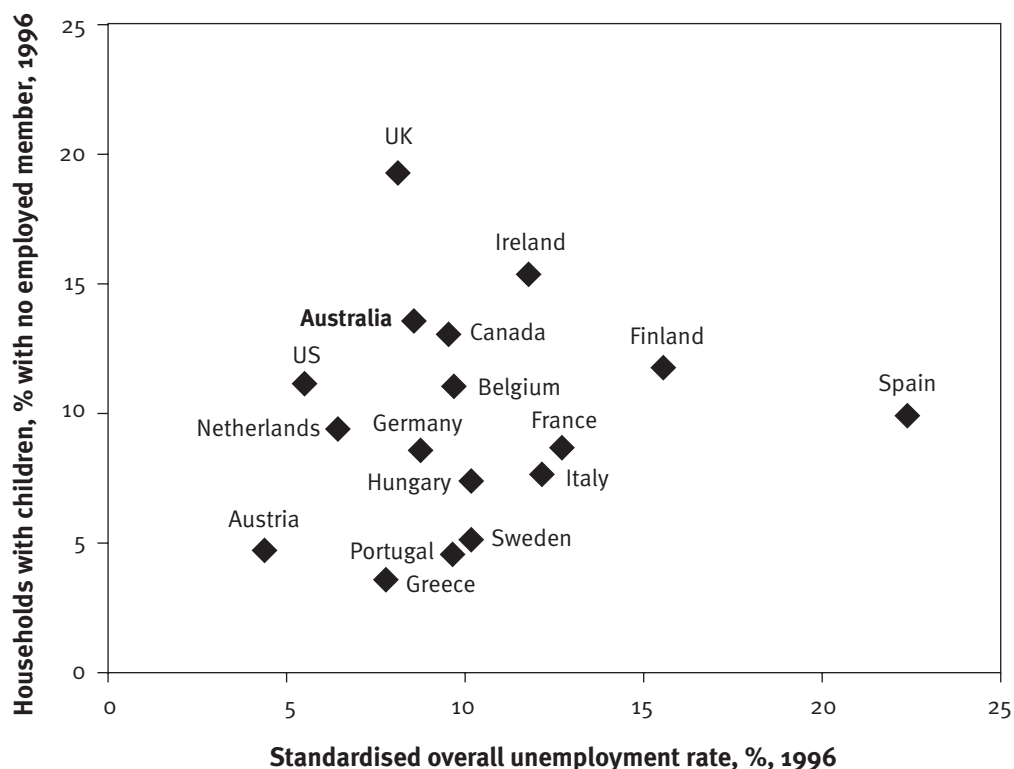
Most of the variation in poverty rates for countries with similar rates of expenditure, stems from variations in the extent to which the parents of children are able to derive income from the labour market. Bradbury and Jäntti (1999, 2001b) examine the sources of household income of the poorest 20 per cent of children in each of 25 industrialised countries. This is expressed relative to the median income, so that ranking countries using the average relative income of the bottom fifth is very similar to a ranking based on poverty rates. The advantage of using average incomes rather than poverty rates is that it permits a disaggregation of the variation in income disadvantage into that due to market incomes and that due to transfers.

They find that across these 25 countries, the variation in the market income of the bottom fifth is larger than the variation in social transfers received by this group. Moreover, those countries with the lowest rates of income disadvantage also have the highest share of income being received from the market. The English-speaking countries (US, UK, Canada, Ireland, Australia), which overall have moderate to high poverty rates, are also the countries where the bottom fifth receive the lowest share of their income from the market. It would seem, therefore, that there is scope for these countries to improve child poverty outcomes significantly via an increase in market income for the most disadvantaged families.

### 4.3 Joblessness

In Australia, the main reason for the low market income of families with children is joblessness. Figure 4.1 shows for 17 countries both the national unemployment rate (for all people) together with the proportion of households with children that have no employed adults. Despite having a below-average unemployment rate, Australia has the third-highest level of parental joblessness.<sup>53</sup> The OECD report also places Australia at third-highest among one- and two-adult households separately.

The divergence between unemployment and joblessness arises because in many countries unemployment is concentrated among people (most notably young people) who do not have family responsibilities. On the other hand, in Australia, families with children are relatively likely to be jobless.

**Figure 4.1** National unemployment rates and joblessness among families with children

Source: OECD, *Employment Outlook*, 1998, and OECD *Standardised Unemployment Rates*.

Table 4.2 shows that the rate of joblessness among Australian families with children has been on an increasing trend since the early 1980s. This applies to both lone-parent and couple-headed families. The jobless rate is much higher among lone-parent households, and lone-parent families are also becoming more common.

The bottom panel of the table decomposes the increase in the overall jobless rate into that due to the increase in lone-parent families and that due to the increase in joblessness within each family type. Between 1982 and 1997–98 the jobless rate increased by 4.8 percentage points, from 9.8 to 14.6 per cent. If the proportion of lone-parent families had stayed at the 1982 level, the increase would have been only 2.1 percentage points. If the within-family-type rates of joblessness had been constant, the increase would have been 2.5 percentage points. Both the increase in joblessness within family type and the increase in lone parenthood contributed to the overall rise in joblessness, with the latter having a larger impact.

**Table 4.2** Jobless households with children, Australia, 1982 to 1997–98

YEAR/QTR	SHARE OF HOUSEHOLDS WITH CHILDREN (%)			JOBLESS RATE (%)		
	LONE PARENT	COUPLE WITH CHILDREN	TOTAL	LONE PARENT	COUPLE WITH CHILDREN	ALL FAMILIES WITH CHILDREN
1982q4	10.4	89.6	100.0	42.3	6.0	9.8
1986q4	12.0	88.0	100.0	49.5	5.9	11.2
1990q4	13.6	86.4	100.0	46.7	6.0	11.5
1994–95	14.7	85.3	100.0	46.4	8.1	13.7
1995–96	16.1	83.9	100.0	45.0	7.0	13.1
1996–97	16.9	83.1	100.0	52.2	7.4	15.0
1997–98	17.5	82.5	100.0	47.0	7.8	14.6
<b>Decomposition analysis</b>						
1982 shares and rates						9.8
1982 share, 1997–98 rates						11.9
1997–98 share, 1982 rates						12.3
1997–98 shares and rates						14.6

**Source:** Calculated from Dawkins, Gregg and Scutella (2001). ‘Other’ households are excluded. Original source: ABS Income Survey CURFs. Note that the share of **children** in lone-parent households is less than shown in the first column of this table because lone-parent households tend to have fewer children on average.

## 4.4 Wages

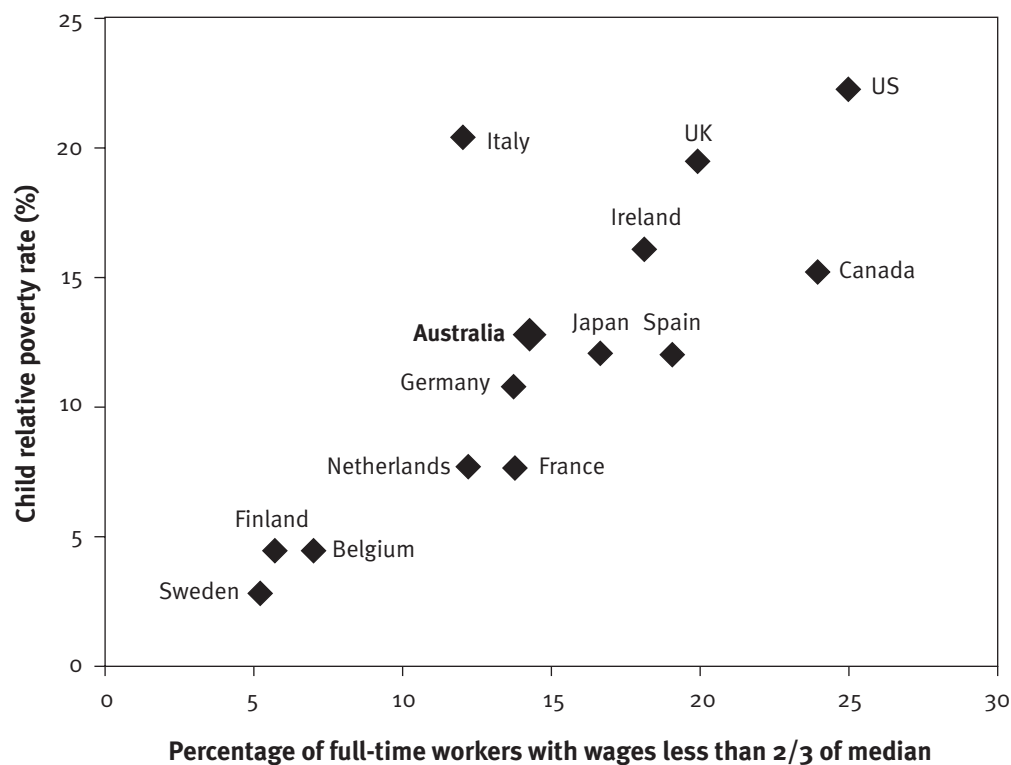
There is extensive evidence that wage inequality in Australia has grown substantially over the past two and a half decades, and that real incomes have fallen at the bottom of the male wage distribution (Borland & Wilkins 1996). The poverty rate for children with at least one full-time employed parent, however, remains low. Harding, Lloyd and Greenwell (2001) estimate that in 1999–2000, the poverty rate for people in families with at least one full-time earner was 2.4 per cent (compared to an overall poverty rate of 13 per cent). Because of the large number of people in this situation, they constitute about one-fifth of the poor population. Nonetheless, this includes many young single adults. We would expect a much lower fraction of children to be in families with full-time employees. Despite the growth in low-wage employment, low wages are generally not viewed as a major direct cause of poverty in Australia.

As Richardson and Harding state:

It is inherent in the design of the Australian welfare structure that families that depend on wages—even low wages—for their income are not at the bottom of the income distribution. Below them are most families that rely on social welfare benefits. (Richardson and Harding 1998, p. 26)

This conclusion would apply to most OECD countries that have comprehensive social assistance schemes. In addition, many low-wage workers do not live in poor households (because of the incomes of other family members).

Given this, it is surprising to find that across nations, the correlation between child poverty rates and the prevalence of low wages is extremely high. Figure 4.2 shows child poverty rates in 14 OECD countries (defined as in Table 3.1) together with estimates of the degree of wage inequality in each of the countries. The correlation between the two measures is 0.82 (0.93 if Italy is excluded).

**Figure 4.2** Child poverty and low wages

Source: UNICEF (2000). Wage and poverty estimates are for the mid-1990s.

One possible explanation for this association is that child poverty and the percentage of full-time workers with wages below two-thirds of the median are both measures of inequality within the bottom half of the income distribution. However, this is not a sufficient explanation, because as noted above the direct link between low wages and poverty is very weak. Most poor children live in families with little or no employment, and most low-wage workers do not live in poor households.

It is important to note, moreover, that this association is the opposite of what might be expected based on labour demand relationships. It is often argued that low wages for low-skill workers will increase demand for their labour, reduce joblessness and hence reduce poverty. To the extent to which this is the case, the strong association between wage inequality and poverty suggests that it is dominated by other relationships.

Two hypotheses can be advanced for this. The first concerns the implications of labour supply patterns for the relationship between wages and benefit levels. In countries with low wages, labour supply may be low (increasing joblessness) and/or income support payments must be kept low to maintain labour supply incentives. Similarly, labour supply incentives also mean that a high level of income support will effectively maintain a floor under wages. The second hypothesis (not mutually exclusive from the first) is that wage inequality and low benefits both arise from fundamental attitudes about tolerance for inequality. These attitudes in turn influence both income support and labour market policies and institutions.

## 4.5 Are the determinants of child poverty special?

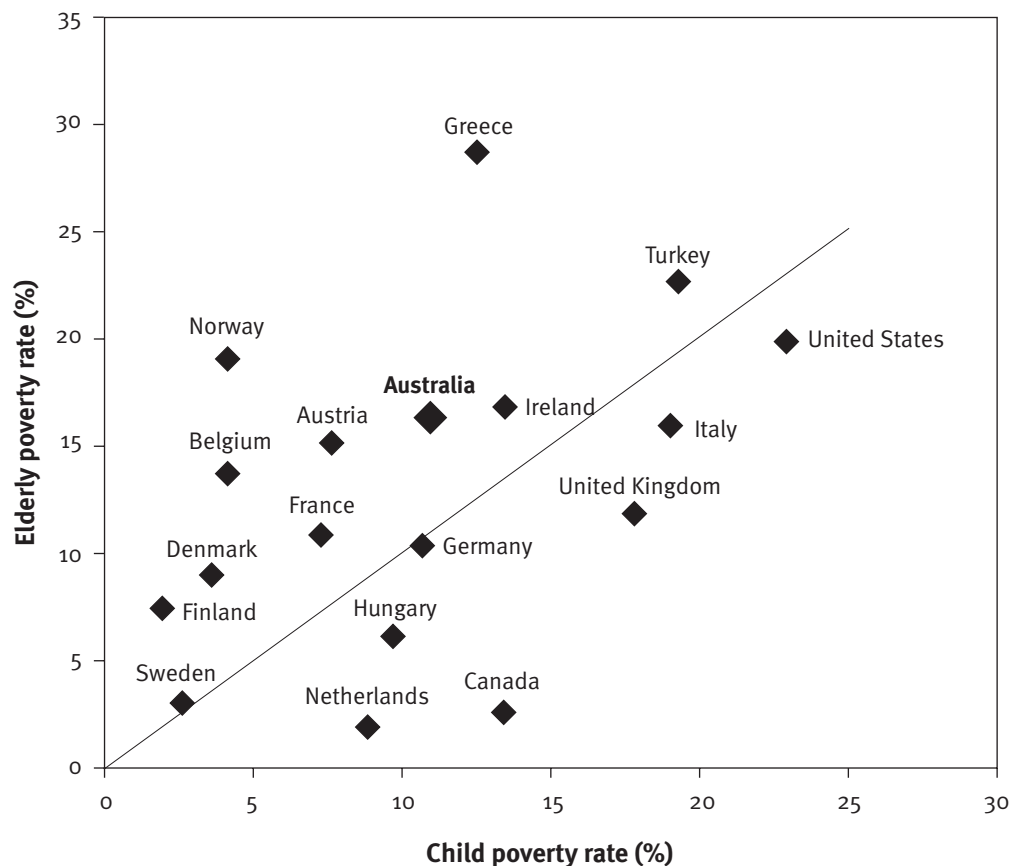
One way of examining such broader social attitudes is to compare the outcomes for children with those for other vulnerable groups. There are several reasons why child poverty specifically should be considered of particular interest for policy-makers and researchers (see Section 2). This does not mean, however, that the causes of and the solutions to poverty will necessarily be different for children than for other groups.

If the underlying causes of child poverty were similar to those of poverty more generally, we might expect to find that poverty trends and cross-national variations in poverty were similar for children and others. Is this the case?

Since child poverty is usually defined as a function of household income, we must expect that poverty among children and among parents will follow the same statistical patterns.<sup>55</sup> Poverty among workforce-age adults who do not live with children will be statistically independent, but this group is rarely separately identified in comparative or trend analysis of poverty. The elderly, however, is one group which is of traditional concern to anti-poverty policy and who largely live in separate households to children. Moreover, their income sources are quite different. They rely much less on labour market income and usually receive income transfers via quite different social insurance programs than families with children. The correlation in poverty rates between children and the elderly can thus serve as a test of the extent to which there are underlying society-wide phenomena that drive poverty outcomes.

Förster (2000) reviews recent national studies examining trends in poverty in 22 OECD countries. Though there is a variety in poverty trends, he does identify a tendency for poverty rates among the elderly to have fallen over the past 10 to 20 years, whilst poverty rates for children have tended to rise. 'Over the last 20 years a poverty population which was disproportionately elderly changed to one which is more weighted towards younger households with children.' (pp. 27–8).

He also presents evidence comparing child poverty with that for other groups. Figure 4.3 summarises these results for children and the elderly in the mid-1990s. For the poverty definition that Förster uses, more countries have higher poverty rates among the elderly than among children. This result on its own is of limited value, as it could change dramatically if a different equivalence scale were used.

**Figure 4.3** Elderly and child poverty rates in OECD countries, mid-1990s

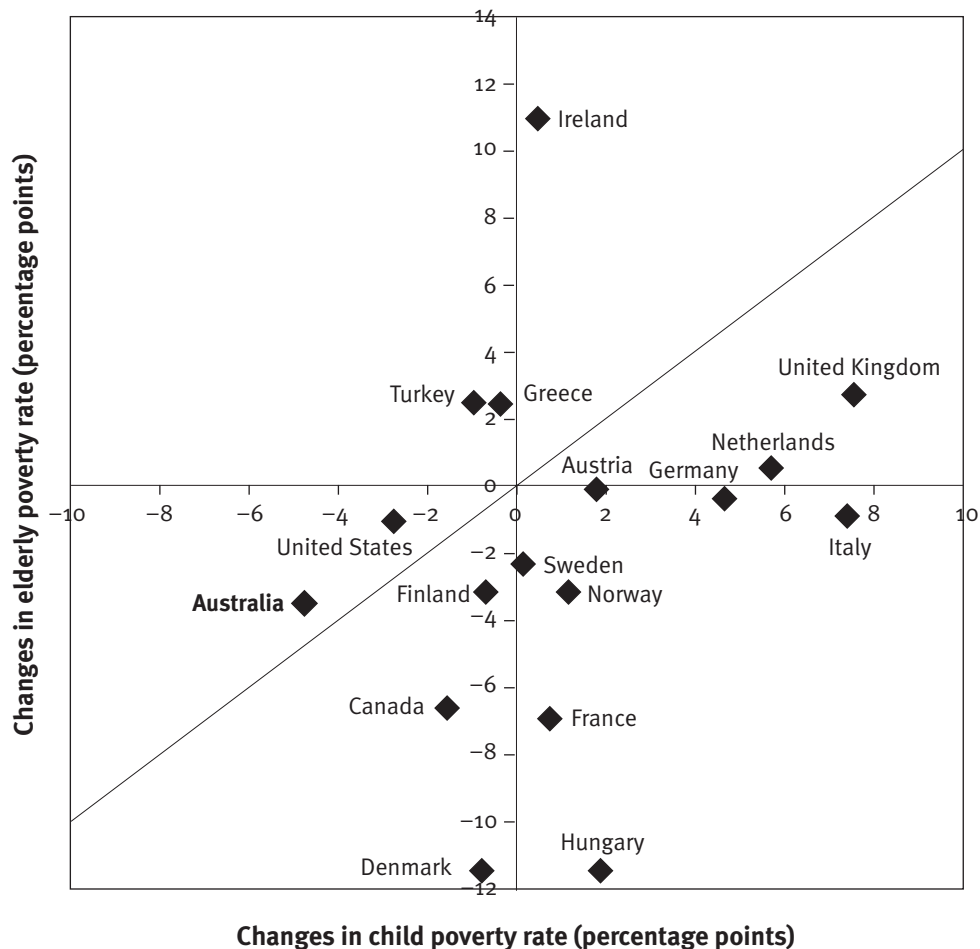
**Source:** Förster (2000), Table 5.4. The poverty line is set at half-median equivalent income in each country. The equivalence scale is the square root of household size. Information for Mexico is also available in Förster's paper. Australian data is from the 1993–94 HES.

It is interesting that Australia is unique among the English-speaking countries in having a higher poverty rate among the elderly than among children. This conclusion may also be sensitive to factors such as the equivalence scale and the poverty threshold. Among the elderly in Australia, large numbers have incomes at the single and couple age pension levels. A small decrease in the poverty line for the elderly in Australia would lead to a large drop in their poverty—probably more so than in any other country.

Across nations, the poverty rates for children and elderly are correlated, but not very strongly ( $r = 0.42$ ). Nonetheless, it is interesting that there is any correlation at all, given that the income sources of the elderly and of families with children are so different. To some limited extent, therefore, there appear to be national patterns of inequality that affect a wide range of population groups.

There are several ways of explaining this. One is to point to society-wide views of the extent of inequality and poverty that is politically permissible. Strong political support for anti-poverty policies among one social group may tend to spill over to other groups. Another perspective is to start with the fact that the poverty lines used are relative to average living standards. So it is possible that cross-national patterns in **average** incomes are the factor that drives this correlation. In other words, some countries may have policies that support high disposable incomes for those near the median of the income distribution (for example, low tax rates).<sup>56</sup> This would tend to lead to both higher child and higher elderly poverty rates in these countries.



**Figure 4.4** Changes in child and elderly poverty, mid-1980s to mid-1990s

**Source:** Förster (2000), Table 5.4. The poverty line is set at half-median equivalent income in each country. The equivalence scale is the square root of household size. Australian data are from the 1984 HES and the 1993–94 HES.

Of course, these two viewpoints are quite consistent, and may indeed reinforce each other. For example, low political support for redistribution will tend to reduce both transfers to the poor and taxes on middle-income households.

Figure 4.4 provides some evidence from the same study on how **changes** in child and elderly poverty compare across nations. This figure suggests that, to the extent to which there is any tendency for society-wide factors to influence both child and elderly poverty, this seems to be more a long rather than short-term factor. Over 10 years, the changes in poverty rates for children and the elderly are largely independent across countries. Many countries had large changes in poverty rates for one group, but not the other.

For all but five countries, child poverty increased at a faster rate (or declined at a slower rate) than elderly poverty. That is, most countries lie below the diagonal line. The most prominent exception is Ireland, which experienced particularly strong rates of economic growth over the period, in which the aged apparently did not share. In Australia, there were decreases in both aged and child poverty of a similar magnitude (between 1984 and 1993–94). See Sections 3.7 and 4.2 for more discussion of Australian child poverty trends.

## 4.6 Summary

Table 4.3 provides a convenient summary of the cross-national patterns of child poverty discussed in this section. This table, from UNICEF (2000), shows child poverty rates for 23 OECD countries, together with estimates of the proportion of children in lone-parent families, the extent of joblessness, the importance of low wages, and the volume of social expenditures. The shading breaks countries into high, low and medium bands on these measures, with high indicating a high level of the phenomena that contributes to child poverty (that is, a low level of social expenditure is shaded as high). For countries where empirical estimates of child poverty determinants were unavailable, the band is estimated.

Though children in lone-parent families are always more likely to be poor (see discussion above), some countries with high levels of lone parenthood have low rates of poverty (for example, Scandinavia) and some countries with few lone parents have high poverty rates (for example, Italy). Some countries with high levels of joblessness have low poverty (Finland and Belgium), but there remains a significant association between joblessness and poverty. As noted above the association with low wages and benefit levels is even stronger.

In this study, Australia was towards the bottom of the middle band of countries in the child poverty 'league table'. Reading across the table, we can identify the proximate causes for this result as stemming from high levels of lone parenthood and worklessness combined with medium levels of wage inequality and social expenditure.

**Table 4.3** The proximate determinants of child poverty—a summary of the sources of cross-national variation

	CHILD POVERTY RATE (%)	PER CENT OF CHILDREN IN LONE-PARENT HOUSEHOLDS	PER CENT OF CHILDREN IN JOBLESS HOUSEHOLDS	PER CENT OF EMPLOYEES EARNING LOW WAGES	WORKFORCE-AGE SOCIAL EXPENDITURES AS A % OF GDP
Sweden	2.6	21.3	5.0	5.2	14.8
Norway	3.9	15.0			11.2
Finland	4.3	11.8	11.8	5.9	15.4
Belgium	4.4	8.2	11.0	7.2	9.7
Luxembourg	4.5	5.8	3.8		7.9
Denmark	5.1	15.2			16.0
Czech Republic	5.9	8.3			5.4
The Netherlands	7.7	7.4	9.3	11.9	12.6
France	7.9	7.7	8.8	13.3	9.1
Hungary	10.3	7.4	7.4		
Germany	10.7	9.8	8.6	13.3	8.4
Japan	12.2			15.7	1.7
Spain	12.3	2.3	10.1	19.0	6.3
Greece	12.3	3.7	4.5		2.9
<b>Australia</b>	12.6	14.1	13.9	13.8	6.3
Poland	15.4	5.6			
Canada	15.5	12.2	13.4	23.7	6.8
Ireland	16.8	8.0	15.4	18.0	9.1
Turkey	19.7	0.7	3.3		0.7
UK	19.8	20.0	19.5	19.6	8.8
Italy	20.5	2.8	7.6	12.5	4.5
US	22.4	16.6	11.1	25.0	3.1
Mexico	26.2	4.3	3.5		0.4

**Source:** UNICEF (2000). Dark shading denotes those countries with the highest level of (relative) child poverty or strongest level of child poverty determinants; medium shading those countries with mid-level poverty; and unshaded the countries with the lowest levels of child poverty or poverty determinants. The cells without numbers have had their grouping estimated.



## 5. Policy strategies

How does this understanding of child poverty assist in formulating policy? Given the widespread political support for reducing child poverty, it is unlikely that any simple costless solution to child poverty has yet to be discovered. Because of the widespread interactions between the different factors influencing child wellbeing, innovation in policy and a commitment of resources is likely to be required across a wide range of policy areas.

Nonetheless, it is possible to group strategies to combat child poverty into three categories. These are policies directing resources to children and their families, policies seeking to influence parental fertility and marriage, and policies seeking to improve the labour market outcomes of the parents of children.

### 5.1 Resource transfers

Child wellbeing depends on much more than the income of their family. Some of these determinants, such as parental care and affection, are not easily influenced by social policy. Even within the scope of economic goods and services, however, income is only one contributor to child wellbeing. Education, health and family support services in particular, are a central part of state support for children in all industrialised and post-industrialised societies.

There are a number of rationales for the provision of services to children.<sup>58</sup> First, compared to income transfers, services are more directly targeted to children rather than shared within the family. Second, policy-makers and taxpayers might not consider all parents sufficiently competent to purchase the services their children need. Though these considerations are not important when parents are altruistic and follow community norms of care for their children, direct service provision will assist the most disadvantaged children, for whom this might not be the case.<sup>59</sup> Third, market failures (including externalities from public education and health) may lead to insufficient resources being provided without state intervention.

For all these reasons, direct provision of services should continue to be a major aspect of policies designed to increase the living standards and wellbeing of children. At the same time, however, many aspects of children's consumption are best provided via parents. In this case, family income is important for children's consumption.

A major concern of policy-makers is that income transfers may undermine incentives for self-provision (that is, reduce parental labour supply, or support family break-up). Though there may be some 'leakage' of this type, both the cross-national and time-series data reviewed here show that higher levels of benefits do increase family living standards. No country with a high level of social expenditure has a high child poverty rate, and increases in benefit levels have raised the real incomes of poor children in Australia.

Nonetheless, given the political limitations on the resources available for social programs, there is ongoing pressure to maximise outcomes relative to costs. One response has been to try to increase the volume of private transfers—in particular child support. Harding and Szukalska (2000b) examine the impact of the Australian child support policy changes of the 1980s and 1990s. Between 1982 and 1997–98, they estimate that child support payments rose from being just 2 per cent to around 8 per cent of the income of lone parents. In the absence of these changes, the child poverty rate would have been 1.2 percentage points higher in 1997–98. Similarly, Kunz,

Villeneuve and Garfinkel (2001) compare Australian child support outcomes with those in other countries (for the mid-1990s) and conclude that child support in Australia is relatively effective.

Nonetheless, there are real constraints on the effectiveness of child support as an anti-poverty measure. When families split up, their costs increase. Combining this with low employment rates among child support payees means that there will often be little surplus income available for redistribution.

In the last two decades, the attention of policy-makers has increasingly turned to policies designed to influence the behaviour of poor families. This has been in two main areas, demographic behaviour (fertility and marriage) and labour market behaviour.

## 5.2 Demographic behaviour

In many countries, policies to influence fertility and marriage have been a central part of child poverty policy. This has particularly been the case in the US, where the objectives of the 1996 *Personal Responsibility and Work Opportunity Reconciliation Act* placed as much (or more) emphasis on these types of behaviour than on labour market involvement. This act defined the purposes of assistance as

... to provide assistance to needy families so that children can be cared for in their own homes; to reduce dependency by promoting job preparation, work and marriage; to prevent out-of-wedlock pregnancies ... and to encourage the formation and maintenance of two-parent families.<sup>60</sup>

Using the official US poverty line, around 60 per cent of poor children live in female lone-parent families. Rates of lone parenthood are high, as is teenage fertility.<sup>61</sup>

Though the US is not unique in having a high lone parenthood rate, the high teenage fertility rate is unique among rich countries. Bradbury and Jäntti (1999) report data from the US Census Bureau International Database for the mid-1990s. This database estimates the teenage fertility rate in the US at 56 live births per 1000, more than double the level in Australia, the UK and Canada (23, 22 and 25 respectively). In countries such as Sweden, Germany and France the fertility rate is much lower again (8, 10, 7). Though comparable data on the marital status of lone parents is more difficult to obtain, it is likely that high rates of teenage fertility will be associated with a high proportion of lone parents being never married rather than separated or divorced. Younger mothers are likely to have lower levels of human capital and lower incomes than older mothers. If partnered, their partners are also likely to share these characteristics.

However, the available evidence suggests that Australian policy-makers do not need to be as concerned with teenage fertility and marriage as US policy-makers—though these issues are still relevant to the Australian policy agenda. As noted above, Australian teenage fertility rates are substantially lower than those in the US. Moreover, the proportion of poor children who live in lone-parent families is also smaller. Table 4.1 shows only one quarter of poor Australian children living in lone-parent families (compared to 60 per cent in the US). However, these estimates might not be comparable. Many of the couple families defined as poor in Australia are self-employed, for whom there is less certainty about living standards. One way of avoiding this measurement problem, as well as the issue of some benefit levels being just above or below the poverty line, is to examine the joblessness rate. This implies a greater importance for lone parenthood in Australian child poverty. Around half of the children

in jobless households in Australia live in lone-parent households.<sup>62</sup> In 1997, around three in 10 lone parents in Australia were never married.<sup>63</sup>

Though these estimates suggest that both teenage fertility and lone parenthood are less serious causes of poverty in Australia than in the US, they are still important. Australian teenage fertility, for example, though comparable to that in other English-speaking countries (other than the US) is still high compared to the countries of western Europe.

### 5.3 Labour market behaviour

Parental joblessness is a key proximate determinant of child poverty, particularly in English-speaking countries. Macro- and micro-economic policies that ensure strong employment growth are therefore an important component of child poverty strategies. However, the long-term upward trend in unemployment evident in many countries, together with the weak relationship between unemployment and parental joblessness described in Section 4.3, suggests that this is not a sufficient response.

Much policy discussion on this issue has focused on the labour demand/labour supply trade-off. On the one hand, lower wages for the low-skilled will increase labour demand. On the other, higher wages relative to benefits will increase labour supply.

In the US, falling real wages for the low-skilled have meant that lack of labour demand has not been the main constraint (except during recessions). Instead, the policy reforms of the last decade have focused on increasing labour supply. This included reductions in benefits (for example, via maximum periods of eligibility), additional job search/training requirements for benefit recipients, and increases in net wages via the introduction and expansion of the EITC.

The welfare caseload and employment outcomes from this policy mix have generally been favourable. Caseloads plummeted during the second half of the 1990s, and employment levels for the low-skilled and for lone mothers rose (Blank & Ellwood 2001, Moffitt 2002a,b). Over the same period, poverty rates among blacks, Hispanics and lone mothers fell. Though part of these gains reflected the strong economic growth of this period, the research consensus is that policy changes played an important part.

Less positively, there is evidence that some more disadvantaged clients experienced a decline in living standards because of the reforms. Those mothers who left welfare because of sanctions were less likely to have jobs than other welfare leavers—suggesting that sanctioning is occurring among the most disadvantaged (Moffitt 2002a,b). Similarly, though the new welfare reform policies contributed to an overall drop in poverty rates, mothers without a high school degree were worse off after the introduction of Temporary Assistance for Needy Families (TANF) (Bennett, Lu & Song 2001). More generally, poverty calculations do not take account of the costs of working (particularly child care) and thus overstate the fall in poverty. The ability of the reformed welfare system to cope with recession is only now being tested.

Nonetheless, the general success of US anti-poverty policies in recent years has led some researchers to propose a similar policy strategy for Australia. The ‘five economists’ for example, have suggested that low-skill wages should be allowed to fall (relative to productivity growth, and possibly in real terms). This would increase labour demand and hence the employment rates of the most disadvantaged. This should be combined with policies similar to the EITC to maintain the real incomes of low-wage families.

Increasing employment, it is argued, is a more effective means of targeting support to the most disadvantaged than by holding low-skill wages high. In particular, many low-wage workers live in medium or high-income households (see Section 4.4). However, in terms of target effectiveness, increased labour demand by itself is likely to be no more effectively targeted than high minimum wages. In both cases, much of the benefit will accrue to workers in medium and high-income families (Richardson & Harding 1998). For example, much of the growth in employment associated with lower minimum wages will be in the form of increased youth employment in families with one or more of the parents already working.

Rather, the reason why a policy package of wage cuts plus EITC might be well-targeted lies in the design of the EITC rather than in any possible wage/employment trade-off. In the US program, in the similar UK Working Families' Tax Credit,<sup>64</sup> and in the proposed Australian plans, the tax credit is assessed using family income (with varying definitions of family). Since this is more closely tied to consumption levels, a switch in support from wages to EITC will increase the targeting efficiency of the overall income package. This is magnified by the possible increase in labour supply among those eligible for the credit.

However, there are real doubts whether the US experience with tax credits can be applied to Australia. To begin with, many of the features of this program are already incorporated into the existing family tax benefit structure. Second, most of the US policy debate has focused on lone-parent families (or couples only to the extent that policy should not provide a marriage disincentive). However, in Australia, at least half of all poor children live in couple-headed families. This poses additional challenges for policy design. As Apps (2001) argues, the income-test of benefits such as the EITC is likely to produce significant labour disincentives for secondary earners.

If the objective is poverty alleviation, and attention is restricted to a static perspective, this may not seem a major problem. Even if the second earner is discouraged from employment, one earner will be sufficient to lift the family above (usually substantially above) the poverty line. However, from a dynamic perspective the conclusion is less clear. Even among single-earner families, if employment opportunities fluctuate over time, an EITC disincentive effect that discourages some low-wage workers from increasing their wage may mean that they are more likely to fall back into poverty. Among couples, discouragement of secondary earners may exclude disadvantaged families from the insurance advantages of dual-earner households.<sup>65</sup> Moreover, higher rates of employment of women married to low-wage men may lead to higher rates of employment among separated and divorced lone parents. The potential interaction of these dynamic effects with policy remains an under-researched area.

Wage and tax/benefit policies are not the only means of increasing employment among parents. Despite their prominence in the policy debate in English-speaking countries, other policies are more prominent in those countries that have been most effective in ensuring parental employment. Most notably, the Scandinavian countries have made a large investment in child care services. Consequently, over 80 per cent of Swedish lone parents are employed, most of them full-time (Solera 2001).<sup>66</sup>

As noted in Section 1.4 above, we cannot simply **assume** that parental (particularly mothers') employment is good for children, since it may reduce caring time and increase parental stress. Nonetheless, US evaluation evidence does suggest that mothers' employment is generally good for school-age children, as long as it actually increases income (see Section 2.2).



But there are other reasons for favouring an approach to child poverty reduction that focuses on employment promotion. First, employment is the most common way for households to increase their incomes and thereby reduce the risk of poverty (as long as in-work incomes can guarantee an above-poverty line income). Second, exposure to the discipline associated with parental employment can have lasting ‘demonstration’ benefits for children when they grow up and are no longer dependent. Patterning children to regard paid work as an important goal in their lives is a valuable outcome from parental employment. There is Australian evidence that children of income support families are themselves more likely to become income support reliant, leave school early and have children earlier than others (Pech & McCoull 2000).

However, the most important reason for considering employment as the central part of any child poverty strategy is a political one (equally relevant to all political parties). With the majority of the working-age population supporting themselves from employment, it is much easier to maintain public support for disadvantaged families if policy measures appeal to these widely held community values.<sup>67</sup>



## Endnotes

- 1 See Travers and Richardson (1993, chapter 5) for a discussion of the historical antecedents of poverty as a 'thick' ethical concept.
- 2 Poverty measurement thus requires an explicit judgement that it is possible to make inter-personal comparisons of this sort.
- 3 See also Whiteford (2001) for a discussion of alternative concepts of poverty. In the Scandinavian level-of-living surveys a multi-dimensional approach is taken. Households are ranked on a variety of indices covering different fields of life such as political participation, health and income (though the term 'poverty' is not usually used).
- 4 For further discussion, see also Travers and Richardson (1993, pp. 18–23).
- 5 Ill health, for example, whilst often an outcome of low levels of economic resources, is also determined by independent factors.
- 6 See also Townsend's (1979) earlier pioneering work.
- 7 In economic terms, access to resources is most closely tied to the concept of income rather than consumption (the difference between the two is savings). However, this paper argues (see Section 3.5) that the most important (life-cycle) forms of saving are more relevant to parental than child living standards.
- 8 See the analysis of Bradbury and Jäntti (1999), discussed in Section 4.2, for an example of this approach. The descriptive conclusions about comparative poverty rates are essentially the same whether a poverty line is used or not. Nonetheless, most of the problems involved in setting the poverty line (such as how to adjust over time) appear in a parallel form when using these alternative perspectives.
- 9 In the Australian context, Saunders (1998a, p.10) notes that 'if we didn't have a poverty line to help give order and coherence to the debate, we would almost certainly have had to invent one'.
- 10 A purchasing power parity (PPP) index is the cross-national analogue of a consumer price index (or, more precisely a gross domestic product (GDP) deflator index). See Bradbury and Jäntti (1999, Appendix A) for further discussion of the limitations of PPP indexes when used in poverty measurement.
- 11 The variation stems from different approaches used to deal with the high level of price inflation during this period (Klugman & Kolev 2001).
- 12 See Jäntti and Danziger (1999) for an introduction to the economic literature on poverty measurement.
- 13 See also Phipps and Burton (1998) with evidence for Canada and the review by Alderman et. al (1995).
- 14 Their research focused on the relationship between children's and men's clothing. It is likely that men's clothing expenditure decreased below the level that would be otherwise expected, and so the absolute increase in children's clothing expenditure would be less than this.
- 15 There are also other targeting arguments in favour of services rather than cash transfers. In particular, service provision may be better at identifying relative need. For example, people with greater needs for health care may be more likely to consume health care services.
- 16 See Garfinkel and Haverman (1977), Vickery (1977), Travers and Richardson (1993).
- 17 The formal definition of unemployment implies that unemployment is not a matter of choice. However, in common usage the term is often used to include voluntary non-employment.
- 18 Travers and Richardson, for example, argue this as a 'conservative' position (that is, most like conventional income analysis) rather than argue that this is a 'best' estimate. For those who are constrained to have less employment than they would prefer, consumer demand theory implies that the marginal value of non-work time will be lower when the person has preferences that permit less substitution between work and non-work. It will also be lower when the income elasticity of non-work is higher (that is, because at that low income they would prefer to have more money rather than leisure). For some people, non-work might even have negative marginal value—witness the unemployed who take on unpaid volunteer work. From the perspective of a social welfare function which places greater weight on the long-term consequences of non-work, a negative or negative marginal value is more plausible. This is suggested by the political popularity of work-for-the-dole schemes. Proponents of these schemes often argue that the unemployed will be better off undertaking employment even if their

wage is not immediately increased. This is not the same as the more common argument that these schemes discourage unemployment by making unemployment less palatable—since the former argument depends on a social opinion of what is good for people and the latter on the personal preferences of the unemployed.

- 19 One could imagine household bargaining models where an increase in parental wages could be worse for children. For example, an increase in the mother's wage rate could encourage her to increase her employment, leading to a reduction in caring time. It could also give her additional bargaining power to claim a greater share of household income. However, given parents' interest in children's wellbeing such an outcome might be considered not very likely—at least for the average family.
- 20 See Bradbury (1995) for a survey. This research suggests that the strong husband-wife correlation is due to both labour supply effects (via the impact of income tests) and correlations in labour market capacities between husbands and wives.
- 21 Naturally, this equity rationale does not necessarily explain the historical origin of these policies, which may be motivated by a much wider range of factors.
- 22 For examples, see Micklewright and Stewart (2000) and UNICEF (2001).
- 23 See Mayer pp. 48–49 for an introduction to this literature.
- 24 See also Levy and Duncan (2000) for a summary of more recent research using similar methods.
- 25 See Haveman and Wolfe (1995) for a review and critique of this large body of literature.
- 26 Almost all the research on child outcomes which controls for unobservable family characteristics is based on the US Panel Study of Income Dynamics, a data set that does not have equivalents (yet) in any other country. See Duncan and Brooks-Gunn (1997) for research in other countries using more limited data.
- 27 They posit that this is due to the potential impact of family income on ability to finance college attendance.
- 28 See Bradbury (1997b) for an introduction to this literature.
- 29 Given that equivalence scales are usually expressed in terms of relativities in money income, these statements are similarly restricted to the domain of commodity-based consumption.
- 30 This is the approach recommended in the Citro and Michael (1995) review of the US poverty line. See also Gardiner et. al (1995).
- 31 Though the collection time period of some commodities might need to be lengthened, and improved coding of transport expenditures into work and non-work items would assist.
- 32 In the economic use of these terms, consumption = income – saving (by definition).
- 33 See Bradbury (1997) and Barrett, Crossly and Worswick (2000) for adjustment methods that can be used to make expenditure data a more accurate indicator of living standards.
- 34 See Whiteford (1995, 1997) for a discussion of the bias that this produces in the interpretation of measures such as the 'average production worker wage'.
- 35 This assumes, inter-alia, that the existence of employer contributions is ultimately borne by employees via lower wages. This is the most common assumption for the long-run incidence of these taxes.
- 36 The private saving country may also have an artificially high rate of poverty among the elderly if their savings are withdrawn via asset depreciation (for example, via consuming owner-occupied dwelling services) rather than income streams (public pensions).
- 37 See Bradbury, Jenkins and Micklewright (2001) for a recent example and review of the key papers providing descriptions of child poverty dynamics.
- 38 The same applies if families cannot smooth consumption, but the impact of low consumption in one period on their welfare can be offset by high consumption in another period.
- 39 Unpublished data from this same study shows that when comparing the poverty rate of children vs the elderly, children vs everyone or children with lone parents vs children with married parents, the relative risks are much the same, whether or not one measures poverty over one year or over two years.
- 40 Nor is there any evidence that increases in poverty in the US have been offset by increased mobility (Gottschalk & Danziger 2001).

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- 41 See endnote 12.
- 42 The ABS (2002a) has recently foreshadowed problems with aspects of the reported income data contained in recent SIHC and HES surveys and announced that it is planning to re-release CURFs for the 1994–95 to 1997–98 SIHC surveys and the HES surveys for 1993–94 and 1998–99. Specific concern over the quality of the income data in the lowest decile has led the ABS to report the incomes of households who are; ‘close to the bottom of the income distribution (namely, the 20 per cent of households in the second and third lowest income deciles)’ as part of its project on *Measuring Australia’s Progress* (ABS 2002b, p. 40).
- 43 Other approaches are possible. These include an attempt to develop a household-level reconciliation between cash income and expenditure (for example, with questions about cash flows during the period and cash stocks at the beginning and end of the survey period). These all involve significantly greater respondent burden.
- 44 All the Australian results are based on calculations undertaken by staff of the SPRC at the University of New South Wales.
- 45 Analogous definitions apply if other income-sharing units, such as families or income units, are used.
- 46 The Greenstein estimates are based on the official US poverty line and the Australian estimates are as defined for Figure 3.2 (1996–97, ‘Income Survey, Current Income’ measure). These estimates are very sensitive to the choice of equivalence scale, and so the US and Australian estimates are not directly comparable.
- 47 Around a quarter of families with four or more children are jobless (Dawkins, Gregg & Scutella 2001).
- 48 Ten per cent is the average, though note that their definition of ‘lone-parent’ household is quite narrow, generally excluding lone parents with children aged over 18 and lone parents living with their parents.
- 49 Harding and Szukalska also make other adjustments to the data, but these do not appear to be key determinants of the results.
- 50 See also Section 3.7 above. One hypothesis being investigated in this paper is that the main problem in the current income measure may stem from its inconsistent measurement of wage income (in both the income surveys and the HESs). This will have more impact on median income than on those with poverty level income. If this is the case, then the ‘half-median’ estimates by Harding and Szukalska, whilst not accurate as half-median estimates, may be accurate estimates of absolute poverty changes (since they estimate real median income to be the same in both years).
- 51 In a related paper, Harding and Szukalska (2000b) estimate that the Child Support Scheme reduced the child poverty rate by about 1.2 percentage points between 1982 and 1997–98, representing about 58 000 children.
- 52 Other potential explanations include changing wage rates (more likely to have led to an increase in poverty) and changes in the numbers of self-employed—who feature strongly in the poor families with earners.
- 53 In the OECD study, households with non-employed parents, but another employed adult (for example, an adult child) are counted as having a job.
- 54 Source: Harding, Lloyd and Greenwell 2001, Table 5. This is for families that do not include self-employed members. The poverty line is based on half average incomes.
- 55 Though the poverty rates will not be precisely identical because of the different numbers of children and adults in poor and non-poor households.
- 56 Another explanation was advanced in Section 1.5. Countries with higher levels of private savings will be observed to have higher child and elderly poverty rates, even though poverty rates based on consumption levels might be the same. However, as noted in Section 1.5 there is little evidence that savings rates do differ dramatically.
- 57 Lone-parent families and worklessness are not independent, since lone parents are less likely to be employed in all countries. Nonetheless, Australia’s high level of worklessness is maintained when considering married-couple families on their own (see Section 4.3).
- 58 See Saunders (2002) for a review of the role of services in complementing income support programs.

- 59 See discussion on Section 1.3. To the extent to which parents are not altruistic (in Beckerian sense), then the direct provision of services to children may also avoid the unfavourable incentive effects potentially associated with income transfers.
- 60 These are the purposes for which *Temporary Assistance to Needy Families* block grants may be applied. Source, <<http://thomas.loc.gov/cgi-bin/query/z?c104:H.R.3734.ENR>>
- 61 Source: <[http://ferret.bls.census.gov/macro/032001/pov/new01\\_000.htm](http://ferret.bls.census.gov/macro/032001/pov/new01_000.htm)>
- 62 From Table 4.2, the proportion of jobless households that are lone-parent is 56 per cent (in 1997–98). Since lone-parent households have fewer children, this implies that about half the children in jobless households live with only one parent.
- 63 Source: ABS Cat No. 4119.0, 1999, p. 23. Some of these never-married lone parents may have been previously in an established de facto relationship.
- 64 See Blundell, Duncan, McCrae and Meghir (2000) for a discussion of the estimated labour market impact of the Working Families' Tax Credit.
- 65 That is, if one parent loses their job, the wage of the other can cushion the drop in income.
- 66 Though this includes mothers on parental leave.
- 67 See Marshall and Kim (2002) for evidence on public support for employment-based programs in the US.
- 68 This definition follows that of the Rothbarth (1943) approach to estimating equivalence scales (see also Deaton & Muelbauer 1980, 1986). It assumes that children have only an income effect on parental consumption. Other models of child costs also permit substitution effects, but these are unlikely to be so large as to change the argument here.
- 69 If  $m = 2$  child consumption is precisely identified—because this implies no economies of sharing and that children are not cheaper than adults.

## References

- Alderman, H, Chiappori, PA, Haddad, L., Hoddinott, J & Kanbur, R 1995, 'Unitary versus Collective Models of the Household: Is it Time to Shift the Burden of Proof?', *The World Bank Research Observer*, 10:1, February, pp. 1–19.
- Apps, P 2001, 'Why an Earned Income Tax Credit Program is a Mistake for Australia', *Discussion Paper*, no. 431, Centre for Economic Policy Research, ANU.
- Atkinson, AB 1987, 'Income Maintenance and Social Insurance', A J Auerbach & M Felstein (eds), *Handbook of Public Economics*, chapter 13, volume II.
- Atkinson, AB 1998, 'Targeting Poverty', *New Economy* 5:1, pp. 3–7.
- Australian Bureau of Statistics (ABS) 2002a, 'Upgrading Household Income Distribution Statistics' *Australian Economic Indicators*, April 2002, Catalogue no. 1350.0, ABS, Canberra, pp. 3–8.
- ABS 2002b, *Measuring Australia's Progress*, Catalogue no. 1370.0, ABS, Canberra.
- Barrett, GF, Crossley, TF & Worswick, C 2000, 'Consumption and Income Inequality in Australia', *The Economic Record* 76:233, June, pp. 116–38.
- Baydar, N, Greek, A & Gritz, RM 1999, 'Young Mother's Time Spent at Work and Time Spent Caring for Children', *Journal of Family and Economic Issues*, 20:1, pp. 61–84.
- Becker, G 1981, *A Treatise on the Family*, Harvard University Press, Cambridge.
- Bennett, NG, Lu, HH & Song, Y 2001, *The Influence of Welfare Reform on the Economic Well-Being of Children, 1987–2000*, unpublished paper.
- Blair, T 1999, 'Beveridge Revisited: A Welfare State for the 21 Century' in R Walker (ed.), *Ending Child Poverty*, The Policy Press, Bristol.
- Blank, R 1995, 'Teen Pregnancy: Government Programs are Not the Cause', *Feminist Economics*, 1:2, Summer, pp. 47–58.
- Blank, R & Ellwood, D T 2001, *The Clinton Legacy for America's Poor* paper prepared for the conference *Economic Policy During the 1990s* John F Kennedy School of Government, Harvard University.
- Blundell, R, Duncan, A, McCrae, J & Meghir, C 2000, 'The Labour Market Impact of the Working Families' Tax Credit' *Fiscal Studies*, 21:1, pp. 75–104.
- Borland, J & Wilkins, R 1996, 'Earnings inequality in Australia', *Economic Record*, 72:216, pp. 7–23.
- Bradbury, B 1995, 'Added, Subtracted or Just Different: Why do the Wives of Unemployed Men Have Such Low Employment Rates?', *Australian Bulletin of Labour*, 21:1, pp. 48–70.
- Bradbury, B 1997a 'The Living Standards of the Low-Income Self-Employed', *Australian Economic Review*, 30:4, pp. 374–89.
- Bradbury, B 1997b, 'Measuring Poverty Changes with Bounded Equivalence Scales: Australia in the 1980s', *Economica*, 64, pp. 245–64.

- Bradbury, B 1998, *Middle Class Welfare in Australia*, Reports and Proceedings No 138, Social Policy Research Centre, UNSW
- Bradbury, B 2001, *The Welfare Interpretation of Consumer Equivalence Scales*, Discussion Paper No 426, ANU Centre for Economic Policy Research.
- Bradbury, B & Jäntti, M 1999, 'Child Poverty across Industrialized Nations', *Innocenti Occasional Papers*, Economic and Social Policy Series, no. 71, UNICEF International Child Development Centre, Florence, Italy.
- Bradbury, B & Jäntti, M 2001a, 'Child poverty across the industrialized world: evidence from the Luxembourg Income Study' in KVleminckx & TM. Smeeding (eds), *Child Well-being, Child Poverty and Child Policy in Modern Nations*, The Policy Press, Bristol.
- Bradbury, B & Jäntti, M 2001b, 'Child poverty across twenty-five countries' in B Bradbury, SP Jenkins, & J Micklewright (eds), *The Dynamics of Child Poverty in Industrialised Countries*, CUP.
- Bradbury, B, Jenkins, SP & Micklewright J 2001, 'The Dynamics of Child Poverty in Seven Industrialised Nations' in J Bradbury, & J Micklewright (eds), *The Dynamics of Child Poverty in Industrialised Countries*, CUP.
- Breunig, R, Dasgupta, I, Gundersen, C & Pattanaik, P 2001 'Explaining the Food Stamp Cash-Out Puzzle', *Food Assistance and Nutrition Research Report*, no. 12, Food and Rural Economics Division, Economic Research Service, U.S. Department of Agriculture.
- Brooks, JL, Hair, EC & Zaslow, MJ 2001, 'Welfare Reform's Impact on Adolescents: Early Warning Signs', *Child Trends Research Brief*, July.
- Bruce B, Garde, P & Vipond, J 1986 'Youth Unemployment and Intergenerational Immobility', *Journal of Industrial Relations*, 28:2, pp. 191–210.
- Buhmann, B, Rainwater, L, Schmaus G & Smeeding T 1988, 'Equivalence scales, well-being, inequality and poverty: sensitivity estimates across ten countries using the Luxembourg Income Study (LIS) Database', *Review of Income and Wealth*, 34:2, June, pp. 115–42.
- Citro, CF & Michael, RT (eds) 1995, *Measuring Poverty a New Approach*, National Academy Press, Washington.
- Commission of Inquiry into Poverty 1975, *First Main Report*, AGPS, Canberra.
- Dawkins, P, Gregg, P & Scutella, R 2001, 'The Growth of Jobless Households in Australia', Melbourne Institute Working Paper, no. 3/01.
- Deaton, AS & Muellbauer, J 1980, *Economics and Consumer Behaviour*, Cambridge University Press, Cambridge.
- Deaton, AS & Muellbauer, J 1986, 'On measuring child costs: with applications to poor countries', *Journal of Political Economy*, 94:4, August, pp. 720–44.
- Department for Work and Pensions 2002, *Measuring Child Poverty. A Consultation Document*, <<http://www.dwp.gov.uk>>
- Duncan, GJ 1997, 'Longitudinal Measures of Children's Deprivation and Welfare Dependence' in RM Hauser, BV Brown & WR Prosser, (eds) *Indicators of Children's Well-Being*, Russel Sage Foundation, New York.



- Duncan, GJ & Chase-Lansdale, PL 2000, *Welfare Reform and Child-Well-being*, paper prepared for the Blank/Haskins conference 'The New World of Welfare Reform' 1–2 February 2001 in Washington, D.C.
- Duncan, GJ, Gustafsson, B, Hauser, R, Schmaus, G, Messinger, H, Muffels, R, Nolan, B & Ray, J-C 1993, 'Poverty Dynamics in Eight Countries', *Journal of Population Economics*, 6, pp. 295–334.
- Duncan, GJ, Yeung W-J, Brooks-Gunn, J & Smith, J 1998, 'How Much Does Childhood Poverty Affect the Life-Chances of Children?', *American Sociological Review*.
- Duncan, GJ. & Brooks-Gunn, J (eds.) 1997, *Consequences of Growing up Poor*, Russell Sage Foundation, New York.
- Förster, M, assisted by Pellizzari, M 2000, *Trends and Driving Factors in Income Distribution and Poverty in the OECD Area*, OECD Labour Market and Social Policy, Occasional Papers, no. 42.
- Gardiner, K, Hills, J, Falkingham, J, Lechene, V & Sutherland, H 1995, 'The Effects of Differences in Housing and Health Care Systems on International Comparisons of Income Distribution', London School of Economics, Welfare State Programme, Suntory-Toyota International Centre for Economics and Related Disciplines, SICERD. Discussion Papers, no. WSP/110.
- Garfinkel, I & Haverman, R 1977, 'Earnings Capacity, Economic Status and Poverty', *Journal of Human Resources*, 12, pp. 49–70.
- Greenstein, R 2000, *Should EITC Benefits be Enlarged for Families with Three or More Children?*, Center on Budget and Policy Priorities, Washington. Revised 10 July 2000.
- Harding, A, Lloyd, R & Greenwell, H 2001, *Financial Disadvantage in Australia 1990 to 2000; The Persistence of Poverty in a Decade of Growth*, The Smith Family, Camperdown.
- Harding, A & Szukalska, A 2000a, 'Trends in Child Poverty in Australia, 1982 to 1995–96', *The Economic Record*, 76(234). Pp. 236–54.
- Harding, A & Szukalska, A 2000b, 'Making a Difference: The Impact of Government Policy on Child Poverty in Australia, 1982 to 1997–98, presented to the 26<sup>th</sup> general Conference of the International association for Research on Income and Wealth, Cracow, Poland, September.
- Haveman, R & Wolfe, B 1995, 'The Determinants of Children's Attainments: A Review of Methods and Findings', *Journal of Economic Literature*, December, pp. 1829–78.
- Jäntti, M & Danziger, S 1999, 'Income Poverty in Advanced Countries' in A B Atkinson & F Bourguignon (eds), *Handbook on Income Distribution*, Elsevier.
- Kilpatrick, RW 1973, 'The Income Elasticity of the Poverty Line', *Review of Economics and Statistics*, June, pp. 327–32.
- Klugman, J & Kolev, A 2001, 'Mobility and Poverty Dynamics Among Russian Children' in B Bradbury, S Jenkins and J Micklewright (eds), *The Dynamics of Child Poverty in Industrialised Countries*, Cambridge University Press, Cambridge.
- Kunz, J, Villeneuve, P & Garfinkel, I 2001, 'Child Support Among Selected OECD Countries: A Comparative Analysis' in K Vleminckx & T Smeeding (eds), *Child Well-being, Child Poverty and Child Policy in Modern Nations*, The Policy Press, Bristol.

- Lerman, RI 1996, 'The Impact of the Changing US Family Structure on Child Poverty and Income Inequality', *Economica*, 63, pp. S119–S139.
- Levy, D & Duncan, GJ 2000, *Using Sibling Samples to Assess the Effect of Childhood Family Income on Completed Schooling*, JCPR Working Paper 168, Northwestern University/University of Chicago.
- Lundberg, SJ, Pollak, RA & Wales, TJ 1997, 'Do husbands and wives pool their resources?', *Journal of Human Resources*, 32, pp. 463–80.
- Mack, J & Lansley, G 1985, *Poor Britain*, Allen and Unwin, London.
- Marshall, W & Kim, A 2002, 'Finishing the Welfare Revolution' Progressive Policy Institute, *Policy Brief*, January.
- Mayer, S 1997, *What Money Can't Buy, Family Income and Children's Life Chances*, Harvard University Press, Cambridge, Massachusetts.
- Micklewright, J & Stewart, K 2000, *The Welfare of Europe's Children* The Policy Press, Bristol.
- Moffitt, RA 2002a, 'From Welfare to Work: What the Evidence Shows' The Brookings Institution, *Welfare Reform and Beyond*, *Policy Brief*, no. 13, January.
- Moffitt, RA 2002b, 'Economic Effects of Means-Tested Transfers in the US', Working Paper, no. 8730, National Bureau of Economic Research.
- Morris P A, Huston, A C, Duncan G J, Crosby, D A & Bos J M (2001), *How Welfare and Work Policies Affect Children: A Synthesis of Research* Manpower Demonstration Research Corporation.
- Nelson, J 1993, 'Household Equivalence Scales: Theory versus Policy?', *Journal of Labour Economics*, 11:3.
- Nolan, B 2000, 'Targeting Poverty—The Irish Example', *Australian Social Policy* 2000, 1, pp. 25–41.
- Organisation for Economic Cooperation and Development (OECD) 1996, *Beyond 2000: The New Social Policy Agenda*, Conference Issues Paper, OECD, Paris.
- Oxley, H, Dang, TT, Förster, MF & Pellizari, M 2001, 'Income Inequalities and Poverty among Children and Households with Children in Selected OECD Countries' in K Vleminckx & TM Smeeding (eds), *Child Well-being, Child Poverty and Child Policy in Modern Nations*, The Policy Press, Bristol.
- Pech, J & McCoull, F 2000, 'Transgenerational Welfare Dependence: Myths and Realities', *Australian Social Policy*, 2000/1, pp. 43–67.
- Phipps, SA & Burton, PS 1998, 'What's mine is yours? The influence of male and female incomes on patterns of household expenditure', *Economica*, 65, pp. 599–613.
- Piachaud, D & Sutherland, H 2000, 'How Effective is the British Government's Attempt to Reduce Child Poverty?', *Innocenti Working Paper*, no. 77, UNICEF Innocenti Research Centre, Florence, Italy.
- Rainwater, L 1974, *What Money Buys: Inequality and the Social Meanings of Income*, Basic Books, New York.

- Richardson, S & Harding, A 1998, 'Low Wages and the Distribution of Family Income in Australia', NATSEM Discussion Paper, no. 33, University of Canberra.
- Richardson, S & Harding, A 1999, 'Poor Workers? The Link Between Low Wages, Low Family Income and the Tax and Transfer System' in S Richardson (ed.), *Reshaping the Labour Market: Regulation, Efficiency and Equality in Australia*, Cambridge University Press, Melbourne, pp. 122–58.
- Ringen, S 1987, *The Possibility of Politics*, Clarendon Press, Oxford.
- Roker, D & Coleman, J 1998, 'The Invisible Poor: Young People Growing up in Family Poverty', paper presented at the conference to mark the centenary of Seebohm Rowntree's first study of poverty, held at the University of York, 18–20 March, 1998.
- Rothbarth, E 1943, 'Note on a Method of Determining Equivalent Income for Families of Different Composition', Appendix IV in *War-Time Pattern of Saving and Expenditure* by C Madge, University Press, Cambridge.
- Saunders, P 1996, 'Poverty in the 1990s: A Challenge to Work and Welfare', in P Sheehan, B Grewal & M Kumnick (eds), *Dialogues on Australia's Future. In Honour of the Late Professor Ronald Henderson*, Centre for Strategic Economic Studies, Victoria University of Technology, pp. 325–50.
- Saunders, P 1998a, 'Reflections on the Australian Poverty Debate', *Social Security Journal* 1998/1, pp. 9–36.
- Saunders, P 1998b, 'Defining Poverty and Identifying the Poor: Reflections on the Australian Experience', *SPRC Discussion Paper*, no. 84.
- Saunders, P 1998c, 'Using Budget Standards to Assess the Well-being of Families', *SPRC Discussion Paper*, no. 93.
- Saunders, P 2002, *Complementing Income Support with the Provision of Services in the Welfare System: Review of Basic Principles and Applications*, report prepared for FaCS, February.
- Saunders, P & Bradbury, B 1991 'Some Australian Evidence on the Consensual Approach to Poverty Measurement', *Economic Analysis and Policy* 21:1, March.
- Sen, A 1985, *Commodities and Capabilities*, North Holland, Amsterdam.
- Smeeding, TM, Saunders, P, Coder, J, Jenkins, J, Fritzell, J, Aldi, Hagenaars, JM, Hauser, R & Wolfson, M 1993 'Poverty, Inequality and Family Living Standards Impacts across Seven Nations: The Effects of Noncash Subsidies for Health, Education and Housing', *Review of Income and Wealth*, 39:3, pp. 229–256.
- Smith, A 1776, *An Inquiry into the Nature And Causes of the Wealth of Nations*.
- Solera, C 2001, 'Income Transfers and Support for Mothers' Employment: The Link to Family Poverty Risks' in K Vleminckx & TM Smeeding (eds), *Child Well-being, Child Poverty and Child Policy in Modern Nations*, The Policy Press, Bristol.
- Tobin, J 1970, 'On Limiting the Domain of Inequality', *Journal of Law and Economics*, 13, pp. 264–277.
- Townsend, P 1979, *Poverty in the United Kingdom*, Penguin, Harmondsworth.
- Travers, P 2001, 'Inequality and the Futures of Our Children' in R Fincher & P Saunders (eds), *Creating Unequal Futures?*, Crows Nest.

Travers, P & Richardson, S 1993, *Living Decently, Material Well-being in Australia*, Oxford University Press, Melbourne.

Tsumori, K, Saunders P & Hughes, H 2002, 'Poor Arguments; A Response to the Smith Family Report on Poverty in Australia', Centre for Independent Studies, *Issue Analysis*, no. 21, 16 January 2002.

UNICEF 2000, 'A League Table of Poverty in Rich Nations', *Innocenti Report Card*, no. 1, June 2000, UNICEF Innocenti Research Centre, Florence, Italy.

UNICEF 2001, 'A League Table of Child Deaths by Injury in Rich Nations' *Innocenti Report Card*, no. 2, February 2001, UNICEF Innocenti Research Centre, Florence, Italy.

United Nations 1995, *Report of the World Summit for Social Development, Copenhagen, 6–12 March 1995* [denoted as 'preliminary version'] <gopher://gopher.undp.org/oo/unconfs/wssd/summit/off/a–9.en>

Vickery, C 1977, 'The Time-Poor: A New Look at Poverty', *Journal of Human Resources*, 12, pp. 27–48.

Vleminckx, K & Smeeding, TM 2001, 'What have we learned and where do we go from here?' in K Vleminckx & Smeeding, TM (eds), *Child Well-being, Child Poverty and Child Policy in Modern Nations*. The Policy Press, Bristol.

Whiteford, P 1985, *A Family's Needs: Equivalence Scales, Poverty and Social Security*, *Research Paper*, no. 27, Development Division, Department of Social Security, April.

Whiteford, P 1995, 'The Use of Replacement Rates in International Comparisons of Benefit Systems', *International Social Security Review*, 48:2/95, pp. 3–30.

Whiteford, P 1997 'Targeting Welfare: A Comment', *The Economic Record*, 73:3, pp. 45–50.

Whiteford, P 2001, 'Understanding Poverty and Social Exclusion: Situating Australia Internationally' in R Fincher & P Saunders (eds), *Creating Unequal Futures? Rethinking Poverty, Inequality and Disadvantage*, Allen and Unwin, Sydney.

## Appendix A: The relationship between the equivalence scale and children's consumption

There is a close relationship between the concept of cost inherent in equivalence scales, the intra-household allocation of resources and children's consumption. In particular, under plausible simple models of household allocation we can draw on the information contained in the equivalence scale to place lower and upper bounds on children's consumption within the household.

First, children's consumption will generally be greater than the 'additional cost of a child'. This is because children share in the public consumption of the household, and this does not impose costs on the parent(s). Second, children's consumption will generally be less than equivalent income. This is because equivalent income is a measure of adult consumption, and children generally consume less than adults.

These points can be illustrated using the simple case of a (female) lone-parent household with one child, compared to a single (female) adult household. The single person household has an income of  $y^0$ . Define the *equivalence scale*,  $m$ , as the relative income required by the larger household so that the mother will have the same personal consumption level as when living alone.<sup>68</sup> The *equivalent income* of the lone-parent household is defined as income divided by this equivalence scale,  $y/m$ . We consider the case where  $y/m = y^0$ , that is, both households have the same equivalent income or living standard. Note that equivalent income is equal to the mother's consumption level, not the child's. This makes sense when comparing the welfare levels of the two households, as the woman is the only person common to both household types.

We capture the different needs of adults and children and the sharing of goods within the household by defining three goods: adult private goods (only consumed by the adult), child private goods (consumed by the child), and public goods. Public goods are goods that can be consumed by one household member without reducing the amount available for other household members. The most important example is housing and in particular, the amenities associated with location of the dwelling.

For simplicity, assume that household expenditure in the lone-parent household is allocated in fixed proportions, irrespective of income level that is, homothetic preferences). Denote  $\alpha_p$ ,  $\alpha_a$  and  $\alpha_c$  as the (non-negative) share of income ( $y$ ) spent on public goods, adult goods and child goods respectively (with  $\alpha_p + \alpha_a + \alpha_c = 1$ ). Assume also that the mother and child both receive the same consumption value from the public good (we relax this below). Then we can represent the consumption levels of the mother,  $c_a$  and the child,  $c_c$  as:

$$\begin{aligned} c_a &= \alpha_p y + \alpha_a y = (1 - \alpha_c) y \\ c_c &= \alpha_p y + \alpha_c y = (1 - \alpha_a) y \end{aligned} \tag{1}$$

If there were no child, all the income would be allocated to the consumption of the woman. When she is living with her child, she needs an income of  $y = y^0 / (1 - \alpha_c)$  to have the same consumption level as a single woman with income  $y^0$  (to see this, substitute this expression into the above equation). Hence  $m = 1 / (1 - \alpha_c)$ .

We can define the monetary (or ‘direct’) cost of raising a child as the difference in income levels between the two households (at the same adult consumption level). Using the expression for  $m$  above, this can be written either in terms of the allocation parameters or the equivalence scale.

$$\text{child cost} = y - y^0 = (1 - \frac{1}{m})y = \alpha_c y \quad (2)$$

However, the consumption level of the child is higher than this cost, because he or she can share in the consumption of household public goods. From expression (1), children’s consumption is given by:

$$\text{children’s consumption} = c_c = (\alpha_p + \alpha_c)y \quad (3)$$

We can also write the equivalent income of the lone-parent household in terms of the within-household allocation parameters. This is:

$$\text{equivalent income} = y / m = (1 - \alpha_c)y = (\alpha_p + \alpha_a)y \quad (4)$$

If we assume that adults have more personal consumption than children, (ie  $\alpha_a \geq \alpha_c$ ), we can combine these expressions to obtain upper and lower bounds for children’s consumption as a function of the equivalence scale and the income of the lone-parent family.

$$(1 - \frac{1}{m})y \leq c_c \leq (\frac{1}{m})y \quad (5)$$

where the first inequality follows from a comparison of expressions (2) and (3) and the second from a comparison of (3) and (4). That is, the first inequality reflects the presence of public goods in the household, and the second inequality arises because adults consume more than children. These bounds are quite wide. For example if  $m = 1.3$ , then  $0.23y \leq c_c \leq 0.77y$ .<sup>69</sup> Evidence on the relative size of the within-household allocation parameters would be required to narrow this.

This expression was derived using the assumption that both adult and child obtain the same consumption value from household public goods. However, the first inequality in expression (5) only requires that the child obtain **some** consumption value from public goods. The second inequality will be true if the child obtains less consumption value than the adult, or if the child obtains more value, but the difference is less than the difference in personal goods. Both these assumptions are plausible.

Note that, even though the standard indicator of child poverty is based on equivalent income, the second inequality implies that this is an overestimate of the child’s consumption level. However, this does not necessarily mean that the child is worse off than the mother, or that equivalent income is an inappropriate measure to use when calculating poverty or inequality. Children are allocated less because it is assumed (by their own parents, and parents generally) that they need less.



