
# Measuring child benefits: Measuring child poverty

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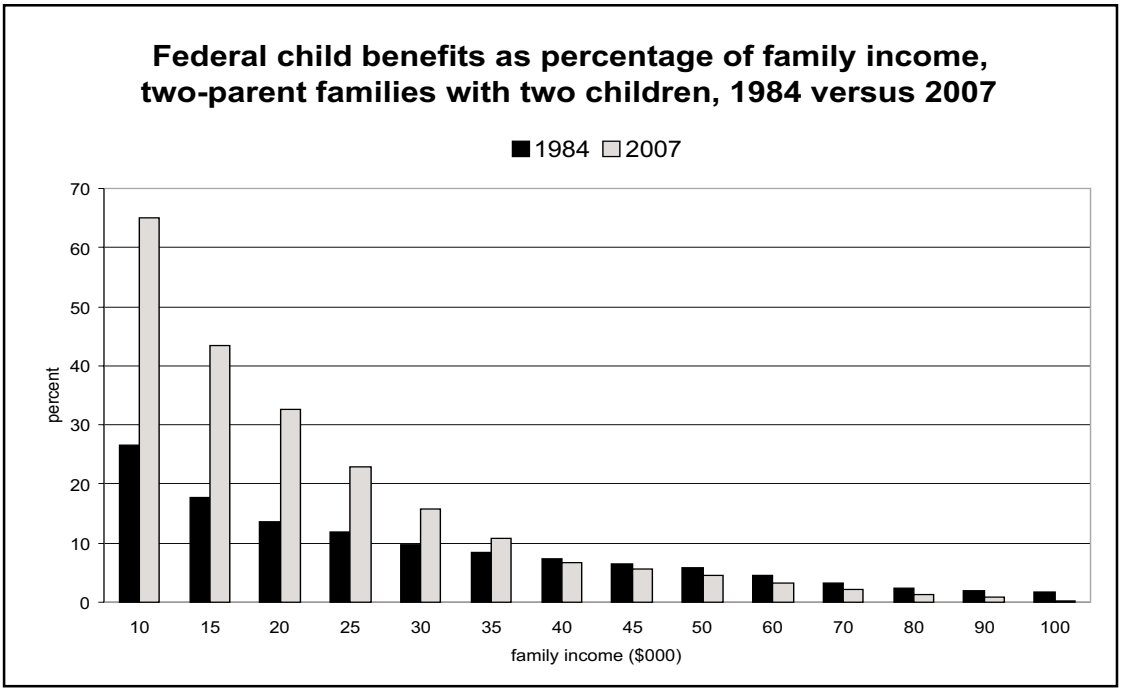
## *Introduction*

Ottawa's child benefits will have more than doubled from a little less than two-and-a-half percent of family income in 1984 to slightly more than five percent in 2007. But is this enough? Or could it possibly be too much? Can we define a goal for the child benefits so we could know when benefits have reached their optimal level? How would such an optimal level be calculated? This paper attempts to answer these questions.

The increases so far have been substantial, and low- and modest-income families have seen by far the largest improvement. By 2007, the federal Canada Child Tax Benefit will supplement income by close to one-third for families with income of $20,000 – better than double the 14 percent contribution in 1984, as can be seen in Figure A.

Increased child benefits have been made possible by an administrative revolution beginning in the late 1970s. In 1978, the federal government introduced a significant innovation in Canada's income security system – the refundable child tax credit. Before the coming of the refundable child tax credit, the income tax system delivered child benefits only to families with incomes high enough to owe tax; the children's tax exemption reduced taxable income and thus the federal and provincial income taxes that families with children paid. Low-income families, with incomes below the taxpaying threshold, paid little or no income tax so they got little or nothing from the children's tax exemption. Moreover, because it reduced taxable income, the children's tax exemption was a regressive program that provided its largest benefit to upper-income families; the higher the tax bracket of the parent that claimed the exemption, the larger the resulting federal and provincial income tax break.

**Figure A**



The refundable child tax credit marked a crucial step forward in the evolution of Canadian income security policy. For the first time, the federal income tax system was being used to deliver child benefits to families too poor to pay income tax, in the form of direct cash payments rather than indirectly through a reduction in income taxes. The refundable child tax credit was a progressive, geared-to-income social program designed to help low- and middle-income families. It paid the largest amount to low-income families and a lower and diminishing benefit to modest- and middle-income families. The refundable child tax credit excluded upper-income families, though they continued to receive family allowances and the children's tax exemption (and its successor, the non-refundable child tax credit). In 1993, Ottawa replaced all three programs with a single income-tested Child Tax Benefit (essentially a larger refundable child tax credit), paid on a monthly basis like the now defunct family allowance.

As the refundable tax credit instrument has evolved, this delivery mechanism has permitted Canada to target higher payments to families with low incomes, but without the costly administrative and social burden of intrusive needs testing used in provincial/territorial social assistance (welfare) systems – indeed, to do so with no stigma and no special 'tests for the poor' at all. This Canadian administrative innovation has attracted attention worldwide and was one of the important influences on the UK's reform of its income security system [Department of Inland Revenue UK 2001].

Canada's system of child benefits entered a still more ambitious phase in 1998 with the National Child Benefit, through which the federal, provincial and territorial governments jointly undertook a fundamental reform of the architecture of child benefits. The key structural change was to replace the previous parallel and uncoordinated programs of needs-tested provincial and territorial child benefits (mainly welfare payments on behalf of children) and income-tested federal child benefits with an *integrated* child benefit system. An integrated system of child benefits would be achieved by replacing child benefits embedded within the welfare system, with an enhanced federal Canada Child Tax Benefit and supplemental provincial and territorial income-tested child benefits.[1] Thus the National Child Benefit initiative represented a structural reform in Canada's income security system. Stigmatizing needs-tested child benefits that had previously been narrowly targeted at families receiving social assistance would be largely or wholly replaced by non-stigmatizing, income-tested benefits paying equal amounts to all low-income families, both those on welfare and the working poor.

To implement fully this structural reform, the maximum Canada Child Tax Benefit must increase until it is at least sufficient to replace virtually all social assistance-provided child benefits, though the federal program need not necessarily do the whole job: Provinces and territories might choose to keep their own new income-tested child benefits, contributing their part to the replacement of welfare-embedded child benefits by income-tested programs.

When the National Child Benefit reform was announced in 1997, Ottawa and the provinces estimated $2,500 as the ballpark average amount per child required for the new Canada Child Tax Benefit to displace most social assistance-provided child benefits in most provinces. The Canada Child Tax Benefit has been steadily augmented since its creation in

1998 and more increases are planned up to 2007. In real (inflation-adjusted) 2004 dollars, the maximum annual payment for the first child in a low-income family increased from $1,761 in 1997 to $2,719 in July 2004 and is projected to reach $3,056 by July 2007 – a substantial $1,295 or 73.5 percent real increase over 1997. (Tables A1 and A2 in Appendix 1 show Canada Child Tax Benefit rates from 1998 through to those planned for 2007, in current and in constant 2004 dollars. Table A3 in Appendix 1 shows the maximum Canada Child Tax Benefit for one to three children, in current and constant 2004 dollars.) The goal of an integrated child benefit could be substantially achieved in 2005 (welfare rates have by and large remained unchanged despite inflation since 1997). If this goal is met it will be an important milestone, but an *integrated* child benefit is not necessarily an *adequate* child benefit.

So, to return to our original query, if the Canada Child Tax Benefit continues to increase over the next several years, the question facing governments and advocates alike is: how much is sufficient? Previous work [Battle and Mendelson 1997] suggested a rough approximation of an adequate child benefit at $4,000 – now updated due to inflation to roughly $4,700. However, at that time Caledon stated that further research was needed before a target figure could be known with greater confidence.

The present study represents a first and major step in that further research. It is primarily a *conceptual* work, rather than an empirical study. The goal of this report is to define a valid methodology to derive an estimate of an adequate level for child benefits: The study leaves the implementation of the methodology to further research.

The first section of this report discusses the core objectives of child-related benefits, since defining an adequate level of child benefits requires an understanding of their purpose. Measuring 'adequacy' requires measuring 'poverty.' The two main methodologies for measuring poverty are critically analyzed in the next section of the report. The newest measure of poverty proposed in Canada is the Market Basket Measure, developed by the federal government in cooperation with the provinces and territories. The third section of the report looks at using the Market Basket Measure to derive an estimate of adequacy levels for child benefits. The report concludes with a summary of the policy implications of the preceding discussion, including specific recommendations for developing better poverty measures in Canada – and thereby, as we shall see, permitting us to assess the adequacy of child benefits.

## *Adequacy and the Anti-Poverty Objective of Child Benefits*

### *Poverty and the role of child benefits*

The federal, provincial and territorial governments have stated that one of the core objectives of the National Child Benefit is "to help prevent and reduce the depth of child poverty" [Federal/Provincial/Territorial Ministers Responsible for Social Services 1997]. What does the phrase 'child poverty' mean in this context?

Children live in families, so children will be poor if their families are poor. 'Child poverty' therefore should be considered as shorthand for 'children who live in families that are poor.' Of course, there may also be a very few children

deprived by adults who do have the financial resources necessary to support them, and there are some children who do not live in families, but leaving aside these rare and extreme exceptions, children share in the prosperity, or otherwise, of their families.[2]

Perhaps, then, an adequate child benefit is simply one that is large enough to ensure that no child is in poverty – meaning that no family with children is poor. In that case, we need only calculate the gap between family income and the poverty line (were there such a thing), and figure out the amount that is needed to close that gap. That amount arithmetically will be a child benefit adequate to meet the goal of ending child poverty. This approach may be characterized as the 'purely redistributive' view of child benefits, as summarized in Table 1.

An alternative vision of an adequate child benefit may be characterized as the 'structuralist' view, also shown in Table 1. According to the structuralist perspective, child benefits play a particular role within the larger income security system and the labour market. The structuralist approach sees an adequate child benefit as an amount large enough to eliminate family poverty that arises as a consequence of the incremental expense of caring for children, but does not look to child benefits alone to eliminate poverty. In other words, child benefits are a necessary but not sufficient instrument to combat family poverty.

While the purely redistributive view might be superficially attractive, it does not stand up to scrutiny and cannot provide a logical foundation for a well-designed income security system. If child benefits were designed to eliminate child poverty all by themselves, the maximum amount of child benefits in the income security system would have to take into account not just the income needs of the child, but those of the whole family. In this case, it would make no sense to discuss 'adequacy' of child-related benefits *per se*, since this would be just the same as adequacy of the income security system as a whole. Essentially, if we define all components of the income security system as having one and only one goal, we lose the concept of specific goals for each of the individual components. It becomes analytically impossible to discuss the separate components of the income security system.

Analogously, the purpose of an automobile may be to get from point A to point B safely and efficiently, but what is the purpose of the tires, the steering wheel and the engine? Or, to make the same point in another way, if 'child benefits' are just another way to help meet over-

**Table 1**
**Two views of the role of child benefits in addressing poverty**

| The '*purely redistributive*' view | The '*structuralist*' view |
|---|---|
| • Child benefits ideally should be large enough to close the whole 'poverty gap' for families with children.<br>• Consequently, child benefits should reflect all the family's needs, not just the needs of the children. | • Child benefits ideally should be large enough to eliminate poverty that is due to the incremental costs of children in a poor family.<br>• Child benefits are not meant to address the needs of the adults in the family, which must be addressed by employment earnings and/or income programs. |

all family income needs, why have a separate program with a label 'child benefits?' Why not just have a family benefit and be done with it? Although it may seem somewhat paradoxical, in an income security system where child benefits simply make up family income deficiency, there really is no such thing as 'child benefits' – except, perhaps, as an honourific label.

Assuming that we do have meaningful 'child benefits' in our income security system, we can ask the question: what is the role of child benefits within the overall income security system? The structuralist answers this question by looking more deeply into the conception of the income security system within the labour market.

In a flexible and relatively unregulated labour market, such as we have in Canada (and other Anglo-American countries), family needs vary by family size and type, but wages do not. If low-wage workers are to have the economic capacity to raise children, without their children being mired in poverty, how can their income take into account the needs of their dependent children? On the other side of the coin, if income security programs for those outside the paid workforce, such as welfare, *do* reflect the needs of families but wages do not, then welfare benefits often will be higher than the earnings of low-income families with children. This outcome would be unfair to working poor families. It also would be unfair to out-of-work families since it would place a financial barrier in the way of those who want to work.

The long-established answer to these dilemmas has been to pay child benefits *both* to workers and to those not in the paid workforce. This was the solution arrived at by many key reports, such as the influential Beveridge report in the UK [HMSO 1942], Canada's Marsh report [Marsh 1943] and the Castonguay-Nepveu report [Quebec 1971]. To fulfil this role both in the labour market and the income security system, maximum child benefits should be sufficient to allow a family to raise a child at just above a poverty-level standard of living when combined with a reasonable but modest adult wage, as portrayed pictorially in Figure B. However, child benefits themselves do not address insufficiency of the 'adult component' in either the income security system or the labour market. The adequacy of the 'adult component' is a separate issue that *cannot and should not* be addressed through child benefits.

In short, in the structuralist conception, an adequate child benefit when combined with an adequate adult income, from whatever source, results in a family income sufficient to support a standard of living just above the poverty level. Of course, what constitutes 'just above a poverty-level standard of living' remains to be discussed, but this understanding of the role of child benefits implies that an adequate child benefit will not, in and of itself, eliminate family poverty – nor should it. An adequate child benefit will help reduce the extent of poverty, by doing its share of the work, so to speak – namely eliminating the cost of raising children as a source of poverty. This is entirely consistent with the wording of the objective stated for the National Child Benefit as proposed by the Federal/Provincial/Territorial Ministers Responsible for Social Services [1997]: *helping* to prevent and reduce the depth of child poverty (emphasis added).

This report adopts the structuralist view of child benefits. There are several specific reasons for doing so, summarized in Table 2, but at the most basic level, structuralist child benefits permit the income security system to be designed rationally and to fit sensibly within

**Figure B**

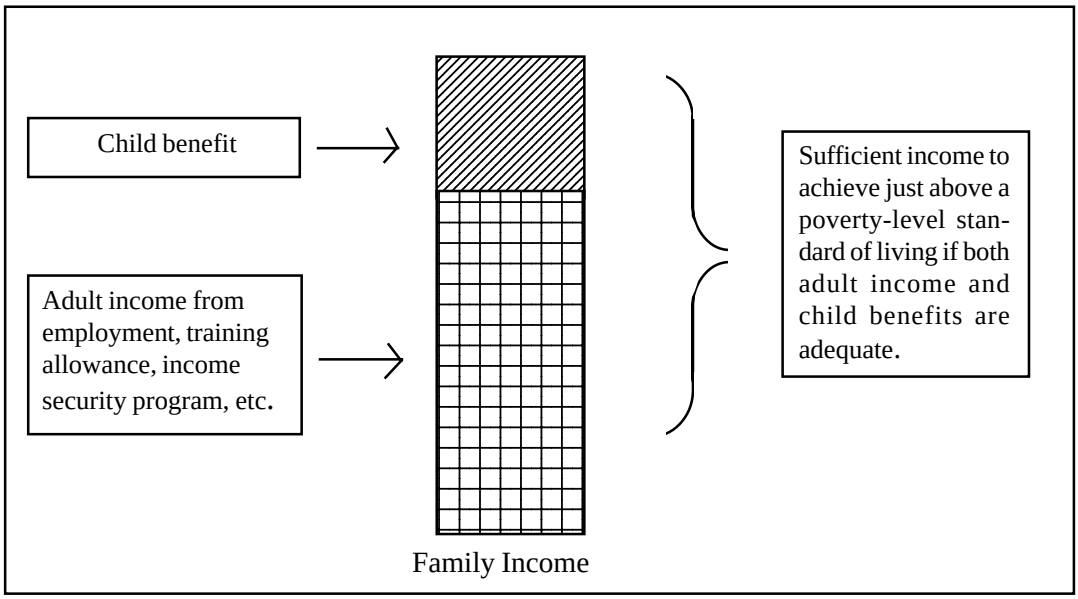



**Table 2**
**Why child benefits should *not* meet the needs of the whole family**

Good design is needed for programs to maintain popular support. If child benefits were designed to meet the needs of the *whole* family, rather than just those of the children in the family, this would:

- Eliminate the distinction between adult and child benefits except in name.
- Require child-related benefits to be very large relative to 'basic' benefits.
- Be unfair to families without children, whose benefits would be too low.
- Make it difficult to reconfigure adult benefits as a wage substitution program that encourages work and skill acquisition.
- Reduce incentives to work, by associating benefits with having a child rather than taking steps towards employment.
- Make having a baby an alternative to paid employment, establishing perverse incentives to have children.

the labour market we have. Without a rational design, income security systems fall mercy to each passing fad, since they cannot sustain popular agreement as to their role and function. Are income security systems a foundation of a well-functioning labour market and as necessary to our overall economic and social well-being as a good banking system, not to mention the broader issues of equal opportunity and fairness? Or are income supports merely charity to be paid or not according to the sometimes whimsical beneficence of the voter? A structuralist view of child benefits fits with the former conception of the income security system. The purely redistributive view, although perhaps at first appealing to those who want to see higher benefits, fits with the latter conception of income security – a conception in which it is as easy to turn the tap off, as it is to turn it on.

***Which costs are included within an adequate child benefit?***

An adequate child benefit is one that fulfils the role of child benefits within the context of a larger social security system. While this implies that child benefits should be equal to the incremental costs of raising a child for a family just above a poverty-level standard of living, some costs cannot (or should not) be included in the calculation of incremental costs. Costs such as food, clothing and shelter, which every family must incur, obviously will make up most of the incremental costs of raising a child. But if a category of expenditure is highly variable, with some families experiencing little or no cost but others spending extraordinary sums, it is not possible to reflect these types of expenses in a child benefit program of general application. The two most relevant examples of these highly variable costs are non-insured health services and child care.

A report on the recently developed Market Basket Measure, which is discussed extensively in later sections of this paper, also reflected on the difficulty of including these types of costs:

> Out of pocket spending on child care and non-insured health care spending recommended by a health professional are not included in the cost of the basket because spending on these items varies so widely from family to family depending on the availability of free or subsidized child care and the health needs of family members. No 'standard' basket component for either category of expenditure could be reasonably set [Human Resources Development Canada 2003: 36, Footnote 12].

Similarly, special costs for children with disabilities, such as attendant care or intensive behavioural modification, cannot be included within a general child benefit program, and there are undoubtedly other costs of this nature as well.

This is *not* to claim that it is impossible to graft a disability credit onto a general child benefit program. Indeed, the federal government did just that in its 2003 Budget announcement of the Child Disability Benefit to be delivered through the Canada Child Tax Benefit [Battle, Torjman and Mendelson 2003: 4-5]. However, the costs of disability should not be added into an assessment of the incremental costs of raising *all* children, so as to increase the amount of the child credit paid to every child, whether the child has a disability or not. If one child has a disability costing, say $5,000 a year, and nine children do not, the average cost is $500 per child per year. Adding on $500 to the child benefit to reflect the average incremental costs of disability would be inadequate for those with needs due to disability, for whom the average cost is far too low, while those without disability would be obtaining an additional $500 without the costs of disability. Of course, adding on $5,000 to every child's benefit would meet the needs of this particular child with a disability, but provide even more of a windfall for those without a costly disability (at a considerably higher cost to the treasury).

Where needs are highly variable, programs must be targeted specifically to those types of needs, as the above example illustrates. The same argument can be made for child care and non-insured health services. For example, with respect to non-insured health services, it would not make sense to provide an additional amount equal to the average cost of non-insured health benefits for all children; rather, what would make sense is a program to compensate for the specific costs actually incurred for non-insured health benefits for any child, as these are so highly variable (or to include these health needs in universal medicare so that costs are no longer borne by individual families). Therefore, the 'main' payment of the Canada Child Tax Benefit should not include provision for highly variable requirements, but only for the costs of those goods and services that are common needs

of almost all children. Thus an adequate child benefit does not include such variable items as child care, non-insured health benefits and disability costs. These important needs must be addressed through alternative mechanisms.

### *Vertical and horizontal equity*

As discussed earlier, if the income security system is to provide families with a standard of living just above the poverty-level – leaving the concept of 'poverty' still to be discussed further – child benefits must be equal to the incremental cost of raising a child at this standard of living. The same argument applies whether family income is from income programs or from low-paid work, particularly in a labour market such as Canada's where low-income workers often have such low earnings that their income is hardly sufficient for a single adult. Indeed, with some provinces' minimum wages falling lower and lower in real terms [Battle 2003], many low-paid workers' full-time earnings may not even be enough for one person to support herself or himself, let alone a child as well.

However, at some income level, as 'adult' income rises, the above argument no longer holds. With increasing adult income, child benefits do not have to be equal to the incremental cost of raising a child – because families can use their own income to support the incremental cost of their children, with enough left over to support the whole family at a considerably better than poverty-level standard of living.

Determining the level of income at which child benefits could begin to be reduced is a matter both of equity and of pragmatism. From the perspective of equity, the question is: at what level of income may a family afford to devote a greater proportion of its income to the additional cost of a child without undermining the ability of its total income to support an acceptable standard of living for the whole family? From a pragmatic perspective, governments must ask what they can afford and are willing to pay and balance the priority of paying benefits to families 'up the income scale' against other public services or taxes. Even with a geared-to-income program like the Canada Child Tax Benefit, paying diminishing benefits once family incomes reach a very modest level (net family income of $22,615), even small improvements in benefits will require considerable increases in expenditures since the majority of families are in the modest to average income range.

In the current Canada Child Tax Benefit, society effectively has answered these questions: The maximum child benefit begins to be reduced at $22,615 net family income.[3] This reveals a social judgement that we expect families to begin to be able to carry a greater a proportion of the costs of raising children at roughly this income level.

While the discussion so far has focused on the anti-poverty objective, traditionally child benefits have pursued a second core objective – horizontal equity or, in simple terms, parental recognition. According to this argument, child benefits are required to help recognize that parents have heavier financial demands than childless couples and single persons with the same employment incomes, and acknowledge the contribution that parents make to society in raising future citizens, workers and taxpayers (not to forget parents) [Battle and Mendelson 1997].

The horizontal equity objective is touted by those who support universal child benefits, such as the well-known federal Family Allowances program that (until its final few years

between 1991 and 1993) paid child benefits to all families regardless of their income. While Family Allowances were universal in reach and set at a flat rate amount, they did not pay the same benefit to all families after they were made taxable in 1973. The amount of benefits was crudely geared to income because family allowances were subject to federal and provincial income tax; the personal income tax system is progressive, levying higher rates on higher bands of income, which means that higher-income families paid more income tax on their family allowances and thus received smaller after-tax benefits. Over time, the federal government has made successive changes shifting the weight of the core objectives of child benefits increasingly to poverty reduction at the expense of horizontal equity: Upper-income families do not qualify for the Canada Child Tax Benefit and, as illustrated in Figure A, middle- and upper-income families have experienced a reduction in child benefits since the mid-1980s relative to family incomes. Nevertheless, the Canada Child Tax Benefit is a very broad-based program providing at least some payment to almost all Canadian families with children (about nine in ten).

Juggling the anti-poverty and horizontal equity objectives of child benefits is a complex and controversial issue. Important as is this debate, it is not relevant to the issue of the adequacy of the maximum child benefit for families with low incomes. Whether universal or income-related, an adequate child benefit for those with low incomes would still be the same. Similarly, at whatever income level the maximum child benefit begins to be reduced in a geared-to-income program, and at whatever rate it is reduced, the adequacy of child benefits for low-income families remains unaffected. Therefore, this paper does not deal with the question of whether child benefits should go to all families, including the wealthy. Nor does it address the question of how much child benefit non-poor families should receive. This report is confined to one and only one fundamental question that must be addressed no matter what the design of a child benefit system: What is an adequate maximum child benefit for families with low incomes?

### *Defining a just-above-poverty-level standard of living*

Many studies on 'the cost of children' have failed to distinguish between two quite different questions – on the one hand, the empirical question of how much families *do* spend on children and, on the other hand, the theoretical question of how much families *should* spend on children to maintain the same standard of living as the family would have had without children. As Phipps puts it, "attempts to answer the question: 'What is the cost of a child?' have often confused a number of quite separate issues. In particular, the questions: 'How much do parents spend on their children?' and 'How much income does it take to preserve the pre-child standard of living?" [Phipps 1998: 157].

Notwithstanding an extensive literature on 'the cost of raising a child,' it is possible to spend just about any amount on raising a child, as any parent will doubtless attest. If we are interested only in the question of the minimum cost to continue a child's physical existence for a few more days, assuming otherwise good health, the answer is likely pennies a day. If we are asking about maintaining the lavish lifestyle of the scions of an ultra-wealthy family, the answer may be several hundred dollars a day. There is

no '*the*' in the cost of raising a child; rather, there is almost any cost of which you can dream.

Assuming a structuralist view of the role of child benefits as described in the previous section of this paper, for the purposes of defining an adequate child benefit the question of interest is not 'what is the cost of raising a child?' The question is instead 'what does it take to preserve the pre-child standard of living?' This latter question may be asked at any standard of living, from the standard of living of low-income families to that enjoyed by middle-income families to the 'super rich.'

But here we are interested in a specific standard of living – namely, the standard of living just above the 'poverty level.' If we know how much income is required for two adults to achieve a standard of living just above the poverty level, then, according to the structuralist view, an adequate child benefit for the first child in a two-adult family is the amount of extra income required for that family to remain just above a poverty-level standard of living. Similarly, an adequate child benefit for a one-parent family is the difference between the amount needed to stay just above a poverty-level standard of living for one adult compared to that for one adult and child, and so on for different sizes of families. (Issues such as sex and age of children and size of community are discussed further below.) Calculating what is an adequate child benefit really comes down to estimating what income will permit families of various structures to reach just above a poverty-level standard of living.

Admittedly, it sounds awkward and less than generous to write of permitting families "to reach just above a poverty-level standard of living." However, if a family is just above a poverty-level standard of living, then by definition it is no longer in poverty. Getting families above the poverty line constitutes the minimum standard of adequacy that we are here attempting to define. For the purposes of this paper, we shall use the phrase 'just above a poverty-level standard of living' as a short hand for 'a standard of living such that the result of virtually any further deprivation, other than the most trivial, would be a standard of living that is *in poverty*.' When discussing 'poverty lines' we mean the estimate of the amount of income a family would require to be able to attain a standard of living just above the poverty level; in reality, most poor families have incomes considerably below the poverty line.

So how do we go about deciding what is just above a poverty-level standard of living and how do we estimate what income a family needs to at least attain that standard of living?' There are two major types or classes of methodologies commonly employed to estimate the income needed to attain at least a poverty-level standard of living, or indeed, the income level required for any given standard of living. These two methodologies are summarized in point form in Table 3.

One type of methodology is to look at the amount families of different structures actually spend, given a constant standard of living. This is called an 'expenditure-based' strategy in this paper, because this methodology uses information on family spending, typically relying upon large-scale surveys of family expenditures. The second type of methodology is to develop a budget from the ground up sufficient to provide a particular standard of living. In this paper, methodologies of this type are called 'budget cost' strategies. Note that expenditure-based strategies are *not* asking how much parents

spend on their children. Rather, they are asking: *if we hold the standard of living constant*, what do families of various structures spend? Similarly, budget cost strategies are not asking how much it costs to raise a child. Rather, budget cost strategies ask: How much does it cost to raise a child at a particular standard of living?

Other authors have written of three, four or more types of methodologies. Much of the difference in number depends upon which are counted as separate methodologies. For example, we here classify 'deprivation index' types of methodology as expenditure based, but many UK authors see it as a distinct methodological approach. These differences in typology schemes are largely arbitrary matters of convenience and do not demark a substantive difference in points of view. Other authors, for example Wolfson and Evans [1992], include a methodology based on surveys of public opinion as to what constitutes a poverty line. While surveys of public opinion have their place, this is not discussed here as a serious methodology. Simplifying the categories of poverty methodology down to two main streams can readily encompass the range of methodologies found in the literature on poverty measurement and permits a more coherent discussion of methodological advantages and disadvantages.

Regardless of which methodology is used, perhaps the most critical shortcoming of much of the literature is that there is rarely a clear specification of the standard of living that is being measured – for *either* methodology. The subsequent sections of this paper discuss the various methodologies for estimating poverty-level incomes. Before doing so, though, we must clarify a critical conceptual distinction – between defining the meaning of 'poverty' and measuring the amount of income likely to result in a standard of living just above the poverty level.

**Table 3**
**Types of methodologies used to estimate the income needed to attain a standard of living just above the poverty level**

| *Expenditure-based* methodologies | *Budget cost* methodologies |
|---|---|
| • Looks at what families actually spend.<br>• Hypothesis is that a particular expenditure pattern (e.g., a certain percentage of income on food, clothing and shelter) indicates a consistent standard of living across different families.<br>• An adequate child benefit is the difference in income between two families both just above a poverty-level standard of living, but one with a child or additional child.<br>• The *deprivation index* is a variant of this methodology, in which the absence of certain goods and services is seen as an indicator of poverty. However, the deprivation index has not usually been used to develop an estimate of poverty level incomes. | • Looks at the cost of a basket of good and services (e.g., considered to be the socially perceived necessities for this location at this time).<br>• Hypothesis is that any family with the income to purchase that basket of goods and services could attain a standard of living just above the poverty level.<br>• An adequate child benefit is the difference in the cost of the basket of goods and services between two families, but one with a child or an additional child, both just above a poverty-level standard of living. |

Jumping to measurement before describing what is being measured is to miss a fundamental step in logic. It may be possible to estimate what income is needed for families of different sizes to preserve any given standard of living, but this does not in any way tell us what standard of living represents a poverty level or any other level, so the expenditure-based methodology itself cannot be a way to define a specific standard of living. Similarly, it is possible to build a budget representing *any* standard of living, so the budget cost methodology itself also cannot be a way of defining a specific standard of living. Both methodologies are ways of estimating what income is required to attain a specific standard of living once that standard of living is defined. Neither methodology can define what they are attempting to measure. We have to define – as Saunders [1999] says "in words" – the standard of living that represents a poverty level, and then and only then can we estimate the income needed to achieve it.

Attempting to measure poverty levels of income without first defining poverty is akin to asking how far it is to our destination without knowing the destination. We have to say that we are going to the next city, or to the corner store, or wherever, and then and only then, can we say how far it is in kilometres or metres or some other measure of distance. We cannot begin to measure the distance without knowing where we are going and, similarly, we cannot measure the income required to attain a standard of living just above the poverty level, unless we specify what is that standard of living. While the distinction between measuring the income needed for a standard of living and describing that standard of living seems simple enough, a cursory review of the literature reveals an astonishing degree of confusion between measurement and definition. To paraphrase the citation from Phipps above, attempts to answer the question 'What is a poverty level?' have often confused a number of quite separate issues, in particular, the questions 'What standard of living represents a poverty level?' and 'How much income does it take to reach the poverty-level standard of living?' The unfortunate result of this missing step has been much methodological rigour in the pursuit of theoretical confusion.

In Canada, despite a plethora of indicators for poverty or low income, an explicit poverty-level standard of living has rarely been suggested. As we have argued above, these are two sequential, but different, questions. Canadian poverty research has commonly collapsed these two questions, so that deriving income levels that would in theory permit a standard of living just above the poverty level – commonly called 'poverty lines' – has often been seen as one and the same as defining what is poverty.

A Canadian exception to this methodological confusion has been the work of Christopher Sarlo [1992, 2001]. Sarlo defines 'in words' his view of a poverty-level standard of living that he argues is consistent with our understanding of the term 'poverty.' According to Sarlo's 'basic needs' definition of a poverty-level standard of living:

> Someone is in a state of poverty if he lacks any item required to maintain long-term physical well-being. For able-bodied persons, the list would include a nutritious diet, shelter, clothing, items for personal hygiene, health care, transportation, and a telephone. Shelter would include the full range of furnishings, appliances, implements, and household supplies. Further, the type, quantity, and quality of each item is at a level considered minimally decent in the society in which one lives" [Sarlo 2001: 11].

One may take issue with Sarlo's definition of a poverty-level standard of living as being far too parsimonious; indeed, it is even conceivable that others might judge the definition as too generous. For example, the definition apparently contains no provision for entertainment, since this is not necessary for long-term physical well-being. A definition of a poverty-level standard of living may also be tested by asking the question: If a family had all these goods and services, would it be just above a poverty-level standard of living so that it would no longer be said to be 'in poverty?' Sarlo's definition would not appear to pass this test. But this question aside (we will return later to discuss some of the specifics of his poverty measure), Sarlo's methodology is clear and logical. Unlike most other writers on poverty measurement, he does set out a definition of a poverty-level standard of living. This permits rational discourse about whether the standard is acceptable – a discourse that is not possible where the standard is implicit or not sufficiently thought through even to be described.

Another example of a Canadian attempt to develop poverty lines is the 'Acceptable Level of Living' (ALL) developed by Winnipeg Harvest and the Social Planning Council of Winnipeg. The ALL measure is based on a mix of expert opinion about minimum nutritional and other requirements, combined with low-income families' own assessment of their requirements. This has enabled the Winnipeg Harvest and the Social Planning Council of Winnipeg to develop a detailed budget including, for example, specific meal plans for the week. The ALL is not meant as a 'below-poverty' line; rather it represents an income level above poverty and is defined as "a fair, modest and acceptable living level." [Winnipeg Harvest and the Social Planning Council of Winnipeg 2003: 1]. The ALL approach is representative of similar efforts made by several other local community groups, such as the Montreal Diet Dispensary [1988].

The ALL looks at requirements in 14 categories: food, personal care, clothing, shelter, health care, child care, transportation, household operations, education, communication, risk management, banking, home furnishings and recreation. Some of these categories are not included in Sarlo's poverty definition, and many of the specific items even within shared categories are not included in Sarlo's calculations. This might be at least partly due to a difference in what each is attempting to define.

Sarlo seems to be defining a kind of steady state of poverty, wherein a family is poor but can continue its physical existence – but just meeting his definition does not mean that the family is out of poverty. In this regard, Sarlo may not be reflecting a commonly held sense of the term 'poverty lines' in that families just over Sarlo's poverty line would still be considered poor. On the other hand, the ALL is a more traditional poverty line (although it does not call itself a poverty line), in that the expectation is that a family at the ALL level will be living a very modest lifestyle, but would not be poor. Unfortunately, the ALL is not accompanied by a general definition of poverty, so we can only infer from the items selected what type of definition is implicit.

Nor does the ALL's use of expert opinions on some necessities such as food help much in substituting for a more explicit definition of the standard of living that its budget represents. While food is obviously a basic necessity, there is a huge range of taste and quality possible and, beyond the barest caloric minimum requirements, the judgements about what food is needed are as much about a particular standard of living as any of the other

judgements. As argued in a US report of the mid-1990s (more on this report later):

> Although expert budgets are generally intended to be derived in an objective manner, with a strong grounding in human physiological requirements, large elements of relativity and subjective judgment invariably enter the process. Thus, for every category for which an explicit budget figure is developed, judgments must be made about the composition of the category and the dollar value that is appropriate for a poverty standard. In a developed country such as the United States, there is usually a wide variety of specific items at varying quality and price levels for any category, almost any of which are adequate for sheer survival. To decide, for example, that a minimally adequate diet must include meat as well as rice and beans and how much of each foodstuff, or that a minimally adequate house or apartment must include at least one bedroom for every two children, is to make a set of judgments that are inevitably influenced by the mores and experiences of the expert's own society. Similarly, to decide what quality of meat (hamburger or ground sirloin) or clothing (polyester or cotton) to price as the poverty standard is to make another set of judgments [Citro and Michael 1995: 107].

Governments also have been more or less active in developing measurements of poverty. Canada's most widely-used poverty lines are the low income cutoffs (LICOs) generated by Statistics Canada to calculate estimates of Canada's low-income population. However, the low income cutoffs are emphatically not poverty lines, and Statistics Canada takes pains to caution that they are a measure of low income rather than poverty. The low income cutoffs may or may not be above or below a poverty line, depending upon one's conception of poverty. Since the low income cutoffs are not suggested as a poverty line by Statistics Canada, it is not surprising that there is no such thing as a 'low income cutoff' definition of poverty. The low income cutoffs are discussed extensively in the next section of this paper.

Unlike Canada, the US has an official poverty line. Developed in the early 1960s, the US poverty line consists of the cost (at that time) of an expert's assessment of a minimum adequate diet, multiplied by three. This poverty line is not connected to any particular living standard. The US official poverty line has not been updated since its inception, except by the Consumer Price Index, so it does not reflect a contemporary standard of living.

Recognizing the many deficiencies of its official poverty line, in the mid-1990s the US put substantial effort into development of a new official poverty line. At the request of Congress, the National Academy of Sciences set up a study panel on poverty measurement that released its report in 1995 [Citro and Michael 1995]. However, it appears that this work is now in a kind of limbo, neither adopted nor disavowed, while the old poverty line remains the official version.

Despite the effort and resources involved, like many other studies of poverty measurement, the 1995 US report contained no clear statement of what the panel means by 'poverty' and also does not distinguish between describing just-above-poverty-level standards of living and estimating the income needed to attain that standard. The closest the US report gets to a definition of poverty is the following:

> Our measure includes a specific concept of economic poverty by which to develop a new poverty threshold for a reference family type: inadequate resources to obtain basic living needs. We define those basic needs as food, clothing, and shelter. There are other needs as well (e.g., personal care, transportation), but there is less agreement about them, and so our approach provides a small amount for other needed spending by means of a multiplier that is applied to the amounts for food, clothing, and shelter. This concept of poverty as insufficient resources

> for basic living needs accords with traditional public concerns for the needy, whether expressed in provisions for homeless shelters, soup kitchens, and clothing drives, or the provision of cash or in-kind benefits for basic consumption [Citro and Michael 1995: 22].

We discuss the new 'official-unofficial' poverty lines suggested in the 1995 US report later; here we note only that the description of what 'poverty' means is vague at best. Providing "a small amount for other needed spending by means of a multiplier that is applied to the amounts for food, clothing, and shelter" is hardly a way of resolving disagreement about what is needed beyond these three basic necessities. Why not a larger amount, or a smaller amount? Even with regard to food, clothing and shelter, the US report's description does not provide any general principle regarding the *quality* of those three basic necessities – unlike, for example, Sarlo who clearly states that his overriding principle is "to maintain long-term physical well-being."

Until recently, the UK had no official poverty lines and reported instead on low-income households, defined as those with less than 60 percent of median income. This situation changed in late 2003, when the UK adopted a set of official indicators for child poverty as a follow-up to its 1999 commitment to reduce child poverty by one-quarter by 2004 and by one-half by 2010, with the ultimate objective of eliminating child poverty 'within a generation.' The UK has achieved its 2004 goal, largely due to generous child tax benefits (as previously noted, designed in part based on the Canada Child Tax Benefit, but with much higher payments to low-income families) and is also well on its way to meeting its 2010 targets. Given the very public nature of its commitments, the UK government obviously needed some way to keep track of progress.

The new official UK indicators of child poverty consist of three different measures:

Absolute low income – … the number of children living in families with incomes below a particular threshold which is adjusted for inflation – set for a couple with one child at £210.5 a week in today's terms.

Relative low income – …the number of children living in households below 60 percent of contemporary median equivalised household income.

Material deprivation and low income combined – … the number of children living in households that are both materially deprived and have an income below 70 percent of contemporary median equivalised household income [Secretary of State for Work and Pensions, UK 2003b: 7].

Both the absolute and relative indicators are low-income measures rather than measures of poverty. The material deprivation indicator, however, does come closer to a definition of a poverty-level standard of living. The measurement of material deprivation "was arrived at through analysis of all existing UK deprivation data to identify a set of questions which best discriminates between poor and non-poor families" [Secretary of State for Work and Pensions, UK 2003b: 12]. This process allowed researchers to narrow down the goods and services that need to be surveyed to measure material deprivation.

The questions that have been developed are set out in Table 4. Items such as food and

everyday clothes are not surveyed, because they are not revealing of the difference between poor and non-poor, as understood by the UK researchers. Almost anyone in the UK will have food and everyday clothes, so the list of items below may be seen as revealing the difference in standard of living that would distinguish poor and non-poor according to the UK concept. Many of the items go beyond basic necessities for physical existence, although some of them (e.g., keep your home adequately warm) would presumably also be encompassed even within a more restrictive conception of poverty.

The UK three-indicator measure of child poverty was developed only after a lengthy process of consultation, including discussions with both parents and children. Table 5 lists the items viewed by children themselves as what are needed not to be poor. The list varies from the mundane (kettle) to the sublime (love). While this list is not a definition of poverty, it does give us a perspective on what children themselves see as their needs in order not to be poor. The list contains many 'basic physical necessities,' but it also contains many 'extras' such as holidays, a TV and new or decent clothes for school – perhaps reflecting the children's recognition that they, too, cannot live by bread alone. It is instructive to reflect upon this list when considering alternative definitions of poverty.

While there is much to admire in the UK's substantial efforts to develop a better understanding of poverty and to measure its own progress, regretfully, it did not take the further step of setting out (based on its research) an

**Table 4**
**UK Department for Work and Pensions**
**questionnaire to measure material deprivation**

| Adult deprivation | Child deprivation |
|---|---|
| • Keep your home adequately warm<br>• Two pairs of all-weather shoes for each adult<br>• Enough money to keep your home in a decent state of repair<br>• A holiday away from home for one week a year, not staying with relatives<br>• Replace any worn out furniture<br>• A small amount of money to spend each week on yourself, not on your family<br>• Regular savings (£10 a month) for rainy days or retirement<br>• Insurance of contents of dwelling<br>• Have friends or family for a drink or meal at least once a month<br>• A hobby or leisure activity<br>• Replace or repair broken electrical goods such as refrigerator or washing machine | • A holiday away from home at least one week a year with his or her family<br>• Swimming at least once a month<br>• A hobby or leisure activity<br>• Friends round for tea or a snack once a fortnight<br>• Enough bedrooms for every child over 10 of different sex to have his or her own bedroom<br>• Leisure equipment (e.g., sports equipment or a bicycle)<br>• Celebrations on special occasions such as birthdays, Christmas or other religious festivals<br>• Play group/nursery/toddler group at least once a week for children of pre-school age<br>• Going on a school trip at least once a term for school-aged children |

Source: Secretary of State for Work and Pensions, UK 2000b: 21.

overall definition of a just-above-poverty-level standard of living. Indeed, one will search fruitlessly through its final report on measuring child poverty for a description of what it is that is being measured.

The UK also does not take the next step and use its work on material deprivation to develop a set of poverty lines. None of the three measures of child poverty proposed by the UK are actually poverty lines. The absolute and the relative low income lines are indicators of low income, with the former being simply a convenient (and challenging) starting line from which the current government may measure its efforts, and the latter a truly relative measure of low income that may have little or nothing to do with poverty. The deprivation measure is a standard of living indicator, but is not related back to income. However, it is possible to use a deprivation index to develop poverty lines, as is discussed in the following section of this paper.

In Australia, a good deal of work has been done on the issue of measuring poverty, including a major multi-year research program funded in 1995 by the Ministry for Social Security. There is no Australian consensus as to a definition of poverty and, as seems often to happen with this research, a change of political priorities apparently resulted in a loss of interest. But unlike many other researchers on poverty measurement, prominent Australian experts have attempted to come to grips with the definition of a just-above-poverty-level standard of living. Saunders [2004] has set out a helpful historical list of alternative definitions of poverty:

- Adam Smith (1776):
  "By necessaries, I understand not only the commodities which are indispensably necessary for the support of life but *whatever the custom renders it indecent for creditable people, even of the lowest order, to be without.* A linen shirt, for example, is strictly speaking not a necessity of life … But in the present time … a creditable day-labourer would be ashamed to appear in public without a linen shirt,

**Table 5**
**Children's views of poverty – what matters as well as money?**

| Goods | Services | Other |
|---|---|---|
| • Bed<br>• Food (healthy/good quality food)<br>• Sofa<br>• Car with insurance and licence<br>• Telephone (friends)<br>• TV, video/DVD<br>• Kettle, fridge, sink, cooker, worktops, cupboards and shelves<br>• House<br>• Decent/good clothes/new clothes for school<br>• Holidays | • Public transport/transportation<br>• Electricity and heating<br>• School and good education<br>• Local doctor/dentist<br>• Local police<br>• Play schemes<br>• After school clubs and youth clubs<br>• Local supermarket<br>• Going to park/trees<br>• A place to play/places to go | • Friends/family<br>• Love<br>• Being able to pay the bills/ pay off debt<br>• Health<br>• Responsiblity<br>• Happy life<br>• Play times after lunch at school<br>• Freedom<br>• Sport and exercise |

Source: Secretary of State for Work and Pensions, UK 2000a: 16.

the want of which would be supposed to denote that disgraceful state of poverty."

- Seebohm Rowntree (1899):
  "[A family is counted as poor if their] … total earnings are insufficient to obtain *the minimum necessities of merely physical efficiency."*

- William Beveridge (1942):
  "In considering the minimum income needed by persons of working age for *subsistence during interruption of earnings*, it is sufficient to take into account food, clothing, fuel, light and household sundries, and rent, though some margin must be allowed for inefficiency in spending."

- Ronald Henderson (1975):
  "Insofar as poverty is defined by reference to a minimum acceptable standard of living, it is a relative concept. [It requires] a value judgment [that] must *reflect the productivity of the economy and community attitudes*. The task of determining a minimum standard of living is difficult given the variety of lifestyles and values in Australian society and the range of matters, such as food, shelter, clothing, health and education, that must be considered." [Note: Henderson developed the semi-official Australian poverty line in 1975.]

- Peter Townsend (1979):
  "Individuals' families and groups in the population can be said to be in poverty when they lack the resources to obtain the types of diet, participate in the activities and have the living conditions and amenities *which are customary, or at least widely encouraged or approved, in the societies to which they belong."*

- Joanna Mack and Stewart Lansley (1985):
  "Poverty is an enforced lack of *socially perceived necessities."*

- Amartya Sen (1992):
  "Poverty [is] *the failure of basic capabilities to reach certain minimally acceptable levels*. The functionings relevant to this … can vary from such elementary physical ones as being well-nourished, being adequately clothed and sheltered, avoiding preventable morbidity, etc., to more complex social achievements such as taking part in the life of the community, being able to appear in public without shame, and so on."

Adding a Canadian example to this list of poverty definitions, a definition of a just-above-poverty standard of living is found in the 1943 Marsh report's 'Desirable Living Minimum.' Fisher [1995: 48] discusses the origins of Marsh's minimum:

> In 1939 the Welfare Council of Toronto published a standard budget embodying a standard of living which "should maintain" or "cover the bare essentials for" – "health and self-respect." The Council undertook the study to provide social agencies with a standard to measure the adequacy of income, and analyze how it was spent; to give "[p]rogressive employers" an assessment of what money wages would provide; and to provide information to the general public to help them "judge the wisdom and effect" of proposed legislation to set a minimum wage for men. Social scientist Leonard Marsh used this budget in a discussion of minimum standards in his 1943 Report on Social Security for Canada. He described it as a "living-wage budget" and a "Desirable Living Minimum" and further characterized it as a "line at which there would be certainty over a long period for better than subsistence standards..."

Saunders [1998: 39] finds the Mack and Lansley definition most acceptable since it "is admirably brief, and it embodies two ideas that I believe to be central to any realistic definition of poverty – that poverty involves involuntary restrictions on choice, and that it is socially specific, grounded in a particular society or culture. The second point has a corollary: a measure of poverty is not only socially determined, but must also meet with community agreement if it is to have social legitimacy."

In other Australian research, Saunders [1999] reports that two alternative 'standards' were developed to describe what it was that they were attempting to measure. One standard was the 'modest but adequate standard' and the other was the 'low cost standard':

> The modest but adequate standard is one which affords full opportunity to participate in contemporary Australian society and the basic options it offers, lying between the standards of survival and decency and those of luxury. It attempts to describe the situation of households whose standard of living falls somewhere around the median standard experienced in the Australian community as a whole.
>
> The low cost standard, in contrast, is seen as one which may require frugal and careful management of resources but still allow social and economic participation consistent with community standards, and enables the individual to fulfil community expectations in the workplace, home and in the community. Whilst not seen as a minimum standard, the low cost standard is one below which it would become increasingly difficult to maintain an acceptable standard of living because of the increased risk of deprivation and disadvantage.

Although Saunders says that the low cost standard is "not seen as a minimum standard," in Canada it may accord with what many people would see as what we are here calling a just-above-poverty-level standard of living. A test for any proposed definition is whether a family meeting it could be considered not poor, but likely to be poor with any further deprivation – and the low cost standard meets this test. The Mack and Lansley definition might also meet this test since, according to that definition, to not be poor is to be able to access all "socially perceived necessities." This would seem to be essentially the same as the low cost standard since families meeting the low cost standard would, with "frugal and careful management," be able to fulfil expectations in the home and community. But below the low cost standard, the family would be in danger of "deprivation and disadvantage" despite careful management of household resources. The Acceptable Level of Living (ALL) approach would also seem to reflect – albeit implicitly – a similar definition of poverty.

The Mack and Lansley definition and the low cost standard are alternatives to the basic needs definition provided by Sarlo. Sarlo argues that if we adopt a standard that "includes more than just necessities ... we have poverty viewed as a 'goal' or as a desirable standard of living rather than as a predicament of real deprivation" [Sarlo 2001: 12]. But the counter-argument is that being just out of poverty should be a desirable goal – at least for families now in poverty. The standard of poverty needs to be defined such that society would have a degree of satisfaction if we could indeed say that no family with children was in poverty, rather than merely knowing that no children were in the process of actively starving or freezing at the present moment. The main point here, though, is this: With explicit definitions, it is at least possible to have a debate. From a methodological perspective, having some definition as an explicit assumption for a poverty measurement may be as important as agreeing on any particular standard – even if the definition is not perfect or set out in precise and comprehensive detail.

Once a poverty-level standard of living is defined, or a definition is provided as a starting assumption, the next stage is to 'operationalize' the definition. This step entails converting any given definition into an empirically observable set of goods and services, or behaviours. This is a task that is also possible to debate. One could, for example, agree with Sarlo's definition of a basic needs poverty-level standard of living, but disagree with his inclusion of, say, only six rolls of paper towels per year. Perhaps using half a roll of paper towels per month for a family with two children is a tad unrealistic?

Nevertheless this at least is a point upon which we could have a debate beyond simple assertion of our own instinctual correctness. Where we must work backwards, such as inferring an implicit definition of poverty from the operational details provided for the ALL, it is harder to have a sensible discussion about whether a specific item should be in or out.

Defining and operationalizing a poverty-level standard of living is not easy. Both take time and effort and neither necessarily results in a consensus. Nonetheless, doing so is required to measure poverty – whatever methodology is employed. Whether one is using an expenditure-based or a budget-based methodology, a first step is to define what it is that is being measured.

## *Methodologies for Measuring Adequacy*

### *Expenditure-based strategies*

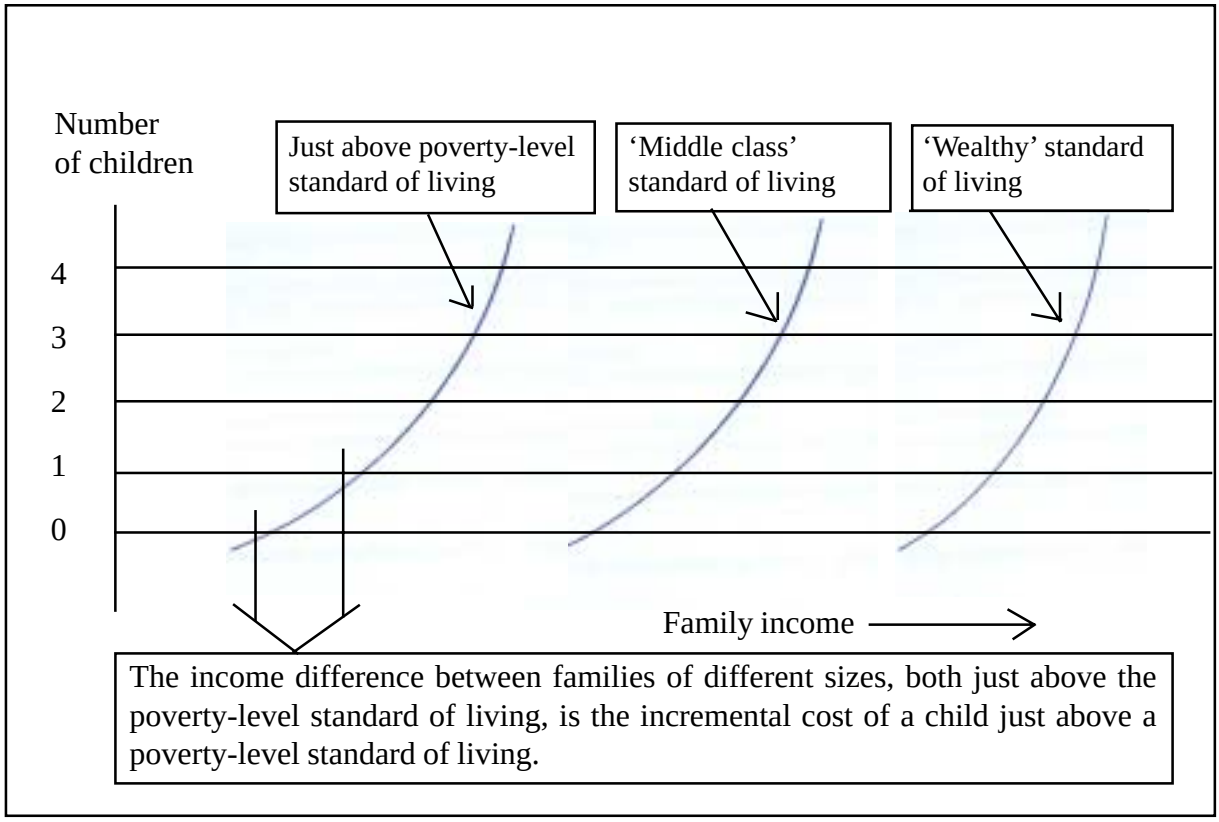
Expenditure-based methodologies use survey data on family expenditures to compare the incomes of families with different structures, while attempting to hold the standard of living constant. The amount of income needed to support a child at a given standard of living is equal to the difference in income between two families both at that given standard of living but otherwise identical, except that one of the families has a child or an additional child. The first challenge for expenditure-based methodologies is coming up with a credible means of deciding when different families have the same standard of living. The second challenge – a challenge not often recognized by those using this methodology – is to say what that standard of living represents. In regard to the measurement of poverty, this second challenge is to show that the standard of living being held constant between families is indeed just above the poverty level, assuming for the moment it is possible to hold the standard of living constant.

The income difference between families of different sizes, both just above a poverty-level standard of living, is the incremental cost of a child just above a poverty-level standard of living.

The simplest and oldest expenditure-based methodology is derived from the 19th century German statistician Ernst Engel's observation that the portion of income spent on food decreases as income rises. The inverse relationship of income to spending on food as a proportion of income is often called Engel's law. Based on this 'law,' it could be argued that the proportion of income a family spends on food can act as a quantifiable indicator of its standard of living. Using this indicator, families spending the same proportion of their income on food could be claimed to have the same standard of living.

While Engel's law theoretically could be used for any standard of living, we are here interested in just above the poverty level. So the next step would be to find a proportion of spending on food representing a just-above-poverty-level standard of living – say, for example, 30 percent (leaving aside for the moment how a particular percentage could be justified, which is the second challenge noted above). Survey data then would be used to create a sample of families, including information on each family's income and spending on food. The sample would be divided into sub-samples of families with the same structure – say, for simplicity, the same number of adults and children. A statistical analysis then could be done on each sub-sample to derive equations linking income and spending on food. The equations would be used to estimate the income level at which a 30

**Figure C**
**Illustration of expenditure-based methodology. Each curve represents families of different sizes with the same standard of living**




percent expenditure on food is most probable. This would be the 'poverty line' using this method, assuming that 30 percent expenditure on food is somehow associated with a just-above-poverty-level standard of living. The difference in poverty lines between families with a difference of one child but otherwise of the same structure, would represent the incremental income needed to keep a family out of poverty for each additional child – that is, an adequate child benefit. This is the most basic and simplified example of an expenditure-based methodology – the archetype, so to speak. Figure C illustrates this archetypical expenditure-based methodology.

This methodology remains in use today, but with a wider selection of goods than just food. Statistics Canada's low income cutoffs use almost exactly the methodology outlined above. Rather than reflecting just the proportion of family income spent on food, the low income cutoffs reflect the proportion spent on food, clothing and shelter. The low income cutoffs have been set to equal the income at which a family is likely to spend a share of its income 20 percentage points higher than the average family (of any size and structure) spends on food, clothing and shelter. Average family spending on food, clothing and shelter as a percentage of income is calculated based on family expend-

iture survey data. At present, Statistics Canada is using data from 1992 as its base, when average spending on food, clothing and shelter in that year was approximately 44 percent of after-tax income. So the after-tax low income cutoffs have been set where expenditures on food, clothing and shelter are 64 percent of after-tax income [Statistics Canada 2003]. A statistical analysis is then performed on the latest (2001) family income survey data to specify the income at which each of 35 categories of family, by size and location, spend 64 percent of their after-tax income on food, clothing and shelter. The result is 35 low income lines, as shown in Table 6 for the most recent data available, for 2003 [see Wolfson and Evans 1992 for a detailed discussion of the LICO methodology].

Statistics Canada has made it abundantly clear that the low income cutoffs are meant to be only a statistical measure of low income [Fellegi 1999] and are not produced by the agency to serve as Canada's official poverty lines, or to stand for any poverty lines at all – official or otherwise. Statistics Canada is not just playing coy with the advocacy community. As is discussed further below, Statistics Canada has good reason to suggest that the low income cutoffs are best seen as useful and consistent indicators of low income, which may be used to assess income distribution trends and patterns over time, but are not necessarily indicators of poverty *per se*. Nevertheless, despite Statistics Canada's protestations, and perhaps due mainly to the absence of an acceptable alternative, the low income cutoffs have come to be widely viewed as Canada's 'semi-official' poverty lines. Like it or not, the low income cutoffs are Canada's 'default' poverty lines and likely will remain so until Ottawa and the provinces make a sustained, adequately funded and well researched effort to develop better poverty lines.

**Table 6**
**After-tax low income cutoffs, 2003**

| Size of family unit | Community size | | | | |
|---|---|---|---|---|---|
| | rural areas | urban areas | | | |
| | | fewer than 30,000 | 30,000 to 99,999 | 100,000 to 499,999 | 500,000 and over |
| 1 | $10,718 | $12,389 | $13,558 | $13,771 | $16,348 |
| 2 | $13,079 | $15,118 | $16,544 | $16,803 | $19,948 |
| 3 | $16,542 | $19,120 | $20,924 | $210,252 | $25,230 |
| 4 | $20,603 | $23,814 | $26,061 | $26,469 | $31,424 |
| 5 | $23,028 | $26,616 | $29,127 | $29,584 | $35,122 |
| 6 | $25,453 | $29,418 | $32,193 | $32,699 | $38,820 |
| 7 or more | $27,878 | $32,220 | $35,259 | $35,814 | $42,519 |

Source: Statistics Canada 2003: 19.

If the low income cutoffs are seen as poverty lines, the incremental income required to maintain a family just at the poverty line when a child is added to the family may be roughly estimated by subtracting the low income cutoffs for a family of any given size from that with one more family member in each of the five locations defining the sub-categories. At the very best, this is an extremely broad approximation, as the low income cutoffs average all increments to family size, not just children, so the additional household income required to attain a cutoff for one more family member represents an 'average mixture' of adults and children. For example, a family of size three in the low income cutoffs may be one adult and two children, two adults and one child, or even three adults. At best, subtracting low income cutoffs of larger families from smaller families provides some ballpark indication of what an adequate child benefit might be if the methodology and its assumptions were used to estimate poverty lines.

Estimates derived by subtracting low income cutoffs for larger size from smaller size families are shown on Table 7. This table is provided only to show how this technique would be applied, and not to advocate the use of the derived estimates as measures of adequacy. Since there are considerably fewer single-parent families than two-parent families, the calculation has been limited to increments beyond family size two. It can be assumed that, in the majority of cases, the increment in family size beyond three represents the addition of a child. For this reason, these calculations – to the limited extent that they should be given any attention at all other than as a demonstration of a technique – are applicable only for two-parent families.

Taking account of all these provisos, this calculation results in a ballpark estimate of an adequate child benefit ranging from a low of $2,425 for the third and additional child in a rural area to a high of $6,194 for a second child in a large urban area. Since more than 80 percent of Canadian families live in urban areas of population 100,000 or higher and more than 80 percent of families with children have only one or two children at home, the range for most Canadian families is $4,449 to $6,194.

The after-tax low income cutoffs are used here, since after-tax income represents the income families actually have to spend. Note, however, that the definition of after-tax income covers only income taxes, not payroll taxes (i.e., Canada/Quebec Pension Plan contributions and Employment Insurance premiums) or consumption taxes such as the Goods and Services Tax. In general, if we use after-tax income to measure adequacy, it means that the child benefit has to be adequate after income taxes and transfers (meaning income payments from government programs) – i.e., we have to look at after-tax child benefits. Since the Canada Child Tax Benefit is not taxable, this does not matter for the purposes of this paper, but it could matter for other studies looking at issues of horizontal equity and alternative payment mechanisms.

One of the most prevalent criticisms of expenditure-based methodologies is that they reflect what families actually spend on their children, rather than what families *should* spend on their children to meet their children's needs. This critique is not valid. Expenditure surveys reveal a full range of spending by families. Among the families surveyed, virtually every possible spending pattern may be found. The

**Table 7**
**Estimates of adequate child benefits derived by using 2003 after-tax low income cutoffs**

| Increment in size of family unit | Community size | | | | |
|---|---|---|---|---|---|
| | rural areas | urban areas | | | |
| | | fewer than 30,000 | 30,000 to 99,999 | 100,000 to 499,999 | 500,000 and over |
| 3 less 2 | $3,463 | $4,002 | $4,380 | $4,449 | $5,282 |
| 4 less 3 | $4,061 | $4,694 | $5,137 | $5,217 | $6,194 |
| 5 less 4 | $2,425 | $2,802 | $3,066 | $3,115 | $3,698 |
| 6 less 5 | $2,425 | $2,802 | $3,066 | $3,115 | $3,698 |
| 7+ less 6 | $2,425 | $2,802 | $3,066 | $3,115 | $3,699 |

Source: Calculations by author from Statistics Canada 2003: 19.

problem facing an expenditure-based methodology is to pick one of those spending patterns as representing a particular standard of living (the second major challenge facing this methodology). As an example of an expenditure-based methodology, if the low income cutoffs are used as a poverty indicator, the challenge is to defend the selection of these particular income levels as most likely to result in a standard of living just above the poverty level.

Although, as noted, Statistics Canada does not suggest the use of its low income cutoffs as poverty lines, they are widely used as such by just about everyone else – including advocacy groups, politicians and the media, and even other government agencies. To the extent that the low income cutoffs are used as a poverty line, the assumption is being made implicitly that poverty is encountered at income levels where families are likely to spend a proportion of their income on food, clothing and shelter that is 20 percentage points or more above the average share. But why 20 percentage points? Why not 15 percentage points or 25 percentage points, or some other figure altogether?

As discussed previously, there must be a definition of a standard of living at the poverty level, before it can be measured. There is nothing about the expenditure-based methodology that prevents a standard of living at the poverty level from being defined; rather, the need to define a standard of living is a prior step that should happen *before* the methodology is used to measure what income permits a poverty-level standard of living.

But once a definition of poverty is established, a link needs to be drawn between poverty and the proposed measurement. Drawing this link *is* especially problematic, perhaps a logically insurmountable problem, within the expenditure-based methodology. In the case of

the low income cutoffs, advocates of using this measure as a poverty line need to show the 'average share of income spent on food, clothing and shelter plus 20 percentage points' would most likely lead to a standard of living that conforms to an acceptable definition of a just-above-poverty-level standard of living, or otherwise make the case that the 'average share of income spent on food, clothing and shelter plus 20 percentage points' represents a just-above-poverty-level standard of living. For example, taking one of the definitions of poverty noted in this paper, it would be necessary to show how a low income cutoff-level income usually would entail a 'low cost' standard of living.

This linkage has not been demonstrated in the case of the low income cutoffs – nor would we expect it to be done by Statistics Canada, since that agency does not advocate the measures be used for this purpose – but it is not at all clear *how* such a linkage could be achieved if one wanted to do so. There is nothing in the expenditure-based methodology itself to suggest a mechanism. Moreover, this is a problem for *any* attempt to use an expenditure-based methodology to define any given standard of living.

The link between a standard of living and a measurement of the standard must be established outside of the model itself. This is not a minor or technical criticism of the methodology: It goes to the core of the methodology. The question the methodology is being used to answer is: What income is required to attain at least a poverty-level standard of living? But the expenditure-based methodology must *assume* an answer to this question. The concept of 'measurement validity' in the social sciences is the "extent to which a measuring instrument adequately and accurately reflects the meaning of the concepts employed" [Hulchanski 1994: 3]. Expenditure-based methodologies do not pass this test of validity in so far as they purport to measure poverty. This is the second challenge facing this methodology.

Returning to the first challenge noted above, and equally fundamentally, how can we be confident that families spending a similar proportion of their income on food, shelter and clothing do indeed share a similar standard of living? Engel's law tells us that families spend a smaller proportion of their income on food (or in more modern terms, on necessities) as their income increases. But it does not follow from Engel's Law that two families of different sizes spending the same proportion of their income on food or necessities share the same standard of living, which is the underlying assumption behind use of the low income cutoffs or similar expenditure-based methodologies to measure a poverty line. Although all automobiles use more gas to go faster, it does not follow that all automobiles use the *same* amount of gas to go at any particular speed. This logical fallacy is implicit in jumping from Engel's law (or its modern equivalents) to the conclusion that families spending a similar proportion of their income on some mix of goods and services share the same standard of living.

There are also several issues warranting consideration that are specific to the use of low income cutoffs as poverty indicators. It is not at all evident why an average of *all* families' proportion of spending is relevant to each category of family. The threshold of 64 percent of after-tax income spent on food, shelter and clothing is derived by calculating the average share of spending of all families on these commodities and then adding 20 percentage

points. But why not calculate the average proportion of spending in each subcategory and then add 20 percentage points to that? This is an important methodological issue, as we can see if we imagine that Toronto and Vancouver were excluded from the family expenditure survey data. In that case, shelter costs on average would be much lower and consequently the average expenditure on food, shelter and clothing as a percent of average income (excluding Toronto and Vancouver) would be much lower.

So long as low income cutoffs are being used as a consistent way to measure income distribution and the changing extent of low income over time, it perhaps makes sense to use a single national average threshold. If the low income cutoffs are 'too high' for some areas, it does not matter in this regard as long as they are more or less consistently too high and we understand that we are using the lines only to infer general patterns of income distribution. For example, there might be many families in rural areas whose living standard would not seem especially difficult or impoverished, despite being below the low income cutoffs. Yet if there is an increase in the number of families below the lines in rural areas, or in the gap between average incomes and the low income cutoffs for many rural families, we can be reasonably certain that there has been an increase in low income, although the number of families in 'real' poverty might not be as represented by the low income cutoffs. But as soon as we employ the low income cutoffs as a poverty measure, the use of a national average threshold represents a serious problem. Put simply, the high cost of shelter in Toronto does not increase poverty in Brandon, and this is what is implied by the use of a single national average of spending on food, clothing and shelter.

A different problem of averaging occurs *after* the threshold (i.e., 64 percent) has been calculated – namely, the 'averaging' of adequacy estimates over various categories. Why do the low income cutoffs include these 35 categories, and not others? Included in the category of '500,000 and over' is both Winnipeg, with some of the lowest cost housing among urban areas in Canada, and Vancouver, with the highest cost housing (for this reason Quebec has developed its own adapted Quebec low income cutoffs). Setting aside momentarily the issue of the increment in family size in the low income cutoffs not necessarily representing the addition of a child, what about children of different ages? Do not older children cost more – because they have greater needs – than young children? Other issues about the specific composition of families will also affect what is adequate for them. For example, a family with two children aged 13 and 15 – one of whom is a boy and the other a girl – will need a bedroom for each of their children. Yet if a family had two boys aged 13 and 15 it would be acceptable for them to share a bedroom. So, does not the age and sex of the children have an impact on what is adequate for a family? The low income cutoffs take none of this into account. [See Wolfson and Evans 1992 for a technical discussion of these issues from the perspective of statistical analysis.]

This set of questions regarding 'averaging' is common to both the expenditure-based and the budget cost methodologies. As Saunders [1999: 66] says:

> There is no such thing as 'the' cost of a child (as we have also argued in another context above), even for a child of a given age and sex assumed to be living in a household at a given standard of living. The best that can be done is to produce estimates that are likely to be broadly applicable

to most circumstances and to be clear about how they are derived and what limitations apply to them.

Whatever methodology is used, there will always need to be some 'averaging' across categories. But there also needs to be some rationale for why certain categories are selected and not others, and why those categories are appropriate for the use to which the indicator is being put. To the extent that the low income cutoffs are used as a poverty indicator, it is not at all obvious what this rationale might be. In later sections of this paper, we review the rationale for specific forms of 'averaging' in developing a quantitative estimate for an adequate Canada Child Tax Benefit.

The 1995 US panel of the National Academy of Sciences recommended a form of poverty line that is in some ways similar to the Canadian low income cutoffs. The US panel recommended a poverty line constructed for a 'reference family' of two adults and two children consisting of a percentage of the median expenditure by families of that structure on food, clothing and shelter, times a multiplier. The multiplier was meant to account for additional necessities, such as personal hygiene items. While the panel did not recommend specific values for these parameters, it did derive what it saw as a reasonable range for these parameters. At the bottom of the range was 78 percent of median expenditure on food, clothing and shelter multiplied by 1.15. At the high end of the range was 83 percent of median expenditure on the three necessities multiplied by 1.25 times. The poverty lines also would be adjusted for geographic place of residence by an index of shelter costs across the US.

Poverty lines for other family structures are derived using equivalence scales, which are discussed further below. However, the US panel report does not explain why, if its methodology is valid for one structure of family, the same methodology should not be used for other family structures as well. If a percentage of the median spending on basic needs of a two-parent, two-child family is an indicator of poverty for that family structure, why should not a percentage of median spending of a one-parent, one-child family be an indicator of poverty for the latter? If so, why use equivalence scales?

Table 8 shows the values converted to 2003 Canadian dollars for an adequate child benefit based on the US panel's estimates of a high and a low range of new US poverty lines. These values are not adjusted for geographic location. Adjusting for geographic location is just a multiplication by an index that averages to 1.00; for example, multiply by 1.28 for New England or by 0.953 for Southern metropolitan areas of 250,000-500,000 [Citro and Michael 1995: 253].

The US panel's recommended poverty lines suffer from many of the same defects as the low income cutoffs. There is no justification for picking any particular percentage of median expenditure on food, clothing and shelter, so the panel's recommendations fail the second challenge noted above – to link the recommended poverty line to a standard of living just above the poverty line (or any standard of living at all). The panel rejects so-called 'expert' budgets because they involve judgements, but provides no alternative objective basis for selecting the values for its recommended methodology – other than the preference of politicians, which presumably can come out of thin air. Nor is there any compelling explanation for picking these three necessities. A dissenting comment asks: "What scientific basis exists for concluding

**Table 8**
**Estimates of an adequate child benefit for a family with two adults, derived from recommendations of the 1995 US panel on poverty measurement**

| Number of children | Low estimate | High estimate |
|---|---|---|
| 1 | $3,424 | $3,805 |
| 2 | $3,123 | $3,564 |
| 3 | $2,904 | $3,384 |
| 4 | $2,736 | $3,241 |
| 5 | $2,736 | $3,126 |

Source: Calculations by author from Citro and Michael 1995: 251, converted to 1992 C$ using Purchasing Power Parity from OECD historical series and updated to 2003 C$ using the Consumer Price Index historical summary from Statistics Canada, CANSIM II, table 326-0002 and Catalogue nos. 62-001-XPB and 62-010-XIB.

that food, clothing, and shelter are basic needs and health care or personal care services are not?" [Citro and Michael 1995: 387]. There is no answer to this question.

The US panel's recommendations also fail the first challenge noted above: There is no reason to suppose that all families at its poverty lines (whatever they would turn out to be when someone decided what percentage of median spending on food, clothing and shelter should be adopted) share the *same* standard of living, whether or not that standard of living is just above the poverty level. Much of the difference in poverty lines for these families is due to the 'equivalence scale' by which the poverty line of the reference family of two adults and two children is adjusted for other family structures. Sarlo too has adopted this US equivalence scale in his most recent work. The US panel's equivalence scales are discussed further below.

Overall, there is much in the voluminous report of the US panel that is of great value, but it does seem better at criticizing other approaches than in adopting an improved approach. Ironically, the very same criticisms it offers for rejecting other approaches to setting poverty lines are often applicable – sometimes more applicable – to its own recommended poverty lines. For example, many other approaches to poverty lines are dismissed because they involve judgements or are deemed to be subjective. However, as noted, the core of the new recommended approach demands deciding on an absolutely central value: What percentage of median spending on food, clothing and shelter represents a reasonable poverty line? The report offers little guidance upon which this critical judgement could be made and debated rationally beyond a few words loosely tossed off in the middle of a paragraph, cited above: that poverty amounts to "insufficient resources for basic living needs." If one politician makes the judgement that, say, 70 percent is the right number, why should not the next politician have the right to remake the judgement? Perhaps the second politician thinks the number should be

80 percent? In the end, the panel's recommended poverty lines seem at least as capricious as the ones they are meant to replace.

The US panel report is a case of the whole being less than the sum of its parts. The report reflects the conceptual confusion between measurement and definition that has plagued the field of poverty measurement, as well as the ultimate incapacity of expenditure-based methodologies to provide a basis for sound poverty lines.

### *Alternative survey-based methodologies*

The low income cutoff methodology is an instance of what are sometimes called 'ISO-PROP' methodologies [Watts 1977]. The low income cutoff methodology describes incomes which all share the same (whence 'iso') proportion (whence 'prop') of some type or types of expenditure. An ISO-PROP methodology is one that keeps some categories of spending constant as a proportion of income across families, to compare incomes among different families all of which have the same proportionate expenditure of income on those categories.

The low income cutoffs use the proportion of income spent on food, clothing and shelter; the original Engel curve used the proportion of income spent just on food; in Australia, Percival and Harding [2000] employ food at home, fuel and power, household non-durables for use inside the home, postal, telephone and telegram charges, and personal care products and services. Invariably, there is something arbitrary in the selection of a range of expenditures to utilize. Whatever expenditures are included, there is an assumption inherent in all ISO-PROP methodologies – at least to the extent that these measures are used as indicators for poverty – that a constant proportion of some type of expenditure reflects a similar standard of living. The US panel's poverty measures are not a classic ISO-PROP methodology, since the poverty lines for families other than two-adult, two-child families are derived from an equivalence scale rather than from independently derived estimates for other size families. However, many of the methodological problems remain the same.

As discussed above, to the extent that any ISO-PROP methodology purports to represent itself as measuring a standard of living, there needs to be evidence outside of an expenditure survey to show that a particular proportion of income devoted to a particular range of commodities represents both an *equal* standard of living among families spending their income in that way and a *particular* standard of living. If we know that two families each spend x percent of their income on A plus B plus C goods and services, does this imply that those two families share a similar standard of living and, if so, what is that standard of living? Does spending x percent on A plus B plus C mean that the families are each poor, or that they each enjoy a comfortable living standard, or could one be poor and the other comfortable? As argued above, there does not seem to be any way within the ISO-PROP methodology to answer these questions.

The extended linear expenditure system (ELES) is a more complex attempt to use expenditure survey data to estimate adequacy. Essentially, the ELES methodology uses econometric techniques to hold the 'utility' of families constant, rather than their standard of living, so as to quantify the contribution of *all* surveyed variables (not just those such as food and clothing) to differences in expenditure patterns among families and allow the 'pure' effect of

an additional child to be isolated. The claim is that the ELES can distinguish between spending incurred because of the preferences of families (whether or not they have a child) and spending patterns that occur just because they have an additional child.

From the perspective of measuring poverty, ELES suffers from a number of methodological problems. First, and most importantly, poverty is not a concept of the internally experienced well-being (utility) of a family; rather, it is a standard of living. As Amartya Sen eloquently puts it: "A grumbling rich man may well be less happy than a contented peasant, but he does have a higher standard of living than that peasant; the comparison of standard of living is not a comparison of utilities" [Sen 1983]. There may be many families that are poor but live happier lives than their wealthier counterparts; nevertheless poor, happy families are still poor.

Secondly, a consistent application of the microeconomic model used by ELES assumes that all decisions made by a family are done to maximize their utility, including the decision to have children. A consistently applied ELES model cannot calculate the additional cost of children, without also counting in the added utility of the children to the family deciding to have them in the first place. This may sound somewhat farfetched to the non-economist, but this is a serious problem in applying a thorough utility maximization assumption: Essentially, children cannot have a utility-diminishing cost, especially when the cost of information and so on is taken into account, else why did the family have them in the first place? Or to put it in another way, the only possible utility-diminishing cost of a child is the extent to which having the child was an unavoidable mistake on the parent's part! Finally, like the ISO-PROP methodologies, even if ELES can estimate the different costs of children to families enjoying the same utility (whatever that is), how can it say what that utility represents – which level of utility means a family is in poverty?

Summing up the results of her elaborate and careful applications of ELES methodology to Australian data, Valenzuela makes clear that her ELES based estimates of the cost of a child:

> …indicate how much parents actually spend on their children, even though the amount spent might be considered inadequate or excessive by some other standards. An alternative procedure for estimating costs of children is called the 'budget standards (or 'basket of goods') approach. (The 'basket of goods' approach is what we call in this paper the 'budget cost' methodology.)
>
> The basket of goods approach indicates how much parents ought to spend on their child…In this sense, it provides an 'ideal' or desirable costing. The estimates based on the basket of goods approach therefore provides answers to the question: 'What should be the cost of a child?'
>
> Estimates of child costs from these two alternative methods (ELES and basket of goods) are not comparable in that each one is intended to measure two different costs. The basket of goods approach clearly involves some normative judgement and is ideal for computing the minimum cost requirements for keeping children at acceptable standards of living. On the other hand, the demand system [ELES] approach indicates what is actually spent on children by households and families according to the expenditure behaviour of families. Because of their very nature, it would therefore not be surprising to see that estimates from these two approaches are not necessarily the same. Studies reveal that costs from the demand system approach tend to be lower on average compared with those estimates coming from the basket of goods approach.
>
> As a result of their basic differences, the cost estimates emanating from these two different

> approaches are used for different purposes. Budget standard estimates, for instance, would be more appropriate for the estimation of poverty lines while analysis of income distributions and related welfare [well-being] issues can be more properly performed using demand system estimates [Valenzuela 1999: 72].

### *Deprivation index-based poverty lines*

At a higher level of generalization, both the ISO-PROP and the ELES methodologies can be called 'ISO-WELFARE' strategies, because they attempt to keep some measure of family welfare constant across different family structures. What they all have in common is the missing link to a standard of living just above poverty, or another particular standard of living. Essentially, these methodologies attempt to use observable spending behaviour of families to infer their standard of living. They attempt indirectly to obtain information on families' standards of living, presumably making the implicit assumption that we cannot directly observe information on standard of living. But is this implicit assumption correct? Why not directly observe families' standard of living?

An alternative methodology turns the ISO-WELFARE strategy on its head: Rather than undertaking a survey of spending to determine the income most likely to result in a given standard of living (in this case, a just-above-poverty-level standard of living), instead undertake a survey of standard of living to determine associated income levels. Peter Townsend first developed this alternative methodology in depth in *Poverty in the United Kingdom* [1979]. The methodology has been extensively explored in the UK, although it does not appear that it has actually been used to generate poverty lines *per se*. As discussed above, the UK's new three-part measures of child poverty include a sophisticated set of indicators of deprivation, but do not relate these back to income.

Although the UK does not appear to have plans to use its survey of deprivation as a basis for estimating poverty lines, in the sense of income levels at which deprivation is likely, it would be relatively simple to do so. In outline, a methodology to derive poverty lines using a deprivation-based approach would consist of the following steps:

1. Define 'in words' a standard of living that is just above the poverty level, capable of being operationalized in a survey format. Operationalizing a standard of poverty might mean developing from that standard a 'list' of items without a certain number of which a family would be considered to be below the standard, as in Townsend's concept of relative deprivation. For example, there might be a dozen items judged to be part of a standard of living just above the poverty level, and a reasonable judgement might be that missing any four of these indicate a family is living in poverty. This is the same type of methodology that is used in the health field to define a number of conditions such as depression and chronic fatigue syndrome. In its child poverty measures, the UK has developed a set of surveyable goods and services, and is applying this technique, although it has done so without articulating the definition of a poverty-level standard of living.

2. Survey families to ascertain their consumption and expenditure patterns (as is already done in Canada through the Survey of Household Spending). See which families are doing without the needed items. The UK is doing this in a survey in 2004.

3. Use statistical techniques to link income levels to likelihood to be in poverty, as measured by the absence of a certain number of items on the deprivation index. In simplified form, this is a matter of regressing the sample of families, with income as the dependent variable and the deprivation indicators as the independent variables, for families of different structures. This should be easy to do in the UK after it completes its 2004 survey.

4. If there exists reasonable statistical reliability for the relationship, the result would allow an estimate of incomes likely, for various familial subcategories, to be just above a poverty-level standard of living. These estimates are the new poverty lines.

The deprivation-based derivation of poverty lines has a number of methodological and practical advantages. Fundamentally, it permits empirical and inexpensive (once the basic data has been gathered) investigation of issues regarding poverty. For example, it might turn out empirically that there is no reasonable statistical reliability in the relationship between income and deprivation – i.e., income is not a good indicator of likelihood to be in poverty. Although counterintuitive, the possibility of finding a non-relationship is a strong argument *in favour* of this methodology since the relationship between income and likelihood of a just-above-poverty-level standard of living is ultimately empirical. A good methodology should not, therefore, axiomatically assume that income is a reliable predictor of poverty, but instead should permit this to be an empirical finding (or otherwise) of research.

In respect of practical investigation of poverty issues, depending upon the survey sample size, it would be easy to 'drill down' to various categories of detail using a deprivation-based approach. For example, equivalence scales would be unnecessary since the data could readily be analyzed for families of different size and structure. Poverty lines for different size cities and geographic regions could be derived. Most importantly, it would be possible to investigate empirically the answers to new questions that may be needed to shed light on public policy issues; for example, whether housing tenure is a significant factor in likelihood to be poor. With current techniques, we know only that renters have lower incomes than owners. This tells us that renters are more likely to be poor, but it does not tell us whether a renter would just be a poor owner if they owned a house. The deprivation-based approach would allow us to see whether renters need a higher income than homeowners in order to attain a similar standard of living. In other words, would changing housing tenure – everything else being equal – change likelihood to be deprived?

To our knowledge, the use of a deprivation index in this manner has not been previously articulated, likely because of the persistent confusion between measurement and definition of poverty. The deprivation index has been seen as an *alternative* to income as away of measuring poverty, not as a way of measuring standard of living that can then be linked statistically to income levels most likely to result in a poverty-level standard of living.

A deprivation index methodology could be readily adopted for use in Canada. The Survey of Household Spending already asks several questions that could be used for this purpose, and it would likely not be too difficult to adapt this survey instrument. Using an existing survey mechanism will substantially reduce costs; in fact, the main incremental expense would be for research that, while not trivial, should not be prohibitive. So far as we know,

this alternative methodology has not been used in Canada, but it could at the very least be a useful addition to our understanding of poverty in our nation.

### *Budget cost strategies*

Budget cost strategies are much easier to understand than expenditure-based strategies. A budget cost strategy consists of defining a basket of goods and services necessary to achieve a given standard of living, and then determining how much the basket costs.

Given its intuitive clarity, it is not surprising that the earliest attempts rigorously to work out a poverty line employed a budget cost strategy. In his classic 1901 report *Poverty: A Study of Town Life*, Seebohm Rowntree developed a detailed schedule of necessities and then proceeded to cost these at local stores in the city of York (UK). Like expenditure-based methodologies, budget cost strategies must define a standard of living before they can compile a list of goods and services needed to attain that standard of living. In Rowntree's case, we would today see the standard of living he defined as the barest subsistence, perhaps just enough to keep the body sustained, and far below an acceptable just above-poverty standard of living. Indeed, Rowntree's living standard today might instead be considered as a (barely) sustainable state of extreme poverty.

Rowntree described the standard of living that his minimal budget would enable as follows:

> A family living upon the scale allowed for in this estimate must never spend a penny on railway fare or omnibus. They must never go into the country unless they walk. They must never purchase a halfpenny newspaper or spend a penny to buy a ticket for a popular concert. They must write no letters to absent children, for they cannot afford to pay the postage. They must never contribute anything to their church or chapel, or give any help to a neighbour which costs them money. They cannot save, nor can they join a sick club or trade union, because they cannot pay the necessary subscriptions. The children must have no pocket money for dolls, marbles, or sweets. The father must smoke no tobacco nor drink beer. The mother must never buy any pretty clothes for herself or her children, the character of the family wardrobe, as for the family diet, being governed by the regulation: 'Nothing must be bought but that which is absolutely necessary for the maintenance of physical health, and what is bought must be of the plainest and most economical description.' Should a child fall ill it must be attended by the parish doctor; should it die, it must be buried by the parish. Finally, the wage earner must never be absent from work for one day [Rowntree 1901: 133-134].

There are two reasons for citing this lengthy extract from Rowntree's early groundbreaking work. First, it illustrates clearly that a budget cost approach is not, as is sometimes claimed, an 'absolute' poverty measure (while expenditure-based methodologies are often described in contrast as 'relative'). An absolute poverty measure is conceived as a timeless and socially detached measurement of minimum required necessities, which would be as accurate in 500 BC Mesopotamia as 1700 London and 2005 Toronto. If there is any such thing, it perhaps consists of some minimum caloric count and provision for shelter of some kind, although it would be impossible to recreate the method of obtaining those calories and the nature of shelter in the modern world. Indeed, as life expectancy and 'health expectancy' have changed, a diet just sufficient to allow a body to survive for another day, likely to die at about age 40, is not acceptable as a minimum standard in today's world. Even if there were such an

absolute standard, it would only be of anthropological interest and would not be relevant to planning a contemporary income security system.

Deciding what items need to be included in a budget is a normative decision-making process about what are acceptable standards in today's society – a point also made by Sarlo. Social standards change, partly because of expectations, but partly as well due to concrete and objective changes in the economy.

In the immediate post-war period, few families had telephones and refrigerators. Now both a telephone and refrigerator are unarguable necessities. It is not that it was impossible to live without a telephone 200 years ago. There was no such thing as a telephone and consequently society used other modes of communication. But since the telephone has become ubiquitous, the alternative modes of interpersonal communication that had been used to accomplish what the telephone now accomplishes (e.g., twice daily mail delivery) have all but disappeared, so not having a telephone now results in extreme isolation. Similarly, before everyone had refrigerators, food distribution was organized on the assumption that households could store perishable food for only a very limited time. Grocery stores were always close by and systems such as daily bread and milk home delivery were in place. The iceman delivered blocks of ice. These alternative systems are now gone, and anyone without refrigeration will have immense difficulty maintaining a healthy diet.

Rowntree's poverty-level standard of living is not absolute, as it is very much rooted in its time and place. His poverty-level standard of living is unacceptable in a modern developed country, whatever one's political inclination. No one with a serious interest in public policy could propose Rowntree's standard of living as representing even a sustainable poverty level today – it is certainly much less generous than, for example, Sarlo's 'basic needs' definition of a poverty-level standard of living. Thus the citation from Rowntree nicely illustrates the relativity of the budget cost strategy.

As is diagrammatically illustrated in Table 9, both methodologies for estimating the income needed to attain just-above-poverty-level standards of living are usually relative. The distinction between methodologies is not that of a relative versus an absolute poverty line, as commonly stated. In fact, the distinction between 'relative' and 'absolute' is not particularly relevant in a modern context.

The second reason for citing Rowntree is to illustrate that a clear definition of a just-above-poverty-level standard of living is also needed using a budget cost approach. A budget is just another way to associate an income level with a living standard. It does not in itself tell us what any given living standard represents. We could use the budget cost approach to estimate the income needed for any living standard, from the most luxurious to the most constrained. In an application of a budget cost strategy, the failure to define explicitly the standard of living that is meant to be achieved by the budget means that there is no reference point from which to arbitrate whether a specific item should be included within the budget or not. The failure to define explicitly the standard of living being targeted also decreases the likelihood of consistency in the selection of items for inclusion in the budget, or even to know whether there is consistency.

Should the budget include a modest suit or equivalent more formal clothes for a man or a woman? Should the budget include the

**Table 9**
**Relative and absolute concepts of poverty versus methodologies to estimate income needed to attain just above a poverty-level standard of living**

| | Relative | Absolute |
|---|---|---|
| Expenditure-based | Reflects current expenditure patterns, which are based on current living standards. | None. |
| Budget cost | Any realistic budget will need to be updated from time to time to reflect current living standards. | Minimum needs to sustain existence without immediate deterioration in physical health. |

modern equivalent of Rowntree's "penny to buy a ticket for a popular concert?" How could one decide on these questions without reference to some description of what standard of living the budget is meant to represent? If mere survival is the goal, any clothing will do and entertainment is not needed. If social participation – including employment – is the goal, then alternative clothing and some limited forms of entertainment are needed.

The argument made by the US panel (cited above) against what it calls, somewhat disparagingly, 'expert budgets' is both correct and incorrect. The panel is correct in concluding that expert budgets require normative judgements, are relative to the norms of society at a given time and cannot be based on pure science, so that in this sense the budget methodology is neither absolute nor objective. But the US panel is wrong in rejecting the budget methodology on these grounds. Every methodology is going to require some judgement, since the concept of a living standard just above the poverty level is fundamentally one of judgement. However, the judgements inherent in compiling a budget can be rationally debated if the assumptions are made clear, and there is no reason to reject this particular methodology based on its lack of objectivity.

As previously discussed, Sarlo does provide a definition of poverty as meeting basic needs for long-term physical well-being. While one may disagree with Sarlo's definition of poverty, it is possible to discuss whether 'basic physical needs' should include a 'penny to buy a ticket for a popular concert.' Similarly, as another example, the Australian low cost standard could form the foundation for the development of a budget to estimate the income required to support a family at a poverty-level standard of living. The Australian low cost standard certainly would include the modern equivalent of Rowntree's 'penny,' while Sarlo's would likely not. Deciding what to include in the basket will still require normative judgement, but at least with a stated definition there will be some rational basis upon which to argue that a given item ought or ought not to be included.

Sarlo's poverty line is based on a market basket approach. It should be possible to calculate the resulting 'adequate child benefit'

according to Sarlo's poverty lines by subtracting the poverty lines for families of each increment size one. However, in his 2001 study, Sarlo uses equivalence scales adopted from the US 1995 panel study rather than actually calculating a budget for each family size. (Equivalence scales and their implications are discussed further below.) By using the US panel's equivalence scales, Sarlo has imported a hybrid assumption into his market basket approach, so that only his reference family of four reflects a true budget cost strategy. As well, Sarlo does not specify whether the increments in family size are due to an additional adult or child, so we can only infer a general estimate, assuming that most increments are for an additional child.

Taking account of the above provisos, Table 10 calculates what an adequate child benefit would be based on Sarlo's poverty lines, updated from the year 2000 to 2003 using the Consumer Price Index. The values for at least the first two children are substantially higher than today's Canada Child Tax Benefit.

The ALL from Winnipeg is also a budget cost approach to poverty lines. However the ALL poverty lines are not calculated for different size families in such a way as to make it possible to extract an estimate of an adequate child benefit; the gradations by family size are not increments by number of children. Therefore we cannot use the current ALL poverty lines to estimate adequacy levels, though perhaps ALL might in future updates be able to undertake a review of various family sizes where the incremental difference is just one child. If so, these detailed family budgets would be a helpful reference to ground future work on child benefit adequacy.

### *The Market Basket Measure*

Like Australia, the UK and the US, Canada's governments have recently shown interest in an improved way of measuring poverty. The Market Basket Measure was developed by Human Resources Development Canada in consultation with a federal-provincial/territorial working group of research officials, and with data collection by Statistics Canada.

**Table 10**
**Adequate child benefit according to Sarlo's basic needs poverty lines, in 2003 dollars**

| Family size | Sarlo's poverty lines | Adequate child benefits |
|---|---|---|
| 2 | $15,006 | |
| 3 | $18,238 | $3,233 |
| 4 | $21,510 | $3,271 |
| 5 | $23,928 | $2,418 |
| 6 | $26,509 | $2,582 |

Source: Calculated from Sarlo, 2001 Table 5: 17 and updated to 2003 C$ using the Consumer Price Index historical summary from Statistics Canada, CANSIM II, Table 326-0002 and Catalogue nos. 62-001-XPB and 62-010-XIB.

The Market Basket Measure is the only attempt in the last several decades by governments in Canada to find a poverty measure that they can use to track progress in addressing poverty – notwithstanding the denials that the Market Basket Measure represents an 'official poverty line' [Human Resources Development Canada 2003]. The Market Basket Measure is therefore an important milestone in social policy, if only because Canada's governments have finally recognized the need to measure poverty in some meaningful manner.

Overall, the Market Basket Measure is a creative and valuable attempt to construct a credible poverty measure using a budget cost methodology. However, as might be expected in the first round of developing a new indicator, there remains much work before the Market Basket Measure becomes a well-established indicator that can be used with confidence. Since the question that is the subject of this report – 'What is an adequate child benefit?' – essentially comes down to developing an acceptable poverty line, and because of the Market Basket Measure's importance as the first and only government-endorsed attempt to develop a new indicator that could be used to measure poverty, the Market Basket Measure is the focus of much of the remainder of this report. The analysis here may contribute to an improved Market Basket Measure.

The Market Basket Measure is described as a 'goods and services' measure as opposed to Statistics Canada's Low Income Measure (one-half of median income), which is described as a relative measure [Human Resources Development Canada 2003: 2]. However, *all* relevant measures of low income or poverty are 'relative' to contemporary living standards, as we have seen. As well, it is clear that the Market Basket Measure is not an absolute measure, assuming there is such a thing, as it contains much more than a bare minimum to survive:

> The market basket on which the Market Basket Measure is based includes specified quantities and qualities of goods and services related to food, clothing and footwear, shelter, and transportation. It also contains other goods and services such as personal and household needs, furniture, telephone service and modest levels of reading, recreation and entertainment (e.g. newspaper and magazine subscriptions, fees to participate in recreational activities or sports, video rentals, tickets to local sports events) [Human Resources Development Canada 2003: 4].

The Market Basket Measure discussion continues the long tradition in poverty research of confusing the distinction between 'relative versus absolute' with 'expenditure based versus budget based.' In fact, the Market Basket Measure is a budget-based measure, but is also relative to existing living standards – as must be any meaningful poverty measure.

Having claimed to be non-relativistic, the Market Basket Measure's designers perhaps felt they did not need to base it on any explicit living standard. Although it is clear from the context that the Market Basket Measure is meant to provide a budget adequate for a living standard just above the poverty level, the living standard that it is measuring is never actually described but remains implicit. Instead, the Market Basket Measure is said "to complement other tools to assess low income such as the low income cutoffs and the Low Income Measure. It is not an official poverty line..." [Human Resources Development Canada 2003: 2]. How is it known *a priori* that the Market Basket Measure is a measure of low income rather than, say, of upper-middle income? The answer is

that "As defined by the Market Basket Measure a person in low income is someone whose … income falls below the cost of the goods and services in the Market Basket…" [Human Resources Development Canada 2003: 4]. This is circular reasoning at its best, and does not help in understanding what it is that the Market Basket Measure is really attempting to measure.

Appendix 2 summarizes the living standard assumptions made for each category of item in the Market Basket Measure. A review of these items shows that they are not consistent in representing a given living standard. For example, the shelter budget is said to "ensure a decent quality of housing even in areas where there is a limited supply of available low-cost housing" [Human Resources Development Canada 2003: 40]. In the case of clothing and footwear, it was found that "Just over half of all families of two adults and two children in Winnipeg spent more on clothing and footwear than did the reference family purchasing only the items in the ALL (the accepted list for the Market Basket Measure) clothing and footwear basket. This represents a standard somewhat above that aimed for by the Market Basket Measure" [Human Resources Development Canada 2003: 39]. Presumably this means that many more than half of families should be expected to spend more than the standard "aimed for by the Market Basket Measure." We are not told what standard the Market Basket Measure is aimed at, but whatever standard the developers had implicitly in mind, it is by implication one that many more than half of Canadians would be above.

Overall, the Market Basket Measure would be a stronger and more useful contribution if it were based on an explicit description of a living standard. This would allow knowledgeable debate to occur as to whether the Market Basket Measure indeed represents a reasonable just-above-poverty-level living standard for Canada. An explicitly stated standard of living also would give some basis for sensible discussion about whether some items ought or ought not to be included. Without such a standard, inclusion or exclusion appears to be a matter only of opinion or taste.

Equally important, an explicitly described standard of living can be used as a basis for maintaining the Market Basket Measure over the long term. If the Market Basket Measure is to be a useful measure for the next several decades, it will have to cope with changing community standards of what is necessary – which is another reason why current confusion about the Market Basket Measure not being a relative standard must be clarified. To do so will require a consistent reference to a living standard that can be measured over time. It may be that a cellphone and access to the Internet will someday be seen as necessary as today's refrigerator and wired telephone. If future (or current) decisions about what to include and exclude in the Market Basket Measure are not to be arbitrary, these decisions need to be justified on the basis of meeting an explicit standard of living.

Basing the Market Basket Measure on an explicit standard of living does not necessarily mean that the standard of living chosen has to be called a just-above-poverty-level standard of living. It can just be called a low cost standard or given some other innocuous name, if governments are too shy to call the Market Basket Measure what it really is. However, this would represent an excess of caution on the part of government agencies. The Market Basket Measure *is* meant to provide a just-above-poverty-level standard of living; if a living standard is expli-

citly chosen, it should be recognized as a poverty standard.

If we accept the Market Basket Measure as the best and most current example of a Canadian budget cost methodology, what does it imply for the level of adequate child benefits? As discussed previously, the logical method for determining child benefit adequacy is to calculate the difference in Market Basket Measure-required income between two families, where the families are structured the same except that one family has an additional child. In other words, the difference in budgets between differently sized families is the estimate of the incremental cost of a child according to the Market Basket Measure. The Australian literature refers to this as the 'difference method.' This method:

> estimates the costs of children by taking the difference in the budget standards for households with and without children, or with different numbers of children. Thus, for example, the cost of the first child is estimated by taking the difference between the budgets of a couple with one child and a couple with no children (or as the difference between a sole parent with one child and a single person). The great advantage of the difference method is simplicity; once the budgets have been derived it is straightforward to take differences to estimate the costs of children [Percival and Harding 2000: 82].

Regrettably, the difference method cannot be applied to the Market Basket Measure, for the simple reason that the Market Basket Measure budget has been calculated only for one 'reference family' consisting of "one male and one female adult aged 25-49 with two children, a girl aged 9 and a boy aged 13" [Human Resources Development Canada 2003: 35]. Thus we have no Market Basket Measure budget for a similar family with, say, only a daughter. To calculate the budget for other size families, the existing Market Basket Measure instead uses 'equivalence scales.'

The Market Basket Measure uses the equivalence scales adopted by Statistics Canada for the Low Income Measure. The Low Income Measure is another measure of low income based on half of median family income. The Low Income Measure is often used in international comparative studies because it is relativized to each country's currency and median income. Statistics Canada's Low Income Measure equivalence scales are: 1.0 for the oldest person in the family, 0.4 for the next oldest, 0.4 for any additional family members over 16 years of age, and 0.3 for any additional family members under 16 years of age. Thus the Market Basket Measure reference family has a weighting of 1.0 + 0.4 + 0.3 + 0.3 = 2 according to the Statistics Canada Low Income Measure equivalence scales [Human Resources Development Canada 2003: 34].

The next section discusses this and other equivalence scales in detail. There are, as we shall see, some serious doubts about using the Low Income Measure equivalence scales. However, for the time being using these equivalence scales, the Market Basket Measure results in the adequacy levels for child benefits set out in Table 11.

The estimates of adequacy range from a low of $3,177 for a child under 16 in small Quebec cities, to a high of $5,750 for a child over 16 in BC towns under 30,000 in population. This is quite close to the levels derived using the low income cutoffs – $3,463 for first children in rural areas to $6,194 for a second child in a large urban area.

**Table 11**
**Estimate of adequate child benefits based on the**
**Market Basket Measure and Low Income Measure equivalence scales**

| Community/community size | Child over 16 | Child under 16 | Sole parent supplement |
|---|---|---|---|
| Newfoundland & Labrador Rural | $ 5,111 | $ 3,833 | $ 1,278 |
| Newfoundland and Labrador <30,000 | $ 5,256 | $ 3,942 | $ 1,314 |
| St. John's CMA | $ 4,819 | $ 3,614 | $ 1,205 |
| PEI Rural | $ 4,714 | $ 3,536 | $ 1,179 |
| PEI <30,000 | $ 4,931 | $ 3,698 | $ 1,233 |
| Charlottetown CA | $ 5,087 | $ 3,815 | $ 1,272 |
| Nova Scotia Rural | $ 5,036 | $ 3,777 | $ 1,259 |
| Nova Scotia <30,000 | $ 5,086 | $ 3,814 | $ 1,271 |
| Nova Scotia 30-99,999 | $ 4,666 | $ 3,500 | $ 1,167 |
| Halifax CMA | $ 4,921 | $ 3,691 | $ 1,230 |
| Sydney CA | $ 4,521 | $ 3,391 | $ 1,130 |
| New Brunswick Rural | $ 4,860 | $ 3,645 | $ 1,215 |
| New Brunswick <30,000 | $ 4,926 | $ 3,695 | $ 1,232 |
| Fredericton CA | $ 4,788 | $ 3,591 | $ 1,197 |
| Saint John CMA | $ 4,447 | $ 3,335 | $ 1,112 |
| Moncton CA | $ 4,588 | $ 3,441 | $ 1,147 |
| Québec Rural | $ 4,632 | $ 3,474 | $ 1,158 |
| Québec <30,000 | $ 4,652 | $ 3,489 | $ 1,163 |
| Québec 30,000-99,999 | $ 4,236 | $ 3,177 | $ 1,059 |
| Québec 100,000-499,999 | $ 4,359 | $ 3,270 | $ 1,090 |
| Québec City CMA | $ 4,431 | $ 3,323 | $ 1,108 |
| Montréal CMA | $ 4,488 | $ 3,366 | $ 1,122 |
| Ontario Rural | $ 5,023 | $ 3,768 | $ 1,256 |
| Ontario <30,000 | $ 5,018 | $ 3,764 | $ 1,255 |
| Ontario 30,000-99,999 | $ 4,612 | $ 3,459 | $ 1,153 |
| Ontario 100,000-499,999 | $ 4,908 | $ 3,681 | $ 1,227 |
| Ottawa CMA | $ 5,301 | $ 3,975 | $ 1,325 |
| Hamilton CMA | $ 4,749 | $ 3,562 | $ 1,187 |
| Toronto CMA | $ 5,469 | $ 4,101 | $ 1,367 |
| Manitoba Rural | $ 4,586 | $ 3,440 | $ 1,147 |
| Manitoba <30,000 | $ 4,827 | $ 3,620 | $ 1,207 |
| Brandon CA | $ 4,349 | $ 3,262 | $ 1,087 |
| Winnipeg CMA | $ 4,550 | $ 3,413 | $ 1,138 |
| Saskatchewan Rural | $ 4,647 | $ 3,486 | $ 1,162 |
| Saskatchewan <30,000 | $ 4,844 | $ 3,633 | $ 1,211 |
| Saskatchewan 30,000-99,999 | $ 4,332 | $ 3,249 | $ 1,083 |
| Saskatoon CMA | $ 4,563 | $ 3,422 | $ 1,141 |
| Regina CMA | $ 4,488 | $ 3,366 | $ 1,122 |

| | | | |
|---|---|---|---|
| Alberta Rural | $ 4,902 | $ 3,676 | $ 1,225 |
| Alberta <30,000 | $ 5,144 | $ 3,858 | $ 1,286 |
| Alberta 30,000-99,999 | $ 4,735 | $ 3,552 | $ 1,184 |
| Edmonton CMA | $ 4,714 | $ 3,536 | $ 1,179 |
| Calgary CMA | $ 4,836 | $ 3,627 | $ 1,209 |
| | | | |
| BC Rural | $ 5,675 | $ 4,256 | $ 1,419 |
| BC <30,000 | $ 5,750 | $ 4,313 | $ 1,438 |
| BC 30,000-99,999 | $ 5,378 | $ 4,034 | $ 1,345 |
| BC 100,000-499,999 | $ 5,327 | $ 3,995 | $ 1,332 |
| Vancouver CMA | $ 5,558 | $ 4,169 | $ 1,390 |

Note: Sole parent supplement is for sole parents whose oldest child is under 16, reflecting the Low Income Measure equivalence scale weighting of 0.4 rather than 0.3 for these children.

Source: Human Resources Development Canada (2003), calculations by author.

In general, the budget cost strategy is an appropriate and accessible methodology for estimating adequate child benefits. The Market Basket Measure is the most recent Canadian instance of a budget cost strategy. An alternative methodology based on a 'deprivation index' – a survey of living standards – also would be appropriate for delineating income levels associated with a poverty standard, and therefore allowing us to calculate the level of an adequate child benefit. However, a survey of living standards has not been done, and so far as we know, has not been considered among Canada's strategies to define poverty lines. On the other hand, the Market Basket Measure exists and plans may be in place to continue and improve the measure over time. The next section therefore focuses mainly on the Market Basket Measure and how it can be refined and improved to derive more credible estimates of adequacy in the future.

### *Critical Issues in the Use of the Market Basket Measure to Estimate an Adequate Child Benefit*

#### *Equivalence scales*

Equivalence scales are a set of ratios for families of different sizes whereby it is hypothesized that one can hold living standards constant among different size and structures of families by applying those ratios. Equivalence scales are:

> "measures of the relative incomes needed by different types of families to attain a similar standard of living. Equivalence scales are usually expressed as a set of numbers; some arbitrarily chosen family or household type is taken as the base and its value is set equal to 1.0. Other family types are then expressed as a proportion of this base. For example, if the benchmark is taken to be a married couple without children, then to determine that the factor for a single individual is 0.60 implies that a single individual needs only 60 percent of the of the income of a married couple to be as well off as they are" [Whiteford 1985: 1].

The Market Basket Measure uses Statistics Canada Low Income Measure equivalence scales to derive budget estimates for families other than the reference family of two adults and two children. As noted previously, the Low Income Measure equivalence scales are: 1.0 for the oldest person in the family, 0.4 for the next oldest, 0.4 for any additional family members over 16 years of age and 0.3 for any additional family members under 16 years of age.

How was the Low Income Measure equivalence scale developed? If we apply the Low Income Measure equivalence scale to the Market Basket Measure budget for a representative family of two adults and two children, can we be confident that this will result in an accurate estimation of the income required for families of differing sizes and structures to achieve approximately the same standard of living as the representative family? Is use of this equivalence scale methodologically consistent with a budget cost strategy?

According to Statistics Canada:

> "For the Low Income Measures, in keeping with the principle of simplicity and conspicuously arbitrary choices, each additional adult is assumed to increase the family's 'needs' by 40% of the 'needs' of the first adult, and each child's 'needs' are assumed to be 30% of that of the first adult. Other values could just as easily have been chosen ... The values of 40% and 30% seemed to be in the general range of most other estimates" [Statistics Canada 1999: 10].

A "conspicuously arbitrary" assumption, in the general range of other estimates, when "other values could just as easily have been chosen," is *not* a solid foundation upon which to extend the Market Basket Measure beyond the representative family.

Developing an equivalence scale entails exactly the same methodological issues, and employs the same expenditure-based or budget cost strategies, as does the issue of poverty lines. As the US panel argued: "If one is going to calculate the cost of the children from the data, one must compare families of different types but at the same level of living. That is, in order to calculate measures of the cost of the children, or, indeed, of the extent of household economies of scale (i.e., equivalence scales), one must have some procedure for knowing when two families of different types are equally well off; only in that way will a comparison of their expenditure patterns reveal what is the cost of the children or the extent of economies of scale" [Citro and Michael 1995: 169].

The Market Basket Measure's reliance on an arbitrary equivalence scale does not at all provide 'budget cost' based estimates of income needs consistent with the methodology or objectives of the Market Basket Measure, and undermines its usefulness to estimate child benefit adequacy. Nor does the claim that the Low Income Measure equivalence scales are consistent with international practice – which has purportedly converged towards the equivalence scales used by the OECD, namely the square root of family size – provide much comfort [Human Resources Development Canada 2003: 35].

First, the Low Income Measure equivalence scales are not the same as the square root of family size, as can be seen in Table 12. The Low Income Measure equivalence scales result in different poverty lines than does the square root of family size and, consequently, different adequacy estimates for child benefits, especially for larger families, as can be seen on Table 13. The differences are more than merely trivial.

Second, there is not a consensus at an international level; for example, the US panel study rejected the OECD equivalence scales. The UK is using the so-called modified OECD equivalence scale for its child poverty measures, not the unmodified OECD equivalence scales referred to in justifying the equivalence scale actually used for the Market Basket Measure. However, it turns out that the modified OECD scale is not even an OECD scale! The 'modified OECD equivalence scale' is a name used by Eurostat for its use of this equivalence scale [Eurostat 1999]. The OECD generally continues to use the square root of family size. So much for international consensus.

More importantly, the very concept of an invariable equivalence scale across national economies is dubious. As Whiteford [1985] points out, there is no reason at all to suppose that equivalence scales would remain constant across countries with dramatically differing cost structures, notwithstanding the fact that equivalence scales are routinely used for international comparative purposes. Relative prices for food, shelter and transportation vary hugely across national economies, and even within national economies. Why would we expect the economies of scale for households in New York or London, where shelter costs are immense, to be the same as for rural Greece or Southern Italy, where shelter costs are much less, and all food prices are very different? Indeed, why should the economies of scale be the same for Toronto households as for Brandon households?

Equivalence scales are great time-saving devices for people doing comparative analysis of income distribution, but they do not make intuitive sense as a means of comparing poverty across different countries or even within countries. Like the consensus that heavier objects fall faster than lighter objects, widespread agreement on the use of equivalences scales – if not which scales to use – has been facilitated by the lack of any serious attempt at empirical validation.

Table 12 shows selected equivalence scales based on various methodologies. The Low Income Measure is the equivalence scale on row A of Table 12. The Low Income Measure equivalence scale is, as we have seen, arbitrary. The equivalence scale on row B of Table 12 is the square root of household size, which was the 'unmodified' OECD equivalence scale. There is no independent validation for the 'square root of household size' equivalence scale. As Whiteford says, the 'square root of household size' equivalence scale "has no inherent attractions, except to those who believe in the philosophical theories of Pythagoras" [Whiteford 1985: 102]. In any case, as noted previously, there is no reason to think that equivalence scales in Europe should be the same as in Canada, since relative prices for items such as food and rent are so different in Europe than in Canada (let alone variation within Canada). Following the unmodified OECD equivalence scale is the supposed *modified* OECD equivalence scale, on row C, which the UK is using for its child poverty measures.

The after-tax low income cutoff equivalence scale, row D, is derived from the after-tax low income cutoffs using the same methodology as in the discussion of ISO-PROP adequacy levels. While this equivalence scale at least has the advantage of not being entirely arbitrary, it suffers from the qualifications noted in the discussion of low income cutoffs in the previous section.

The Phipps equivalence scale, row E, is also non-arbitrary. Phipps derives her equivalence scale using a linear expenditure model

on Canadian household spending data. But the Phipps scale may not be especially useful for poverty research; among other problems, her scale is derived from all households' spending (rich, poor and in between) and assumes that there is a constant equivalence for families of all incomes. This is highly counterintuitive. It assumes that if two adults with $20,000 income require an additional $5,000 to be equally well off with the addition of a child, then two adults with $100,000 income require $25,000 to be equally well off with one additional child. At best, the Phipps scale is likely to underestimate equivalences for low-income families, because it is based on spending of Canadians at all incomes. At worst, the scale exhibits all the previously discussed problems of the linear expenditure model. (Other equivalence scales also entail the questionable implication that the various ratios are the same for all income groups. But the Phipps and similarly derived equivalence scales have the added deficit of building this assumption into their methodology in order to *derive* the equivalence scale in the first place.)

The equivalence scale on row E of Table 12 is the scale adopted by the US panel study, which is also the scale used by Sarlo. The study rejected the square root equivalence scale because, as noted above, "one must have some procedure for knowing when two families of different types are equally well off" and the project could not validate such a claim with respect to the unmodified OECD scales. Unfortunately, as in much else of the US panel study, after producing a trenchant critique of others' work, the panel then proposes its own equivalence scales that are subject to exactly the same critique.

The US panel describes its recommended equivalence scale as follows:

> We propose that poverty thresholds for different family types be developed by applying an

**Table 12**
**Comparison of various equivalence scales**

| | Adult 1 | Adult 2 | Child 1 | Child 2 | Sole parent supplement |
|---|---|---|---|---|---|
| A. Statistics Canada Low Income Measure | 1 | 0.4 | 0.3 | 0.3 | 0.1 |
| B. OECD square root of household size | 1 | 0.41 | 0.32 | 0.27 | 0.1 |
| C. 'Modified OECD' scale (child under 14) | 1 | 0.5 | 0.3 | 0.3 | 0.2 |
| D. Low income cutoff equivalences | 1 | 0.22 | 0.32 | 0.38 | -0.09 |
| E. Phipps, Canada | 1 | 0.4 | 0.22 | 0.17 | 0.18 |
| F. US panel (two adults) | 1 | 0.62 | 0.38 | 0.36 | 0.24 |
| G. Townsend, UK | 1 | 0.41 | 0.24 | 0.22 | 0.17 |
| H. Saunders, Australia | 1 | 0.4 | 0.39 | 0.42 | 0.01 |

Note: The sole support supplement is the difference between the amount for the first child and the second adult, on the assumption that this would be a supplement for sole parents.

Sources: Human Resources Development Canada 2003; Saunders 1999; Phipps 1998; Whiteford 1985; Citro and Michael 1995; various calculations by author.

explicit scale to the reference family poverty threshold. The scale should distinguish the needs of children under 18 and adults but not make other distinctions by age; the scale should also recognize economies of scale for larger families. A scale of this type is the following: scale value = $(a + pk)^f$, where 'a' is the number of adults in the family, 'k' is the number of children, each of whom is treated as a proportion 'p' of an adult, and 'f' is the scale economy factor. The formula calculates the number of adult equivalents (a+pk) and raises the result to a power f that reflects economies of scale for larger families. We recommend values for both 'p' and 'f' near 0.70; to be specific, we recommend setting 'p' at 0.70 (i.e., each child is treated as 70% of an adult) and 'f' in the range of 0.65 to 0.75. To calculate the actual thresholds, the ratio of the scale value from the formula for each family type to the value for the reference family type is applied to the reference family threshold" [Citro and Michael 1995: 161-162].

The values used for the calculations of the US equivalence scale in row F are 0.7 both for 'p' and for 'f.'

Whiteford [1985] derived the equivalence scale on row G from Townsend's survey of living standards and incomes. While Townsend's strategy is an example of the first step in an alternative and, we have argued, appropriate, methodology for establishing poverty lines, his equivalence scale is based on data from the UK and likely would not be applicable in Canada. Saunders' equivalence scale on row H is built using a budget cost strategy, which is also an appropriate methodology, but it is based on Australian prices. Townsend's equivalence weightings are far less for each child than the weighting using the Low Income Measure equivalence scale. Saunders' weightings for each child vary from the Low Income Measure equivalence scale by about the same amount as Townsend's – this would be reassuring, were it not that they are in the *opposite* direction.

There is substantial divergence among the equivalence scales in Table 12. While there may

**Table 13**
**'Adequate child benefits' in Toronto based on the Market Basket Measure adjusted with various equivalence scales ($27,343 for a family of two adults and two children)**

| | Adult 1 | Adult 2 | Child 1 | Child 2 | Sole parent supplement |
|---|---|---|---|---|---|
| A. Statistics Canada Low Income Measure | $13,672 | $ 5,469 | $ 4,101 | $ 4,101 | $ 1,368 |
| B. OECD square root of household size | $13,672 | $ 5,663 | $ 4,345 | $ 3,663 | $ 1,318 |
| C. Modified OECD scale (child under 14) | $13,020 | $ 6,510 | $ 3,906 | $ 3,906 | $ 2,604 |
| D. Low Income Cutoff equivalences | $14,224 | $ 3,189 | $ 4,540 | $ 5,389 | -$ 1,351 |
| E. Phipps, Canada | $15,270 | $ 6,108 | $ 3,314 | $ 2,651 | $ 2,794 |
| F. US panel (two adults) | $11,586 | $ 7,183 | $ 4,403 | $ 4,171 | $ 2,780 |
| G. Townsend, UK | $14,622 | $ 5,995 | $ 3,509 | $ 3,217 | $ 2,486 |
| H. Saunders, Australia | $12,361 | $ 4,944 | $ 4,846 | $ 5,192 | $ 98 |

Calculations by author.

be agreement amongst many researchers on the use of equivalence scales, this is little more than an arbitrary convention adopted for reasons of convenience. But the precise equivalence scale employed matters a great deal for any estimation using equivalence scales to extend the results for the Market Basket Measure representative family to other families, or to extend any other methodology using a representative family (such as Sarlo's work) and so to derive an estimate of an adequate child benefit.

Table 13 presents the amount of an adequate child benefit in Toronto based on the Market Basket Measure, using the equivalence scales on Table 12, as an illustration of the variation that results from differing equivalence scales. All of these estimates use the *same* poverty line for the representative two-adult, two-child family – $27,343 – nevertheless the estimate of an adequate child benefit for the first child of a two-parent family ranges from $3,314 to $4,846. The estimates for a second child range from $2,651 to $5,389.

The point of Tables 12 and 13 is not to advocate a particular methodology for the development of equivalence scales. All the methodological issues discussed in quantifying adequacy are reproduced in developing an equivalence scale, and these have already been discussed. Rather, the point is to demonstrate that equivalence scales do matter, that the equivalence scale used in the Market Basket Measure is not well supported nor is any other equivalence scale, that there are deep and serious questions about the use of any equivalence scale for poverty research, and that the lack of an acceptable equivalence scale means we cannot derive a credible estimate of an adequate child benefit by using the equivalence scale shortcut with any methodology.

If the Market Basket Measure or any other methodology is to be a useful tool, not only for quantifying adequacy of income security programs but also for calculating the incidence of poverty, it must have a better basis for establishing poverty lines for various family sizes and structures. The methodology to do so for the Market Basket Measure is simple (at least simple to describe – it may be complex to implement): Develop a separate budget for various sizes and structures of families. If developed at least once, such a budget will permit validated equivalence scales to be derived, based on the same methodology as the Market Basket Measure, and this process will not need to be repeated again for several years. The budget cost strategy requires that a 'gold standard' be established for equivalence scales using separate budgets, to be consistent with the methodological underpinnings of the Market Basket Measure.

One of the advantages noted regarding the deprivation index methodology is that it does not require an equivalence scale. Once the data is in hand, it is a relatively straightforward statistical exercise to derive poverty lines for sub-samples of each family structure using the deprivation index methodology (and the poverty lines could then be used to derive empirically based equivalence scales for other purposes). This does, of course, have implications for the required sample size.

### *Averaging*

As we have seen, the problem of setting a poverty line may be summed up as, first, defining a just-above-poverty-level standard of living, and then finding a way to link that standard of living to income levels for families

of various circumstances. Whatever methodology is used to link income with a poverty standard – whether it is based on expenditure surveys, a deprivation index or budget costs – the resulting poverty line will at best be a measure of probability. Individual circumstances vary enormously, and any poverty line is at most a prediction that families of a particular type and structure are *likely* to be poor if their income is below the poverty line. The poverty line says that, on average, families with this income will experience a standard of living just above the poverty level.

Many families below any poverty line will not experience a standard of living at the poverty level because of various specific circumstances – say, for example, due to good luck in finding adequate and inexpensive shelter. There also will be many families above the poverty income line that, due to their specific circumstances, have a standard of living below that of the defined poverty-level standard of living. As noted in the discussion of a deprivation-based methodology, in the extreme if there are almost as many families above as below the income line that have a below-poverty standard of living, then that poverty line is simply not a good predictor of a poverty level standard of living.

Since families have different structures, live in different regions and have other dissimilar characteristics, the more we average across all families despite their differences, the less likely we are to have a poverty line that is a good predictor. For example, if we lump all households together, whether they are single individuals, families with many children, young or old, and attempt to derive a single poverty line, it is unlikely that the line will be a very good predictor of a poverty level standard of living. Families with many members might be substantially above the line but actually poor, while singles might be below the line but actually quite well off. To get more accurately predictive poverty lines, we would need to develop a separate line for each size of family.

In general, the more detailed a poverty line as regards family circumstances, the higher the probability that a family in those circumstances will experience a standard of living equivalent to that which the poverty line is attempting to delineate. However, any usable poverty lines will always require some level of 'averaging' across family circumstances or we would have twenty million poverty lines for 20 million families. So, there has to be a compromise between the level of detail and the usefulness of poverty lines as a descriptive tool.

The same issue must be addressed in assessing the adequacy of child benefits. If the optimal amount of the maximum child benefit payment is equal to the incremental cost of a child for a family at the poverty line, how detailed should the child benefit structure be? We know that a family's age-sex mix of children can affect costs. Most researchers, whatever their methodology, agree that older children generally cost more than younger, excepting newborns. As well, two boys aged 13 and 16 may cost substantially less than a boy and a girl of the same ages, because community standards demand that older children of different sexes have separate sleeping accommodations. Further, although the Low Income Measure equivalence scale provides no recognition of economies of scale in number of children, most researchers also agree that the incremental cost of each child decreases (at least to some point) as the number of children increase. We also know that the place of residence and the nature of tenure – whether owner or renter – will likely matter a great deal to costs. (Shelter is discussed further later.)

But aside from these issues, families' circumstances will vary a great deal on an even more individualized basis. Is the decline in family income relatively recent, so that it still has some savings, good clothes, a good car and no debt? Does the family have supportive family and friends with tangible resources who are willing to help? Are the adults skilled and creative housekeepers?

We can obtain a rudimentary, but reasonable, quantitative estimate of the extent to which some of our existing measures of poverty and low income respond to detailed family circumstances by analyzing the number of 'categories' of children that the measures include. A 'category of children' is, for example, children under 16 living in cities of over 500,000. Everything else being equal, if a measure has, say, only two categories of age groupings for children – for example, under and over 16 years of age – but another measure has three categories for children for example, under 7 years of age, between 8 and 16 and over 16 – then the measure with three categories has more detailed provision for specific family circumstances.

The Market Basket Measure has 48 areas of residence. While the Market Basket Measure itself only includes one type of family, the developers of the Market Basket Measure have suggested using the Low Income Measure equivalence scale to generate further measures for other types of families. But the Low Income Measure equivalence scale only has two categories for children's age, 0.3 for each child under 16 and 0.4 for each child over 16 as well as for the first child in a sole parent family, and no other detailed breakdown. Therefore using the Low Income Measure equivalence scale on the Market Basket Measure results in 96 categories for children.

The low income cutoffs are provided in five categories of residence and seven of family size, but have no specific category for children. Adapting the low income cutoffs to derive child cost increments, as we have in Table 6, results in 16 categories for children, since the low income cutoff-derived cost increment is the same for the fourth and more children, except in cities of more than 500,000.

The Canada Child Tax Benefit maximum amount is effectively only in three categories, with a July 2004-June 2005 rate schedule of a maximum $2,719 for the first child, $2,503 for the second and $2,507 for each additional child, and an additional payment of $239 for each child under 7 for whom the child care expense deduction is not claimed. In addition, provinces and territories have the right to vary Ottawa's Canada Child Tax Benefit payments by age or by birth order of the children. At present, only Alberta takes advantage of this provision, varying its benefit according to age in four categories, so that the benefit is smaller for younger children and larger for older children – resulting in 12 categories.

Other countries' child benefit systems also have relatively few categories. In the UK, the child tax credit has only two categories of benefit, with a larger benefit for the first child and a smaller benefit for other children. The universal Child Benefit also pays higher benefits to the first child and then a lesser amount for the next and each additional child. With these two benefits combined, there are only two categories – much like the Canadian structure, with higher benefits for the first child. In Australia, the main child benefit, Family Tax Benefit A, pays three rates for children – $3,401 for children under 13, $4,314 for children aged 13 to 15, and $1,095 for children 16 and 17 (figures in 2003 Australian dollars). In the US,

the Earned Income Tax Credit pays different amounts for 'not married' and 'married' claimants (more for the latter) and a larger benefit for the first child than the second child, with no benefits for the third or additional children. Counting zero benefits for three and more children, this amounts to six categories of payment. The US also has a child tax credit and implicit child benefits embedded in its tax system, which are not discussed here. (For a detailed comparative analysis of these four countries' child benefit systems, see Battle and Mendelson 2001).

Should an adequate child benefit be as detailed as possible? That is, should an adequate child benefit program have many categories for children so as to respond to detailed family circumstances? What are the limits to how useful detailed categories may be before the number of categories is more of a nuisance than it is worth? If the practice of most countries is any guide, a simple benefit structure with fewer categories is preferable. Why might this be? The constraints on the degree of detail in the structure of child benefits are both practical and philosophical.

In practical terms, it would be problematic to administer a national child benefit program that took account of detailed aspects of family circumstances. Any factors other than those that are readily established and are not easily falsified, such as age of children, would make a large program difficult to administer, especially through the income tax system. Detailed non-demographic categories likely would require more complex reporting and verification procedures, along with increased administrative costs.

Perhaps equally important is the continued evolution of the philosophy of social benefits over the last several decades. Indeed, the development of the Canada Child Tax Benefit is part of the evolution in the governing philosophy of social policy.

When the Canada Assistance Plan was written in 1966, provinces were required to institute a detailed needs test for each family applying for social assistance. This requirement not only entailed a test of assets but an accounting of many aspects of family life, with separate categories for food, clothing, shelter, age of children and so on. This approach has come to be seen as excessively paternalistic, reducing recipients to a state of dependency and inhibiting recipients from making their own budgeting and spending decisions. The eventual replacement of child-related social assistance benefits with the Canada Child Tax Benefit and allied provincial/territorial income-tested child benefits will provide a political and policy platform for the next stage in the evolution of assistance – replacing welfare's family budget-based needs test with a system of adult benefits that more closely resembles a wage. A detailed and intrusive child benefit, which went beyond basic predictable and consistent demographic characteristics such as age and number of children, would be contrary to the spirit and direction of the evolution of our social security system.

Another philosophical issue for income security policy is the role and nature of *national* benefits. At present, Canadian taxpayers pay the same federal taxes whether they are in Waterloo or Winnipeg. Should the Canada Child Tax Benefit become an exception by allowing benefits to vary with costs in every geographic location across Canada? There are currently special income tax provisions for residents of Northern Canada, but this feature affects relatively few people in carefully delineated circumstances, and is very different than a potential

national tax-delivered program that maintains variations right across Canada. This is mainly an issue of how to recognize shelter costs, since shelter is the most variable geographic cost. We address further a geographically-variable child benefit in the next section as part of the discussion of shelter costs.

However, where there are no philosophical or practical constraints, and setting aside for the time being the question of geographically variable rates, there is no reason for the structure of the Canada Child Tax Benefit not to reflect better the incremental costs of children for families living just above a poverty-level standard of living. There is strong consensus among researchers that costs go up as children get older (with the exception of newborns) and that costs per child decrease as the number of children increase. Unfortunately, until a credible Market Basket Measure is completed for families of various structures, we do not have detailed information to quantify these cost differences in Canada. But when such information is available, the Canada Child Tax Benefit could be made more adequate for varying family circumstances if it were adjusted to provide escalating benefits for age (as is already done in Alberta – proving it is possible without administrative difficulties) and declining benefits for number of children. (The latter adjustment could be simplified by being made only up to the third child, since only about 10 percent of Canadian families have more than three children.) In administrative and philosophical terms, these adjustments should present no significant or costly challenges, so there is no reason not to develop an improved benefit schedule better reflecting actual expenses. An illustration of such a benefit schedule is provided in the next section, in Table 15. The Canada Child Tax Benefit could and should have a more rational benefit structure.

***Including shelter costs in the Canada Child Tax Benefit***

We have argued that child benefits should be sufficient to pay the incremental costs of an additional child for families at just above a poverty-level standard of living. But do we indeed mean *all* the incremental costs? As discussed in the previous section, one qualification is that the standard of adequacy may be better expressed as: Child benefits should be sufficient to pay for the incremental costs of an additional child for an *average* family at just above a poverty-level standard of living, given the number and age of children in the family and whether it is a one-parent or two-parent family. Should child benefits also be sufficient to pay the incremental shelter costs associated with having an additional child? Should these also be *average* shelter costs, adjusted only for the number and age of children in the family and whether it is a one- or two-parent family, or should child benefits recognize variation among different locations across Canada?

Although the premise of our approach to adequacy is that an adequate child benefit will be sufficient to pay the incremental costs of a child for a family living at just above a poverty-level standard of living, there are some exceptions. As we have already seen, averaging some costs among different family circumstances means that even an 'ideal' Canada Child Tax Benefit will not be quite adequate for the individualized needs of some families, while it will be more than adequate for others. In addition, some expenses that are highly variable or should be supported through other programs also should not be included – such as child care and extended health services. Should shelter costs – unlike, say, food and clothing – also be excluded from the calculation of an adequate child benefit? Or, perhaps more to the point, how should shelter

costs be included, given that they are highly variable both geographically and according to the structure of the family?

To date some provinces, which have otherwise fully replaced their social assistance-embedded child benefits with a combination of the Canada Child Tax Benefit and provincial supplements, have kept the incremental budget per child for shelter within the welfare system rather than moving it into the more broadly based child benefits system. These provinces are opting to treat shelter costs as an exception and allow them to remain part of the more restrictive needs-tested social assistance system. For example, British Columbia has replaced all child-related social assistance with a combination of the Canada Child Tax Benefit and the geared-to-income BC Family Bonus, with one exception – shelter. Table 14 shows the structure of BC social assistance as of July 2003 for employable singles, couples and two-parent families – where all adults are under 65 years of age. As can be seen, BC has almost no incremental benefits for children remaining in its social assistance program except within the shelter component.

There are two likely explanations for some provinces' reluctance to roll shelter increments for family size fully into their provincial child benefit so as to eliminate completely any incrementally from social assistance. The first is that shelter is a major cost item: Shifting an item from the social assistance side of the ledger to a broader based income-related program (e.g., the BC Family Bonus) implies expanding the number of beneficiaries to include all of those earning low incomes (i.e., the working poor) who are not on social assistance. Thus, including shelter increments for family size in the broad based program will increase costs.

The second likely reason is subtler: Most provinces (Quebec and Alberta are the exceptions) pay shelter allowance as an actual expenditure up to a maximum, unlike for example, the flat rate that is paid for other necessities

**Table 14**
**British Columbia social assistance rates for employable singles, couples and two-parent families where all adults are under 65 years of age**

| Family size | Base benefit | Maximum shelter benefit |
|---|---|---|
| 1 | 282.92 | $325 |
| 2 | 452.06 | 520 |
| 3 | 452.06 | 555 |
| 4 | 452.06 | 590 |
| 5 | 452.06 | 625 |
| 6 | 452.06 | 660 |
| 7 | 452.06 | 695 |

Source: British Columbia Ministry of Human Resources. *http://www.mhr.gov.bc.ca/publicat/bcea/bcben_rates.htm*

such as food and clothing. The cost to a province paying actual shelter up to a maximum is less than the cost of paying a flat rate equal to the maximum without reference to recipient spending. The amount a province saves by paying actual rents, rather than the maximum as a flat rate, depends upon the number of recipients whose actual rent is less than the maximum.

Provincial savings have likely shrunk considerably over the last several years as social assistance has been frozen in almost all provinces, while rents have kept increasing; one consequence of this has been that shelter allowances are now even more inadequate than in the early 1990s. Likely many more welfare recipients are now paying actual rent above the maximum shelter allowance, so there are no provincial savings due to paying actual rent rather than a flat rate equal to the maximum for these people, because the government is already paying the maximum. However, given the large amount of money involved, doubtless substantial savings remain. So, if the province moves shelter expenses over to a broad-based income-related program, it also loses this source of savings.

Despite these explanations, failure to roll shelter increments for family size as fully as possible into the broad based income-related program, and out of social assistance, carries with it significant downsides. This failure implies that a portion of the 'welfare wall' will remain standing. Families on social assistance will be entitled to a financial benefit that is not available to working families who are not on social assistance.

A second downside is the bureaucratic cost. The payment of actual rents creates a huge bureaucracy with stacks of monthly paperwork for governments, landlords and recipients, while demeaning and stigmatizing recipients. Moreover, it prevents recipients from using opportunities to obtain rent below the maximum as a way of economizing and getting the most out of their budgets. Furthermore, in a system paying actual rents up to a maximum, neither recipients nor landlords have any incentive to lower rents below the maximum. So the savings a province may obtain by keeping shelter increments for family size within the social assistance system come at a cost – in barriers to work, bureaucracy, inefficiency and stigmatization.

Despite these costs, realistically, budgetary requirements and fiscal capacity will always be a factor in the evolution of Canada's child benefit system towards adequacy. But the purpose of this paper is to describe what an adequate child benefit would be as a *goal* for the income security system. In principal, incremental shelter allowances for family size should be fully included in the broad-based income-related child benefit. Certainly, to continue with BC as it was in 2003 as an example, there was nothing in principle to prevent the province from adding $35 to the BC Family Bonus, so as to eliminate almost all incremental benefits for family size from its social assistance rates, leaving only the 'adult benefit.' However, as discussed in the next section, there might be good reason not to expect the *national* program, the Canada Child Tax Benefit, to itself completely take account of the regional variability of shelter costs.

***Variation in shelter costs***

As can be seen in Figure D, shelter costs make up about 31 percent of the total 'average' Market Basket Measure budget for a family of four – the largest single component in the Market Basket Measure budget. However this is a rough

average of all the geographic areas included in the Market Basket Measure; in fact, shelter as a proportion of the total Market Basket Measure budget varied from a low of 22 percent in rural Manitoba to a high of 42 percent in Toronto.

Figure E shows that shelter costs explain most of the variation in the Market Basket Measure between locations in Canada, aside from transportation. According to a simple regression, shelter accounts for 75 percent of the variation in the Market Basket Measure, excluding transportation ($R^2 = 0.7584$). Almost all the remaining variation is attributable to the way transportation costs have been estimated. In the Market Basket Measure, transportation has been calculated as essentially binary, with low costs for urban areas where public transit is available and high costs for rural areas where it is assumed that a family needs a car.

The Market Basket Measure method for calculating the shelter costs for its budget is to some extent arbitrary, consisting simply of "the average of the median rents for two-bedroom and three-bedroom rental units for each community and community size in each province where the number of observations permitted a statistically reliable calculation. Households whose rents were subsidized were included in the sample, but those paying no rent were excluded as were rental units requiring major repairs" [Human Resources Development Canada 2003: 39].

Including all rents, not just those paid by lower-income tenants, likely distorts the amounts budgeted in the Market Basket Measure. On the other hand, including subsidized rents – of which there are about 600,000 in Canada – will tend to decrease over all rental

**Figure D**

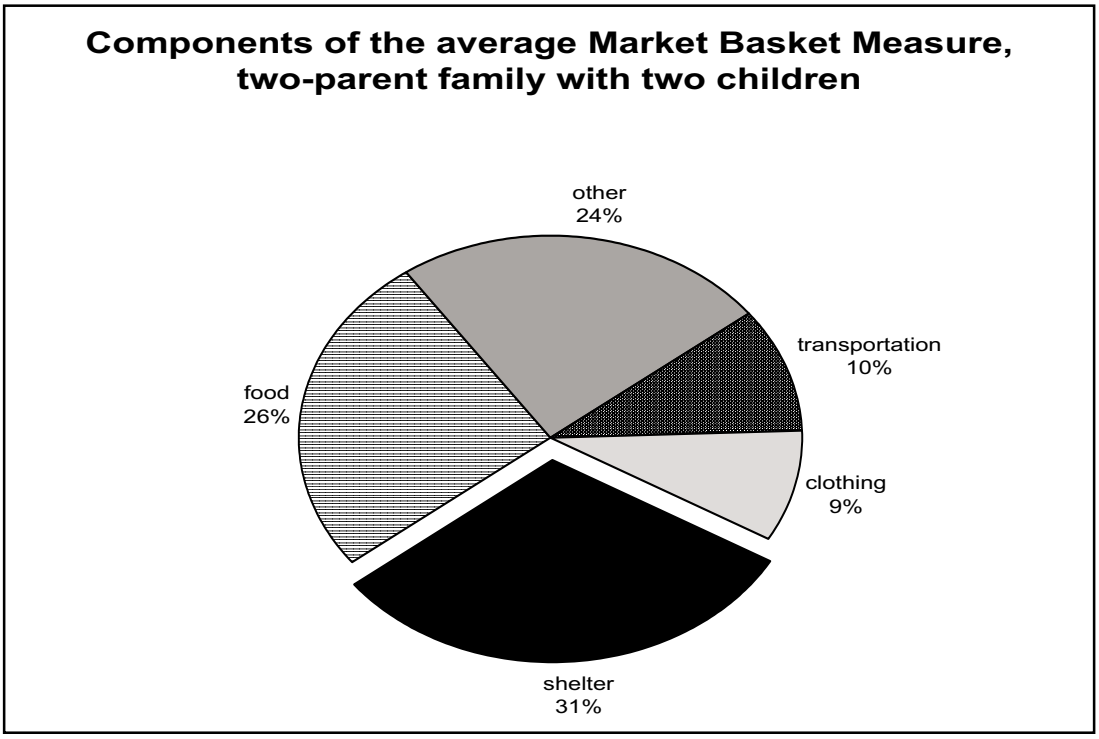
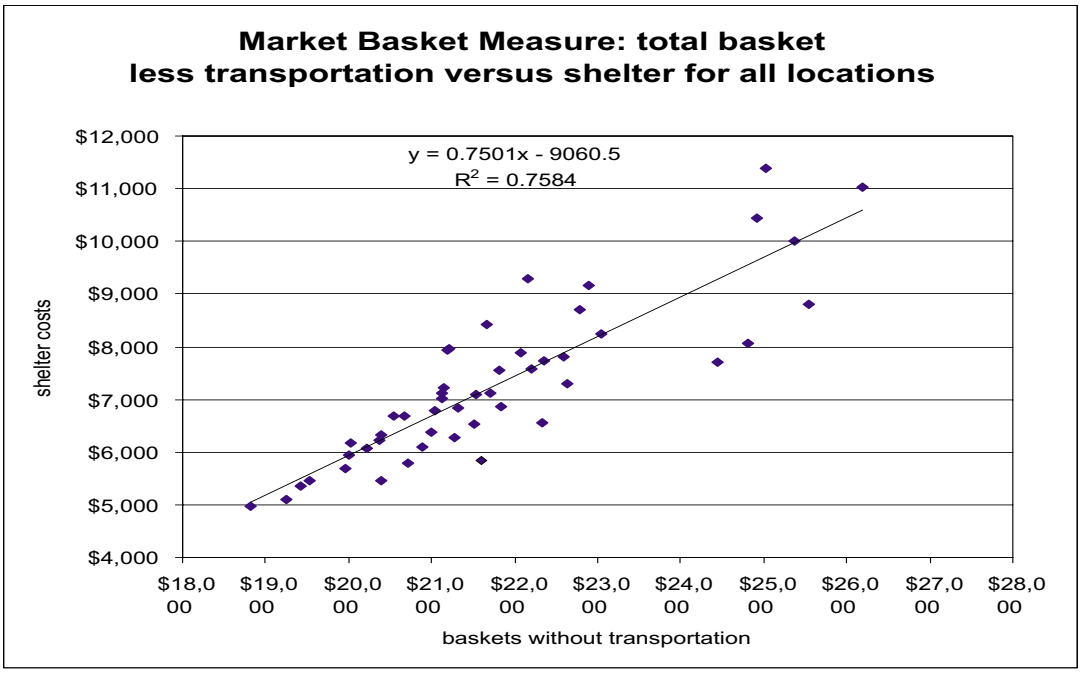


**Figure E**




costs. However, it is not likely that these two effects just happen to offset each other perfectly. As well, the Market Basket Measure data are from the Census, which is an excellent source, but to bring the estimate of shelter costs up to date, the Market Basket Measure shelter cost estimate has been updated using the *provincial* Consumer Price Index for rental accommodation. But the rate of change in shelter costs is anything but uniform across a whole province. In fact, the cost of rental housing has been rising much more rapidly in large cities, so the updating to current prices understates the variation in rents today. [4] Private correspondence with Canada Mortgage and Housing: "CMHC has calculated changes in average median rents for two- and three-bedroom units for the 19 Market Basket Measure urban centres based on CMHC's Rental Market Survey (RMS) data and compared them to the Market Basket Measure-calculated shelter costs. Most variances were relatively small (i.e. <6%) …[but] higher variances existed for Ottawa (RMS>Market Basket Measure by 10%) and Toronto (RMS>Market Basket Measure by 11%) due to these two locales experiencing rent increases far in excess of the provincial average calculated using the Market Basket Measure approach. Analysis of RMS data between 1996-2000 confirmed that Toronto and Ottawa had the highest rent changes (i.e. 19.5% and 18.7% respectively) for 2-bedroom units during this period."

Once again, the Market Basket Measure as it has been developed to date has taken a shortcut that undermines its methodological soundness. The researchers need to operationalize a stated just-above-poverty-level standard of living in respect of quality of shelter and then cost that quality of shelter in locations throughout Canada. There is no reason, other than blind luck, to suppose that the average of the median

cost of renting two- and three-bedroom apartments represents anything at all other than a statistical average.

Despite these shortcomings, for the purposes of this paper the problems in the Market Basket Measure estimate of shelter cost are not critical. Whatever data source is used the answer is going to be the same: There is substantial variation in shelter costs across Canada and shelter requires much of the income for families at a poverty-level standard of living. Shelter is a very big part of the family budget; the incremental cost of shelter is significant if an additional bedroom is needed (we discuss in the next section when such increments are required), and there will be substantial variation in shelter cost across Canada. These factors will remain, no matter how we measure shelter costs or family income needs.

To return to the question in this section with respect to an adequate child benefit: In order to be adequate, should the Canada Child Tax Benefit be variable across various communities in Canada, as well as vary for age and number of children, to reflect variation in shelter costs?

The tentative answer to this question would appear to be that the Canada Child Tax Benefit should *not* be variable to account for regional variation in shelter costs. Rather, the Canada Child Tax Benefit should be set at some weighted average of shelter costs in a properly derived Market Basket Measure of a poverty-level standard of living. There are practical reasons for not including regionally variable shelter costs in the Canada Child Tax Benefit. There would have to be some objective means of establishing relative shelter costs in each of many dozens of locations across Canada, and this would be difficult, costly and subject to much dispute. Moreover, shelter costs would have to vary when the family moved, so would shelter costs be adjusted immediately or only retrospectively when income tax is reported? Other practical issues also arise, such as policing and enforcement, and shelter cost variation *within* cities (which may be as great as between cities).

From a philosophical perspective, it can also be questioned whether another regional variation should be introduced to Canada's tax/transfer system. The idea that Ottawa treats all Canadians equally, wherever they live in Canada, has a great deal of appeal, especially in the context of our increasingly decentralized federalism. Substantially higher payments in Toronto than Moose Jaw might be difficult to maintain politically, undermining support for the national program. As well, while variation by age and number of children ends up being more or less equal over all regions in Canada, the same would not be true of variation by shelter cost, which would result in a much greater flow of funds to Toronto and Vancouver than to other centres across Canada.

Although there are strong arguments against regional variation in the Canada Child Tax Benefit to take account of regional variation in shelter costs, failure to do so does have consequences. In particular, this means that the national child benefit system cannot by itself fully meet the incremental costs of raising a child at a just-above-poverty-level standard of living; it cannot by itself be fully adequate everywhere in Canada. Fortunately, our federal system of government provides a built-in solution to this problem: Provinces should consider a modest income-related incremental shelter allowance targeted to high shelter cost areas to account for the additional incremental child-related cost of rent in some locations. Assuming that the

principle of a single-rated Canadian program is paramount, there may also be some other areas (e.g., transport) where differences in cost between various provincial locations might be considered as candidates for a provincial supplementary program.

### *Recognizing detailed family structure*

As previously noted, one of the peculiarities of shelter is the 'lumpiness' of the acceptable minimum standards. Two young children in a single bedroom are fine, as are two older children of the same sex. But two children over 5 years of age of different sexes should have individual bedrooms, according to National Occupancy Standards.[5] Certainly the Low Income Measure equivalence scale does nothing to recognize this lumpiness, nor do other equivalence scales. The Market Basket Measure averages two- and three-bedroom apartment rental costs because some two-parent, two-child families have two bedrooms and others have three. This is a compromise of sorts, but helps very little to give a picture of the real costs of children to families with low incomes. Assuming that there were a reliable estimate of the incremental cost of shelter to various different family structures, at a just-above-poverty-level standard of living, should the Canada Child Tax Benefit recognize the lumpiness of acceptable minimum standards in its benefit structure, or should it (as with several other issues) simply use a rough and ready average, relying on other parts of the income security system to fill in?

There is no theoretical reason for the Canada Child Tax Benefit *not* to reflect this reality of Canadian minimum living standards. The only limitation would therefore be practical – if it were not reasonable to expect a nationwide program to respond to such detailed information about family structure, or if the result would be an extraordinarily complex and difficult to administer rate structure. However, it is possible to construct a reasonably simple and straightforward benefit structure that does

**Table 15**
**Illustrative example of a Canada Child Tax Benefit rate structure reflecting requirement for extra bedrooms for older children of different sexes, as well as increasing payments for older children and decreasing payments for each additional child**

| | |
|---|---|
| Base rate for each child | $3,500 |
| Each child aged 0 to 1 add | $1,000 |
| Each child aged 7 to 12 add | $ 500 |
| Each child aged 12 to 16 add | $1,000 |
| Each child aged 16 or 17 add | $1,500 |
| For each additional child beyond 1 subtract | $ 500 |
| For each pair of male and female children aged 5 to 18 add | $1,000 |

Note: The age categories are Alberta's, but should be categories based on a careful analysis of costs facing families of differing structures. Amounts are purely illustrative to show how the structure could work.

respond to all the factors which should be taken into account in attempting to establish an adequate child benefit – namely, age of children, number of children in the family and the sex distribution of older children.

Table 15 presents such a rate structure. The rates are provided only as an illustrative example: The point of the table is to show that it is possible to design a better rate structure that more accurately reflects family costs. As can be seen, it is very simple to calculate the value of a maximum child benefit from this table. All the information required is already being collected on the Canada Child Tax Benefit application form. The administrative cost of switching to this alternative structure of payments would be extremely low – likely only the one-time cost of developing new software.

The rate structure of the Canada Child Tax Benefit was carried over from the programs that it replaced. The rate structure has no basis in theory and no validation in relation to achieving the objectives of the Canada Child Tax Benefit. With or without rate increases beyond those currently scheduled, a more rational rate structure would bring the Canada Child Tax Benefit a little closer to adequacy, and provide a more solid foundation for reform of the income security system overall.

### *Housing policy*

The preceding discussion has reflected the perspective of income security planning and analysis. In Canada, social policy also includes housing policy. Housing policy and income security policy obviously overlap, but because they until recently have been undertaken through different arms of government (some provincial governments are now combining the two areas in single departments), with somewhat different objectives, the policies of the two sectors are not necessarily coordinated in all instances.

In the world of housing policy, for example, there is a widely accepted and used index of shelter affordability – 30 percent of before-tax income. In housing policy, 'rent-geared-to-income' has been a key social program for the previous several decades, although much less so in the last decade or so. In rent-geared-to-income programs, renters pay a fixed proportion (usually approximately the affordability guideline of 30 percent) of their income as rent, with the rest subsidized. There are also some broad based provincial programs paying a shelter allowance to recipients based on their shelter costs and their income.

How do these concepts and strategies drawn from 'housing policy' fit with income security policy, and especially with the Canada Child Tax Benefit as it has been discussed in the preceding sections of this report?

Could the 30 percent guideline be brought from housing policy into income security policy? It is difficult to see how the 30 percent affordability guide could be useful to income security planning, other than as a rough approximation of the distribution of lower-priced shelter in Canada. The 30 percent guide is analogous in some ways to an application of Engel's Law, except that instead of using regression to calculate the income at which a family of a particular structure is most likely to spend more than 30 percent of their income on housing, the housing affordability guide suggests that any family of any income that is spending more than 30 percent of their income on shelter is living in housing that is unaffordable for them.[6] Yet, as we have seen in the Market Basket Measure, it is possible to build a fully plau-

sible budget in which families are spending more than 30 percent of their income on housing but are above the poverty line.

While the Market Basket Measure is flawed and is not the only way to develop an estimate of family income requirements, it provides us with a reasonable enough representative family budget for various geographic locations in Canada to permit analysis of policy issues. In the Market Basket Measure, shelter costs are 30 percent of the standard household budget on an unweighted average of all the locations listed. Shelter is over 30 percent of the Market Basket Measure budget in almost every large city and all of Ontario and BC. The Market Basket Measure is an after-tax measure, while the housing affordability guide is a before-tax measure, but the point is the same: Spending more than 30 percent of income on shelter does not imply that shelter is unaffordable; rather, it means that families need more income than they otherwise would in order to be above the poverty line, because they have to spend more of their income on shelter.[7]

The Market Basket Measure underestimates shelter costs, since its benchmark family actually requires three bedrooms and the Market Basket Measure provides for only an average of two and three bedrooms. On the other hand, the Market Basket Measure overestimates shelter costs because it is based on median shelter costs, rather than those experienced by low-income families. As well, as also noted, the Market Basket Measure's price indexing is inadequate for some large cities. However, this mis-estimation implies only that the income estimate arising from the Market Basket Measure may be too low or too high, not that shelter is unaffordable or readily affordable. For example, the Market Basket Measure suggests that a family of four living in Toronto with an after-tax income of $27,343 can afford to pay the average of median rents of two- and three-bedroom apartments in Toronto and still have sufficient income left over for an acceptable standard of other goods and services, despite the fact that this family would be paying 42 percent of its after-tax income for shelter.

If the cost of an adequate apartment is substantially more than is estimated in the current Market Basket Measure, this means that it has underestimated the required budget for minimum needs in Toronto. As long as a family can meet adequate standards for all other goods and services and still acquire adequate housing, it can (by definition) afford its shelter, whether it costs 30, 40 or even 50 percent of income. There is nothing magic about 30 percent. Whatever the relative cost of shelter, it is possible to build a plausible budget that will provide for adequate standards of consumption for all goods and services.

The 30 percent guide provides an approximation as to when shelter is relatively expensive in a given location, but it does not tell us whether any particular family at any given income can afford adequate shelter. Therefore the guide may be useful from a housing perspective, but it is hard to see how it could be applied to income security policy. The 30 percent guide is not relevant to the adequacy of the child benefit: The child benefit needs to be adequate to provide for the incremental cost of a child up to a just-above-poverty-level standard of living, including the incremental cost of shelter, whatever the shelter cost and the consequent budget for a poverty standard of living.

There are approximately 600,000 social housing units in Canada, many of which have rent-geared-to-income. Although there are variations among provinces, by and large the rent-geared-to-income programs allow families in subsidized housing to pay rents below market value and their rents are kept to no more than about 30 percent of their income. If the income of a family in rent-geared-to-income housing declines, then the family's rent goes down as well.

How should rent-geared-to-income interact with an adequate child benefit? The concept of an adequate child benefit is that it reflects the incremental costs of a child, including the incremental shelter costs. If a child benefit were adequate, it would pay, for those with the lowest income, an incremental amount that included an average cost of adding the necessary shelter for each additional child.

If a family gets both an adequate child benefit and rent-geared-to-income, it would effectively be obtaining overlapping shelter benefit for each child – once through the amount included for incremental shelter costs in an adequate child benefit, and a second time in the in-kind benefit through the subsidy in the geared-to-income rent. Of course, the double benefit will affect only a relatively small number of families, and in practice it might be more sensible just to ignore the overlap of the two programs. Yet, families in rent-geared-to-income housing already have a substantial advantage over other low-income families, so the fairness – as opposed to the convenience – of just ignoring this double benefit might be questioned.

The solution to this dilemma would be to charge families in rent-geared-to-income housing the full amount that is implicitly included in the child benefit for shelter, regardless of their income. This would mean that only that portion of rent that is attributable to the 'adult' space requirements would be provided on a rent-geared-to-income basis, effectively the same amount of subsidy regardless of the number of children in the family. Realistically, the rent for the adult portion of subsidized housing is not specially denoted in it anyway, nor is the amount in the child benefit attributable to shelter necessarily stated anywhere. Thus it may be administratively difficult to put this solution into practice.

Rent supplement programs present a very similar challenge as rent-geared-to-income in designing the 'fit' with an adequate child benefit. Several provinces offer rent supplement programs of various kinds, but the overall design is that a cash benefit is paid to beneficiaries, with the benefit calculated according to both income and the amount of rent paid (or some approximation of rent for those in their own homes). As with rent-geared-to-income, the theoretical way to ensure that families do not get a double benefit – once through the implicit allocation for shelter for children in the child benefit, and again through the rent supplement – is to pay a rent supplement only on rental costs up to a maximum approximating the rental costs of an adult couple. In this way, the rental costs associated with larger accommodations for families with children will not be recognized, but families with children will still get the 'adult' benefit. The exception would be that component of a provincial program meant to recognize high incremental shelter costs in some locations, where such incremental shelter costs per child are higher than the national 'average' included in the Canada Child Tax Benefit.

There are also other programs, aside from housing programs, which may offer some form of child-related benefits. Most prominently, the

Employment Insurance program currently offers benefits related to the presence of children through the Family Supplement, targeted to low-income families. If and when the Canada Child Tax Benefit reached its adequacy level, this would amount to double benefits for Employment Insurance recipients with children. The solution is obviously to eliminate such child-related benefits from Employment Insurance. In any case, including child benefits in Employment Insurance is contrary to the program's role as a social insurance program meant to replace workers' lost wages. Similar adjustments and rationalization could be achieved with other programs offering child-related benefits.

This review of the fit between housing policy and income security policy tells us mainly one thing: More work is needed. Starting from different premises, the two areas of social policy have not always ended up in the same place. When considering in detail the implementation of new income security systems – such as the National Child Benefit – the existing inventory of housing policies needs to be taken into account as part of the environment in which income programs must function. In the longer run, when considering the broader architecture of income security programs, the role of housing needs simultaneously to be reviewed with potential consequent adjustments in both income security and housing policy. In short, the 'architecture' of social policy has to include housing.

## *Conclusion*

An adequate child benefit will be sufficient to pay the average incremental cost of an additional child for a family living just above a poverty-level standard of living. Every one of the dozens of estimates provided in this paper (with the exception of one or two) suggests that the Canada Child Tax Benefit needs to be substantially higher than it is today. The best guess with existing information is that the average incremental cost of an additional child for a family living just above a poverty-level standard of living is somewhere in the vicinity of $4,000+, varying according to the structure of the family. However, it will not be possible to estimate accurately the amount of an adequate child benefit until Canada develops credible poverty lines for various family structures, whether or not these are called 'official' poverty lines.

The first step in developing credible poverty lines is to undertake the theoretical and normative task of defining 'in words' a standard of living just above the poverty level. In short, what do we mean by 'poverty?' This is *not* an intrinsically impossible task, but it is a step usually missing in poverty research in Canada. Missing this step has resulted in the curious phenomenon of jumping into elaborate measurement schemes without saying what is being measured.

Once a standard of living just above the poverty level has been defined, whether or not there is unanimity as to this definition, the next step is to operationalize this definition into specifics about the consumption required to attain this standard of living in Canada. The third step is then to estimate an income level for various structures of families at which this standard of living can be attained – that is, to derive estimates for what is commonly referred to as poverty lines. Poverty lines are not a definition of poverty, but estimates of the income needed to attain a just-above-poverty-level standard of living. We have suggested two alternative methodologies for estimating poverty lines. The first two steps – the definition of

poverty and its operationalization into specifics about goods and services – remain the same under either methodology.

One methodology is the 'deprivation index.' This methodology builds on the approach first pioneered by Townsend. The methodology is now being employed extensively in the United Kingdom, although even in the UK researchers have not taken the next logical step of using statistical techniques to relate income and poverty as measured by a deprivation index. So far as we know, this methodology has not been attempted yet in Canada.

The other methodology is to develop 'from the ground up' the budget needed for various structures of families in various locations to purchase the goods and services included in the operationalizationed definition of a just-above-poverty standard of living. This is more or less the Market Basket Measure approach that has been initiated by Human Resources Development Canada and Statistics Canada, with the assistance of provinces and territories, except the first step of defining what was being measured is missing in the case of the Market Basket Measure. The Market Basket Measure also does not provide estimates for various structures of families, relying instead on equivalence scales that have no credibility for the purposes of measuring poverty. Put simply, the Market Basket Measure is a great beginning, but it has all the appearances of a first effort. It is not yet clear whether any followup is planned, or whether the current Market Basket Measure for 2001 is to end up being a one-time effort.

Measuring the extent of poverty is one of the dozen or so most important statistics that we need as a society, right on a level with such key indicators as the Gross Domestic Product and average income. Every year, governments in Canada spend billions of dollars attempting to redress poverty among Canadian families. It is remarkable, therefore, how little has been invested in developing measures of poverty in Canada. Other than the Low Income Measure, which is simply a percentage of median income, Canadians working on social policy have had to rely on updated low income cutoffs which were arbitrary measures 40 years ago when they were developed and remain arbitrary measures today. Neither the low income cutoffs nor the Low Income Measure are meant to be poverty lines. The only new initiative has been the Market Basket Measure. The Market Basket Measure is a welcome initiative, but is planning under way to build on this beginning, so as to make this methodology into an ongoing and serious alternative?

It is time for the government of Canada and its statistical agency to get serious about developing a better measure of poverty. This will take time, money and, most of all, diligent intellectual effort, but it is necessary to measure our progress as a country. It is also necessary to set goals for our anti-poverty programs, including, most prominently, the Canada Child Tax Benefit. Ideally, Statistics Canada, with the assistance of relevant departments, should explore both methodologies outlined here. However, at the very least, intensive discussions and research on enhancing the Market Basket Measure needs to be undertaken, towards a 'Stage 2' version that will be improved, more detailed, better rooted in clearly articulated theory and more reliable. Until a better measure of poverty is developed, everyone is going to continue using the low income cutoffs as poverty lines, despite the protests of Statistics Canada. All that this shows is that we, as a society, need a credible and authoritative poverty measure.

Although it is not possible at this time to estimate the amount of an adequate child benefit, it is possible to make some general observations about what it is and what its structure should be. First, and most importantly, an adequate child benefit must be adequate for its role and purpose in the income security system. An adequate child benefit will not by itself end child poverty, buy child care for all who need it, ensure that parents appropriately prioritize their children's needs, or, in general, be the magic elixir curing all ills. But what an adequate child benefit can do is nothing short of astonishing: It can ensure that no family in Canada is poor just as a result of the cost of raising a child. Were this goal to be achieved, it would be a great accomplishment for Canada, resulting in substantial improvements in the standard of living of poor children and their families.

An adequate Canada Child Tax Benefit should have a benefit structure that makes use of demographic and other readily available information to reflect as closely as possible the expenses faced by Canadian families living just above a poverty-level standard of living. Benefits should decline as the number of children increases, and increase as the age of children increases (with the exception of newborns). The benefit structure also should recognize the need for additional bedrooms with certain age and gender mixes of children. This can all be accomplished with existing information and without greatly complicating the benefit structure.

As a national program, the Canada Child Tax Benefit should not reflect the full regional variation in costs facing families across Canada. These regional variations are better met through provincial supplementation programs, making use of the flexibility that is one of the strengths of Canada's system of federalism. Most importantly, this includes regional variation in shelter costs.

Finally, other programs in Canada's social security system will need to be reshaped to fit with an adequate child benefit. This is both a challenge and an opportunity. The challenge is to avoid double benefits and rationalize program overlaps, so as to ensure fairness to all recipients. The opportunity is to use an adequate child benefit as a platform for a major reform to the 'other side' of the income security system – benefits for adults.

**Endnotes**

1. All provincial and territorial jurisdictions except Prince Edward Island now provide income-tested child benefits, most delivered by the federal government on their behalf through the Canada Child Tax Benefit/ income tax administrative machinery. Note that the National Child Benefit reform did not integrate another program providing child-related benefits, Employment Insurance's Family Supplement. Targeted to low-income families, the Family Supplement raises one parent's EI benefits from the regular 55 percent of average insurable earnings to as high as 80 percent.

2. There is a substantial literature on intra-familial decision-making, including who makes the decisions and in whose interests those decisions are made. We are not in this paper exploring this issue; if family decisions are not being made in the interests of all family members, the problem is much deeper than can be resolved by child benefits. In addition, we are also not investigating here whether income (whether shared equitably in the family or not) really makes a difference to childhood well-being and outcomes, which has also been the subject of interesting research. (For a good up-to-date review of research on the relation between parental income and children's outcomes, see Mayer 2002.)

3. Net family income means income from all sources (employment, investments, rent, income security programs, etc.) minus such expenditures as child care expenses, union dues and professional fees, and contributions to Registered Pension Plans and Registered Retirement Savings Plans. Especially for upper-income families, net income typically is (not insignificantly) lower than total income.

4. Private correspondence with Canada Mortgage and Housing: "CMHC has calculated changes in average median rents for two-three bedroom units for the 19 Market Basket Measure urban centres based on CMHC's Rental Market Survey (RMS) data and compared them to the Market Basket Measure-calculated shelter costs. Most variances were relatively small (i.e. <6%)…[but] Higher variances existed for Ottawa (RMS>Market Basket Measure by 10%) and Toronto (RMS>Market Basket Measure by 11%) due to these two locales experiencing rent increases far in excess of the provincial average calculated using the Market Basket Measure approach. Analysis of RMS data between 1996-2000 confirmed that Toronto and Ottawa had the highest rent changes (i.e. 19.5% and 18.7% respectively) for 2-bedroom units during this period."

5. As well, the National Occupancy Standards recommend a maximum of two persons for each bedroom. As this affects relatively few families, this is not dealt with here, but it could be encompassed within a benefit structure.

6. Even taken just as a housing guideline, there is no substantive academic or policy justification for the figure of 30 percent [Hulchanski 1994].

7. The 30 percent rule could be used on a community basis rather than an individual basis. The incomes of a particular community, say, for example, the Greater Toronto Area, could be regressed against the proportion of income spent on shelter to see at what income families of various structures were most likely to be spending more than 30 percent of their income on shelter. That income level could then be compared to median income in that community to derive a *community* housing affordability index.

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# Appendix 1

## Value of the Canada Child Tax Benefit projected to 2007

**Table A1**
**Maximum Canada Child Tax Benefit rates, current dollars**

| | Basic benefit | NCB Supplement 1 child | NCB Supplement 2nd child | NCB Supplement 3rd child | Young child supplement | Added benefit for 3+ children |
|---|---|---|---|---|---|---|
| 1998 | $1,020 | $605 | $405 | $330 | $213 | $75 |
| 1999 | $1,020 | $785 | $585 | $510 | $213 | $75 |
| 2000 | $1,104 | $977 | $771 | $694 | $219 | $77 |
| 2001 | $1,117 | $1,255 | $1,055 | $980 | $221 | $78 |
| 2002 | $1,151 | $1,293 | $1,087 | $1,009 | $228 | $80 |
| 2003 | $1,169 | $1,463 | $1,254 | $1,176 | $232 | $82 |
| 2004 | $1,208 | $1,511 | $1,295 | $1,215 | $239 | $84 |
| 2005 est. | $1,221 | $1,713 | $1,495 | $1,413 | $242 | $85 |
| 2006 est. | $1,246 | $1,933 | $1,710 | $1,626 | $247 | $87 |
| 2007 est. | $1,271 | $1,972 | $1,745 | $1,660 | $252 | $89 |

Source: Department of Finance Canada. *2003 Budget.*

**Table A2**
**Maximum Canada Child Tax Benefit rates, constant 2004 dollars**

| | Basic benefit | NCB Supplement 1 child | NCB Supplement 2nd child | NCB Supplement 3rd child | Young child supplement | Added benefit for 3+ children |
|---|---|---|---|---|---|---|
| 1998 | $1,162 | $689 | $461 | $376 | $243 | $85 |
| 1999 | $1,143 | $880 | $655 | $571 | $239 | $84 |
| 2000 | $1,204 | $1,066 | $841 | $757 | $239 | $84 |
| 2001 | $1,188 | $1,334 | $1,122 | $1,042 | $235 | $83 |
| 2002 | $1,198 | $1,345 | $1,131 | $1,050 | $237 | $83 |
| 2003 | $1,193 | $1,492 | $1,279 | $1,2006 | $236 | $84 |
| 2004 | $1,208 | $1,511 | $1,295 | $1,215 | $239 | $84 |
| 2005 est. | $1,197 | $1,679 | $1,466 | $1,385 | $237 | $83 |
| 2006 est. | $1,198 | $1,858 | $1,644 | $1,563 | $237 | $84 |
| 2007 est. | $1,198 | $1,858 | $1,644 | $1,564 | $237 | $84 |

Source: Department of Finance Canada. *2003 Budget*, calculations by author.

**Table A3**
**Maximum Canada Child Tax Benefit, current and constant (2004) dollars, all children over 7**

| | Current dollars | | | Constant (2004) dollars | | |
|---|---|---|---|---|---|---|
| | 1 child | 2 children | 3 children | 1 child | 2 children | 3 children |
| 1998 | $1,625 | $3,050 | $4,475 | $1,852 | $3,475 | $5,099 |
| 1999 | $1,805 | $3,410 | $5,015 | $2,0223 | $3,821 | $5,619 |
| 2000 | $2,081 | $3,956 | $5,831 | $2,270 | $4,316 | $6,361 |
| 2001 | $2,372 | $4,544 | $6,719 | $2,522 | $4,832 | $7,144 |
| 2002 | $2,444 | $4,682 | $6,922 | $2,543 | $4,871 | $7,201 |
| 2003 | $2,632 | $5,056 | $7,483 | $2,685 | $5,157 | $7,633 |
| 2004 | $2,719 | $5,222 | $7,729 | $2,719 | $5,222 | $7,729 |
| 2005 est. | $2,934 | $5,650 | $8,369 | $2,876 | $5,539 | $8,205 |
| 2006 est. | $3,179 | $6,135 | $9,094 | $3,056 | $5,897 | $8,741 |
| 2007 est. | $3,243 | $6,259 | $9,279 | $3,056 | $5,898 | $8,744 |

Source: Department of Finance Canada. *2003 Budget*, calculations by author.

# Appendix 2

## Living standard assumptions of items included in the Market Basket Measure

| Item | Standard |
|---|---|
| Food | The content of the food component of the Market Basket Measure basket is as described in the Health Canada publication, *National Nutritious Food Basket 1998*, written by Judith Lawn. The basket represents community standards of food expenditure in Canada as derived from Statistics Canada's *Survey of Family Food Expenditure in Canada 1996* and has been adjusted to be consistent with Health Canada's *Nutrition Recommendations* and current guidelines for fat and saturated fat intake for adults. It is neither "an ideal diet" nor the cheapest diet that meets nutritional requirements. Instead it represents a nutritious diet that is consistent with the food purchases of ordinary Canadian households. It contains healthy foods that "people like to eat." It is designed to be "socially acceptable and contain sufficient variety to be nutritionally adequate and palatable over the long term." It includes more costly "basic processed foods such as yogurt or bread … since a family would not normally prepare those foods from raw ingredients." p.38 |
| Clothing and footwear | In 1997, Winnipeg Harvest and the Winnipeg Social Planning Council developed a budget guide for families in the Winnipeg Census Metropolitan Area that they named the Acceptable Level of Living (ALL) measure. In 1999 the Federal-Provincial-Territorial Working Group on Social Development Research and Information chose the clothing and footwear component of the ALL for the Market Basket Measure because it:<br>• was the most recent clothing and footwear "basket" developed in Canada;<br>• reflected an effort to provide clothing and footwear for common work, school and social occasions, a standard similar to that aimed for by the Market Basket Measure; and<br>• had significant input from low-income persons. p.38<br>Just over half of all families of two adults and two children in Winnipeg spent more on clothing and footwear than did the reference family purchasing only the items in the A.L.L. clothing and footwear basket. This represents a standard somewhat above that aimed for by the Market Basket Measure. p.39 |
| Shelter | The shelter component of the Market Basket Measure reflects the average of the median rents for two-bedroom and three-bedroom rental units for each community and community size in each province where the number of observations permitted a statistically reliable calculation. Households whose rents were subsidized were included in the sample, but those paying no rent were excluded as were rental units requiring major repairs. The choice of the average of the median rents for two and three-bedroom units was made because approximately half of two-adult, two-child renting families live in each of these two types of units. The median rent was chosen to ensure a decent quality of housing even in areas where there is a limited supply of available low-cost housing. pp. 39-40 |
| Transportation | The transportation component of the Market Basket Measure largely follows the recommendations of the National Council of Welfare in its publication *A New Poverty Line: Yes, No or Maybe?* These recommendations are based on the insight that in contrast to the cost of shelter, the cost of basic transportation is generally less expensive in large urban areas than in smaller communities or rural Canada. As a result, in urban centres served by a public transit system the transportation component of the basket consists of the annual cost of two adult monthly transit passes plus one round trip taxi ride a month costing $16 to accommodate a shopping expedition where large items which cannot be carried by hand, are purchased. The $16 amount will be adjusted annually to reflect changes in the Consumer Price Index for taxi rides for the province as a whole. Statistics Canada determined that all but 3 of 49 urban centres with a population of 30,000 or more had public transit systems. Accordingly, in all centres of this size the transportation component described in the preceding paragraph was used. In all other areas, including Charlottetown which |

| | |
|---|---|
| | has a population of more than 30,000 but no public transit system, the transportation component of the basket consisted of the cost of paying for and operating a five-year old four-door, four-cylinder Chevrolet Cavalier. p.41 |
| Other goods and services | There are several other goods and services that are encompassed by the Market Basket Measure standard of consumption. The category "Other Goods and Services" includes expenditures on personal care, household needs, furniture (excluding the items included under shelter), basic telephone service, postage stamps, religious and charitable donations, school supplies and modest levels of reading material, recreation and entertainment. The reading, recreation and entertainment component includes a newspaper subscription, video rentals, YM/YWCA memberships, magazines, books and tickets for movies and sports events. …it was decided to approximate the cost of these goods and services using a multiplier representing expenditures on them as a proportion of average spending on food and clothing and footwear by the second decile of the reference family. The multiplier will be calculated each year using the detailed micro-data from the main file of the Survey of Household Spending. This is the one component of the Market Basket Measure basket whose cost is calculated using a "relative" methodology rather than being based on actual prices of specific goods and services. pp. 42-43 |