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**Child Poverty and Family Structure
In Canada**

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CHILD POVERTY AND FAMILY STRUCTURE IN CANADA, 1981-1997

Abstract

This paper examines the relationship between family structure and child poverty in Canada over the 1981-1997 period. While recognising the many methodological and conceptual difficulties encountered in efforts to document child poverty over time, two alternate indicators are used, Statistics Canada's official low income cut-offs, and an alternate indicator of "deep poverty". Using the Survey of Consumer Finances (1981, 1989 and 1997), trends in low income are considered, along with concurrent changes in the structure of Canadian families with children. Particular attention is paid to trends in the incidence of lone parenthood, the number of children per family, and the age of parents (as an indicator of recent shifts in the timing of childbearing). Overall, these changes are found to have offsetting effects on the incidence of child poverty, such that irrespective of a substantial growth in the incidence of lone parenthood, the overall impact of changes in family composition have been relatively modest.

Introduction

The study of poverty in Canada is clearly hindered by a lack of consensus in definition. For example, in a widely distributed news release by Statistics Canada on the measurement on poverty and low income, Chief Statistician Ivan Fellegi (1997) explained why the federal agency has never claimed to measure poverty through its low income cut-offs. The official position is that Statistics Canada does not, and cannot measure the level of "poverty" due to a lack of agreement among Canadians as to how poverty can best be defined. Regardless of this official position, Statistics Canada's low income cut-offs continue to be the most widely cited "poverty lines" in the media and popular discussions of social policy. For instance, this measure shows that the low income rate of children was higher in 1997 than in 1981, and the gap between the low income rate of children and that of other Canadians widened throughout the 1990s (Statistics Canada, 1998).ⁱ

This lack of consensus as to how poverty can best be measured has also characterised recent debates on the etiology of changing child poverty and inequality. For example, in a recent review of sociological research in the United States, Lichter

(1997) observes that much of this literature has been highly politicised and polarised. In the American context, part of this debate can be explained by the hard reality that the problem of child poverty is particularly severe (Rainwater, 1995; Battle and Muszynski, 1995; Osberg, 2000). Yet in a more fundamental manner, much of the debate can be understood as a result of “monocausal explanations” of child poverty. As Lichter summarised, behavioural explanations that emphasise the personal choices regarding work and family life (e.g. the detrimental impact of non-marital fertility, divorce and lone parenthood) have often been set against structural explanations that emphasised the role of labour markets and/or government policy.

The current study appreciates these difficulties, both in measurement and explanation, in examining the relationship between changes in child poverty and family structure in Canada over the 1981-1997 period. First, in terms of measurement, it is acknowledged that no single indicator of child poverty presents a complete picture of recent trends. For this reason, an additional indicator of “deep poverty” is introduced in order to supplement the use of official low income cut-offs. A combination of more than one set of low income cut-offs, both adjusted for changes in the cost of living over time, can provide a more comprehensive and consistent picture of recent trends. Secondly, while the primary emphasis of the current paper is on the interrelationship between recent changes in family structure and low income among children, it is emphasised that this focus is not incompatible with structural explanations of recent trends. Due to the strong statistical association between the incidence of low income and selected family characteristics (the incidence of lone parenthood, the number of children per family, the age of parents), an emphasis on the “demography of child poverty” can provide insights as to the character of recent trends. At the same time, any comprehensive effort at explanation must recognise that family demographic change acts in combination with many other factors, to which no single analysis can do justice.

The current study uses demographic standardization techniques to compare the summary indicators across populations or over time. This methodology allows us to address the basic question regarding the change in child poverty rates that would have occurred over the 1981-1997 period, had there been no change in family structure. Such an approach has been widely applied in the study of demographic rates (such as summary indicators of mortality, nuptiality, migration and fertility), and has also previously been applied in the American context to the study of child poverty (Eggebeen and Lichter, 1991, Duncan, 1992; Hernandez, 1993; Lerman, 1996). Although the paper does not emphasize the methodological aspects of standardization, the approach used here is superior to that adopted by other Canadian analyses, in terms of attributing the change in both low income and deep poverty to various components of family change.

PREVIOUS RESEARCH

Income-based measures of poverty have many well-known limitations, most of which have been discussed in detail elsewhere (Ruggles, 1990; Wolfson and Evans 1989; Cotton et al., 1999). For example, most income-based measures of income poverty exclude information on property or wealth, just as they inevitably exclude various sources of potential income and services not easily captured through survey research. More specifically, they tend to systematically under-report or exclude various types of in-kind public assistance, the sharing of resources and services across households and generations, the impact of exchanges in the informal economy, the bartering of goods and services, among other potential sources of non-declared income. Similarly, efforts to define income-based measures of poverty are hindered by problems in establishing equivalence scales for comparing families of varying size and composition. In addition, most research on income poverty completely neglects the manner in which resources are shared within families – between spouses and between adults and children. The implicit assumption of an equal sharing of financial resources can potentially obscure important

differences in the actual level of economic hardship experienced by individual family members (Phipps and Burton, 1995).

Other measurement difficulties relate to the income threshold that is chosen to represent a "minimal standard of living" or "poverty", especially when considering income trends over time. For example, one of the most commonly encountered low-income cut-off is 50% of median family income – with adjustments for family size and composition. As a "relative" measure of low income, this indicator is sensitive to shifts over time in the distribution of income but not to shifts in average income levels (Wolfson and Evans, 1989; Sharif and Phipps, 1994). As an alternative, it is possible to select one of several possible low-income cut-offs and to adjust exclusively for inflation over time. These alternatives can lead to contradictory results, as demonstrated by comparing two recent Canadian studies that have attempted to delineate the importance of family and demographic change to past trends in child poverty. In examining the incidence of child poverty from the early 1970s through to the 1990, Dooley (1994:434) points to a decrease in child poverty whereas Picot et al. (1998: 14) document an increase for roughly the same period. ⁱⁱ The difference again relates to definition, as Picot et al (1998) rely upon the aforementioned "relative" measure of income poverty (50% of median income), whereas Dooley adjusts a set of low income cut-offs exclusively for inflation over this extended period. In examining the income data a bit further, much of the decline as documented by Dooley occurred during the 1970s, when income gains in Canada outpaced inflation whereas the level of income inequality remained relative stable. With regard to more recent years, child poverty rates rose noticeably with the

recession of the early 1990s, regardless of what methodology is used in examining trends over time. Toward the latter 1990s, child poverty rates have not returned to pre-recession levels (Statistics Canada, 1998).

Moving beyond these issues relating to definition and measurement, various insights are gained from both of these studies in terms of the relevance of demographic change to recent change in the incidence of income poverty in Canada. Dooley (1994) documents a decline in the proportion of the poor who are children (beginning in the 1970s) with a large part of this decline being attributed to reductions in fertility and family size. In addition, the proportion of all poor families that involve female lone parent has also risen, as associated with ongoing changes in union formation and dissolution, along with non-marital fertility. Picot et al. (1998) use logistic regression to isolate the relative impact of “familial characteristics” on recent trends in child poverty. However, they do not differentiate the effect of the various types of family change, ranging from more educated parents, to the prevalence of two-earner families, to fewer children per family and more lone parenthood. Overall, the change in these “family characteristics” reduced the risk of low income over the period 1973-1988, but increased this risk over the period 1988-95.

Other problems exist in relying exclusively on low income cut-offs, including the fact that they are largely insensitive to changes in the income distribution of the poor (Ruggles, 1990; Myles and Picot, 2000; Osberg, 2000). An exclusive reliance upon these

low income cut-offs tell us nothing as to the income distribution of those that fall below these income thresholds, nor whether their economic circumstances has improved, worsened or remained much the same over time. In recognition of this problem, the current study introduces an additional measure of low income meant to estimate the extent of “deep poverty” in Canada. Measures of "deep poverty" have been used in American research, and these have typically been set at about 50% of the Census Bureau’s official poverty rates (Palmer et al., 1988; US Bureau of the Census, 1989). In the current context, these thresholds are also arbitrarily set at 50% of Statistics Canada’s LICOs.

The present study uses standardisation and decomposition techniques to study the inflation adjusted measures of low income and deep poverty as they apply to Canadian children. In addition, the various components of family change are analysed both separately and in combination.ⁱⁱⁱ

DATA AND METHODOLOGY

The data source for the current study is the annual Survey of Consumer Finances. As a supplement to the Canadian Labour Force Survey, this household survey targets all persons aged 15 and over residing in Canada, with the exception of people in the Yukon or Northwest Territories, residents of institutions, persons living on Indian reserves, and full time members of the Canadian armed forces living in barracks (some two percent of Canada’s population). Using about two thirds of the Labour Force Survey,

approximately 35,000 households are sampled, or some 65,000 individuals. With an individual response rate of 80%, this survey is the most comprehensive source of information on family income and income poverty in Canada, with a conceptually consistent set of data since 1981. For present purposes, data from this survey for the years 1981, 1989 and 1997 are selected as comparable years in terms of Canadian labour market conditions. Separate comparisons are then made for the 1981-1989 and the 1989-1997 periods, with a data source of sufficient size to allow for reasonably reliable sub-population estimates and detailed information on the characteristics and composition of Canadian families.

Standardisation has been used by demographers to eliminate compositional effects in comparing two or more populations^{iv} (Kitagawa, 1955, 1964; Keyfitz, 1968; Beaujot and Bland, 1978; Shryock and Siegel, 1980; Das Gupta, 1993). For example, in examining crude death rates for a specific population over time, one might ask how this measure would have varied if there was no change in the age/sex composition of the population. Basically, this technique eliminates the impact of compositional effects by assuming a particular population as standard and applying the age/sex specific rates to this standard. Standardization is closely related to decomposition, or decomposing the difference between the overall rates in two or more populations (Das Gupta, 1978; 1991; 1993). Decomposition seeks to determine the additive contributions of "compositional factors" and "rate factors" in the difference across two or more populations. Decomposition techniques have been extended by demographers to include any number of factors (beyond age and sex as described above) and to simultaneous consideration of three or more populations (Pollard, 1988; Clogg and Eliason, 1989; Das Gupta, 1993).

The current application of standardization and decomposition considers the simultaneous effect of three demographic factors: (i) an increase in the proportion of children living with a female lone parent, (ii) the ongoing shift toward smaller number of children per family, and (iii) the tendency of Canadian adults to increasingly delay childbearing to older ages. The latter two factors should somewhat offset the negative impact of recent trends in terms of lone parenthood, as a smaller number of children leads to a smaller number of claimants on family income (and a lower likelihood of poverty) and an older average age of childbearing implies that parents are increasingly delaying having children until their resources are more able to cover the substantial costs of raising children. The use of several factors and several time periods brings into consideration the choice of the standard population. In the current study, Das Gupta's (1993) three factor and three population decomposition will be implemented, which involves standards that are averages of the population composition over time.^v Using this approach, overall differences in terms of child poverty rates for the 1981-1997 period will be decomposed, to isolate the effect of each factor separately, as well as the "rate effect" that remains after simulating no change in composition.

CHANGES IN CHILD POVERTY AND ITS DECOMPOSITION

Table 1 presents the distribution of children, by family type, number of children per family, and age of parents (i.e. mother in all but male lone parent families) for the years, 1981, 1989 and 1997. Also included in Table 1 are the levels of low income and of deep poverty for Canadian children under 18 years of age.

(INSERT TABLE 1 HERE)

For the full period, the incidence of low income using the official LICOs increased from 16.3% in 1981 to 19.9% by 1997 (up by just over 20%). Over this same

period, the incidence of deep poverty also increased, yet not to the same extent, from 5.1% in 1981 to 5.5% by 1997 (an increase of approximately 8% for this same period). While this implies a deterioration in terms of the economic conditions faced by Canadian children, Table 1 also demonstrates that this increase in low income rates did not in fact characterise the full period. More specifically, the incidence of low income was lower in 1989 than in 1981, dropping from 16.3% in 1981 to 15.2% in 1989, before rebounding to 19.9% by 1997. In the measurement of "deep poverty", the 1981-1989 period appears to be characterised by some success in terms of reducing its prevalence, dropping from 5.1% in 1981 down to 3.9% by 1989, before returning to 5.5% by 1997.

In contrast with the variable trends in low income, the changes in family characteristics are uni-directional. There is an ongoing decline in the proportion of Canadian children living with two parents. For example, in 1981, fully 89.6% of children were living with two parents, relative to only 83.9% by 1997. This change is consistent with what is known of past trends in terms of marriage and marital dissolution in Canada, as unions involving children have become somewhat less stable over recent years (Marcil- Gratton, 1998; Beaujot, 2000). While the incidence of lone parenthood continues to remain substantially lower in Canada than in the United States (where fertility outside of marriage and without a partner is considerably higher than in Canada), its strong statistical association with poverty requires further analysis.

With this increase in the incidence of lone parenthood, further change in terms of the level and timing of fertility has also had an impact on the economic conditions faced by Canadian children. Table 1 documents two further changes of relevance in this context: children in 1997 are more likely to have fewer siblings relative to 1981 and more likely to be living with older parents. For example, whereas 21.6% of children could be classified as the "only child" in 1981 and 42.6% with one sibling, by 1997 this increased to 24% and 45% respectively. In addition, the proportion of children living with older parents increased over this period, for example, the percentage living with a mother aged

40+ increased from 29% in 1981 to 35% by 1997, with a similar trend for children with mothers aged 35-39 (up from 23.3% to 28.5%). This trend has occurred at the expense of mothers having children earlier on in the life cycle, as for example, the percentage of children living with a mother under 25 decreased from 6.5% in 1981 to 3.4% by 1997. Since childbearing at older ages is generally associated with a higher income (Oppenheimer, 1988; Grindstaff et al., 1989; Dooley, 1991; Kerr, 1992), one would anticipate that this change has served to reduce poverty rates among Canadian children.

Table 2 presents this same distribution of children, by family type, number of children per family and age of parents, but only for those children classified as income poor. Non-surprisingly, the distribution of children shifts, as certain types of families are far more likely to be classified as income poor. For example, whereas 13.7% of all children are reported to be living in female lone parent families in 1997, 41% of all children falling below the official LICOs and 50% of all children in deep poverty live in this family type. Similarly, whereas only 3.4% of all children in 1997 are reported to be living in a family with a mother under the age of 25, almost one in 10 children (9.7%) falling below the official LICOs and almost 1 in 7 children (14.8%) in deep poverty are residing with a young mother.

(INSERT TABLE 2 HERE)

Over the 1981-1997 period, change that characterised all children (an increased proportion living in lone parent families, an increased proportion living with older parents, a decline in the average number of children per family) also characterised children classified as income poor. As documented in Table 2, an increase in the proportion of all poor children living in families headed by a lone parent has occurred simultaneously with a slight increase in the average age in the parents of these same children, and a slight shift toward smaller family size.

These descriptive statistics hint at the utility of standardization techniques, in taking into consideration the impact of all of these compositional changes, in combination and separately, on overall child poverty rates over the 1981-97 period. As previously indicated, this method makes it possible to determine what would have been the changes in poverty in the absence of these compositional changes in the population. For example, if there were no change in the distribution of children across lone parent and dual parent families over the 1981-1997 period, how might low income rates have evolved. Similarly, if there were no change in the average age of parents over time, or if there were no change in the distribution of children by family size, how might low income rates have differed relative to the actual situation.

Table 3 presents the results from this standardization exercise, separately for low income and deep poverty. In the first column, the aforementioned changes as actually observed are presented, whereas the second through fifth columns reflect changes in low income rates as obtained after standardization. In applying basic standardization techniques, the 1981 low income rates are taken as given, with the increase or decrease as obtained through the standardization exercise compared to the 1981 rates. In the second column, low income rates are presented, as obtained by standardising on family type, with the distribution of children by family type maintained as constant over the 1981-1997 period. The third column includes low income rates, standardised for the number of children per family, the fourth includes rates standardised for the age of parents, whereas the fifth includes rates standardised simultaneously for all three compositional factors.

INSERT TABLE 3 HERE

With the standardisation for family type, low income is estimated at a lower level in both 1989 and 1997 than initially observed. For example the proportion of all children falling below Statistics Canada's LICOs, after standardising on family type, is estimated as declining from 16.3% in 1981 to 14.3% by 1989 (as opposed to 15.2% as originally

documented), before climbing to only 17.5% by 1997 (as opposed to 19.9%). In other words, in accepting the results from this exercise, it could be argued that two thirds (i.e. 2.4 percentage points) of the 3.6% point increase in poverty rates between 1981 and 1997 be accounted for by changes in family type during this period. With respect to deep poverty, rather than witnessing a slight upturn over this period as initially documented (from 5.1% in 1981 to 5.5% by 1997), after standardising on family type, deep poverty is found to have declined over the full period, from 5.1% to 4.5%.

While an increased incidence of lone parenthood has acted as an upward demographic pressure in terms of increasing child poverty in Canada, on the other side of the ledger, standardized rates on the number of children per family (column 3) and the age of parents (column 4) suggest the opposite is also occurring. Without exception, the standardized rates on both of these factors imply that the low income rate would have been even higher among children in Canada, in the absence of change on these two fundamental factors. For example, with respect to the official LICOs, the incidence of low income is estimated as rising to 20.3% when standardising on the number of children per family and fully 21.2% in standardising on age of mother/male lone parent. With regard to deep poverty, standardisation on number of children produces rates negligibly higher than actually observed (at 5.6% in 1997), whereas the rate standardised on age of mother/male lone parent increases the incidence of low income (at 6.1% by 1997).

The relative importance of all of these changes is summarised by rates in Column 5, which standardises for all three compositional factors simultaneously. With respect to the official LICOs, this standardisation demonstrates the extent to which the aforementioned factors have served to offset each other. The negative impact of increased lone parenthood appears to have almost completely been offset by changes relating to the number of children per family and the age of parents. For example, the rates standardised across all three factors are very close to the rates as initially observed, decreasing slightly from 16.3% in 1981 to 15.1% by 1989, only to increase to 19.3% by

1997. Overall, just over 80% of the increase in poverty rates as initially observed remains, pointing to the importance of further factors in explanation. On the other hand, with regard to deep poverty, the slight upturn as initially documented (from 5.1% in 1981 to 5.5% by 1997) disappears (from 5.1% to 5.2%) after standardising on the three factors. In an immediate sense, this implies that the negative impact of an increased lone parenthood is almost fully offset by changes in terms of number of children and age of parents, when focusing in on children living in families at the very bottom of the income distribution.

SUMMARY AND DISCUSSION

After the recession of the early 1980s, low income rates among children in Canada dropped for several years through to a low point in 1989. With the return to recession in the early 1990s, low income rates among Canadian children rebounded, and remained at persistently high levels through to the latter half of the 1990s. These trends as observed in terms of lone income are true both for “official low income rates” and rates of “deep poverty” - defined as 50% of the low-income cutoffs. These low income trends as documented in Canada can be usefully compared to concurrent trends in official poverty lines in the U.S. over this same period (Census Bureau, 1999).

There have been important changes in family structure in both Canada and the United States, with direct economic ramifications for children. As a result of higher rates of union dissolution and non-marital fertility, both countries have experienced a substantial increase in the proportion of children living in lone parent households. The extremely high association between child poverty and lone parenthood, and the substantial growth in the proportion of all children living in lone parent households, has been widely considered a fundamental factor in explaining the persistence of high “child poverty” rates in both countries. Concurrent trends in terms of childbearing have had the opposite effect on poverty rates, as for example, smaller overall family size has been

associated with lower poverty rates with fewer dependent youths per household and a decline in the number of claimants on family income. A shift toward older ages in terms of childbearing serves to reduce overall poverty rates, as adults delay having children until later in their reproductive years when economic resources are generally greater.

A variety of other factors have been raised in explaining the increased child poverty rates in North America, with many parallels to be drawn between the United States and Canada. For example, in drawing international comparisons, Cornia and Danziger (1997) point to a rise in neo-liberal economic policies and retrenchment in the welfare state, across many countries, which has only exasperated the problem of child poverty and income inequality among families with children. Others have pointed to downward pressures on the earning capacity of young adults, in both the United States (Blank, 1996, Lichter et al., 1994) and Canada (Morissette, 1998; Beaudry and Green, 1997). Demonstrative of the degree to which Canada is becoming integrated into a broader North American economy and society, average earnings in both countries, for young men in particular, were lower toward the mid 1990s than they were at the beginning of the 1980s. Trends as observed throughout the 1980s and 1990s have been linked to changes on the demand side of the labour market, most notably, due to changes in trade, globalisation and technology (Katz and Murphy, 1992). It is worth noting in this context that the steady climb in the average number of earners per family (with children) which characterised most of the 1970s and 1980s in Canada, actually stabilised into the early 1990s, before declining somewhat through to 1997 (Statistics Canada, 1998). An important factor in explaining this latter stabilisation and subsequent decline is the greater growth in the number of families headed by lone parents relative to two parent – two income families.

It is within this broader context that the interrelationship between change in family structure and economic well being must be considered. For example, the current decomposition demonstrates how recent trends in terms of the level and timing of

childbearing in Canada (two factors often neglected in both academic research and public discussions of child poverty) have largely offset the negative impact of increased lone parenthood. Whereas the absence of any increase in the prevalence of lone parent families would have dampened the rise in child poverty rates considerably (with standardisation indicating that the increase be reduced by as much as two thirds), the impact of changes in the number and timing of childbearing are found to have an opposite effect of comparable magnitude. Some two-thirds of the overall change in child poverty may be attributed to the increase in lone parenthood. Given the offsetting factors, low income rates would be much the same in 1997 as in 1981. Consequently, any comprehensive attempt at explaining the persistence of relatively high rates of child poverty into the latter 1990s necessarily broadens the discussion to other factors, from the labour market conditions as faced by young adults, to the changing levels of income support through government transfers.

These factors of family composition, labour market conditions and government transfers undoubtedly operate differently in different countries. For instance, in the United States, family size has remained larger and age at parenthood has increased less, highlighting the importance in trends in lone parenthood (Eggbeen and Lichter, 1991; Lerman, 1996; Rodgers, 1996). In the Canadian case, it would appear that young adults have partly compensated for trends in the labour market by later parenting and having fewer children. Nonetheless, other behavioural changes in adults, in terms of union

formation and dissolution, have still accentuated the income poverty of Canadian children.

ENDNOTES:

- i) This statement is true using Statistics Canada's 1992 base pre-tax, after transfer low income cut-offs, adjusted solely by the current price index (CPI) over this period. The current study relies on these cut-offs which were developed on the basis of an analysis of the 1992 family expenditures survey. Based on the idea of "very little disposable income", Statistic Canada analyses expenditure data in an attempt to identify income levels whereby families spend a disproportionate share of their income on food, clothing and shelter, after controlling for city size and family size. These cut-offs are then updated by Statistics Canada from year to year, using only the CPI, in the same manner as an 'absolute' poverty line, but rebased periodically with reference to changes in average consumption proportions (see Cotton, Webber and Saint-Pierre, 1999). For further details on the 1992 base cut-offs, Appendix A includes the actual dollar values, by city and family size (in 1997 dollars).
- ii) In working with pre-tax – after transfer income and limiting our time frame to the period as examined by Dooley (i.e. 1973-1990).
- iii) In his presidential address to the Canadian Economics Association, Osberg (2000) reviewed various shortcomings associated with low income rates, along with alternatives that he sees as more theoretically satisfying. For instance, he considers the "Sen-Shorrocks-Thon index of poverty intensity" which combines information on the poverty rate, the poverty gap and the level of inequality characterising the income poor. Yet Osberg also acknowledges, that often theoretically satisfying indices lack straight forward and intuitively satisfying interpretations. The rates adopted in the current analysis have the advantage of greater currency and ease of interpretation.
- iv) The emphasis placed on standardization methods in demography and sociology is undoubtedly associated with the benefits of this technique as a descriptive method. Other statistical models used to study discrete variables, such as log-linear or logit models use a logarithmic scale, which lacks the ease of interpretation of absolute or arithmetic scales. As Clogg and Eliason (1989) have emphasised in elaborating upon the utility of this standardization to sociology, while it is one of the older techniques for analysing group differences in terms of rates and proportions, one of its primary benefits, at least partially explaining its longevity, is its ease of interpretation and adaptability.
- v) In a review of previous research, Das Gupta (1993) criticised Clogg and Eliason's "purging method" which he claimed to be far too complicated to be of any practical use for most applications of standardization involving more than one or two factors. In

addition, this purging method (among other more traditional approaches to standardisation) was criticised in that it often produces inconsistencies in the decomposition of rates which are difficult to interpret. These inconsistencies have been shown to be related to somewhat arbitrary decisions taken in the selection of the most appropriate “standard populations” for the purposes of decomposition. Alternatively, Das Gupta’s approach to standardisation deals with this problem through the reliance upon “average populations” in the selection of standards, and eliminates inconsistencies through a strictly mathematical approach that solves for unknowns from algebraic equations rather than any reliance upon statistical modelling. Instead of relying upon any specific year (1981, 1989 or 1997) as the standard for the current decomposition, Das Gupta’s three factor and three population decomposition involves a standard that is in fact an average in terms of population composition

REFERENCES

- Battle, K. and L. Muszynski
1995 One Way to Fight Child Poverty. Ottawa: Caledon Institute of Social Policy.
- Beaudry, P. and D. Green
1997 Cohort Patterns in Canadian Earnings. Toronto: Canadian Institute for Advanced Research Working Paper, no. 97.
- Beaujot, R.
2000 Earning and Caring in Canadian Families. Peterborough: Broadview Press.
- Beaujot, R. and J. Bland
1978 “Components of Change Analysis, with Applications to Households in Canada” *Genus* 34: 145-154.
- Blank, R.
1996 The New Economics of Poverty. Princeton: Princeton University Press.
- Clogg C. and S. Eliason
1989 “A flexible procedure for adjusting rates and proportions, including statistical methods for group comparisons.” *American Sociological Review* 53:267-293.
- Cornia G. and S. Danziger (eds.)
1997 Child Poverty and Deprivation in the Industrialised Countries, 1945-1995. New York: Oxford University Press.

- Cotton, C., M. Webber, and Y. Saint-Pierre
 1998 Should the Low Income Cutoffs be Updated? Ottawa: Statistics Canada,
 Catalogue No. 75F0002MIE-99009.
- Das Gupta, P.
 1978 “A general method of decomposing a difference between two rates into
 several components.” *Demography* 15:99-112.
- 1991 “Decomposition of the difference between two rates and its
 consistency when more than two populations are involved.”
Mathematical Population Studies 3:105-125.
- 1993 Standardization and Decomposition of Rates: A User’s Manual.
 Washington: U.S. Bureau of the Census, Current Population Reports,
 Series P23-186.
- Dooley, M.
 1991 “The demography of child poverty” *Canadian Studies in Population*
 18: 53-74.
- 1994 “Women Children and Poverty in Canada” *Canadian Public Policy* 20:
 430-443.
- Duncan, G.
 1991 “The economic environment of childhood,” Pp. 23-50 in A. Huston (ed.),
Children in Poverty: Child Development and Public Policy. New York:
 Cambridge University Press.
- Eggebeen, D. and D. Lichter
 1991 “Race, family structure and changing poverty among American children.”
American Sociological Review 56: 801-817.
- Fellegi, I.
 1997 On Poverty and Low Income. Ottawa: Statistics Canada,
 Catalogue No. 13F0027XIE.
- Grindstaff, C. T.R. Balakrishnan and P. Maxim
 1989 “Life course alternatives: factors associated with differential timing
 patterns in fertility among women recently completing childbearing,
 Canada 1981.” *Canadian Journal of Sociology* 14: 443-460.
- Kerr, Don

- 1992 Demographic Life Cycle Events and Economic Well-Being. Ph.D. Dissertation, London: University of Western Ontario.
- Keyfitz, N.
1968 Introduction to the Mathematics of Population. Reading, MA: Addison-Wesley.
- Kitagawa, E.
1955 "Components of a difference between two rates." *Journal of the American Statistical Association* 50:1168-1194.
- 1964 "Standardized comparisons in population research." *Demography* 1: 296-315.
- Hernandez, D.
1993 *America's Children: Resources from Family, Government and the Economy*. New York: Russell Sage Foundation.
- Lerman, R.
1996 "The impact of the changing U.S. family structure on child poverty and income inequality." *Economica* 63:S119-S139.
- Lichter, D.
1997 "Poverty and inequality among children." *Annual Review of Sociology* 23:121-145.
- Lichter, D. and D. Eggebeen
1994 "The effect of parental employment on child poverty." *Journal of Marriage and the Family* 56:633-645.
- Marcil-Gratton N.
1998 *Growing up with Mom and Dad? The Intricate Family Life Course of Canadian Children*. Ottawa: Statistics Canada, Catalogue no. 89-566.
- Morissette, R.
1997 "The declining labour market status of young men." In M. Corak (ed.) *Labour Markets, Social Institutions and the Future of Canada's Children*. Ottawa: Statistics Canada, Catalogue no. 89-553.
- Myles J. and G. Picot
2000 *Social Transfers, Earnings and Low Income Intensity among*

Canadian Children, 1981-1996: Highlighting Recent Developments in Low Income Measurement. Ottawa: Statistics Canada, Catalogue no. 11F0019MPE.

Oppenheimer, V.

1988 "A Theory of Marriage Timing." *American Journal of Sociology* 94:563-91.

Osberg, L.

2000 Poverty in Canada and the USA: Measurement, Trends and Implications. *Canadian Journal of Economics* 33:847-877.

Phipps, S. and P. Burton

1995. "Sharing Within Families: Implications for the Measurement of Poverty among Individuals in Canada" *Canadian Journal of Economics*, 28:1, 175-204.

Picot, G., J. Myles and W. Pyper

1998 "Markets, Families and Social Transfers: Trends in Low Income among the Young and Old, 1973-1995". In M. Corak (ed.) *Labour Markets, Social Institutions and the Future of Canada's Children*. Statistics Canada. Catalogue no. 89-553-XPB.

Palmer, J., T. Smeeding and C. Jencks,

1988 "The uses and limits of income comparisons." Pp. 9-27 in J. Palmer, T. Smeeding and B. Torrey (eds.), *The Vulnerable*. Washington: The Urban Institute Press.

Pollard, J.

1988 "On the decomposition of changes in expectation of life and differentials in life expectancy." *Demography* 25: 265-276.

Rodgers, H.

1996 *Poor Women, Poor Children*. Armonk, Sharp Publishers.

Ruggles, P.

1990 *Drawing the Line*. Washington: The Urban Institute.

Sharif, N. and S. Phipps

1994. "The Challenge of Child Poverty: which Policies Might Help?" *Canadian Business Economics* 2: 17-30.

Shryock, H. and J. Siegel

1980 The Materials and Methods of Demography. San Diego: Academic Press.

Statistics Canada

1996 Income Distributions by Size in Canada, 1997. Ottawa: Statistics
Canada. Catalogue No. 13-207-XPB.

U.S. Bureau of the Census

1988 Poverty in the United States: 1987. Current Population Reports,
Series P-60, No. 163. Washington: U.S. Government Printing Office.

Wolfson, M. and J. Evans

1988 Statistics Canada's Low Income Cutoffs: Methodological Concerns and
Possibilities. Analytical Studies Branch, Ottawa: Statistics Canada.

Wunsch G. and M. Termot

1978 Introduction to Demographic Analysis: Principals and Methods.
New York: Plenum Press.

Table 1. Distribution of Canadian Children (<18 yrs), by Family Type, Age of Lone Parent and Number of Children, and Poverty Rates 1981-1997

	1981	1989	1997
Family Type			
married couple ⁱ	89.6	87.7	83.9
female lone parent	9.0	11.0	13.7
male lone parent	1.5	1.3	2.4
	100.0	100.0	100.0
Age of Mother/Male Lone Parent			
<25	6.5	4.1	3.4
25-29	16.6	15.3	10.4
30-34	24.6	26.4	22.6
35-39	23.3	26.0	28.5
40+	29.0	28.2	35.0
	100.0	100.0	100.0
No. of Children (under 18)			
one	21.6	22.5	23.9
two	42.6	46.3	45.0
three	23.5	21.9	22.5
four+	12.2	9.3	8.6
	100.0	100.0	100.0
Poverty Rates			
Official Low Income Cutoffs	16.3	15.2	19.9
Deep Poverty	5.1	3.9	5.5

ⁱ Includes common law unions

Source: Survey of Consumer Finances, Statistics Canada, 1981, 1989, 1997

Table 2. Distribution of Children Classified as Income Poor, by Family Type, Age of Mother/Male Lone Parent and Number of Children, 1981, 1989, 1997		1981	1989	1997
		Distribution of children below LICOs		
family type				
	married couple	66.2	56.8	56.2
	female LP	31.9	41.4	41.0
	Male LP	1.9	1.8	2.8
		100.0	100.0	100.0
Age of Mother/Male LP				
	<25	12.1	10.3	9.7
	25-29	19.0	20.9	15.4
	30-34	24.6	28.0	25.1
	35-39	19.4	21.4	24.6
	40+	24.8	19.4	25.2
		100.0	100.0	100.0
No. of Children (under 18)				
	one	17.9	21.2	23.1
	two	35.2	42.2	40.2
	three	27.9	21.7	24.0
	four+	19.0	14.9	12.6
		100.0	100.0	100.0
		Distribution of children in deep poverty		
family type				
	married couple	51.9	50.1	46.3
	female LP	46.2	48.3	49.8
	Male LP	1.8	1.6	3.9
		100.0	100.0	100.0
Age of Mother/Male LP				
	<25	16.6	12.1	14.8
	25-29	18.7	20.7	17.4
	30-34	23.9	24.6	20.9
	35-39	20.8	23.3	22.1
	40+	20.0	19.3	24.9
		100.0	100.0	100.0
No. of Children (under 18)				
	one	21.7	22.5	27.9
	two	35.8	43.4	40.9
	three	25.4	20.3	26.1
	four+	17.2	13.8	5.1
		100.0	100.0	100.0

Source: Survey of Consumer Finances, Statistics Canada, 1981, 1989, 1997

Table 3. Observed and Standardized Low Income Rates, 1981, 1989, 1997

Official LICOs	Observed	Standardized Rates			Standardized 3 factors
		Family Type	Number of Children	Age of Mother/ Male Lone Parent	
1981	16.3	16.3	16.3	16.3	16.3
1989	15.2	14.3	15.6	15.7	15.1
1997	19.9	17.5	20.3	21.2	19.3
Deep Poverty					
1981	5.1	5.1	5.1	5.1	5.1
1989	3.9	3.5	4.1	4.2	3.8
1997	5.5	4.5	5.6	6.1	5.2

Source: Survey of Consumer Finances, Statistics Canada, 1981, 1989, 1997

Appendix

Table A: Low Income Cut-offs of Family Units, 1997

Size of family unit	Size of area of residence				
	500,000 and over	100,000 to 400,000	30,000 to 99,999	< 30,000	Rural Areas
2 persons	21,760	18,664	18,534	17,245	15,038
3 persons	27,063	23,213	23,050	21,448	18,703
4 persons	32,759	28,098	28,903	25,964	22,639
5 persons	36,618	31,409	31,191	29,023	25,307
6 persons	40,479	34,720	34,478	32,081	27,975
7+ persons	44,339	38,032	37,766	35,140	30,643

Source: Statistics Canada (1998) Income Distribution by Size in Canada, 1997. Catalogue 13-207-XPB

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