

Phipps, Shelley

Working Paper

Poverty and Labor Market Change: Canada in Comparative Perspective

LIS Working Paper Series, No. 108

Provided in Cooperation with:

Luxembourg Income Study (LIS)

Suggested Citation: Phipps, Shelley (1994) : Poverty and Labor Market Change: Canada in Comparative Perspective, LIS Working Paper Series, No. 108, Luxembourg Income Study (LIS), Luxembourg

This Version is available at:

<https://hdl.handle.net/10419/160780>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.

Luxembourg Income Study Working Paper Series

Working Paper No. 108

**Poverty and Labor Market Change:
Canada in Comparative Perspective**

Shelley Phipps

April 1994

(scanned copy)



**Poverty and Labour Market Change:
Canada in Comparative Perspective**

By

**Shelley A. Phipps
Department of Economics
Dalhousie University
Halifax, Nova Scotia
B3M 2W4**

Paper prepared for presentation at the conference "Labour Market Polarization and Social Policy," Queen's University, School of Policy Studies, Kingston, Ontario, January 27-28, 1994. I would like to thank Ethel Langille for her excellent research assistance, Ken Battle, Lars Osberg and Vera Brusentsev for helpful comments and the Social Sciences and Humanities Research Council of Canada for financial support.

A growing number of researchers have documented the phenomenon of polarization in the Canadian labour market (e.g., Beach and Slovstve, 1993; Burbidge, Magee and Robb, 1993; Economic Council of Canada, 1990; Freeman and Needels, 1991; MacPhail, 1993, Morisette, Myles and Picot, 1993). Researchers in the US have found evidence of an even greater degree of polarization in the US (see Levy and Murnane, 1992 for a survey). Gottschalk and Joyce (1992) use data from the Luxembourg Income Study to argue that evidence for polarization can also be found for Australia, the Netherlands, Sweden and the United Kingdom, though the severity of polarization varies across countries.

What are the implications of these labour-market developments for trends in the experience of poverty? If workers at the bottom of the earnings distribution are losing ground - in terms of wage rates, in terms of hours or both -- does this mean that more families are poor? Given the systematic patterns in who is losing out in the labour market, do we also observe systematic changes in the experience of poverty?

There is not, of course, a one-for-one connection between low earnings and family poverty. Some individuals losing out in the labour market may be shielded from poverty because they have spouses or other family members with employment. Of course, in some cases, additional household members may be induced to enter the labour market to help compensate for the labour-market difficulties of other household members and to help hold family income above poverty level. Moreover, inadequate earnings from the labour market may not result in poverty if sufficiently supplemented with government transfers.

This paper examines the link between labour markets and poverty in Canada and in three other advanced industrial countries -- Australia, Sweden and the United States.

Section 1 outlines the data employed. Section 2 discusses changes between the early and mid/late 1980's in the incidence and depth of poverty, at the national level and for important demographic sub-groups. Section 3 uses probit analysis to assess which household characteristics are associated with the highest probability of poverty. Section 4 concludes with a discussion of social policy implications.

1. Data

Microdata for this research are drawn from the Luxembourg Income Study, a unique collection of internationally comparable microdata surveys contributed by individual countries and housed in Luxembourg. Data are easily accessible to remote users via the EARN/BITNET system. See de Tombeur, et.al., 1993 for a detailed description of this resource.

Data are available at two points in time -- the early and the mid/late 1980s -- for each of the countries included in this analysis. The countries chosen for this project were, in part, dictated by the requirement that changes over time be observable. (See Appendix A for a description of the data sets included in LIS for the countries studied here.) Note, however, that with data for only two time periods, we are limited to observing changes from one period to the next rather than trends in the experience of poverty. (Poverty rates may have fallen, then risen again between the first and second survey year.) Note, as well, that unemployment rates were slightly higher in the second time period than in the first for Australia, Canada and the US. Unemployment rates were slightly lower in the second time period for Sweden. (See Appendix Table C.1.) In no case are we comparing time periods at dramatically different stages of the business cycle. Nonetheless, since

poverty is importantly linked with employment experiences (see, for example, Phipps 1991), it would have been ideal to have, for each country, data available for two years with exactly the same rates of unemployment. Unfortunately, this was not possible for this project.

The basic unit of analysis was, where possible, chosen to be the family (though the terms household and family will be used interchangeably throughout the text). The exception was Sweden, where 'tax units' were the only option available. Unmarried children greater than eighteen are counted as separate 'tax units,' even if they are still living with their parents. Thus, for Sweden, we will be understating family size and over-estimating the number of young, single individuals. It is also important to note that 'married' means legally married or living in a 'de facto' married state for all countries except the US, where only legal marriages are recognized in the data. Finally, the definition of a 'child' differs across the countries. In Canada and the US, no age restriction is imposed. In Sweden, children must be less than 18 years. In Australia, children must be less than 15 or between 15 and 20 years and full-time students.

Following the current consensus among researchers in the field of international poverty comparisons, a family unit is defined to be poor if it has an equivalent income less than 50 percent of median gross (i.e., post-transfer but pre-tax) equivalent income for the country. This is a relative definition of poverty. Equivalent income is defined as household gross income divided by the appropriate household equivalence scale. The equivalence scale chosen is that recommended by the OECD in which the first adult in the family is assigned a value of 1.0, additional adults add 0.7 and children add 0.5. (This equivalence scale differs slightly from that implicit

in the Statistics Canada Low-Income Cut-offs.) A gross income poverty line is chosen since this is the approach to measuring poverty most familiar to policy analysts in Canada.¹

2. Changes in the Incidence and Depth of Poverty

2.a Changes for the Population

Table 1 documents changes in the incidence and depth of poverty at the national level using three alternative income concepts. First, we ask "How many families would be poor if they relied entirely on the wages/salary of the household 'head.'"² Next, we ask how many families would be poor if they also had access to the earnings of other family members and to self-employment income. These first two income concepts relate to 'market generated' poverty. Finally, we ask how many families are poor in terms of gross income -- including transfers. Thus, the final category relates to poverty which remains after government intervention through the welfare state.

Notice, first, that roughly 50 percent of families would be poor in all countries studied if they had to rely solely on the wages/salary of the head.³ Thus, in aggregate, we observe very similar outcomes in terms of

¹ The 50 percent of median income definition yields poverty lines which are very close to the Statistics Canada LICO's, if the same equivalence scale is chosen. See Sharif and Phipps, 1994 for an illustration. Notice that measuring 'family' poverty assumes that resources are shared equally within the family. If this is not true, then we may be over- or under-estimating the poverty experiences of individual members of families. See Phipps and Burton, 1993 for a discussion and illustration of this point.

² In most of the data sets employed, the man in a male/female couple is designated as the household 'head.' Otherwise, a single individual or single parent is the 'head.'

³ These numbers include the elderly, most of whom have no labour-market earnings.

market-generated poverty across the countries despite important differences in labour-market institutions. For example, collective bargaining is much more pervasive in Australia and Sweden than in Canada, or especially, the US. See Appendix Table B.4.

Second, notice that for Australia and Canada there has been little change over the study period in the incidence of poverty according to this measure. However, more families would be poor in the mid/late 1980s in both Sweden and the United States if forced to rely solely on the wages/salary of the head.

When the earnings of other family members as well as self-employment income are added to household resources, the incidence of poverty drops markedly in all countries from about 50 percent to roughly 40 percent in Australia and Sweden and to about 35 percent in Canada and the US. It is interesting to note that the countries with more centralized wage-setting institutions actually generate higher levels of poverty in terms of family earnings. (However, this is not true for all demographic sub-groups as will be noted through the text.)

Additional earners are clearly vital to the prevention of poverty for many families. However, by the mid/late 1980's, family earnings were somewhat less effective in keeping families out of poverty in Canada, Sweden and the US. This was not true in Australia.

When we move from family earnings (including self-employment income) to family gross income (which involves adding capital income and most importantly for lower-income families, transfers), the incidence of poverty again falls markedly. For Australia, Canada and the US the incidence of poverty drops by roughly 20 percentage points (slightly less in the US). For Sweden, the

incidence of poverty drops by about 35 percentage points. Thus, when transfers are added, the incidence of poverty is much lower in Sweden than in any of the other countries. In Sweden, the state plays a much larger role in eliminating poverty generated in the labour market.

Over the period under study, the incidence of poverty measured using gross family income has increased in all countries except Canada where there has been a very small reduction.⁴ The largest increase occurred in Sweden, though it is important to remember that even with major increases in the incidence of poverty between 1981 and 1987 in Sweden, the incidence of poverty (11.1 percent) is still only about half what is observed in Australia (19.2 percent) or the US (21.3 percent). In all countries except the US, the average depth of poverty has fallen slightly over the period.

2b. Changes in Family Poverty by Gender of Reference Individual

While interesting, aggregate measures of the experience of poverty in a country can mask what is happening to important demographic sub-groups. This section of the paper examines changes in the experience of poverty separately for male- versus female-headed families.⁵ Tables 2, 4 and 6 document changes in the incidence and depth of poverty separately for these two groups using the three income concepts employed in section 2a (i.e., earnings of head, family earnings, gross family income).

A first very important point to notice is that female-headed families

⁴ The small reduction in the over-all incidence of poverty in Canada is due to a reduction in the incidence of poverty among the elderly. If the elderly are removed from the sample, the incidence of poverty in Canada increases over the period from 22.8 to 24.7 percent.

⁵ Recall that in most of the countries studied, if a man is present in the household, he is designated as the 'head.'

experience a dramatically higher incidence of poverty in all countries, regardless of the measure of income employed. This basic fact has not changed during the 1980's. The average depth of poverty experienced by female-headed families is typically deeper than that experienced by male-headed families, though the differences in depth are much smaller than the differences in incidence, particularly once transfer income is included. (In Sweden, and using gross income to measure family resources, the depth of poverty is lower for female-headed families than for male-headed families.)

If families only had access to the earnings of the head of household, 60 to 70 percent of female-headed families would be poor while only 40 to 45 percent of male-headed families would be poor. In all countries, there have been small increases in the incidence of poverty among female-headed households using only earnings of head as a measure of family resources. However, in most cases, these changes have been quite small. (See Table 2.) There has been no change in the incidence of poverty among male-headed households in Australia and Canada, but noticeable increases in Sweden and the United States.

When other family earnings are added to household resources, much larger reductions in poverty are noticeable for male-headed households. Again, recall that the male partner is almost always labelled the 'head', if present. Thus, almost all couples will be labelled male-headed and will have the possibility of using spouse's earnings to reduce family poverty. Families without a second potential earner do not have this potential 'escape route' from poverty. (Of course, it should be remembered that a second income certainly does not ensure that a family will escape poverty. Moreover, it is quite possible, in situations of high unemployment, that spouses will not be

able to find paid employment.)

Table 4 indicates that the incidence of poverty in terms of total family earnings is higher for both male-headed and female-headed families in the mid/late 1980's than in the earlier time period. (The one exception is for male-headed families in Australia.)

Finally, when poverty is measured using family gross income (i.e., when capital income and transfers are added), Table 6 indicates that the incidence and depth of poverty drop substantially for both male- and female-headed households in all countries and years. Transfers are of vital importance for the prevention of poverty for many families in all countries, though transfers are most effective in Sweden. For example, in 1981 the incidence of poverty fell from 62.3 percent to 8.4 percent for female-headed households. In Canada, in the same year, the incidence of poverty was reduced from 55.0 percent to 29.4 percent.

Table 6 indicates that the incidence of poverty was higher in the mid/late 1980's than in the early 1980's for female-headed households in Australia, Sweden and the US and lower in Canada. The magnitude of the change was particularly noticeable in Sweden (from 8.4 to 17.1 percent), though again it is important to note that the incidence of poverty among female-headed households was still much lower in Sweden than in any of the other countries studied. The incidence of poverty increased over the period studied for male-headed households in all countries.

2c. Changes in Family Poverty by Age of Reference Individual

One of the most striking changes in family poverty between the early and mid/late 1980's in Canada, Sweden and the United States was the increase in the incidence of poverty among families with young (less than 25 years) heads. First, Table 2 indicates that if young families had been forced to rely solely on the labour-market earnings of the household head, very large increases in the incidence of poverty would have been observed (7.9 percentage points in Canada, 7 percentage points in Sweden and 13.4 percentage points in the US).⁶ While the incidence of poverty falls in all years and countries when the earnings of other family members are added to household resources, there has still been an increase in the incidence of poverty among young families in Canada, Sweden and the US relative to the the early 1980's (an increase of 8 percentage points in Canada, 6 percentage points in Sweden and 10.7 percentage points in the US). Of course, a majority of young people are not 'married' and do not, therefore, have the potential support of spouse's earnings to help bring incomes over poverty level. (See Table B.2.)

Research on polarization in the labour market (see, for example, Beach and Slotsve, 1993; MacPhail, 1993; Levy and Murnane, 1992; Gottschalk and Joyce, 1992) has demonstrated that younger workers have been losing ground relative to older workers in all of the countries studied. This growing disadvantage in the labour market appears to have resulted in a growing inability of younger families to support themselves above poverty level using

⁶ In the first time period, the incidence of poverty among young families, in terms of earnings of the head, was nearly identical in Canada, Sweden and the US (about 40 percent). Canada and Sweden again appear very similar in 1987 (about 47 percent of young families are poor by this measure), but conditions became even more unfavourable for young families in the US (about 54 percent poor).

only their own earnings.

From a policy perspective, it is important to remember that a significant number of young people (less than 25) have children to support. In Canada, 16 percent of families with a reference individual less than 25 years of age contained children in 1987 (about one third of these were single parents). In the US, 27.4 percent of families with a young reference person contained children (about equally divided between single parents and couples with children -- see Table B.2). Thus, increased poverty among young adults means increased poverty among some children, with all of the associated negative externalities.

It should also be noted that when economic times are difficult, some young people return to their parent's home for support. Except in the case of Sweden,⁷ these young people who had previously formed family units of their own will disappear from the sample of families. It seems important to remember that in such cases there may still be labour market problems, though these difficulties 'disappear' from our analyses when parental units are re-joined.

Table 6 addresses the question: "To what extent do transfers relieve the poverty which would otherwise be experienced by families with young heads?" While extremely important, the evidence presented in this table suggests that transfers do not go as far in relieving the poverty experienced by youth as they do for the population as a whole. For example, in Canada in 1987, the ratio of the incidence of poverty for the entire population using

⁷ Recall that the Swedish 'tax units' treat all young people over the age of 18 as separate units, whether or not they still reside with their parents. Thus, we will be over-estimating the number of Swedish youth who live alone and over-stating the incidence of poverty among them.

family earnings to the incidence of poverty for the entire population using gross family income is 2.32. For families with young heads, the equivalent ratio is 1.18. For the US in 1986, the ratio of the incidence of poverty for the population using family earnings to the incidence of poverty for the population using gross income is 1.80. For families with young heads, the equivalent ratio is 1.11. For Sweden in 1987, the equivalent ratios are 4.07 for the population and 2.63 for young families.

Thus, while transfers certainly assist young families, many are still left in poverty. In Sweden and Canada, they constitute the poorest age group in both years. In the US, the elderly had a higher incidence of poverty in 1979, but poverty among young families was highest by 1986. There has thus been a change between the early and mid/late 1980's in the direction of markedly increased poverty among young families. Transfers help, but do not entirely offset the adverse labour market experiences of the young.

Australia is the interesting exception to the story of deteriorating economic circumstances for young families. In Australia, even if young families were forced to depend solely on the earnings of the household head, poverty rates would have fallen over the time period studied. Moreover, poverty rates are much lower in absolute terms in any year than those observed in Canada, Sweden or the US. (In 1985, 32.1 percent of young Australian families would have been poor if they relied only on earnings of the head; 47.1 percent of young Canadian families would have been poor in 1987; 47.6 percent of young Swedish families would have been poor in 1987; 53.8 percent of young US families would have been poor.) The lower poverty rates experienced by Australian youth at the end of the study period is also observed when total family earnings or family gross income are used as the

measure of resources.

While the period of study for Australia (1981-1985) ends slightly sooner than for the other countries (1981-87 for Canada and Sweden; 1979-86 for the US), these changes nonetheless seem extremely interesting and suggest that study of the Australian labour market would be worthwhile for policy-makers in other countries concerned about the plight of the young. Gottschalk and Joyce (1992) report that young Australian full-time workers have fallen behind older full-time workers -- the ratio of median real wages and salaries fell from 0.911 to 0.862 between 1981 and 1985. However, the equivalent comparison for the US (1979-86) is 0.784 to 0.676. Thus, Australian young people started in a much better position relative to older workers.

A rather informal investigation of the unique characteristics of the Australian labour market suggests several hypotheses about why Australian youth may fare relatively well. Perhaps most importantly, wage levels are not purely market-determined in Australia. Basic wages -- 'award levels' -- are established for each occupation by State and Federal wage tribunals. These are legally enforceable minimum wages. Award levels were originally determined as 'that which is necessary to support a man, his wife and their children living in a civilized community' plus a margin for the value of the work performed. (For example, occupations deemed to require greater skill would receive a higher award level.) In 1983, about 83.6 percent of men and 89.7 percent of women were covered by this system of wage setting. While 'over-award' wages are possible, they are not common (Gregory and Anstie, 1987).

An example of the powerful influence of the wage tribunals in Australia can be found in the story of the implementation of a policy of equal pay for men and women. Before 1975, award levels for women were typically set at 75

percent of the award levels for men in the same occupation. In 1972, the federal wage tribunal, The Commonwealth Conciliation and Arbitration Commission, decided in favour of a policy of equal pay for equal work, to be fully implemented by June 1975. Researchers agree that this action was extremely effective in reducing the male/female wage gap (Gregory and Anstie, 1987, Mitchell, 1984). Gregory and Anstie (1987) report that the ratio of the average award rate for women to the average award rate for men climbed from about 72 percent (1950-69) to about 92 percent after 1975. Moreover, female employment continued to increase as a share of male employment throughout the period regardless of the measure of employment used (e.g., hours, full-time workers). Thus, the large change in relative male/female wages did not seem to affect relative employment levels of male and female workers (Gregory and Anstie, 1975; Mitchell, 1984).

The powerful Australian wage tribunals may also have had an important influence on relative youth/adult wages. First, according to Mitchell (1984), 'the Australian award decisions tend to compress the wage structure because the system attempts to be equitable, thereby protecting the weak at the bottom of the wage ladder' (p. 182). Mitchell (1984) presents statistical evidence that the Australian wage distribution is compressed relative to the market-determined wages received in the US. Since young workers, other things equal, are at the bottom of the wage ladder, this wage compression will be to their advantage. Further, in the mid-1970's, there was an explicit increase in youth awards relative to those for adults in response to local shortages of entry-level workers. This may help to explain why youth started in a better position relative to adults in Australia than in the other countries studied (see Gottschalk and Joyce, 1992). Further, continuous indexation of wages

from 1975 (with the exception of 1981 and 1982) would help to preserve real wages for Australian youth.

Mitchell (1984) also discusses a variety of job-training and vocational programmes aimed primarily at youth which were initiated in the mid-1970's. While these may have had an influence, he argues that the influence would have been relatively small, since job-training programmes will only be of real benefit in periods of low unemployment.⁸

The other interesting trend which appears when we examine the poverty experiences of different age groups separately is that trends in poverty for the elderly have been quite different in the four countries studied. (This discussion focusses on poverty measured in terms of gross income since few elderly families depend primarily on labour market earnings.) The incidence of poverty has increased slightly for families with elderly heads in Australia and decreased slightly in the US. In Canada, there has been a large drop in the incidence of poverty among elderly families (from 22.0 percent to 12.8 percent) with little change in the depth of poverty. On the other hand, in Sweden there has been a large increase in both the incidence and depth of poverty (from 5.8 percent to 11.4 percent and from 0.08 to 0.14, respectively). These trends are important, but since they are not directly linked to labour markets, they will not be pursued here.

⁸ Another important institutional difference between Australia and, for example, Canada, is that young adults in Australia are eligible to receive unemployment insurance benefits, although at a lower rate than adults, without any previous labour-market attachment. Many would argue that this should generate labour-market problems, though Australian econometric studies cannot find evidence of any dis-incentive effects.

2d. Changes in Poverty by Family Type

Tables 3, 5 and 7 report the incidence and depth of poverty for families categorized as 'singles,' 'couples,' 'couples with children' and 'single parents.'⁹ A first very important point to notice is that despite small changes, the basic fact that single-parent families are overwhelmingly the most poor group in Australia, Canada and the US has not changed over the period of the 1980's. (For example, in the later time period, 53.2 percent of single-parent families were poor in Australia, 48.8 percent were poor in Canada and 53.9 percent were poor in the US. See Table 7.) This issue remains a critical social policy problem in all three countries.

While single parents are also a relatively poor group in Sweden, only 8.5 percent of such families were poor in 1987 -- a much smaller share. It is also interesting to note (see Table 3) that the earnings of single parents in Sweden are better able to support their families than are the earnings of single parents in the other countries studied. Table 3 indicates that (in the second time period) 52.5 percent of Swedish single parent families would have been poor if relying solely on the earnings of the head. In Australia, 72.4 percent would have been poor. In Canada, 69.0 percent would have been poor and in the US 69.1 percent would have been poor.

With respect to changes in the poverty experiences of families of different types, the most significant have been for families with children

⁹ More precisely, 'singles' are families in which the head is not married and there are no children present. 'Couples' are families in which the head is 'married' but there are no children present. 'Couples with children' are families in which the head is 'married' and children are present. 'Single parents' are families in which the head is not married and children are present. Recall that 'married' includes common-law relationships in all countries except the US.

present.¹⁰ If couples with children were forced to rely only on the earnings of the head of household, there would have been more poor families by the mid/late 1980's in Sweden and the US and fewer poor families in Canada and Australia. For couples with children, earnings of other family members significantly reduce poverty. Still, the same changes -- increased incidence of poverty in the US and Sweden and reduced incidence of poverty in Canada and Australia -- are apparent. Finally, transfer income helps reduce the incidence of poverty for couples with children in all countries, but the degree of assistance provided varies markedly. For example, there is a 12.7 percentage point reduction in the incidence of poverty in Sweden in 1987 and only a 3.4 percentage point reduction in the US. The adverse effects of labour market conditions are offset to a much larger degree in Sweden than in the US -- leaving relatively few couples with children poor in Sweden.

Over-all, using gross income to measure poverty, there has been a significant upward trend in the poverty experience of US couples with children (from 13.3 to 17.1 percent), very small increases in Australia and Sweden and virtually no change in Canada.

For single-parent families, there has been a decline in the ability of head's earnings to keep families out of poverty in Canada and Sweden, an improvement in Australia and almost no change in the US. (Again, notice that the earnings of the family head are much more likely to keep Swedish single parents out of poverty than is true in the other countries.) In terms of gross incomes, Table 7 indicates an increase in the poverty experience of

¹⁰ One exception is the significant increase in the incidence of poverty -- measured using gross income -- for single individuals in Sweden (from 9.9 percent to 17.7 percent). This change does not appear to be linked with labour-market experiences.

single parent families in Australia, Canada and the US and a small decrease in Sweden (again, despite a change in the opposite direction in terms of earnings).

2e. Changes in Family Poverty by Number of Earners

Table 5 indicates that employment is far from a guarantee that a family will escape poverty (see also O'Connor and Smeeding, 1993). In all countries, earnings became less able to support the family above poverty level. By the end of the study period, roughly 40 percent of Swedish families with one earner would have been poor based solely on family earnings, about 30 percent of Canadian and US one-earner families would have been poor and about 20 percent of Australian one-earner families would have been poor. Even two earners often did not generate enough income to lift families above poverty level based on earnings alone, and the severity of this problem increased in all countries through the 1980's. At the end of the study period, about 13 percent of two-earner families in Canada, Sweden and the US would have been poor based on family earnings; 8.4 percent of Australian two-earner families would have been poor.

Government transfers in all cases reduced the incidence of poverty among one-earner families, but the trend observed in Table 7 is nevertheless toward increased poverty for families with one earner. Similarly, after the inclusion of transfers, the trend for two-earner families is to a higher incidence of poverty (though in Canada this change is rather small). Thus, labour markets do seem to have generated a higher incidence of poverty which

has not entirely been off-set by government transfers.¹¹

Further, it is interesting to note that the proportion of families with one earner dropped and the proportion of families with two or more earners increased through the 1980's in every country. (See Appendix Table 8.1.) This change is particularly marked for Australia where 24.5 percent of families had two or more earners in 1981 while 36.0 percent had two or more earners in 1985. In Canada, 43.1 percent of families had two or more earners in 1981 and 45.2 percent had two or more earners in 1987. The rate of increase is not so large in Canada, but both starting and ending levels are higher. Thus, it seems likely that many families responded to poor labour market conditions with increasing rates of labour-force participation for family members as one way of attempting to avoid poverty.

3. Probit Analysis of the Determinants of Family Poverty

This section of the paper supplements the descriptive statistical analysis of changes in the incidence of poverty by conducting a simple probit analysis of the characteristics associated with a higher probability of poverty in each country and year. In this way, we can determine whether, for example, young families are more likely to be poor once we have controlled for other important influences such as number of dependant children and employment status.

For each country and year, the dependent variable is a dummy variable

¹¹ Given the focus in the polarization literature on the role of education (e.g., Bound and Johnson, 1992; Freeman and Needels, 1991; Katz and Murphy, 1992; Levy and Murnane, 1992) it would be interesting to compare trends in poverty internationally for families in which the head has different levels of education. However, the Swedish data do not provide the information necessary for this analysis.

set equal to one if the family is poor, equal to zero otherwise. The list of explanatory variables include a set of dummy variables to indicate the age of the household head (the excluded category is 45-64), dummy variables to indicate whether the household head is a single man or a single woman (with couples the excluded category), a continuous variable denoting the number of children present in the family,¹² a set of categorical variables to indicate whether the family had zero, two or more than two earners (with the excluded category being one earner) and, finally, for all countries but Sweden¹³ a dummy variable indicating that the head is employed full-time, full-year outside the home.¹⁴

Results of the probit analysis are reported in Table 8. In general, these confirm the results of the descriptive analysis discussed in section 2. The probability of being poor increases, other things equal, if the family head is less than 25 years of age in Canada, Sweden and the United States and falls in Australia.¹⁵ There is a decreased risk of being poor for families with elderly heads, other things equal, in Australia and Canada and an

¹² The rationale for using the number of children rather than the total number of family members was that additional adults are more likely to be self-supporting than are children. This will not be true, of course, in the case of the very elderly or disabled.

¹³ The 1981 Swedish data indicated only whether the head of household worked for pay full-time and not whether he or she worked full year. Experiments with using just the full-time indicator did not prove successful. The 1987 data do provide this information and probit estimates for 1987 including the full-time, full-year variable are provided in Appendix Table C.1 for comparison with the other countries.

¹⁴ Full-time is defined as 35 or more hours per week. Full-year is defined as 40 or more weeks of employment per year.

¹⁵ If we construct confidence bands of two standard errors around the earlier and the later parameter estimate for each country, the bands do not overlap.

increased risk in Sweden.¹⁶ There is no change in the probability of poverty for elderly families in the US.

Additional children are associated with a higher risk of poverty, other things equal, in all countries and time periods. This risk has increased significantly over the time period studied in Australia and the US. (Again, confidence bands of two standard errors do not overlap.)

Being a single parent is associated with a higher probability of poverty in all time periods in Australia, Canada and the US. (The estimated coefficient is particularly high in the US.) However, for Canada and the US, there have not been major changes in the probability of poverty for single parents. For Australia, there has been a significant increase in the probability of poverty for single parents. In Sweden, single parents are significantly less likely to be poor than are couples, controlling for other factors. This is a major difference between Sweden and the other countries which is not evident from the descriptive analysis presented earlier.

Not surprisingly, families with zero earners are significantly more likely to be poor than families with one earner in all countries and time periods except Sweden, 1987. Moreover, quantitatively, this effect is very large. In Canada, over the period under study, the difference in probabilities of poverty for zero and one-earner families fell significantly. For Australia, the difference increased.

Again, not surprisingly, families with two earners are always significantly less likely to be poor than families relying on just one earner. This is true for all countries and time periods. However, the difference in

¹⁶ Again, confidence bands of two standard errors do not overlap for Canada and Sweden. Confidence bands of one standard error do not overlap for Australia.

probabilities of poverty for one- and two-earner families is smaller than the difference between families with zero and one earner. The only significant change in estimated relationships is for Australia, where the difference in probabilities of poverty between one- and two-earner families fell over the period of study.

Finally, families in which the head is employed full-time, full-year outside the home are in all cases less likely to experience poverty than other households. This effect is large in all cases and unchanging over the 1980's for Canada and the US. For Australia, having a full-time/full-year head is less important for reducing poverty probabilities at the end of the period than at the beginning.¹⁷

4. Policy Discussion and Conclusions

Micro-data from the Luxembourg Income Study indicate that through the 1980's, labour market earnings became less adequate to support families in Canada, Sweden and the United States. (This was not true in Australia.) Roughly 40 percent of all families would have been poor if they had relied only on the labour market for resources. Moreover, for these potentially poor families, average income pre-transfer was only about 20 percent of poverty income.

Given the existence of government transfers in these countries, the actual experience of poverty was much lower -- roughly 20 percent in Australia, Canada and the US and roughly 10 percent in Sweden. For Canada,

¹⁷ Recall that the full-time, full-year dummy variable could not be included for both years of the Swedish data. See Appendix Table C.1 for the 1987 probit results using this variable. As for the other countries, having a full-time, full-year head reduces a family's chances of being poor.

aggregate poverty measured using gross income fell very slightly over this period as a result of large reductions in the incidence of poverty among the elderly. (If the elderly are excluded, the incidence of poverty increased in Canada.) For the other three countries, aggregate poverty measured using gross family income increased -- very slightly for Australia and the US but quite markedly for Sweden. (However, it should be kept in mind that the actual level of poverty in Sweden even at the end of the period was much lower -- about half-- than that which existed in the other countries.)

However, from the perspective of social policy, it is not sufficient merely to observe changes in aggregate measures of poverty. The more important question to ask is whether systematic changes in the labour market experiences of particular sub-groups have resulted in significant changes in the poverty experiences of these groups. This paper provides evidence for the following policy-relevant 'changes' in poverty:¹⁸

1. Families with young heads have experienced significant increases in poverty, except in Australia.
2. Single-parent families continue to experience shockingly high rates of poverty. Single-parent families have much lower rates of poverty in Sweden than in the other countries studied, both because they fare better in the labour market and because they receive more generous transfers.

¹⁸ The absence of a change can sometimes be very important -- for example, when there is no improvement in the poverty experiences of a highly vulnerable group such as single-parent families.

3. In all countries, more families had multiple participants in the labour force by the mid to late 1980's than at the beginning of the period, but having two earners was less of a guarantee against poverty. While employment is an extremely important means of reducing poverty for many families, significant numbers of families with two earners did not generate sufficient earnings to avoid poverty (about 13 percent in Canada, Sweden and the US in the mid/late 1980's).

Consider, first, the policy implications of increased poverty among youth. Improved programmes for training and education are vital. However, this alone will not be enough if labour market conditions remain as bad for young people as they have been in recent years. Excellent training is obviously of limited use to those who cannot find jobs -- preferably good jobs with long-term prospects for advancement. Preliminary investigations suggest that centralized wage-setting institutions in Australia may help to explain the superior labour-market experiences of young people. Future research should seek a more detailed explanation of this possibility.

The continuing extremely high rates of poverty experienced by single-parent families is also a vital issue for social policy. In this case, an examination of the Swedish situation might generate helpful policy options. First, it is important to emphasize that Swedish single parents are much less likely to be poor both because they receive generous transfers and because their labour-market earnings are more likely to support families above poverty level than are the labour-market earnings of single parents in the other countries studied. Since most single parents are women, it is relevant that

gender differences in labour-market outcomes are much smaller in Sweden than in Canada.¹⁹ Equal pay policies are very important for single-parent families. They are also very important for any families depending on a women's earnings to stay above poverty level -- this is true of a large and growing number of couples as well.

Swedish single parents may also fare better in the labour market because Sweden provides a number of policies which are very supportive of parents in the labour market -- acknowledging some of the difficulties women face in combining workplace and family responsibilities. For example, 80 percent of Swedish children (aged 3 to school age) attend publicly funded childcare while only about 15 percent of Canadian children are enrolled in publicly funded childcare (Gauthier, 1993). Moreover, Swedish parents receive more generous and flexible maternity/parental leaves and are entitled to temporary leave for the care of sick children (up to 10 years of age) of up to 60 days per child per year. Canadians might consider adopting similar programmes which would also be of tremendous benefit to the increasing number of two-earner families with children.

Swedish single parents also fare better because they receive more generous transfers than do Canadian single parents. One important example is the universally provided family allowance payment which is available to families with children in Sweden.²⁰ (Such a transfer could be of enormous benefit to poor couples with children as well.) Advance maintenance payments,

¹⁹ Phipps and Burton, 1993 report that in 1987 the ratio of female to male earnings for individuals aged 25-55 with some positive earnings was 54 percent in Canada and 63 percent in Sweden.

²⁰ Phipps, 1993 reports that in 1987 average child benefits received by Swedish families with children constituted 9.7 percent of average Swedish income. In the same year, the equivalent figure for Canada was 2.5 percent.

ensuring that 100 percent of Swedish single mothers receive child support, also provide an important source of income. (See Phipps, 1993 for a more detailed discussion of the programmes available in Sweden.)

Much of the policy discussion above is also relevant for the growing number of two-earner families living in poverty. Not just 'any job' (or any two jobs) will provide a family with a standard of living above poverty level. As was true for youth, we need to think about the creation of 'good jobs' with security and decent wages. We must also remember that with a growing number of two-parent families, labour-market institutions must be structured to recognize that workers have home as well as workplace responsibilities.

Bibliography

- Beach, Charles. M. and Slotsve, George A. 1993. "Polarization of Earnings in the Canadian Labour Market" paper presented at the John Deutsch Institute conference on "Stabilization, Growth and Distribution: Linkages in the Knowledge Era" Queen's University, Kingston, Ontario, October 14-16 1993.
- Burbidge, J.B., Magee, L. and Robb, A.L. 1993. "On Canadian Wage Inequality: the 1970's and 1980's" McMaster University, Department of Economics, Working Paper No. 93-07.
- Bound, John and Johnson, George. 1992. "Changes in the Structure of Wages in the 1980's: An Evaluation of Alternative Explanations" American Economic Review 82, 371-392.
- de Tombeur, Caroline et al. 1993. "Luxembourg Income Study (LIS): Working Paper #7.
- Economic Council of Canada. 1990. "Good Jobs Bad Jobs: Employment in the Service Economy".
- Freeman, Richard and Needels, Karen. 1991. "Skill Differentials in Canada in an Era of Rising Labor Market Inequality".
- Gauthier, Anne Hélène. "Family Policies in the OECD Countries" University of Oxford, Department of Applied Social Studies and Social Research.
- Gottschalk, Peter. 1992. "Changes in Inequality of Family Income in Seven Industrialized Countries -- Responses to Growing Earnings Inequality" Luxembourg Income Study, Working Paper # 86.
- Gottschalk, Peter and Joyce, Mary. 1992. "The Impact of Technological Change, Deindustrialization, and Internationalization of Trade on

**Earnings Inequality -- An International Perspective" Luxembourg
Income Study, Working Paper # 85.**

- Gregory, R.G. and Anstie, R.K. 1987. "Equal Pay in Australia. Can Women Do Better than 88 Cents in the Hourly Male Dollar?" paper presented at the Pacific Rim Comparative Labour Policy Conference. The University of British Columbia. Vancouver, BC, June 24-25, 1987.
- Katz, Lawrence F. and Murphy, Kevin M. 1992. "Changes in Relative Wages, 1963-1987: Supply and Demand Factors" Quarterly Journal of Economics v. 107, 35-78.
- Levy, Frank and Murnane, Richard J. 1992. "U.S. Earnings Levels and Earnings Inequality: A Review of Recent Trends and Proposed Explanations" Journal of Economic Literature XXX, 1333-1381.
- MacPhail, Fiona. 1993. "Has the "Great U-Turn" Gone Full Circle?: Recent Trends in Earnings Inequality in Canada 1981-89" Dalhousie University, Department of Economics, Working Paper No. 93-01.
- Mitchell, Daniel J.B. 1994. "The Australian Labor Market" in Richard E. Caves and Lawrence B. Krause (eds). The Australian Economy: A View From the North, The Brookings Institution: Washington, D.C.
- Morisette, René, Myles, John and Picot, Garnett. 1993. "What is Happening to Earnings Inequality in Canada?" Statistics Canada. Analytical Studies Branch. Research Paper No. 60.
- O'Connor, Inge and Smeeding, Timothy M. 1993. "Working But Poor - A Cross National Comparison of Earnings Adequacy" Luxembourg Income Study, Working Paper No. # 94.

- Phipps, Shelley. 1993. "International Perspectives on Income Support for Families with Children" paper presented at the Canadian Employment Research Forum, Ottawa, Ontario, September 24, 1993.
- Phipps, Shelley. 1993. "Canadian Child Benefits: Behavioural Consequences, Income Adequacy and Alternatives" Dalhousie University, Department of Economics, Working Paper No. 93-03.
- Phipps, Shelley. 1991. "Regional Differences in the Incidence of Poverty in Canada," The Canadian Journal of Regional Science, 14:1, 47-72.
- Phipps, Shelley and Burton, Peter. 1993. "Bargaining Models of Household Behaviour: An Empirical Test Using the Luxembourg Income Study" Luxembourg Income Study, Working Paper No. 98.
- Phipps, Shelley and Burton, Peter. 1993. "Collective Models of Household Behaviour: Implications for Economic Policy" paper presented at the Status of Women "Economic Equality Workshop," Ottawa, Ontario, November 29-30, 1993.
- Sharif, Najma and Phipps, Shelley. 1994. "The Challenge of Child Poverty: Which Policies Might Help?" paper presented at the conference "Wise Spending, Just Taxation and Appropriate Fiscal Stance: Challenges Facing Ottawa and the Provinces," Laurentian University, Sudbury, Ontario, February 25-26, 1994.

TABLE 1
Incidence and Depth of Poverty

Country and Year	Incidence of Poverty, using earnings of reference individual	Normalized Deficit, using earnings of reference individual	Incidence of Poverty, using total family earned income	Normalized Deficit, using earned income	Incidence of Poverty, using total family gross income	Normalized Deficit, using gross income
Australia 1981 1985	50.0	0.896	39.1	0.856	18.4	0.290
	50.1	0.899	37.3	0.856	19.2	0.259
Canada 1981 1987	50.6	0.824	33.8	0.753	16.3	0.340
	50.4	0.792	35.9	0.764	15.5	0.328
Sweden 1981 1987	50.5	0.824	42.3	0.805	6.4	0.392
	54.0	0.793	45.2	0.796	11.1	0.376
USA 1979 1986	47.9	0.808	35.9	0.769	20.2	0.396
	52.0	0.804	38.5	0.781	21.3	0.402

* Normalized deficit = (poverty line - gross equivalent income) poverty line

Note: Poverty lines for each country are constructed as 50 percent of median gross equivalent income. A family is "poor" if gross family equivalent income is less than 50 percent of median gross equivalent income.

TABLE 2

Incidence of Poverty and Normalized Deficit Using Wages and Salaries of Reference Individual,
by Gender and Age of Reference Individual

Country and Year	Incidence of Poverty (%)						Mean Normalized Deficit					
	Gender of Reference Individual		Age of Reference Individual				Gender of Reference Individual		Age of Reference Individual			
	Male	Female	<25	25-44	45-64	65 +	Male	Female	<25	25-44	45-64	65 +
Australia 1981 1985	44.3	69.1	34.1	34.7	49.5	97.0	0.88	0.94	0.73	0.82	0.90	0.99
	44.6	69.5	32.1	30.4	52.2	98.3	0.88	0.95	0.79	0.79	0.90	0.99
Canada 1981 1987	46.7	63.2	39.2	36.0	49.5	96.0	0.80	0.88	0.65	0.71	0.81	0.97
	46.3	64.3	47.1	35.1	48.0	96.3	0.76	0.87	0.60	0.65	0.78	0.98
Sweden 1981 1987	45.5	62.7	40.6	29.4	36.3	98.2	0.79	0.88	0.59	0.58	0.80	0.98
	49.9	63.9	47.6	34.4	37.7	99.0	0.77	0.83	0.55	0.53	0.78	0.98
USA 1979 1986	40.1	66.4	40.4	30.7	42.7	94.6	0.78	0.85	0.61	0.65	0.80	0.96
	45.8	68.3	53.8	35.6	47.2	94.1	0.77	0.86	0.65	0.65	0.81	0.96

TABLE 3

Incidence of Poverty and Normalized Deficit Using Wages and Salaries of Reference Individual by
Family Type and Number of Earners

COUNTRY & YEAR	INCIDENCE OF POVERTY										MEAN NORMALIZED DEFICIT							
	FAMILY TYPE					NUMBER OF EARNERS					FAMILY TYPE				NUMBER OF EARNERS			
	SINGLE	COUPLE	COUPLE & KIDS	SINGLE PARENT	NONE	ONE	TWO	MORE THAN TWO	SINGLE	COUPLE	COUPLE & KIDS	SINGLE PARENT	NONE	ONE	TWO	MORE THAN TWO		
Australia 1981 1985	55.1	53.9	38.1	75.1	100.0	27.4	19.1	52.6	0.94	0.95	0.78	0.89	1.00	0.72	0.63	0.74		
	54.3	59.2	33.6	72.4	100.0	30.4	31.0	38.3	0.94	0.94	0.76	0.89	1.00	0.79	0.78	0.72		
Canada 1981 1987	54.3	52.9	42.7	66.2	100.0	36.9	38.7	54.2	0.89	0.87	0.69	0.82	1.00	0.76	0.71	0.67		
	54.2	55.2	38.8	69.0	100.0	37.5	36.1	47.3	0.87	0.85	0.60	0.78	1.00	0.73	0.62	0.61		
Sweden 1981 1987	55.2	56.4	32.6	46.2	100.0	41.7	19.4	32.7	0.88	0.89	0.54	0.57	1.00	0.74	0.36	0.50		
	56.8	57.9	41.1	52.5	100.0	42.6	36.2	31.6	0.84	0.90	0.45	0.56	1.00	0.68	0.55	0.48		
USA 1979 1986	52.9	50.0	34.0	69.2	100.0	37.1	31.1	39.3	0.87	0.88	0.62	0.76	1.00	0.71	0.63	0.63		
	55.9	52.7	41.5	69.1	100.0	39.5	37.4	42.1	0.89	0.85	0.62	0.76	1.00	0.72	0.62	0.62		

TABLE 4

Incidence of Poverty and Mean Normalized Deficit,
Using Total Family Earned Income by Gender and Age of Reference Individual

Country and Year	Incidence of Poverty (%)						Mean Normalized Deficit					
	Gender of Reference Individual		Age of Reference Individual				Gender of Reference Individual		Age of Reference Individual			
	Male	Female	<25	25-44	45-64	65 +	Male	Female	<25	25-44	45-64	65 +
Australia 1981 1985	32.5 30.1	61.0 63.2	30.0 28.4	24.8 18.5	33.5 32.7	88.4 90.0	0.83 0.81	0.91 0.93	0.72 0.77	0.75 0.66	0.83 0.84	0.97 0.97
Canada 1981 1987	27.2 29.4	55.0 57.8	29.2 37.2	18.8 20.4	26.5 28.2	87.2 89.2	0.70 0.71	0.84 0.85	0.61 0.56	0.54 0.58	0.69 0.72	0.93 0.94
Sweden 1981 1987	34.1 37.7	62.3 63.5	39.0 45.0	17.4 21.5	24.8 25.4	96.6 95.5	0.76 0.77	0.87 0.83	0.56 0.54	0.54 0.53	0.72 0.74	0.95 0.96
USA 1979 1986	26.8 29.4	57.6 62.5	32.9 43.6	19.0 21.4	26.2 29.5	86.8 85.9	0.72 0.73	0.82 0.84	0.60 0.67	0.56 0.59	0.73 0.72	0.91 0.93

TABLE 5

Incidence of Poverty and Normalized Deficit Using Total Family Earned Income
by Family Type and Number of Earners

COUNTRY & YEAR	INCIDENCE OF POVERTY								MEAN NORMALIZED DEFICIT							
	FAMILY TYPE				NUMBER OF EARNERS				FAMILY TYPE				NUMBER OF EARNERS			
	SINGLE	COUPLE	COUPLE & KIDS	SINGLE PARENT	NONE	ONE	TWO	MORE THAN TWO	SINGLE	COUPLE	COUPLE & KIDS	SINGLE PARENT	NONE	ONE	TWO	MORE THAN TWO
Australia 1981 1985	47.8 47.0	41.0 42.5	25.3 17.5	65.2 65.9	92.5 100.0	17.6 20.3	3.7 8.4	15.2 3.3	0.91 0.92	0.91 0.91	0.69 0.55	0.84 0.86	0.97 1.00	0.49 0.50	0.33 0.37	0.34 0.39
Canada 1981 1987	46.3 48.3	33.0 35.1	19.0 19.6	55.9 58.8	100.0 100.0	27.7 31.0	12.4 13.0	11.9 10.5	0.85 0.84	0.81 0.82	0.44 0.46	0.75 0.77	1.00 1.00	0.54 0.55	0.40 0.39	0.30 0.32
Sweden 1981 1987	53.8 55.7	42.6 44.2	13.0 16.6	44.3 50.4	100.0 100.0	34.1 39.4	6.0 13.7	6.2 8.1	0.86 0.83	0.83 0.87	0.34 0.38	0.55 0.54	1.00 1.00	0.57 0.60	0.30 0.44	0.33 0.48
USA 1979 1986	47.2 50.2	34.6 35.2	16.6 20.5	62.0 62.6	100.0 100.0	28.5 31.9	12.3 13.4	9.4 10.9	0.86 0.87	0.83 0.83	0.44 0.47	0.71 0.73	1.00 1.00	0.53 0.56	0.41 0.41	0.63 0.62

TABLE 6

Incidence of Poverty and Normalized Deficit Using Total Family Gross Income by
Age and Gender of Reference Individual

Country and Year	Incidence of Poverty (%)						Mean Normalized Deficit					
	Gender of Reference Individual		Age of Reference Individual				Gender of Reference Individual		Age of Reference Individual			
	Male	Female	<25	25-44	45-64	65 +	Male	Female	<25	25-44	45-64	65 +
Australia 1981 1985	14.1	32.9	24.9	14.8	14.1	30.6	0.29	0.29	0.44	0.37	0.30	0.11
	14.8	34.9	21.6	13.8	16.8	33.9	0.28	0.23	0.37	0.35	0.28	0.13
Canada 1981 1987	12.2	29.4	23.7	13.5	14.7	22.0	0.33	0.36	0.47	0.36	0.38	0.19
	12.3	26.1	31.6	14.6	14.2	12.8	0.33	0.33	0.39	0.35	0.34	0.18
Sweden 1981 1987	5.6	8.4	19.2	4.1	3.4	5.8	0.44	0.31	0.48	0.58	0.37	0.08
	8.6	17.1	32.2	6.2	4.1	11.4	0.41	0.33	0.49	0.43	0.40	0.14
USA 1979 1986	13.7	35.9	27.1	15.5	16.6	32.1	0.38	0.41	0.48	0.40	0.46	0.31
	14.9	38.2	39.4	18.0	16.4	29.3	0.40	0.40	0.53	0.43	0.42	0.29

TABLE 7

Incidence of Poverty and Normalized Deficit Using Total Family Gross Income by Family Type and Number of Earners

COUNTRY & YEAR	INCIDENCE OF POVERTY (%)								MEAN NORMALIZED DEFICIT							
	FAMILY TYPE				NUMBER OF EARNERS				FAMILY TYPE				NUMBER OF EARNERS			
	SINGLE	COUPLE	COUPLE & KIDS	SINGLE PARENT	NONE	ONE	TWO	MORE THAN TWO	SINGLE	COUPLE	COUPLE & KIDS	SINGLE PARENT	NONE	ONE	TWO	MORE THAN TWO
Australia 1981 1985	22.5	14.1	12.8	52.4	42.0	9.6	1.9	4.2	0.29	0.20	0.35	0.34	0.29	0.30	0.21	0.23
	23.1	15.4	13.0	53.2	50.8	10.3	5.2	0.0	0.21	0.22	0.35	0.33	0.24	0.30	0.29	0.29
Canada 1981 1987	21.9	8.7	12.7	43.3	41.7	16.0	6.2	6.0	0.34	0.28	0.33	0.41	0.34	0.37	0.31	0.21
	19.9	7.8	12.9	48.8	31.2	18.6	6.9	4.7	0.35	0.27	0.32	0.33	0.34	0.34	0.29	0.23
Sweden 1981 1987	9.9	1.6	3.0	9.0	10.4	7.7	0.5	1.0	0.37	0.30	0.63	0.36	0.35	0.37	**	0.32
	17.7	3.1	3.9	8.5	15.0	15.2	2.7	2.5	0.39	0.32	0.29	0.24	0.26	0.44	0.39	0.18
USA 1979 1986	25.7	11.2	13.3	51.3	50.6	17.3	8.5	6.9	0.41	0.34	0.34	0.45	0.42	0.39	0.35	0.34
	26.0	10.4	17.1	53.9	47.9	19.8	9.4	7.5	0.41	0.36	0.36	0.46	0.41	0.43	0.34	0.31

** only 7 cases

TABLE 8

Probit Estimates of the Probability of Poverty

	Australia 1981	Australia 1985	Canada 1981	Canada 1987	Sweden** 1981	Sweden** 1987	USA 1979	USA 1986
Dummy = 1 if Reference Individual < 25	0.903 (0.055)	0.401 (0.083)	0.183 (0.050)	0.429 (0.061)	0.466 (0.083)	0.684 (0.059)	0.245 (0.049)	0.668 (0.061)
Dummy = 1 if Reference Individual 25-44	0.340 (0.045)	-0.003* (0.062)	-0.214 (0.038)	-0.144 (0.043)	-0.050* (0.049)	-0.136 (0.053)	-0.222 (0.039)	-0.049* (0.043)
Dummy = 1 if Reference Individual > 65	-0.296 (0.041)	-0.420 (0.058)	-0.668 (0.047)	-0.987 (0.054)	-0.944 (0.091)	0.222 (0.068)	-0.410 (0.044)	-0.453 (0.049)
Dummy = 1 if Single Woman	0.022* (0.039)	0.116 (0.054)	0.224 (0.040)	0.080* (0.046)	0.021* (0.072)	0.318 (0.072)	0.317 (0.039)	0.318 (0.042)
Dummy = 1 if Single Man	0.098 (0.046)	0.035* (0.065)	0.076* (0.046)	0.041* (0.053)	0.116* (0.063)	0.345 (0.071)	0.103 (0.046)	0.102 (0.052)
Dummy = 1 if Sole Parent	0.273 (0.059)	0.436 (0.085)	0.387 (0.054)	0.455 (0.061)	-0.394 (0.073)	-0.204* (0.120)	0.561 (0.046)	0.566 (0.053)
Number of Children	0.265 (0.016)	0.385 (0.025)	0.360 (0.015)	0.373 (0.018)	0.263 (0.023)	0.309 (0.026)	0.245 (0.049)	0.409 (0.018)
Dummy = 1 if Zero Earners	1.107 (0.039)	1.420 (0.061)	0.812 (0.045)	0.546 (0.051)	0.816 (0.068)	0.115* (0.069)	0.867 (0.042)	0.881 (0.047)
Dummy = 1 if 2 Earners	-0.609 (0.059)	-0.382 (0.062)	-0.504 (0.037)	-0.586 (0.043)	-1.294 (0.081)	-0.523 (0.069)	-0.405 (0.039)	-0.403 (0.043)
Dummy = 1 if More than 2 Earners	-0.370 (0.144)	-0.646 (0.128)	-0.726 (0.057)	-0.731 (0.064)	-0.814 (0.077)	-0.748 (0.113)	-0.697 (0.063)	-0.521 (0.068)
Dummy = 1 if Reference Individual Employed Full-time, Full-year	-1.024 (0.040)	-0.742 (0.058)	-0.901 (0.032)	-1.012 (0.037)	-	-	-0.965 (0.034)	-0.962 (0.038)
Constant	-1.270 (0.047)	-1.302 (0.064)	-0.673 (0.040)	-0.501 (0.044)	-1.335 (0.040)	-1.479 (0.065)	-0.814 (0.040)	-0.900 (0.045)
Number of Observations	15985	8014	15136	11518	9625	9530	15174	12158

** Swedish results are not directly comparable with those obtained for the other countries since a full-time, full-year dummy variable is not included. Appendix Table C.1 present Swedish results for 1987 with the full-time, full-year dummy variable included.

Note: Standard errors are presented in parentheses. An asterisk denotes lack of statistical significance at the 5 percent level.

Appendix A. Details of Sources for Data Selected from the Luxembourg Income Study

Country\Year	Name of Survey	Number of Survey Units in LIS Data (Unweighted)
Australia 1981	Income and Housing Survey	15,985
Australia 1985	Income Distribution Survey	8,014
Canada 1981	Survey of Consumer Finances	15,136
Canada 1987	Survey of Consumer Finances	11,960
Sweden 1981	Income Distribution Survey	9,625
Sweden 1987	Income Distribution Survey	9,421
USA 1979	March Current Population Survey	15,225
USA 1986	March Current Population Survey	11,614

Note: Subsamples were drawn from the US and Canadian Surveys.

APPENDIX TABLE B.1

Distribution of Families by Demographic Group

	AUSTRALIA		CANADA		SWEDEN		USA	
	1981	1985	1981	1987	1981	1987	1979	1986
DEMOGRAPHICS								
<u>Gender of Reference Individual</u>								
Male	76.9	78.1	76.3	76.9	70.8	71.0	70.6	72.5
Female	23.1	21.9	23.7	23.1	29.2	29.0	29.4	27.5
<u>Age of Reference Individual</u>								
< 25	10.5	8.3	9.4	7.6	13.6	15.4	9.6	6.8
25-44	41.7	42.9	43.0	46.0	33.8	33.7	40.4	44.6
45-64	30.3	29.5	30.5	29.0	26.8	25.1	30.2	28.3
65 +	17.4	19.3	17.1	17.4	25.7	25.9	19.7	20.3
<u>Number of Earners in Family</u>								
None	32.8	27.2	17.7	19.4	24.3	23.7	19.5	21.3
One	42.7	36.8	39.3	35.5	48.0	43.8	41.9	37.4
Two	22.2	28.7	31.5	32.2	21.4	28.6	28.6	31.3
> Two	2.3	7.3	11.6	13.0	6.3	3.9	10.0	10.0
<u>Family Type</u>								
Single	32.0	34.4	32.1	34.2	50.9	51.9	34.4	34.6
Couple, no kids	28.2	28.9	27.8	30.0	24.7	25.4	27.1	28.8
Couple & kids	34.5	31.7	34.3	31.1	20.3	18.7	29.9	28.3
Single parent	5.4	5.1	5.8	4.8	4.4	4.0	8.6	8.3

APPENDIX TABLE B.2

Distribution of Families, with Head < 25 years, by Demographic Group

	AUSTRALIA		CANADA		SWEDEN		USA	
DEMOGRAPHICS	1981	1985	1981	1987	1981	1987	1979	1986
<u>Gender of Reference Individual</u>								
Male	62.0	58.3	63.3	62.0	63.3	61.1	63.3	61.1
Female	38.0	41.7	36.7	38.0	36.7	38.9	36.7	39.0
<u>Number of Earners in Family</u>								
None	13.9	13.3	6.7	5.6	5.4	3.2	7.7	13.0
One	69.0	72.9	64.3	64.1	87.3	88.0	63.4	56.9
Two	16.8	13.8	28.0	28.7	5.9	8.8	27.9	29.6
> Two	0.3	0.2	1.0	1.6	1.4	-	1.0	0.5
<u>Family Type</u>								
Single	65.5	74.5	59.6	64.2	90.4	88.6	54.5	54.9
Couple, no kids	15.5	7.7	1.7	19.8	5.9	7.1	15.4	17.6
Couple & kids	11.1	9.2	12.6	10.8	1.9	2.0	18.7	14.3
Single parent	7.9	8.7	6.2	5.2	1.8	2.3	11.4	13.1

APPENDIX TABLE B.3

Unemployment Rates

	AUSTRALIA	CANADA	SWEDEN	USA
Year	Unemployment Rate	Unemployment Rate	Unemployment Rate	Unemployment Rate
1976	4.68	7.06	1.59	7.53
1977	5.59	8.04	1.80	6.91
1978	6.15	8.28	2.23	5.94
1979	5.79	7.39	2.06	5.73
1980	5.85	7.43	1.99	7.00
1981	5.56	7.50	2.49	7.47
1982	6.67	10.90	3.14	9.50
1983	9.81	11.77	3.45	9.42
1984	8.46	11.17	3.10	7.38
1985	7.83	10.40	2.83	7.06
1986	7.88	9.48	2.67	6.86
1987	7.75	8.79	1.90	6.08
1988	6.77	7.72	1.61	5.41
1989	5.67	7.50	1.35	5.18

Source: Luxembourg Income Study, Institutional Database.

APPENDIX TABLE B.4

Union Density

	AUSTRALIA	CANADA	SWEDEN	USA
Year	Union Density	Union Density	Union Density	Union Density
1976	0.44	0.31	0.76	0.20
1977	0.44	0.30	0.79	0.19
1978	0.44	0.30	0.80	0.19
1979	0.44	N/A	0.78	0.17
1980	0.44	0.29	0.79	0.18
1981	N/A	0.32	0.76	0.21
1982	N/A	0.33	0.77	0.20
1983	N/A	0.32	N/A	0.19

Note: Union density is measured as the percentage of the labour force covered by collective agreements.

Source: Luxembourg Income Study, Institutional Database.

*

Appendix Table C.1

	Sweden
	1987
Dummy = 1 if Reference Individual < 25	0.478 (0.063)
Dummy = 1 if Reference Individual 25-44	-0.137 (0.056)
Dummy = 1 if Reference Individual > 65	-0.215 (0.069)
Dummy = 1 if Single Woman	0.324 (0.074)
Dummy = 1 if Single Man	0.412 (0.073)
Dummy = 1 if Sole Parent	-0.304 (0.128)
Number of Children	0.354 (0.027)
Dummy = 1 if Zero Earners	-0.346 (0.071)
Dummy = 1 if 2 Earners	-0.338 (0.070)
Dummy = 1 if More than 2 Earners	-0.544 (0.116)
Dummy = 1 if Reference Individual Employed Full-time, Full-year	-1.057 (0.116)
Constant	-0.780 (0.070)
Number of Observations	9530