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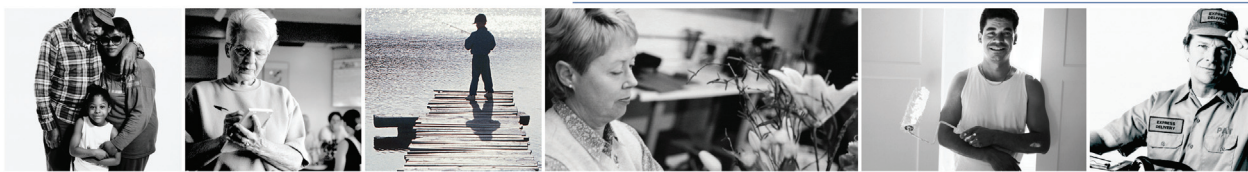
HUMAN RESOURCES AND SOCIAL DEVELOPMENT CANADA

When Working is not enough to Escape Poverty:

An Analysis of Canada's Working Poor

WORKING PAPER

August 2006



***When Working is not enough to
Escape Poverty: An Analysis
of Canada's Working Poor***

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August 2006

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The views expressed in this report are those of the authors and not necessarily those of Human Resources and Social Development Canada or the Federal Government. Readers are encouraged to contact the authors with comments and suggestions.

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Disclaimer

There is no official definition of poverty in Canada. Poverty is a complex notion that can have various meanings such as lack of social inclusion, being in low-income or being deprived of basic necessities. Consequently, poverty can be measured in many ways. For the sake of efficiency of language as well as to be consistent with international terminology *people living in low income are also referred to as poor throughout this article.*

Related publications from the authors:

What Does it mean to be Poor and Working? Available in the Policy Research Initiative Research Papers Series at http://policyresearch.gc.ca/page.asp?pagenm=pub_wp_abs

- This paper discusses the spending patterns and living conditions of working poor families in 2002, using data from the Survey of Household Spending.

The Other Face of Working Poverty. Available in the Policy Research Initiative Research Papers Series at http://policyresearch.gc.ca/page.asp?pagenm=pub_wp_abs

- This paper looks at low-income Canadians who were active in the labour market in 2001 according to the number of hours that they worked, using data from the Survey of Labour and Income Dynamics.

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Executive Summary

There is a tacit agreement among Canadians that individuals who work hard should be able to provide a decent living for themselves and their families. However, for many Canadians, having a worker in the family is not a ticket out of poverty. This situation is not new in Canada. In the 1960s, research showed that a significant proportion of low-income families included at least one worker. While the United States has been monitoring the working poor for almost 15 years and European countries started to do so lately, relatively little is known about this group in Canada. There is no generally accepted definition of working poverty and the few researchers that have looked into this issue have provided descriptive profiles of working poor Canadians using various definitions.

This study first discusses the pros and cons of the various definitions that have been used to investigate the phenomenon of working poverty in Canada, and argues for the use of a new definition. In this study, *working poor individuals are defined as individuals aged 18 to 64 who have worked for pay a minimum of 910 hours in the reference year, who are not full-time students, and have a low family income according to the Market Basket Measure of low income.* The study then uses data from Statistics Canada's Survey of Labour and Income Dynamics to identify working poor Canadians and to shed light on many questions that relate to this population. In addition to providing a detailed descriptive profile of working poor Canadians, the study identifies the main determinants of low income for workers, and looks at the dynamics of work and low income for the working poor.

Many of the findings that came out of this research can be summarized in the form of "myths and facts" because they go counter to several popular beliefs in Canada.

Myth: *The poor do not work.*

- Facts:**
- In 2001, there were 653,300 working poor persons in Canada. Including dependants, 1.5 million Canadians were affected by working poverty, of which about one third were children under 18. These 1.5 million individuals accounted for about 40% of all low income Canadians in 2001.
 - Over a six-year period (1996-2001), about one in ten working-age adults experienced at least one year of working poverty.

Myth: *The working poor do not work hard.*

- Fact:**
- In 2001, working poor Canadians worked, on average, as many hours as other workers (around 2,000 hours). Nevertheless, fewer of them worked full time, year round and the number of hours that they worked was slightly more volatile over the longer term.

Myth: *The working poor are low paid.*

- Facts:**
- In 2001, salaried working poor Canadians earned on average \$12 per hour. In fact, fewer than 50% of them were low-paid and less than 7% earned the minimum wage.
 - Furthermore, in 2001, 88% of low-paid salaried workers (i.e. those who earned less than 10\$/h) were not poor.

Myth: *Self-employed workers are wealthy professionals.*

Fact:

- In 2001, more than 40% of working poor Canadians were self-employed, and the incidence of poverty was four times higher among the self-employed than among salaried workers.

Myth: *Bad jobs are the main cause of poverty among workers.*

Facts:

- Family characteristics are the most important determinants of poverty for workers. Workers who are the sole breadwinner in their families are much more vulnerable to low income.
- Being low-paid is a significant risk factor but, contrary to popular belief, it is not the most important determinant.
- Self-employed workers are at greater risk of low income than low-paid salaried workers.

Myth: *Working poverty is a short transition between welfare and 'decent' work.*

Facts:

- Although working poor Canadians are more likely than other workers to be social assistance (SA) recipients, most of them never relied on SA.
- The working poor are more likely to escape poverty in the longer run than the "welfare" poor. However, between 1996 and 2001, the working poor spent on average three years in low income and 40% of them experienced persistent poverty.
- Furthermore, many of those who exited poverty over the same period did so mainly because of a change in their family circumstances, not because of their progression in the labour market.
- In fact, five years later, close to 50% of those who were working poor in 1996 still had low earnings and would not have been able to provide for themselves had they lived alone.

Sommaire

Au Canada, on s'entend généralement pour dire que les personnes fournissant un effort de travail considérable devraient être en mesure de vivre décemment et de faire vivre les membres de leur famille. Or, pour certains Canadiens compter un travailleur dans sa famille ne constitue pas une garantie contre le faible revenu. Cette situation n'est pas nouvelle au Canada. En effet, dans les années soixante, des études ont démontré qu'une grande proportion des individus à faible revenu faisait partie de familles comptant au moins un travailleur. Alors qu'on étudie le phénomène des travailleurs pauvres depuis près de 15 ans aux États-Unis, et que certains pays d'Europe ont aussi commencé à s'y intéresser récemment, au Canada, on en connaît très peu à ce sujet. Il n'existe aucune définition officielle des travailleurs pauvres au Canada et les quelques chercheurs s'étant intéressés à l'enjeu ont préparé des profils descriptifs des travailleurs pauvres au Canada à partir de diverses définitions.

La présente étude discute dans un premier temps des avantages et des inconvénients liés aux différentes définitions utilisées jusqu'à maintenant afin d'analyser le phénomène des travailleurs pauvres au Canada, et justifie l'utilisation d'une nouvelle définition. Dans cette étude, les travailleurs pauvres se définissent comme des individus âgés de 18 à 64 ans, qui ont cumulé au moins 910 heures de travail rémunéré durant l'année de référence, qui ne sont pas des étudiants à temps plein, et qui ont un faible revenu familial selon la Mesure du panier de consommation. L'étude utilise ensuite les données de *l'Enquête sur la dynamique du travail et du revenu* afin d'identifier les travailleurs pauvres au Canada et de faire la lumière sur plusieurs questions concernant cette population. En plus de fournir un profil descriptif des travailleurs pauvres, elle identifie les principaux déterminants de la pauvreté chez les travailleurs, et s'intéresse aux trajectoires sur le marché du travail et à la dynamique du faible revenu chez les travailleurs pauvres.

Plusieurs des résultats qui ressortent de cette étude peuvent être résumés sous forme de « mythes » et « réalité » puisqu'ils infirment certaines croyances généralement répandues au sein de la population canadienne :

Mythe	Les pauvres ne travaillent pas.
Réalité	<ul style="list-style-type: none">• En 2001, il y avait au Canada 653 300 travailleurs pauvres. En comptant les personnes à charge, c'est 1,5 million de Canadiens qui étaient touchés par cette forme de pauvreté, dont environ le tiers était des enfants âgés de moins de 18 ans. Ces 1,5 million de personnes représentaient environ 40 % de toutes les personnes à faible revenu au Canada en 2001.• Sur une période de six ans (de 1996 à 2001), environ un adulte en âge de travailler sur dix a été travailleur pauvre au moins une année.
Mythe	Les travailleurs pauvres ne travaillent pas suffisamment fort.
Réalité	<ul style="list-style-type: none">• En 2001, les travailleurs pauvres du Canada ont travaillé en moyenne autant d'heures que les autres travailleurs (environ 2 000 heures). Néanmoins, un nombre moins élevé d'entre eux ont travaillé à temps plein, toute l'année, et le nombre d'heures travaillées était un peu plus instable à long terme chez les travailleurs pauvres que chez les autres travailleurs.

Mythe	Les travailleurs pauvres ont des faibles salaires horaires.
Réalité	<ul style="list-style-type: none"> • En 2001, les travailleurs pauvres du Canada gagnaient en moyenne 12 \$ l'heure. En fait, moins de 50 % d'entre eux avaient un faible salaire, et moins de 7 % gagnaient le salaire minimum. • En 2001, 88 % des travailleurs salariés qui avaient un faible salaire horaire (c.-à-d. qu'ils gagnaient moins de 10 \$ l'heure) n'étaient pas pauvres.
Mythe	Les travailleurs autonomes sont de riches professionnels.
Réalité	<ul style="list-style-type: none"> • En 2001, plus de 40 % des travailleurs pauvres du Canada étaient des travailleurs autonomes, et l'incidence de la pauvreté était quatre fois plus élevée chez eux que chez les travailleurs salariés.
Mythe	Les emplois précaires sont la principale cause de la pauvreté chez les travailleurs.
Réalité	<ul style="list-style-type: none"> • Les caractéristiques familiales sont les déterminants les plus importants de la pauvreté chez les travailleurs. Les travailleurs qui ne peuvent pas compter sur un deuxième gagne-pain sont beaucoup plus vulnérables à la pauvreté. • Le fait d'avoir un faible salaire horaire constitue un facteur de risque important, mais, contrairement à ce que l'on croit, il ne s'agit pas du déterminant le plus important. • Les travailleurs autonomes sont plus susceptibles d'avoir un faible revenu familial que les travailleurs salariés dont le salaire horaire est bas.
Mythe	La pauvreté chez les travailleurs n'est qu'une période de transition entre l'assistance sociale et de meilleures conditions de travail.
Réalité	<ul style="list-style-type: none"> • Même si les travailleurs pauvres du Canada sont particulièrement susceptibles d'être des bénéficiaires de l'assistance sociale, la plupart d'entre eux n'y ont jamais eu recours. • Les travailleurs pauvres sont plus susceptibles de se sortir de la pauvreté à long terme que les pauvres qui dépendent majoritairement de l'assistance sociale. Cependant, entre 1996 et 2001, les travailleurs pauvres ont vécu en moyenne trois ans sous le seuil de faible revenu, et 40 % d'entre eux ont connu la pauvreté persistante. • De plus, nombre de ceux qui se sont sortis de la pauvreté au cours de cette période ont pu le faire surtout en raison d'un changement de leur situation familiale, et non grâce à leur progression sur le marché du travail. • En fait, près de 50% des travailleurs qui étaient pauvres en 1996 avaient encore de faibles gains et n'auraient pas été en mesure de subvenir à leurs besoins personnels cinq années plus tard.

Introduction

Nearly all industrialized countries have moved to placing a greater emphasis on labour market integration as a key element of the fight against poverty and exclusion. However, evidence suggests that if having a job is often necessary to escape poverty, it is not always sufficient. As Leach and Sikora¹ point out “*working poor families are families who are ‘playing by the rules’ by working and contributing to the productivity and prosperity (of their country)...but yet struggle day-to-day to meet their basic needs.*”

In Canada, poverty among workers is not a new issue. Already, in 1897, Herbert Ames², a pioneer in social research who studied poverty in Montreal, noted “*Few are the (poor) families where nothing is earned...Almost without exception, each family has its wage earner, often more than one...*” (p.29). In 1943, Marsh stated in his report on social security³ “*If earning power stops all else is threatened*” (p.9). At the same time, Marsh recognized that personal and family characteristics could also contribute to poverty and suggested a social safety net that would protect Canadians from major disruptive life events (such as job loss or sickness). In 1968, Podoluck (1968) reported that a large number of low-income Canadians were indeed working. In 1971, a Special Committee mandated by the federal government⁴ reported that “*Canadian welfare programs were spending \$6 billion per year to meet financial need, yet one fifth of Canadians was defined as poor. Furthermore, 60% of the poor were employed most or all of the year and therefore largely ineligible for traditional welfare aid.*” (p.153).

It is worth noting that if the working poor drew the attention of researchers in the 60s’ and ‘70s, programs and policies intended to support family income focused primarily on support for persons not in employment.

Since then, the social and economic contexts have greatly evolved. On the social front, family structures have changed profoundly, for instance there has been a major increase in the rate of divorce and lone parenthood. Moreover, roles and responsibilities of family members in regard to caring for family or earning to provide for their family have changed with a growth in female work outside the home. On the economic front, earnings inequality has increased, young workers’ wages have lost grounds relative to others and there has been an increase in atypical work⁵. Furthermore, in the mid-1990s policies and programs sought to reduce dependence on income support by tightening eligibility and providing assistance to those able to make the transition into the labour market. This, in combination with strong economic growth, led to a substantial decrease in the number of social assistance recipients (on average 40.6% between 1994 and 2002⁶). These developments contributed to a renewed interest in poverty among workers.

¹ See Leach, Mike & S. Sikora. (August 2003).

² See Guest (1997).

³ See Marsh (1943).

⁴ See Guest (1997).

⁵ See Corak, 1998.

⁶ See Karabegović & Veldhuis (May 2003).

While the issues relating to working poverty have been studied in the United States for 15 years and have also been taken up more recently in European countries, in Canada little is known about this group. In fact, there is no commonly agreed definition of working poverty among researchers or policy-makers.

The objective of this Working paper is to provide a better understanding of working poverty in Canada. Chapter one reviews the literature on working poor individuals, emphasizing previous Canadian findings. Chapter two provides a review of the literature on working poor definitions used in North America and in Europe, and introduces a new definition of working poverty then used in the analysis presented throughout the paper. Chapter three presents a detailed cross-sectional profile of working poor Canadians based on this new definition, including information on the number of working poor Canadians and their dependants in 2001, the work effort of working poor individuals and the severity of their poverty. It then presents detailed information on the demographic, socioeconomic, family and labour market characteristics of working poor Canadians and compares those characteristics with those of other Canadian workers. Finally, working poor Canadians are compared, to the extent possible, to those in other countries. Chapter four presents the results of logistic regressions used to identify the factors that increase the probability of being poor for workers. The next three chapters investigate issues related to the factors that were identified as the main determinants of poverty for workers, namely the potential for a second earner in working poor families (chapter five); the situation of self-employed versus salaried workers (chapter six); and the impact of increasing the wages of salaried working poor persons on their low-income status (chapter seven). Chapter eight focuses on the long-term situation of working poor Canadians, i.e. it analyses the relative patterns of work and low-income of working poor Canadians over 1996 to 2001. The last chapter summarizes the main results of the research, raises potential areas for further research, and presents policy considerations flowing from these research findings.

Chapter 1: Literature Review on Working Poverty

1.1 Previous Findings on the Working Poor Population in Canada

In Canada, few organizations have looked into the issue of working poverty, and those that have only provided descriptive profiles of working poor Canadians. For instance, in 1981 the National Council of Welfare (NCW)⁷ showed that:

- The number of working poor families declined steadily over the 1973-1977 period both in absolute and in relative terms.
- In 1977, the working poor were highly urbanized; they were more likely to work in service, sales, farming, fishing or clerical jobs and they were much less likely to be employed full-year, although few received income from social assistance.
- Working poor families were also much more likely than other families to depend on only one earner.
- A majority of working poor Canadians were unattached individuals as opposed to being part of an economic family.

The NCW updated the profile of working poor Canadians in subsequent Poverty Profile publications. It also presented limited information on children living in working poor families in its *Child Poverty Profile 1998*. According to their definition, there were 311,000 poor children living in families where the major income earner worked full-time, full-year (FTFY) in 1998. Of children who lived in two-parent families where the major income earner worked FTFY, only 5.6 percent were poor. The rate was 18.9 percent for children living with single-parent mothers who worked FTFY.

In 2000, the Canadian Council on Social Development (CCSD) also prepared a profile of working poor families using a different definition⁸. Their findings were quite similar to those of the NCW.

1.2 Outcomes Associated With Poverty

Very little research has been done in Canada to determine the specific effect of being working poor on individual outcomes. However, it can reasonably be expected that the working poor experience many of the same outcomes as the poor in general.

⁷ The NCW defines the working poor as any economic family whose income is below Statistics Canada's low income cut-offs and who earned more than half of that income from wages and salaries or from self-employment (see National Council of Welfare (1981) and National Council of Welfare, *Poverty Profile*, 1985, 1988, 1992, 1997 and 2002 editions).

⁸ The CCSD defines the working poor as low-income non-elderly households (under 65) whose adult members have, between them, at least 49 weeks of either full-time or part-time work during the year.

1.2.1 Canadian Evidence

A review of the Canadian literature shows that children living in poor families have more than twice the incidence of chronic illness and physical and developmental disability as children living in non-poor families. They are also more likely than those who are not poor to have problems with their vision, hearing, speech, and mobility. In addition, poor children score lower on measures of cognition and school achievement, and they are twice as likely to drop out of school as their non-poor peers. Furthermore, children in poor families are more likely than children in non-poor families to have social impairments and psychiatric, emotional, hyperactivity, and conduct disorders as well as being more likely to display anti-social and aggressive behaviours. Children experiencing persistent poverty are at even greater risk than children experiencing sporadic and/or short-term poverty⁹.

Poverty can also have impacts on civic engagement. According to Uslander and Brown (2001), participation in America is becoming more unequal: the well-off have always participated more than the poor and the rising income gap may exacerbate the skew in civic engagement. A greater class skew in participation is likely to mean that the views of the well-off are more likely to be heard than those with fewer resources which can worsen the situation of the poor in the long run.

1.2.2 US Evidence

Turning to the outcomes of children living in working poor families more specifically, a recent US study¹⁰ found that in 1997:

- Children in working poor families had a significantly lower likelihood of being identified as gifted than either children in poor families not meeting the work standard or children in working families with incomes above the poverty threshold;
- They were more likely than children living in more affluent working families to have repeated a grade, to have been suspended or expelled from school, or to have a higher level of parental aggravation;
- The father involvement score for children in working poor families was also lower than that of other children;
- The parents of children in working poor families scored significantly higher on the positive index of attitudes towards the community than poor families not meeting the work standard. However, they scored significantly lower than children in working families with incomes higher than 200 percent of the poverty threshold.

The limited research conducted in the United States suggests that there are significant differences in outcomes of children living in working poor families versus other low-income families. Some differences may be positive, others negative. The extent to which these findings are applicable to Canada remains to be assessed.

⁹ Kornberger, R. & al (2001).

¹⁰ See Wertheimer, R. & al (2002).

1.3 Research Initiatives on the Working Poor in Other Countries

Working poverty is a preoccupation in many countries. For instance, the United States Bureau of Labour Statistics (BLS) has been monitoring working poor persons for almost 15 years. As reported in Gardner and Hertz (1992):

“For many years policy makers, analysts, and workers have been interested in the relationship between work and the poverty status of families. Interest escalated in the 1960’s when many poverty-reduction efforts were put into place for the first time. In the early 1980’s, the Bureau of Labour Statistics (BLS) began analyzing the relationship between work and the economic status of families, and published data annually from 1982 to 1987 in bulletins titled Linking Employment Problems to Economic Status. In 1989, BLS researchers Bruce Klein and Philip Ronen developed a new method for linking individuals’ labour market efforts to the poverty status of their families (p.20)”.

Since then, the BLS has published profiles of working poor persons¹¹ on many occasions.

More recently, the working poor gained attention in Europe. In 2001, researchers with the Institut National de la Statistique et des Études Économiques (INSEE, France) provided a descriptive profile of the French working poor for the year 1994 (inspiring themselves with the US definition). They also looked at the dynamics of work and low-income for the working poor over 1994-1997.

In the same year, the Swiss Département Fédéral de l’Économie commissioned researchers to prepare a statistical profile of the working poor¹² in Switzerland. The Department also undertook consultations with various Swiss organizations (anti-poverty groups, union of workers, union of managers, etc.) in order to get their views on potential policies to alleviate poverty among workers.

In 2003, Eurofound¹³ (an agency set up by the European Council to contribute to the planning and design of better living and working conditions in Europe) also

¹¹ The BLS defines the working poor as individuals who spent at least 27 weeks working or looking for work but whose incomes fall below the official poverty line.

¹² The Swiss Federal Statistical Office defines the working poor as 1) all ‘active’ individuals, regardless of the number of hours they work; or 2) all individuals working full-time (i.e. 36 hours or more weekly) whose family income falls below the cost of a ‘moderate’ rent plus a basic health insurance premium plus the Confédération Suisse des Institutions d’Action Sociale’s ‘vital’ minimum.

¹³ Eurofound carries out research and development projects to provide data and analysis for informing and supporting the formulation of EU policy on working and living conditions. The Foundation has a network of experts throughout Europe who conduct research on its behalf including assessing the current national situations, the preparation of case studies and national reports and the conducting of surveys. As part of its research base, the Foundation maintains a number of key monitoring tools, such as the European Industrial Relations Observatory (EIRO), European surveys on working conditions and Monitoring Quality of Life in the EU. In November 2002, it launched the European Monitoring Centre on Change (EMCC) web portal, which will act as an information source focusing on aspects of economic and social change.

commissioned researchers to look into the issue of working poverty¹⁴. As a result they published in February 2004 a document titled *Working Poor in the European Union* which not only looks at the characteristics of the working poor but also at policies and programs that support the working poor in Europe.

At the same time, the Statistical Agency of the European Union received the mandate to develop an indicator of working poverty in order to assess the impact of any policies and programs on working poor persons. The first report of the Agency came out in May 2005 and presents statistics on working poor persons, as well as on low income more generally, in the European Union for 2001.

¹⁴ One of the definitions used by Eurofound to identify the working poor is the following. The working poor are those individuals that worked at least six months in the prior year and whose income falls under 60 percent of the national equivalised median income.

Chapter 2: Who Are the Working Poor?

2.1 Introduction

In order to investigate the roots of working poverty it is first essential to clarify what we mean by being working poor. However, one major difficulty we face in undertaking this task is the fact that working poverty draws on two usually distinct fields of research: employment (where the unit of analysis usually is the person) and poverty (where the unit of analysis is the family). Another difficulty we face is the lack of a generally accepted definition of working poverty in Canada. The objective of this chapter is to provide a new definition of working poverty that minimizes the weaknesses of existing ones, is operationally feasible, and could eventually be useful to policy-makers.

2.2 Existing Definitions of Working Poverty

While different countries have their own poverty thresholds, they also use different work tests to identify who is sufficiently active in the labour market to be considered a ‘worker’ (see Table 2.1). The same is true in Canada, where there is no agreed-upon definition of the working poor among researchers or policy-makers (see Table 2.2).

Despite the lack of consensus, criteria used by Canadian organisations and other countries provide some insight into how working poverty could be defined. For instance, many countries use the number of hours worked to define the work level. However, as it is important to strike a balance between different interests (e.g. work effort vs. availability of work), some of the definitions appear too stringent, e.g. the US Census Bureau uses a high work requirement. As well, the work effort is sometimes identified at the individual level, sometimes at the family level.

Table 2.1 Criteria to identify working poor individuals and families in the U.S. and in Europe		
Country/Source	Work Level (individual or family level)	Income threshold (always at the family level)
U.S.A. U.S. Census Bureau Child Trends ¹⁶ U.S. Bureau of Labour Statistics The Urban Institute (and many other U.S. researchers)	Family level: Total hours worked by family members greater than or equal to 1,750 hours Family level: Either two parents together worked at least 35 hours per week or a single parent worked at least 20 hours per week ¹⁷ Individual level: At least 27 weeks working or looking for work Individual level: Adults work, on average, at least half time (about 1,000 hours)	Federal Poverty Line (FPL) ¹⁵ FPL FPL Less than 200% of FPL
U.K. Definition provided by the European Industrial Relations Observatory, EIRO	Family level: Households with at least one income from full-time or part-time employment	Less than 50% or 60% of the median income
Germany Definition provided by EIRO	Individual level: All full-time workers	Less than 50% of the national average
France Institut National de la Statistique et de l'Économie (Definition provided by EIRO)	Individual level: Workers who have spent at least 6 months of the year on the labour market and have had a job for at least 1 month during a year.	Less than 50% of the median income
Switzerland Swiss Federal Statistical Office	Family level: Total hours worked by family members greater than or equal to 36 hours per week	The family income after tax and social contributions is below the 'Conférence Suisse des institutions d'action sociale' (CSIAS) poverty threshold.

¹⁵ The Census Bureau uses a set of money income threshold that vary by family size and composition to define the Federal Poverty Lines (FPL). If a family's total income is less than that family's threshold then that family and every individual in it is considered poor. Money income (before taxes) includes all labour income, all government cash transfers, pensions, alimony, rent, interest, dividends and other money income.

¹⁶ Child Trends is a U.S. non-profit, non-partisan research centre that studies children and families. It is based in Washington D.C.

¹⁷ This work standard is similar to that established by the 1996 U.S. Welfare Reform Law.

Criteria used in Canada have some limitations (see table 2.3). The National Council of Welfare (NCW) defines working poor families as households where at least 50 percent of the family income comes from wages, salaries or self-employment. This means that the work level threshold is variable, i.e. it changes from one family to another. Table 2.2 presents an example of the possible implications of such a definition.

In this example, individuals A and B have similar family structures but individual A worked significantly more hours than individual B, yet he would not be identified as being working poor while individual B would be. Clearly, a definition of working poverty based on the proportion of income coming from earnings is biased towards individuals earning higher hourly wages, and could lead to results that are counter intuitive, i.e. it could exclude individuals working longer hours at lower wages.

Table 2.2 Illustrative Case		
	Individual A	Individual B
Number of hours worked	1000	750
<u>* hourly wage</u>	<u>*\$6.85</u>	<u>*\$10</u>
=Total earnings	=\$6,850	=\$7,500
+Government transfers (NCBS – 3 children)	+\$7,000	+\$7,000
=Total Income	=\$13,850	=\$14,500
Percentage of total income coming from earnings	49%	52%

The Canadian Council on Social Development requires that all adult members in the family have, between them, at least 49 weeks of either full-time or part-time work to be identified as working poor. This is a restrictive work criterion, particularly for unattached individuals and lone parents, two groups at an especially high risk of poverty as demonstrated by other research on low income. Indeed, unattached individuals and lone-parents can only depend on themselves to cumulate the 49 weeks required to be identified as being working poor, while couples potentially have two adults to reach the same threshold.

Finally, the Canadian Policy Research Networks considers only full-time full-year earners, which is an even more stringent work criterion, as it does not recognize that unemployment is sometimes out of an individuals' control. Furthermore, in this case the poverty threshold is set at \$20,000 per individual and does not take into consideration the income of all family members to decide if an individual is poor or not. In fact the CPRN definition is a definition of low-paid work rather than a definition of working poverty¹⁸.

¹⁸ The distinction between low-paid work and working poverty is discussed in section 2.5.

Table 2.3 Criteria to identify working poor individuals and families in Canada		
Source	Work Level	Income threshold
National Council of Welfare (NCW)	Family level: More than 50% of total family ¹⁹ income comes from wages, salaries or self-employment	Statistics Canada's Low-Income Cut-Offs (LICOs)
Canadian Council on Social Development (CCSD)	Family level: Adult members have, between them, at least 49 weeks of either full-time ²⁰ or part-time work	A low-income threshold
Canadian Policy Research Networks (CPRN)	Individual level: Full-time/ Full-year	Less than \$20,000 per year (in this case, the 'poverty' threshold is also defined at the individual level).

Because of the shortcomings of existing national and international definitions, a new definition of working poverty was developed that avoids some of the limitations mentioned above.

2.3 A New Definition of Working Poverty

The following issues need to be addressed in order to develop a definition of working poverty which recognizes the family as an economic unit, and that is both operationally feasible and useful to policy-makers.

- 1) What is a worker? What is a 'working family'?
- 2) Who lives in poverty?
- 3) How should the concepts of work and poverty be combined to derive a meaningful definition of working poor individuals and families?

2.3.1 What is a Worker? What is a 'Working Family'?

The chosen definitions of a worker and a 'working family' are the following:

- A *worker* is an individual aged 18 to 64, who is not a full-time student and who worked for pay at least 910 hours in the reference year.
- A *working family* is a family where at least one of the members is a worker.

¹⁹ Households of two or more persons where the head of the household is non-elderly (under age 65).

²⁰ Full-time work means at least 30 hours per week.

In order to identify workers, the first step is to limit the sample to the target population.

- *Target Population* – Canadians aged 18 to 64 who were not studying full-time in the reference year.
 - Individuals under 18 and full-time students are excluded from the target population as jobs are often transitory for these groups, taken on to provide a supplementary income while they are studying and not reflective of their ability to achieve long term economic and social goals.
 - Individuals aged 65 and over are also excluded from the target population given their unconditional eligibility for public pension benefits (with few exceptions).

Once the target population has been set, a work criterion has to be chosen to identify who has a sufficient attachment to the labour force to be identified as a ‘worker’.

- *Work Criterion at the individual level* – In this study, workers are individuals who worked for pay at least 910 hours in the reference year.
 - This is equivalent to working 26 weeks at an average of 35 hours per week²¹, i.e. to spend most of the year working rather than not working.
 - The number of hours worked, not the number of weeks in employment, was chosen to identify workers, because it provides a better indication of the real attachment of individuals to the labour market. Indeed, the number of weeks in employment tells us nothing about the full-time/part-time status of employees, and could therefore lead to including individuals with very different work profiles in the working poor population.

While two-earner families are increasingly prevalent in today’s society, there is still no expectation that, when possible, both parents will work. Therefore, there is no rationale to require that all adults in an economic family be working for that family to be identified as a ‘working family’. Consequently, only one member of an economic family is required to meet the above-mentioned work criterion to be identified as a ‘working family’.

- *Work Criterion at the family level* – In this study, a working family is an economic family where at least one member worked for pay a minimum of 910 hours in the reference year.

2.3.2 Who Lives in Poverty?

The chosen definitions of ‘poverty’ are the following:

- For cross-sectional analysis: *A family is poor if it lacks the disposable income to purchase the goods and services included in the Market Basket Measure (MBM).*
- For longitudinal analysis: *A family is poor if its after-tax income falls below the LICO-IAT.*
- For cross-sectional and longitudinal analysis: *An individual is poor if he/she lives in a family that is poor.*

²¹ 35 hours of work per week is about the average number of ‘normal’ hours worked by Canada’s working population. Indeed, in 2001 the average number of ‘usual’ (normal) hours worked by Canada’s working population was 36.6 hours (see Statistics Canada: Labour Force Survey). Note, though, that for statistical purposes, in the SLID and in the Labour Force Survey full time work is defined as working 30 hours or more per week.

Identifying who is poor is not easier than identifying who is working as there is an ongoing debate around the definition and measurement of poverty. Should poverty be defined as a lack of social inclusion, being in low-income, or being deprived of basic necessities? Should absolute, relative, subjective or hybrid measures be used to quantify poverty? The intention of this chapter is not to resolve these issues. In this working paper, analysis is undertaken using some of the measures that are already available in Canada.

Three measures of low income are common to policy and popular discussions: the low-income cut-offs (LICOs)²², the low-income measure (LIM) and, more recently, the market-basket measure (MBM).

Statistics Canada defines a LICO as a threshold below which a family is likely to spend significantly more of its income on food, shelter, and clothing than the average family. In 1992, Statistics Canada tabulated different LICOs using the Family Expenditure Survey (FAMEX) for various family sizes and size of area of residence. Since then, the LICOs have been updated annually using the Consumer Price Index (CPI). The LICOs have two main limitations: 1) they do not take into consideration variations in the local cost of living; and 2) they are based on an arbitrary threshold²³. However, LICOs are used by many in the media, researchers and policy-makers and, allow for comparisons over time as they have been computed for many years.

The low-income measure (LIM) is defined as half the median income adjusted for family size. This is a relative measure of low income, rising and falling with median incomes. However, the LIM is similar to widely used international measures and is therefore useful in doing international comparisons²⁴.

The market basket measure (MBM) threshold represents a standard of living somewhere between subsistence and inclusion. It is derived using the actual cost of goods and services rather than being a purely 'relative' indicator of low-income. The MBM is sensitive to geographical variations in the cost of living and to family size and composition. According to the MBM, a person in low-income is someone whose disposable family income falls below the cost of the goods and services in the Market Basket in their community or community size. One current drawback of the MBM is that it is a recent, relatively unknown measure that allows for only limited historical comparisons²⁵.

²² It should be noted that "Statistics Canada has clearly and consistently emphasized that the LICOs are quite different from measures of poverty and that this agency does not endorse their use as such. They reflect a consistent and well defined methodology that identifies those who are substantially worse-off than the average. In the absence of an accepted definition of poverty, these statistics have been used by many analysts who wanted to study the characteristics of the relatively worse off families in Canada. These measures have enabled Statistics Canada to report important trends such as the changing composition of this group over time." (Statistics Canada, December 1999).

²³ More precisely, "base year low income cut-offs are set where families spend 20 percentage points more of their income than the Canadian average on food, shelter and clothing." (Statistics Canada, December 1999).

²⁴ See page 13 in Giles, P. (2004) *Low income measurement in Canada*, Statistics Canada, Catalogue no. 75F0002MIE2004011, December 2004, 20pages. <http://www.statcan.ca/english/research/75F0002MIE/75F0002MIE2004011.pdf>

²⁵ The MBM is available only for years 2000 to 2003.

Because some costs are associated with working (such as child care for families with young children), and because the MBM is the only measure that considers mandatory expenses for families, we found this measure particularly relevant for the study of working poverty. Consequently, the MBM is used to identify who is ‘poor’ when doing cross-sectional analysis. However, because of data limitations, we used the after-tax low-income cut-offs to do the longitudinal analysis.

To illustrate what it could mean to be ‘poor’ let us look at the case of an economic family of four (two adults and two children) living in Toronto. According to the relevant Statistics Canada LICO, a family of four would be identified as poor if its after-tax income was below \$29,908 in 2001 (see Table 2.4). According to the MBM, a family of two adults and two children would need a minimum of \$19,493 to cover the cost of food, shelter and transportation in Toronto in the same year. Consequently, in Toronto a family of four with an after-tax income of \$29,908 in 2001 would have been left with only \$10,415, or \$868 per month on average, to cover all other expenses including child care, uninsured health care expenses, clothing, outings, etc.

Table 2.4 Statistics Canada's Low Income Cut Offs for year 2001					
Size of family unit	Community size				
	Rural	Urban areas			
		Less than 30 000	30 000 to 99 999	100 000 to 99 999	500 000 or more
1 person	10,201	11,791	12,904	13,107	15,559
2 people	12,448	14,388	15,745	15,992	18,986
3 people	15,744	18,198	19,915	20,227	24,013
4 people	19,609	22,665	24,804	25,192	29,908
5 people	21,917	25,332	27,722	28,157	33,428
6 people	24,225	27,999	30,640	31,122	36,948
7 people or more	26,533	30,666	33,558	34,087	40,468

2.3.3 *New Definitions of Working Poor Individuals and Families*

A working poor individual is someone who works the equivalent of full-time for at least half of the year but whose family income is below a low-income threshold. A working poor family is an economic family including at least one working poor individual.

Using the work and poverty thresholds described above, the operational definitions of working poor individuals and working poor families that are used throughout this document are the following:

- *Working poor individuals* are those individuals aged 18 to 64 who worked for pay a minimum of 910 hours in the reference year, who are not full-time students, and whose family income **falls below** a low income threshold (the MBM for cross-sectional analysis and the LICO-IAT for longitudinal analysis).

- *Working Poor Families* are economic families with a low-income (as defined previously) where at least one member is an individual aged 18 to 64 who worked for pay a minimum of 910 hours in the reference year and who is not a full-time student. In other words, a working poor family is an economic family including at least one working poor individual.

Following the same logic, other workers (in opposition to working poor individuals) and other working families (in opposition to working poor families) are defined as follows:

- *Other workers* are those individuals aged 18 to 64 who worked for pay a minimum of 910 hours in the reference year, who are not full-time students, and whose family income is **at or above** a low income threshold (the MBM for cross-sectional analysis and the LICO-IAT for longitudinal analysis).
- *Other working families* are economic families **that do not have a low-income** and where at least one member is an individual aged 18 to 64 who worked for pay a minimum of 910 hours in the reference year and who is not a full-time student.

2.4 Data

Data from the *Survey of Labour and Income Dynamic* (SLID) are used in this study:

- 2001 data for cross-sectional analysis; and
- 1996-2001 panel data for longitudinal analysis.

Year 2001 and the second panel of the SLID were the most recent data available when the study started.

All results presented in this study are based on the main file of Statistics Canada's *Survey of Labour and Income Dynamics* (SLID). The SLID is the official source of estimates on low income in Canada and provides detailed information on labour market activity of individuals and families. Consequently, the SLID allows for the identification of the target population and of the working poor population.

When this study started, SLID data were available for the years 1993 to 2001 and only the first two panels had been completed (1993-1998 and 1996-2001). For the cross-sectional analysis, the authors chose to use the most recent data available at the beginning of the study, i.e. 2001 data. For the longitudinal analysis, they used the data from the second panel (i.e. 1996-2001)²⁶.

The 2001 SLID cross-sectional sample represents 30,466,800 individuals. When sample selection criteria related to age and student status are imposed, a sample representing 15,867,617 individuals remains (see Table 2.5).

²⁶ See appendix A.1 for more details on the SLID.

Table 2.5
Number of individuals in the 2001 sample of the SLID, before and after the sample selection criteria are imposed

	Unweighted	Weighted
Number of individuals in 2001	78,500	30,466,800
Number of individuals aged 18 to 64 in 2001	49,800	19,880,900
Number of individuals who were not full-time students ²⁷ in 2001	40,200	15,867,600

Table 2.6 shows that 4.1% (or 653,300 individuals) of the target population were working poor individuals in 2001 and that 5.6% of workers could be identified as being working poor.

Table 2.6
Distribution of the target population by employment and low income status in 2001

	#	%
Numbers of individuals 18-64 who were not full-time student in 2001	15,867,600	100.0
% who had a low family income in 2001	1,738,600	11.0
% who worked 910 hours or more in 2001	11,587,400	73.0
% who worked 910 hours or more and had a low family income in 2001	653,300	4.1

2.5 Low Paid Workers Versus the Working Poor

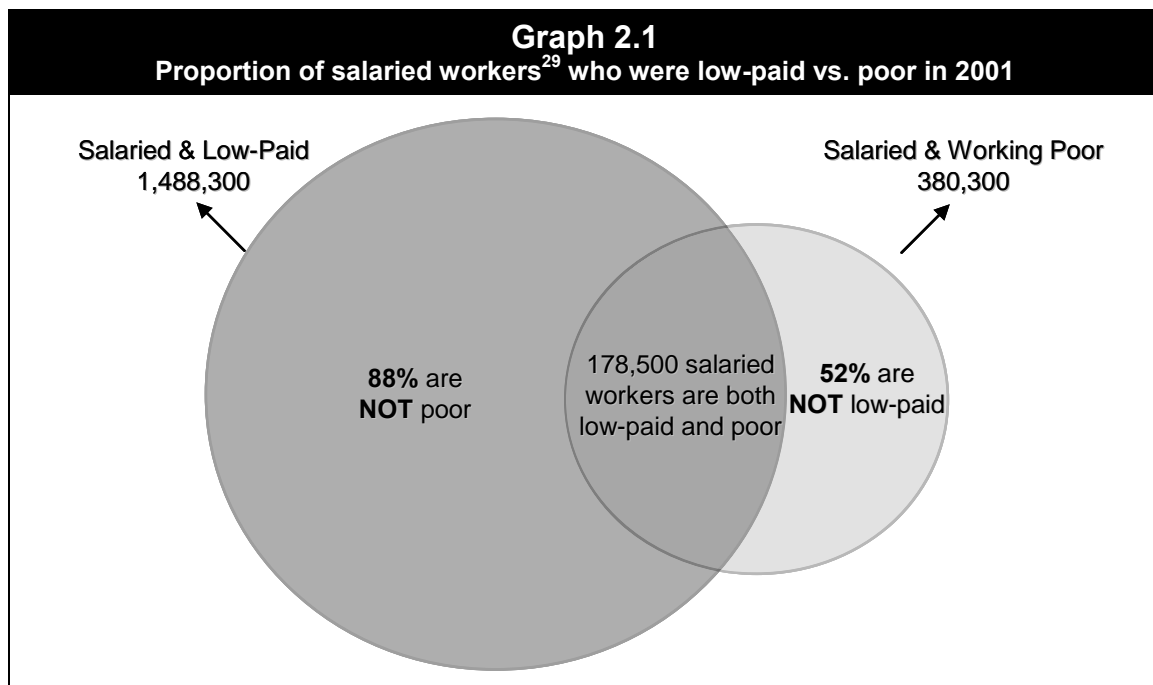
For Canadian workers, being low-paid is not synonymous with being poor.

Before moving to the profile of working poor Canadians, it is useful to make a distinction between low-paid workers²⁸ and the working poor; two groups that are conceptually different, but that in practice overlap somewhat, as there is a great deal of confusion between the two.

A low-paid worker is an individual whose annual earnings are low while a working poor person is an individual whose economic family income falls under a poverty threshold. In the first case, only the individuals' earnings determine if they are low paid while in the case of the working poor, the incomes of all family members determine if they are poor. Therefore an individual working full-time, full-year at the minimum wage is considered to be low-paid. However, if this individual's earnings are combined with that of another worker in the family then the probability of being poor is greatly reduced. In fact, in 2001, 88% of low paid Canadian salaried workers were not poor, and many salaried workers who did not have low wages still ended up in poverty because their income was not sufficient to provide for the needs of their families. This was the case for approximately 52% of salaried working poor Canadians (see graph 2.1).

²⁷ To ensure that there was no full-time student in their sample, the authors chose to omit observations for which student status was unknown, i.e. values for variables *studtf26* and/or *flprpt20* were missing in 2001. For more information on missing values see appendix A.2.

²⁸ Following the OECD, being low-paid means earning less than two-thirds of the country's hourly median wage (\$10 per hour in Canada in 2001). Following our preferred definition, 'workers' are individuals aged 18 to 64, who are not full-time students and who cumulated at least 910 hours of paid work in the reference year (i.e. 2001).



Statistics Canada (Chung, 2004) found a similar result using a more stringent definition of low-pay³⁰ and census data. They also found that the proportion of low-paid workers (including salaried and self-employed workers) who live in low-income (30%) has remained virtually unchanged between 1980 and 2000.

This finding of a weak link between low pay and poverty is consistent with US and European data. For instance, according to Eurostat, in 1996, 80% of low paid workers in the European Union were not poor. It is therefore important to recognize that low pay and working poverty are distinct issues that could call for different policy interventions.

2.6 Conclusion

This chapter introduced a new definition of working poor individuals and families which will be used throughout this study to analyse working poverty in Canada. Working poor individuals are those individuals aged 18 to 64 who have worked for pay a minimum of 910 hours in the reference year, who are not full-time students, and whose family income falls below a low income threshold (the MBM for cross-sectional analysis and the LICO-IAT for longitudinal analysis), while working poor families are those economic families including at least one working poor individual. The chapter also introduced the database from which all subsequent analysis in this document is derived: Statistics Canada's Survey of Labour and Income Dynamics. Finally, the chapter shed some light on the distinction between low-paid workers and working poor individuals, indicating that most low-paid workers are not poor.

²⁹ As defined in this chapter, workers are individuals who are not full-time students and who worked at least 910 hours in the reference year.

³⁰ Statistics Canada defined low-paid workers as those who worked full time, full year but earned \$20,000 per year or less in the reference year.

Chapter 3: A Descriptive Profile of Working Poor Canadians for 2001

Box A: Key definitions

***Working poor individuals** are those individuals aged 18 to 64 who have worked for pay a minimum of 910 hours in the reference year, who are not full-time students, and have a low family income according to the Market Basket Measure of low income.*

***Working Poor Families** are those economic families where at least one member is a working poor individual.*

***Other Workers** are those individuals aged 18 to 64 who have worked for pay a minimum of 910 hours in the reference year, who are not full-time students, and whose family income is **at or above** a low income threshold.*

Individuals who worked less than 910 hours were excluded from this research. However, detailed information on this group can be found in 'The Other Face of Working Poverty', available at: http://policyresearch.gc.ca/page.asp?pagenm=pub_wp_abs

3.1 Introduction

This chapter presents a profile of working poor Canadians for 2001 using the definitions developed in chapter two. More specifically, it presents information on the number of working poor Canadians and their dependants in 2001, the work effort of working poor individuals, and the depth of their poverty. It then presents detailed information on their demographic, socioeconomic, family and labour market characteristics and provides comparisons with the characteristics of working non-poor persons. Finally, Canadian statistics related to working poor persons are compared to those of other countries.

3.2 Number of Working Poor Canadians

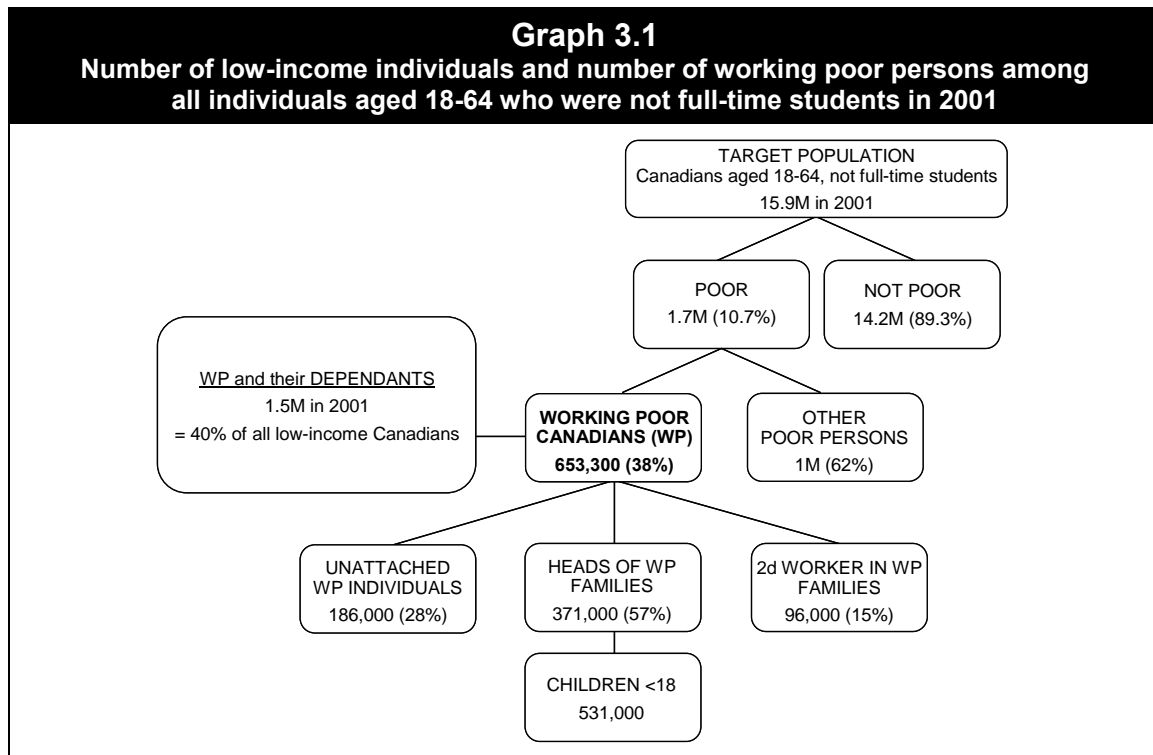
In 2001, there were 653,300 working poor individuals in Canada and 1.5 million persons living in a working poor family, accounting for almost 40% of all low income Canadians.

In 2001, there were 653,300 working poor persons in Canada, accounting for 5.6% of all workers³¹ but for about 40% of low-income adults³². Including dependants, 1.5 million Canadians lived in a working poor family, of which about one third (531,000 individuals) were children under 18. These 1.5 million persons accounted for almost 40% of all low-income Canadians³³ (see graph 3.1).

³¹ I.e. individuals aged 18-64 who were not full-time students and who cumulated at least 910 hours of paid work in 2001.

³² I.e. individuals aged 18-64 who were not full-time students in 2001 and who had a low family income.

³³ In 2001, 3,847,400 Canadians (12.6% of all Canadians) had a low family income according to the Market Basket Measure of low income.



A break-down of working poor Canadians shows that in 2001 close to 30% of them were unattached while over 70% were part of an economic family (there were about 371,000 working poor families in total in that year).

3.3 Work Effort

In 2001, working poor persons showed a strong attachment to the labour market.

In 2001, most working poor individuals had a strong attachment to the labour market. In fact, 76% of working poor Canadians reported 1,500 hours of paid work or more during the year (the equivalent of full time, full year work). This proportion is lower than the proportion observed among workers who were not poor (88%), nevertheless the average number of hours worked by working poor individuals was very similar to that worked by other workers (2,090 hours for the working poor compared to 2,050 hours for the working non-poor).

3.4 Labour Market Conditions

Despite similar work efforts, working poor individuals had, on average, lower wages than other workers. Indeed, in 2001 they earned on average \$12 per hour in paid employment, or 65% of the wages of other salaried workers. It is interesting to note that although the wages of working poor individuals were low, on average they were about 50% higher

than the highest minimum wage available in Canada in 2001 (\$8 per hour in British Columbia)³⁴.

In addition to having lower wages, working poor individuals typically held jobs offering fewer benefits than other workers in 2001 (see Tables 3.1 and 3.2³⁵). For instance, less than 25% of individuals living in a working poor family had access to a dental care plan or a health insurance plan, while this proportion was close to 75% among individuals living in non-poor families including at least one worker.

Table 3.1 Proportion of workers who have access to various employment-related benefits, by low-income status in 2001		
Employment-Related Benefits	Working Poor in 2001	Other Workers in 2001
% who had access to life and disability insurance	17.9%	61.5%
% who were union members	10.8%	30.3%
% whose employer provided a pension plan	15.1%	48.7%

Table 3.2 Proportion of individuals living in a family who had access to various employment-related benefits*, by low-income status in 2001		
Employment-Related Benefits	Persons Living in a Working Poor Family in 2001	Persons Living in a Working Non-Poor Family in 2001
% who had access to a dental care plan	25.6%	74.6%
% who had access to a health insurance plan	26.6%	74.6%

* We assume that the dental care/health insurance plans cover all individuals living in the family.

Finally, of those who held only paid employment during the year, close to 40% did not have a regular day work schedule whereas this proportion was substantially lower among other workers (25%). This suggests that among other challenges associated with such work arrangements, ‘9 to 5’ day care services are not as useful to working poor persons with children as they are to other workers.

3.5 Depth of Poverty

For low-income Canadians, work does not provide a systematic advantage over benefit dependency.

³⁴ Chapter 7 discusses the links between the minimum wage and working poverty at length.

³⁵ Please note that exceptionally, in tables 3.1 and 3.2, non-respondents have been divided equally among the different categories.

It might be expected that the working poor would be in a better situation than the poor who are not working (i.e. that employment revenues provide a higher income than income assistance). Somewhat surprisingly, it did not seem to be the case for working poor unattached individuals and for heads of working poor families in 2001, whose poverty depths³⁶ were, on average, not statistically different from those of their non-working counterparts (see Table 3.3).

For instance, in 2001 the absolute poverty depth of unattached working poor Canadians was about \$4,600 while it was less than \$5,200 for other low-income unattached individuals; and the absolute poverty depth of heads of working poor families was \$6,900 while it was a just bit over \$6,800 for heads of other low-income families. This means that for low-income Canadians, work does not provide a systematic advantage over benefit dependency.

Table 3.3						
Depth of poverty of working poor and non-working poor Canadians in 2001						
	All individuals		Unattached		Heads of families	
	Working poor	Non-working poor	Working poor	Non-working poor	Working poor	Non-working poor
Poverty Depth (%)	30.5%	35.0%	35.6%	41.3%	28.6%	31.9%
Poverty Depth (\$)	\$6,311	\$6,465	\$4,623	\$5,175	\$6,915	\$6,837

3.6 Characteristics of Working Poor Canadians

Tables 3.4 and 3.5 provide detailed information on the demographic, socioeconomic, family and labour market characteristics of poor and non-poor working Canadians, as well as their use of EI and regional rates of poverty. The next sections comment at length on those results³⁷.

3.6.1 Demographic Characteristics

In 2001, men represented 57% of working poor Canadians, a proportion roughly equal to their relative position in the Canadian labour market. On the other hand, working poor persons were more likely to be young than their non-poor counterparts (12% of working poor Canadians were 18-24 compared to less than 7% of working non-poor persons).

A disproportionately high number of working poor persons lived in British Columbia in 2001 (23% of all working poor Canadians) while a relatively low number lived in Quebec (15%). In comparison, 12% of non-poor workers lived in British Columbia and 24% lived in Quebec.

³⁶ The poverty depth (in %) is the average, over all low-income persons examined, of the following: 1- (MBM disposable income/ MBM threshold), while the poverty depth (in \$) is the average, over all low-income persons examined, of the following: (MBM threshold – MBM disposable income).

³⁷ Note that the only results that are discussed in the following sections are those that are statistically different at confidence intervals of 95%.

Among larger cities, we find that in 2001 the incidence of poverty among workers was highest in Vancouver (where 9.6% of workers were poor) compared to Winnipeg, Montreal and the Ottawa-Gatineau region (where between 3.2% and 3.4% of workers were poor) or Toronto (where 5.3% of workers were poor). It is also interesting to note that low-income adults living in Montreal were half as likely as those living in Calgary or Toronto to be a worker in 2001 (only a quarter of low-income adults who lived in Montreal in 2001 worked at least 910 hours compared to over half of those living in Calgary and 47% of those living in Toronto).

Finally, it is worth noting that working poor individuals were more likely than their non-poor counterparts to be single, separated, divorced or widowed in 2001, and about twice as likely to be a recent immigrant, an Aboriginal living off-reserve or to have work limitations³⁸.

3.6.2 Socioeconomic Characteristics

While there were significant differences in educational attainment between poor and non-poor workers (e.g. close to 20% of the working poor held less than a high school diploma compared to fewer than 12% of other workers), a considerable share of the working poor (over 10%) held a university diploma in 2001.

3.6.3 Family Characteristics

In 2001, there was a disproportionately high number of unattached individuals among working poor Canadians (28% compared to only about half that among working non-poor persons). Interestingly, 35% of working poor persons living in a couple had three children or more compared to only 11% of their non-poor counterparts. Surprisingly, the proportion of working poor persons that were lone-parents was similar to the proportion observed among working non-poor persons (9.9% compared to 7.3%).

3.6.4 Labour Market Characteristics

Although a large majority (close to 76%) of working poor individuals worked 1,500 hours or more in 2001 (the equivalent of full-time/full-year work) and an even larger proportion (close to 86%) of those who reported their labour market experience had three years or more of experience in the labour market, working non-poor Canadians were even more likely to work full-time year round (over 88% of them) and to cumulate three years of experience (close to 95% of them).

Interestingly, the proportion of working poor persons who did not work full-time in their main job (over 12%) was almost twice as high as the proportion among working non-poor persons (about 7%). Also, working poor Canadians were more likely than their non-

³⁸ In this report, being an Aboriginal living off reserve or a recent immigrant are equivalent to having a 'high risk' status.

poor counterparts to have held more than one job in 2001 (26.8% of working poor Canadians did while this proportion was 15.8% among their non-poor counterparts).

Finally, exploring the link between labour market and family characteristics we found that 32.3% of working poor Canadians living in a couple depended on only one earner in 2001 while it was the case for no more than 7.9% of working non-poor Canadians.

3.6.5 Access to Government Benefits and Regional Rate of Poverty

In 2001, almost 90% of working poor Canadians received at least \$1 in government transfers, this compares to about 48% of working non-poor Canadians. Limiting the sample to those who received some government transfers in 2001, close to 25% of the income of working poor persons but less than 5% of the income of other workers was in the form of transfers.

Looking at the sources of transfers, it appears that almost 8% of working poor persons received some social assistance benefits in 2001 as compared to fewer than 1% of working non-poor persons. In the same year, similar proportions of working poor and working non-poor Canadians (13.4% versus 12.6%) received at least \$1 in Employment Insurance benefits.

Finally, in 2001 over 43% of working poor Canadians lived in a region³⁹ where the rate of poverty was above the average national rate. This proportion was only 26% among working non-poor individuals. This might suggest that there is some geographical concentration of working poverty in Canada.

3.6.6 Main Job

In 2001, working poor Canadians were especially likely to experience at least one spell of self-employment. Indeed, over 40% of them reported some self-employment compared to only 13% of other workers. A large proportion (about one third) of working poor individuals worked in the sales and services sector and most of them (66%) worked for small businesses. In comparison, only 19% of working non-poor Canadians worked in the sales and services sector and less than 36% worked for a small business.

³⁹ The regions were defined according to the MBM (i.e. followed Statistics Canada's CMAs sub-division of the territory).

Table 3.4 Distribution of working poor (WP) and working non-poor (WNP) individuals, by characteristics in 2001, (*see note at the end of the table)				
	WP		WNP	
All individuals	653,300	100%	10,934,100	100%
1. Demographic Characteristics				
Gender				
Male	369,100	56.5%	6,090,300	55.7%
Female	284,200	43.5%	4,843,800	44.3%
Age				
18-24	77,700	11.9%	710,700	6.5%
25-34	162,000	24.8%	2,569,500	23.5%
35-44	207,100	31.7%	3,520,800	32.2%
45-54	143,100	21.9%	2,974,100	27.2%
55-64	63,400	9.7%	1,170,000	10.7%
Province				
Atlantic Provinces (Nfld, PEI, NB or NS)	62,700	9.6%	787,300	7.2%
Quebec	99,300	15.2%	2,580,500	23.6%
Ontario	220,200	33.7%	4,373,700	40%
Manitoba or Saskatchewan or Alberta	120,200	18.4%	1,880,700	17.2%
BC	150,900	23.1%	1,323,000	12.1%
Marital Status				
Single (was never married)	183,600	28.1%	2,219,600	20.3%
In a union (married or not)	355,400	54.4%	7,621,100	69.7%
Separated, divorced or a widow	114,300	17.5%	1,093,400	10%
Immigrant or Aboriginal living off-reserve				
Yes	75,100	11.5%	579,500	5.3%
No	508,300	77.8%	9,523,600	87.1%
Work Limitations				
Yes	75,800	11.6%	677,900	6.2%
No	577,500	88.4%	10,256,200	93.8%
2. Socioeconomic Characteristics				
Highest level of education				
Less than a high school diploma	128,000	19.6%	1,279,300	11.7%
HSD	169,200	25.9%	2,591,400	23.7%
More than a HSD	197,900	30.3%	3,892,600	35.6%
University	73,200	11.2%	2,197,800	20.1%
Part-time Student				
Yes	27,400	4.2%	612,300	5.6%
No	625,900	95.8%	10,321,800	94.4%
3. Family Characteristics				
Family Type				
Unattached	185,500	28.4%	1,508,900	13.8%
Couple without children, one earner	31,400	4.8%	295,200	2.7%
Couple without children, two earners or more	74,500	11.4%	3,586,400	32.8%
Couple with one or two children, one earner	54,200	8.3%	229,600	2.1%
Couple with one or two children, two earners or more	105,800	16.2%	3,083,400	28.2%
Couple with three children or more, one earner	28,100	4.3%	76,500	0.7%
Couple with three children or more, two earners or more	58,100	8.9%	349,900	3.2%
Lone Parent family	64,700	9.9%	798,200	7.3%
Other family type	51,000	7.8%	1,005,900	9.2%

Table 3.4 (End)

	WP		WNP	
4. Characteristics Related to Work Effort				
Number of hours worked				
910-1,500 hours	158,800	24.3%	1,279,300	11.7%
1,501-2,499 hours	335,800	51.4%	8,211,500	75.1%
2,500 hours or more	158,800	24.3%	1,443,300	13.2%
Labour Market Experience				
Less than 3 years	58,100	8.9%	590,400	5.4%
3 years or more	341,700	52.3%	7,457,100	68.2%
Worked full-time in main job				
Yes	549,400	84.1%	9,873,500	90.3%
No	75,100	11.5%	743,500	6.8%
Cumulated more than one job during the year				
Yes	175,300	26.8%	1,730,100	15.8%
No	478,000	73.2%	9,204,100	84.2%
5. Regional Rate of Poverty (RRP)				
RRP is over national average	294,000	45%	2,799,100	25.6%
RRP is under national average	359,300	55%	8,135,000	74.4%
6. Access to Government Benefits				
Received some Government Transfers	586,700	89.8%	5,292,100	48.4%
Received some Employment Insurance Benefits	87,500	13.4%	1,377,700	12.6%
Received some Social Assistance Benefits	51,600	7.9%	109,300	1%
7. Characteristics Related to Main Job				
Self-employed during the year				
Yes	265,900	40.7%	1,443,300	13.2%
No	387,400	59.3%	9,490,800	86.8%
Type of Occupation				
Finance and Business	133,300	20.4%	3,214,600	29.4%
Arts, sciences & health	80,400	12.3%	2,460,200	22.5%
Sales and services	210,400	32.2%	2,121,200	19.4%
Other occupation	218,200	33.4%	2,908,500	26.6%
Size of Business				
Small (<20 employees)	432,500	66.2%	3,892,600	35.6%
Medium (20-99 employees)	126,100	19.3%	3,061,600	28%
Large (100+ employees)	78,400	12%	3,772,300	34.5%
Low-Paid (earning less than \$10/h)	178,500	48.2% of salaried ⁴⁰	1,309,800	25.5% of salaried

* Note that the proportions within a category do not always sum up to 100% because for some individuals the information was missing, and we made the decision not to impute a value to those individuals.

⁴⁰ The focus is on salaried individuals, as the information on hourly wages is usually not available for self-employed persons (unless they are also salaried), who often get paid a fixed amount of money to do a job (whatever the number of hours that they have to put in to respect their contract).

Table 3.5
Number of workers, poor and working poor individuals in selected
Census Metropolitan Areas (CMAs) in 2001

CMA	Workers (910 hours or more)	Poor (18-64, not full- time students)	Working Poor	Working Poor as a % of Workers	Working Poor as a % of the Poor
Montreal	1,156,900	162,800	39,800	3.4%	24.4%
Ottawa/Gatineau	426,300	48,600	15,800	3.7%	32.6%
Toronto	1,857,400	210,200	99,100	5.3%	47.1%
Winnipeg	264,200	21,900	8,500	3.2%	38.8%
Calgary	375,200	38,000	19,600	5.2%	51.7%
Vancouver	753,100	168,300	72,500	9.6%	43.1%

Table 3.6
Number of unattached Working Poor, Heads of Working Poor Families and total number
of individuals affected by working poverty in selected CMAs in 2001

CMA	Number of Unattached Working Poor	Number of Heads of Working Poor Families	Total Number of Individuals affected by Working Poverty
Montreal	17,618	X	87,681
Ottawa/Gatineau	X	X	41,173
Toronto	29,064	58,239	244,413
Winnipeg	X	5,242	21,342
Calgary	X	X	39,564
Vancouver	17,963	41,490	157,500

Box B: Key Technical Details

For all estimates presented in this document:

- Bootstrap weights were used to calculate the standard errors (as per the methodology developed by Piérard, Emmanuelle & al. (October 17, 2003) in *Bootstrapping Made Easy: A Stata ADO File*, McMaster Research Data Centre, Statistics Canada).
- ‘X’ Means that the information is not available because the sample size is too small. Statistics Canada demands that we do not publish estimations with less than 25 un-weighted observations.
- For characteristics with 25 observations or more we checked the 95% confidence intervals (CI) around the estimate. When the authors judged that the CI were sufficiently small they kept the estimate, otherwise they did not present it.
- The authors also made sure that the 95% CI around estimates were mutually exclusive before concluding that two proportions were statistically different.

3.7 Characteristics of the Working Poor in Other Countries

How do the characteristics of working poor Canadians compare to those of working poor persons living in other countries? A review of the literature shows that whatever the country, working poor individuals share many traits (see table 3.7). In particular, they are more likely than other workers to:

- Work in the services industry (Canada, the US, EU countries and Switzerland);
- Be self-employed (Canada, EU countries and Switzerland);
- Earn low wages (Canada, the US, EU countries and Switzerland); to depend on only one earner (Canada, the US, EU countries);
- Be young (Canada, the US, EU countries and Switzerland); to be part of a ‘minority’ (i.e. to be a recent immigrant in Canada, Switzerland and EU countries; or to be Black or Hispanic in the US);
- Have a disability (Canada, EU countries);
- Be less educated (Canada, the US, EU countries and Switzerland);
- Be lone-parents (Canada, the US, EU countries and Switzerland); and
- Have many children (Canada, the US, EU countries and Switzerland).

Table 3.7 Characteristics of working poor persons in various developed countries				
	Canada	USA	EU countries	Switzerland
Proportion of the active/working population	5.6%	4.9%	7.0%	7.4%
Work in the Services Industry	X	X	X	X
Self-employed	X		X	X
Earn low wages	X	X	X	X
Depend on only one earner	X	X	X	
Are young	X	X	X	X
Recent immigrants	X		X	X
Blacks and Hispanics		X		
Have a disability	X		X	
Have a low education	X	X	X	X
Lone parents	X	X	X	X
Have many children	X	X	X	X

Furthermore, working poor persons accounted for a not insignificant part of the active population in many countries e.g., 5.6 percent of Canadian workers in 2001, 4.9 percent of US workers in 2001; 7 percent of EU workers in 2001; and 7.4 percent of Swiss workers in 2003. The reader should note, however, that the definitions of a ‘worker’ and of ‘poverty’ differ significantly from one country to another. Nevertheless, we can safely assume that between five percent and ten percent of workers have low family incomes in many so-called ‘developed’ countries, which indicates that the working poor issue cuts across borders and that many countries can benefit from others’ knowledge of working poor individuals and of the policies and programs that have proved to be the most efficient at helping them.

3.8 Conclusion

This chapter presented many characteristics of working poor Canadians and contrasted them with those of their non-poor counterparts. Among other things, we found that compared to working non-poor Canadians, a higher proportion of working poor Canadians depended on only one earner, were young, self-employed, lived in BC, and were less educated in 2001.

Chapter 4: Determinants of Poverty Among Workers

4.1 Introduction

Descriptive statistics presented in chapter three indicate that the working poor are a highly heterogeneous group. However, those statistics also show that some characteristics (personal, family or job-related) are more common among working poor individuals, suggesting that some traits increase the financial vulnerability of workers. Those characteristics include being young, self-employed, or part of a one-earner family. It is quite possible that some workers' characteristics are correlated, such as age and marital status, or being self-employed and working in a specific industry. Given that descriptive statistics alone cannot isolate the specific impact of each characteristic on the risk of being poor, firm conclusions regarding the main determinants of poverty for workers cannot be reached. It is thus important to assess whether apparent relationships between various characteristics and the risk of being poor for workers persist when other characteristics are held constant.

4.2 Literature Review

No Canadian study has used a rigorous econometric methodology to identify the characteristics increasing the probability of being poor for workers. In fact, to our knowledge, only one study done by the Swiss has used logistic regression analysis to identify the determinants of poverty for workers⁴¹.

The main findings of this study are the following: 1) the probability of poverty among Swiss workers increases with the number of people in the household; and 2) this probability is inversely related to the household total work effort. The probability of being poor for Swiss workers also increases when the worker is self-employed, works in agriculture or the retail trade sector, has precarious employment (part-time, term or atypical work schedule), is an immigrant, is young and/or female.

Although the Swiss study used a sophisticated econometric methodology to identify risk factors, its findings are quite similar to those obtained in Canada using descriptive statistics (see chapter three). This suggests that the profiles of working poor individuals (whether living in Canada or in other countries) provide a useful description of the characteristics that increase a worker's vulnerability to poverty. However, descriptive profiles do not permit identifying the determinants that are statistically significant or their order of importance.

⁴¹ See "*Les working poor en Suisse*" (2001).

4.3 Methodology

4.3.1 *Dependent Variable*

In trying to explain poverty among workers in Canada, the dependent variable is modeled as a dummy variable taking the following value:

- 1 if a worker is part of a family that has a low income, and
- 0 if a worker is part of a family that does not have a low income⁴²

4.3.2 *Independent or Explanatory Variables*

On the basis of results of studies carried out in other countries, descriptive profile of working poor Canadians, and the data available in the Survey of Labour and Income Dynamics, the following groups of variables were used to build a model to explain poverty among workers: demographic (gender, age, province of residence, marital status, being part of a high-risk group, having work limitations); socioeconomic (level of education, student status, work experience); family (family type, number of earners in the family, and number of children in the family); work effort (number of hours of work, part-time work, holding multiple jobs) and main job characteristics (self-employment, industry, size of business).⁴³

Characteristics such as the motivation, resourcefulness or social network of workers likely play a major role in explaining the financial situation in which they find themselves, so it would have been desirable to include such variables in the analysis. Unfortunately, this type of variable is not available in the SLID and consequently, could not be taken into consideration.

Also, worker's wages cannot be used in conjunction with factors with which there is a high risk of multicollinearity as it would hinder the identification of the specific impact of other factors (e.g. the level of education, age, experience and industry in which the worker is employed).⁴⁴

4.3.3 *Rates of Poverty among Workers*

Before developing an econometric model, rates of poverty among workers (WP rates)⁴⁵ were calculated for each of the characteristics identified in the last chapter. Those rates shed some more light on the variables most likely to have an impact on the probability of

⁴² For further details on the subsample and the dependent variable, see Appendix B.1.

⁴³ See Appendix B.2 for a list of the variables included in each of these groups and their definitions.

⁴⁴ In section 4.4.2, the results of a regression including workers' wage level serve as the basis for a discussion as to the relative importance of self-employed/salaried status, hourly wages, number of hours worked and family characteristics in explaining low income among workers.

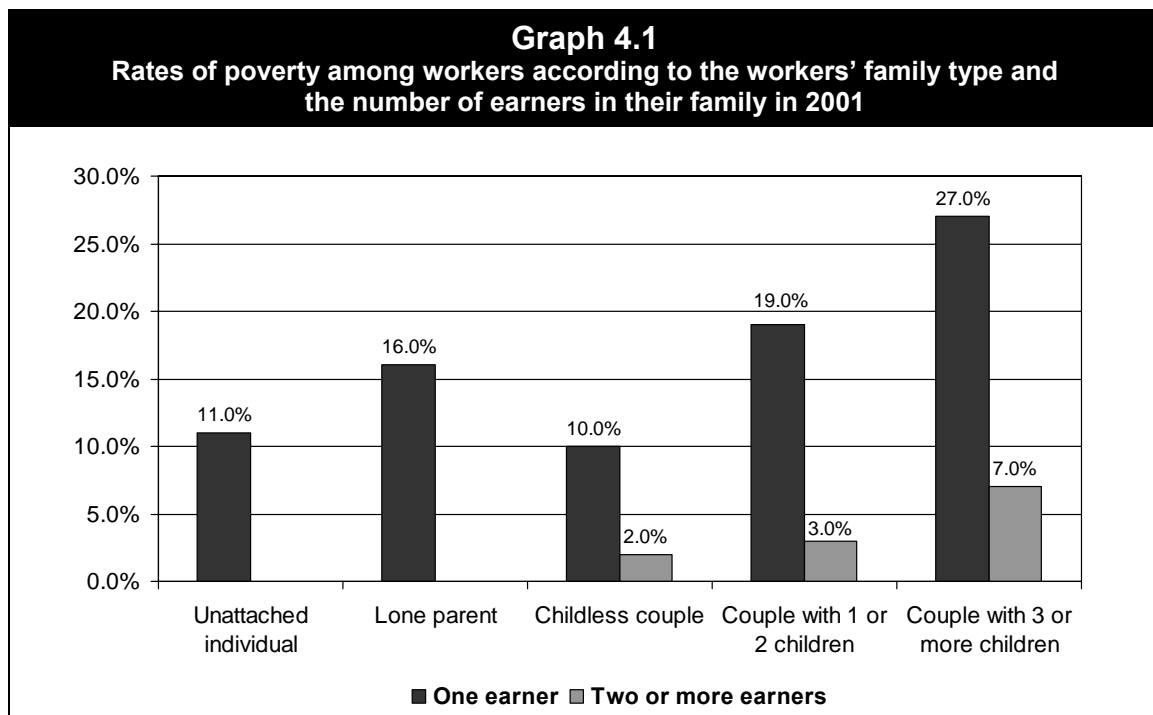
⁴⁵ The WP rate is the percentage of working poor individuals among workers.

being poor for workers, and make it easier to compare the results derived from descriptive statistics with those from logistic regressions.

As mentioned in chapter three, the rate of poverty for all workers, or the global WP rate, was 5.6% in Canada in 2001. However, higher WP rates can be observed among workers who have specific characteristics (see Table 4.1). For instance, the WP rates indicate that the characteristics most strongly associated with a high rate of poverty among workers are family-related. Indeed, the number of earners in a family and the family size stand out as key factors for explaining the incidence of poverty among workers. As shown in Graph 4.1, in 2001 financial poverty was rather rare among workers who were members of childless couples in which both spouses were working (2%). However, it was much more prevalent among workers who were part of a couple with one or two children but who were the only earner in the family (19%) and even more common among those who had many dependent children (27%).

Being unattached or a lone parent were also family situations associated with high WP rates in 2001. This is not surprising as in most cases those situations imply that only one person contributes to the family income.

Aside from family characteristics, other characteristics also increased the WP rates: experiencing a period of self-employment during the year (16%), working fewer than 1,500 hours (11%) and being part of a high-risk group, i.e. being a recent immigrant or an Aboriginal person living off-reserve (12%).



Finally, other groups had fairly high WP rates in 2001. Those groups included individuals aged 18-24, inhabitants of British Columbia, school drop-outs,⁴⁶ individuals who did not

⁴⁶ Workers with less than a high school diploma.

have much experience in the labour market,⁴⁷ were separated, divorced or widowed, had work limitations, worked in the sales and services industry and/or for small businesses, or cumulated many hours of paid work during the year (2,500 hours or more).

Table 4.1 Number of workers, number of working poor individuals and rates of poverty among workers, by characteristic in 2001				
	Number of workers	Number of working poor individuals	Rate of Poverty among workers	Difference in rate vs. lowest rate (pp*)
All workers	11,587,400	653,300	5.6%	
1. Demographic Characteristics				
Gender				
Male	6,464,100	369,200	5.7%	0.1
Female	5,123,400	284,100	5.6%	0.0
Age				
18-24	785,700	77,700	9.9%	4.8
25-34	2,728,200	162,000	5.9%	0.8
35-54	6,840,500	350,300	5.1%	0.0
55-64	1,233,100	63,400	5.1%	0.0
Province of residence				
Atlantic (Nfld, PEI, NB or NS)	849,700	62,800	7.4%	3.7
Quebec	2,674,500	99,500	3.7%	0.0
Ontario	4,590,100	220,000	4.8%	1.1
Prairies (Manitoba or Saskatchewan)	779,700	46,200	5.9%	2.2
Alberta	1,221,500	74,000	6.1%	2.7
British Columbia	1,471,900	150,800	10.2%	6.5
Marital status				
Single (never married)	2,403,300	183,700	7.6%	3.1
In a union (married or common law)	7,974,500	355,100	4.5%	0.0
Separated, divorced or widowed	1,207,700	114,600	9.5%	5.0
Recent immigrant or Aboriginal off-reserve				
Yes	654,500	74,900	11.5%	6.4
No	10,031,300	508,600	5.1%	0.0
Work limitations				
Yes	755,600	75,700	10.0%	4.7
No	10,831,800	577,600	5.3%	0.0
2. Socioeconomic Characteristics				
Highest level of education				
Less than high school diploma	1,409,000	127,800	9.1%	5.9
High school diploma	2,756,600	169,300	6.1%	2.9
Post-secondary	4,088,800	198,000	4.8%	1.6
University	2,276,100	73,100	3.2%	0.0
Part-time student				
Yes	634,900	27,600	4.3%	0.0
No	10,952,500	625,700	5.7%	1.4
Experience in the labour market				
Fewer than 3 years	644,800	57,900	9.0%	4.6
3 or more years	7,796,500	341,500	4.4%	0.0

⁴⁷ Workers with fewer than three years of full-time experience in the labour market.

Table 4.1 (End)

	Number of workers	Number of working poor individuals	Rate of Poverty among workers	Difference in rate vs. lowest rate (pp)
3. Family Characteristics				
Family type				
Unattached individual	1,696,200	185,700	11.0%	9.0
Childless couple, one earner	330,800	31,500	9.5%	7.5
Childless couple, two earners	3,656,700	74,300	2.0%	0.0
Couple with 1 or 2 children, one earner	285,800	54,100	18.9%	16.9
Couple with 1 or 2 children, two earners	3,193,000	105,700	3.3%	1.3
Couple with 3+ children, one earner	102,600	28,100	27.4%	25.4
Couple with 3+ children, two earners	855,500	57,900	6.7%	4.7
Lone-parent family	415,000	64,600	15.6%	13.6
Other family type	1,051,900	51,200	4.9%	2.9
4. Characteristics Related to Work Effort				
Number of hours of paid work during the year				
910-1499	1,436,500	158,700	11.1%	7.2
1500-2499	8,552,700	335,900	3.9%	0.0
2500+	1,598,200	157,700	9.9%	6.0
Main job full-time				
Yes	10,418,900	549,200	5.3%	0.0
No	821,600	75,300	9.2%	3.9
Only one job during the year				
Yes	9,682,100	478,000	4.9%	0.0
No	1,905,400	175,300	9.2%	4.3
5. Characteristics Related to Main Job				
Self-employed during the year				
Yes	1,713,600	265,900	15.5%	11.6
No	9,873,800	387,400	3.9%	0.0
Type of occupation				
Business and finance	3,348,600	133,400	4.0%	0.8
Arts, sciences and health	2,541,200	80,400	3.2%	0.0
Sales and services	2,328,500	210,600	9.0%	5.8
Other	3,130,600	218,300	7.0%	3.8
Size of business				
Small (<20 employees)	4,324,300	432,300	10.0%	8.0
Medium-sized (20-99)	3,183,700	125,900	4.0%	2.0
Large (100+)	3,850,400	78,100	2.0%	0.0

* PP means percentage points.

Bold characters indicate that the difference between the rate of poverty for this specific characteristic and the lowest rate observed in the same category is statistically significant at a 95% confidence level.

4.3.4 Logistic Regressions

As mentioned previously, descriptive statistics do not consider the possible interactions taking place between the factors identified as being most likely to increase the risk of workers being poor. To account for those interactions, and because the variable that we are trying to explain is a binary (or dichotomous) variable, a logistic regression model was developed.⁴⁸

⁴⁸ See Appendices C.1 and C.2 for further details on the logistic regression model.

4.3.4.1 *Model Specifications*

In order to develop a good model, a number of tests were carried out (see Table 4.2). A simple model (Model A) including a constant and a few basic explanatory variables (gender, age and province of residence) was first estimated. Then, groups of explanatory variables were gradually integrated into the model to assess whether or not they added to the model's predictive power. The ultimate objective was to identify the model that most effectively predicted poverty among workers.

Those tests confirmed that each group of variables that were included in the model enhanced its predictive power. They also allowed us to identify which of the variables did not have a significant impact on the probability of being poor for workers as well as those whose effect was unclear. Ultimately, they led us to make choices relative to the relevance of some explanatory variables.

For example, in Model E, the variables related to the status of full-time/part-time worker and to the status of part-time student were not significant factors in explaining the probability of low income among workers. Accordingly, correlation tests were carried out along with tests to assess whether or not the omission of those variables had a negative impact on the quality of the model.⁴⁹ Given that the variable concerning a worker's full-time/part-time status was highly correlated with the variable identifying if workers worked fewer than 1500 hours in 2001, and that its omission did not decrease the model's predictive power, it was removed from the model. However, since the omission of the variable controlling for part-time student status reduced the model's predictive power, it was kept.

With respect to the control variables relative to the marital status, they no longer had the expected sign when those relative to the family type were introduced (see Models D and E). Accordingly, correlation tests between marital status and other explanatory variables were carried out. The results of those tests indicated that the variables relative to the status of single and separated/divorced or widowed were too strongly correlated with those relative to the status of unattached individual and lone parent family, which in turn led to overestimating the effects associated with the latter two variables, and made the coefficients associated with the single, separated/divorced or widowed variables negative (and thus counter-intuitive). Given that family type is more important than marital status in explaining poverty among workers, the latter category of variables was omitted from the model.

Finally, despite relatively strong correlations observed between other pairs of variables (such as self-employment and size of business, self-employment and high number of hours of work, or age and experience on the labour market), they were kept in the model given that they control for distinct characteristics.

⁴⁹ See Appendix C.3 for the results of the correlation tests.

Table 4.2
Results of the logistic regression models that were tested and of the preferred model, 2001

	Models tested					
	A	B	C	D	E	Preferred model
1. Demographic Characteristics						
Gender	X	X	X	✓	X	✓
Age	✓*	✓*	X	✓*	✓*	✓*
Province of residence	✓*	✓*	✓*	✓*	✓*	✓*
Marital status		✓	✓	✓*	✓*	
				*	*	
Recent immigrant or Aboriginal person		✓	✓	✓	✓	✓
Work limitations		✓	✓	✓	✓	✓
2. Socioeconomic Characteristics						
Level of education			✓	✓	✓	✓*
Part-time student			X	X	X	X
Experience in the labour market			✓	✓	✓	✓
3. Family Characteristics						
Family type				✓	✓*	✓
4. Characteristics Related to Work Effort						
Number of hours worked during the year					✓	✓
Main job full-time					X	
Only one job during the year					✓	✓
5. Characteristics Related to Main Job						
Self-employed during the year						✓
Type of occupation						✓*
Size of business						✓
Pseudo R ²	2.3	4.5	6.6	14.6	17.3	24.1
Area under ROC curve ⁵⁰	0.615	0.667	0.702	0.783	0.805	0.854

The ✓ symbol indicates that it is an explanatory variable included in the model for which each category is statistically significant at ($P \leq 0.05$).

The ✓* symbol indicates that it is an explanatory variable included in the model for which certain categories are not statistically significant at ($P \leq 0.05$).

The X symbol indicates that it is an explanatory variable included in the model but for which none of the categories is statistically significant at ($P \leq 0.05$).

The ✓** symbol indicates that it is an explanatory variable included in the model for which all categories are statistically significant at ($P \leq 0.05$) but for which the sign changed with the introduction of new explanatory variables.

Pseudo R² and the area under the ROC curve are two measures of the goodness of fit of the model. In other words, they indicate the effectiveness of the regressors included in the model to predict poverty among workers. There is no perfect measure to assess the quality of adjustment of a logistic regression model. It is therefore advisable not to rely on the exact figures obtained through these measures. They can nonetheless be used to check whether or not any changes to the model will improve the goodness of fit. Pseudo R² is defined as $1 - L_1/L_0$ where L_0 represents the log of the likelihood of the model with a single constant and L_1 the log of the likelihood of the model with the constant and the other explanatory variables. The more it increases, the better the adjustment of the model is and vice versa.

The area under the ROC curve is a more appropriate measure when the actual number of Y=1 in the sample is small (see Appendix C.4 for further explanation). The closer it is to 1, the better the adjustment of the model is and vice versa.

⁵⁰ Because of restrictions imposed by the software that were used, these measures were calculated without taking the bootstrap weights into consideration. Consequently, they should be interpreted with caution.

4.4 Findings

4.4.1 *Main Determinants of Poverty among Workers in 2001*

Main findings of the preferred regression model

The most important determinants of poverty among workers are family-related:

- To be the sole earner in a family (includes unattached individuals, lone parents and sole-earner in couples);
- To have many dependant children.

Other determinants are:

- To be self employed;
- To be a recent immigrant or an Aboriginal person living off-reserve;
- Not to work full time, full year.

Table 4.3a presents the estimates that were derived from the preferred model. It shows that many explanatory variables have a statistically significant effect on the risk of poverty among workers. While in most cases the results reflect trends observed with descriptive statistics, in general the effects are less pronounced, and sometimes even much less significant than what descriptive statistics suggested.

Logistic regressions confirm that the family situation plays a key role in explaining the probability of having a low family income for workers. Among all the potential explanatory factors that were considered, the number of earners and dependant children in a family were the factors the most correlated with the probability of being poor for a worker. While workers who were part of a childless couple in which the spouse worked only had 1 chance out of 50 (2%) of having a low family income in 2001, this probability increased to 1 in 10 (10%) if the spouse was not working, and to slightly over 1 in 4 (26%) if the couple also had many dependent children.

The regressions also confirm that unattached individuals and heads of lone-parent families are particularly vulnerable to poverty when they work. The predicted probability of having a low family income for those two groups of workers is between 2 and 3 times higher than that of workers in general.

It is also important to mention that the vulnerability of lone parents in employment likely varies with the number of children that they care for. However, this hypothesis could not be tested as there were not enough observations to analyze lone parents in more detail.

In short, in Canada the number of earners and the number of dependent children in the family are key determinants of poverty among workers. Workers who are the sole breadwinner in their family are clearly at greater risk of having financial difficulties, and

this risk increases with the number of children that they care for (whether they are the sole earner in the family or not). It is thus essential to consider the family situation of workers in assessing their financial situation and their ability to support themselves and their families. As reported by the European Foundation for the Improvement of Living and Working Conditions (2004) “*the key cause of poverty is most often the structure of the household*”⁵¹.

With respect to the characteristics relative to a worker’s main job, they also explain, although to a lesser extent than those relative to the family, the risk of being poor for workers. Workers who reported some self-employment in 2001 were three times more likely to have a low family income than those who were never self-employed, regardless of their family situation. Similarly, the likelihood of poverty for employees of small businesses (<20 employees) is more than double that of employees of large firms (≥100 employees). The same holds true for workers whose main job is in the sales and services sector, who stand a greater risk of having a low family income compared to those who work in the fields of science or health care. In Switzerland, the industry in which a worker is employed has also been identified as an important factor in explaining the risk of poverty: working in agriculture or in retail trade coincides with a higher probability of poverty for workers.

Not surprisingly, work effort also has an impact on the probability of being poor for workers. Similarly to what had been observed with descriptive statistics, working fewer hours per year indeed increases the probability that a worker will be poor. However, workers who reported a very high number of hours of paid work were not more vulnerable to poverty than workers who reported a more ‘reasonable’ number of hours (i.e., between 1,500 hours and 2,499 hours per year, or the equivalent of 30 to 50 hours/week throughout the year), as the rates of poverty presented in section 4.3.3 might have suggested. This is probably due to the fact that the variable controlling for a high number of hours of paid work is correlated with other variables (such as being self-employed). Finally, the fact that a worker held more than one job during a year was also associated with a greater chance of being poor.

Some demographic characteristics are also among the factors that significantly increase the risk of being poor for workers. Those characteristics are (in decreasing order of importance) being part of a high-risk group (i.e. to be a recent immigrant or an Aboriginal person living off-reserve); being young (i.e. 18 to 24 years-old); and having work limitations. Indeed, having one of those characteristics increased the risk of being poor for workers by a minimum of 2.6 percentage points in 2001. The province in which a worker lives also explains his/her risk of being poor. Workers who lived in British Columbia, followed by those living in the Atlantic Provinces, were at least twice as likely as those living in Quebec to have a low family income in 2001.

Furthermore, it is worth noting that the socioeconomic characteristics of workers are only weakly related to the probability of being poor. Although there is a statistically significant link between a low level of education, a lack of experience in the labour

⁵¹ *Working poor in the European Union, 2004*, p. 36.

market and an increased risk of poverty among workers, those factors are not the most significant in explaining working poverty, as might have been expected. Indeed, the fact that a worker has not completed high school (compared with having a university degree) increases his/her probability of being poor by 3.5 percentage points. Also, the importance of the number of years in the labour market is less significant than what descriptive statistics indicated. Indeed, being a new entrant in the labour market⁵² (compared with having more work experience) increases the predicted probability of poverty among workers by only 1.7 percentage points. These results suggest that socioeconomic characteristics better explain the likelihood of being employed and the type of employment that a person holds than the risk of poverty when someone already works a significant number of hours.

Another interesting fact to report is the influence of a worker's gender on his/her chance of experiencing poverty. While none of the descriptive statistics and few model specifications suggested an impact of this variable, the preferred model points to a weak but positive and significant link between being a female and the probability of having a low family income for workers. This suggests that, *ceteris paribus*, women are slightly more likely than men to be in a precarious financial situation in spite of working a substantial number of hours. Finally, being a part time student does not explain in any significant way poverty among workers.

In brief, although none of the characteristics included in the model allows one to predict financial poverty with certainty, many observable characteristics significantly increase the risk of poverty for a worker. Indeed, the results clearly indicate that workers who are most vulnerable to poverty are those who are the sole earner in their family, have many dependent children, or are self-employed. For instance, the predicted probability of being poor for salaried workers who are part of a childless couple in which both spouses work is only 1.3%. This probability increases to 25.1% if they are unattached and self-employed, or to 47.7% for self-employed workers who are the only breadwinner of a couple with several children.

Nevertheless, it is important to repeat that empirical analysis allows for the identification of only some of the characteristics that actually explain the risk of poverty among workers since the impact of a number of other potential determinants (such as motivation, social and intellectual skills, etc.) cannot be assessed because of data limitations.

⁵² I.e. having less than three years of full-time experience.

Table 4.3a Results of the preferred model: estimated coefficients, level of significance of coefficients, predicted probabilities of poverty among workers and difference in relation to the lowest predicted probability for all characteristics, 2001				
	Estimated coefficient*	(P<=0.05)	Predicted probability ⁵³	Difference with lowest probability in pp**
All workers			5.6%	
1. Demographic Characteristics				
Gender				
Female	0.2379	0.0060	6.3%	1.1
Male (OMITTED) ⁵⁴			5.2%	0.0
Age				
18-24	0.6546	0.0000	8.5%	3.8
25-34	0.2558	0.0236	6.3%	1.6
35-54 (OMITTED)			5.2%	0.5
55-64	-0.1093	0.5123	4.7%	0.0
Province of residence				
Atlantic provinces	0.5546	0.0000	7.9%	4.0
Quebec	-0.3317	0.0172	3.9%	0.0
Ontario (OMITTED)			5.1%	1.2
Manitoba or Saskatchewan	-0.0224	0.8694	5.0%	1.1
Alberta	0.0921	0.5263	5.5%	1.6
British Columbia	0.7853	0.0000	9.3%	5.4
Recent immigrant or Aboriginal off-reserve				
Yes	0.8089	0.0000	9.9%	4.5
No (OMITTED)			5.4%	0.0
Work limitations				
Yes	0.5041	0.0001	8.0%	2.6
No (OMITTED)			5.4%	0.0
2. Socioeconomic Characteristics				
Highest level of education				
Less than high school diploma	0.7647	0.0000	7.6%	3.5
High school diploma	0.4252	0.1296	5.9%	1.8
Post-secondary	0.2143	0.1748	4.9%	0.8
University (OMITTED)			4.1%	0.0
Part-time student				
Yes	-0.1431	0.4722	5.1%	0.0
No (OMITTED)			5.7%	0.6
Experience in the labour market				
Fewer than 3 years	0.3690	0.0348	6.7%	1.7
3 or more years (OMITTED)			5.0%	0.0

⁵³ See Appendix C.5 for more details about how to derive and interpret predicted probabilities.

⁵⁴ We chose to omit the category for which we expected that the worker's probability of poverty would be the lowest.

Table 4.3a (End)

	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
3. Family Characteristics				
Family type				
Unattached individual	2.1156	0.0000	11.8%	9.8
Childless couple, one earner	1.8754	0.0000	9.9%	7.9
Childless couple, two earners (OMITTED)			2.0%	0.0
Couple with 1 or 2 children, one earner	2.6818	0.0000	17.6%	15.6
Couple with 1 or 2 children, two earners	0.6427	0.0001	3.5%	1.5
Couple with 3+ children, one earner	3.3080	0.0000	26.0%	24.0
Couple with 3+ children, two earners	1.3346	0.0000	6.4%	4.4
Lone-parent family	2.4856	0.0000	15.4%	13.4
Other family type	0.8173	0.0006	4.1%	2.1
4. Characteristics Related to Work Effort				
Number of hours of paid work during the year				
910-1499	0.8519	0.0000	9.2%	4.5
1500-2499 (OMITTED)			4.7%	0.0
2500+	0.2584	0.0379	5.8%	1.1
Only one job during the year				
Yes	-0.3260	0.0029	5.3%	0.0
No (OMITTED)			6.8%	1.5
5. Characteristics Related to Main Job				
Self-employed during the year				
Yes	1.4219	0.0000	12.5%	8.4
No (OMITTED)			4.1%	0.0
Type of occupation				
Business and finance (OMITTED)			4.7%	0.6
Arts, sciences and health	-0.1787	0.2262	4.1%	0.0
Sales and services	0.5271	0.0000	7.1%	3.0
Other	0.3646	0.0030	6.3%	2.2
Size of business				
Small (<20 employees)	0.9542	0.0000	7.1%	3.9
Medium-sized (20-99)	0.4865	0.0008	4.9%	1.7
Large (100+) (OMITTED)			3.2%	0.0
Pseudo R2: 24.1				
Area under ROC curve: 0.854				
* All coefficients with a P-value <0.05 are statistically significant at a confidence level of 95%.				
** pp means percentage point.				

4.4.2 Relative Importance of Wages and Family Characteristics

Low wages are an important determinant of poverty for workers. However, contrary to popular belief, they are not the most important determinant.

As mentioned previously, the preferred model cannot simultaneously measure the relative importance of a worker's family characteristics, wage level and work effort because a worker's wages are so dependent on his/her other personal characteristics.

It is nevertheless interesting to assess the importance of family characteristics in conjunction with wages to determine their relative strength in explaining poverty. To that end, a model that only included explanatory variables relative to the family status, work effort and, low wages of workers was estimated (see Table 4.3b). Because the information on wages is available only for salaried workers in SLID and because self-employed workers account for a large share of working poor persons (41%), the authors decided to create a new labour force status variable divided into three mutually exclusive categories: 1) self-employed workers, 2) salaried workers earning low wages (i.e. earning \$10/h or less), and 3) salaried workers not earning low wages.

The results of this model clearly indicate that having low wages is a significant factor in explaining poverty for workers. Compared to those who are better paid, salaried workers earning low wages indeed have a greater risk of being poor (11.1% compared to 2.6% for salaried workers not earning low wages). However, self-employed workers are at a greater risk of experiencing poverty than salaried workers (earning low wages or not) and, independently of the labour force status, family-related characteristics have an even stronger impact on the probability of being poor for workers. Indeed, the difference in the probability of being poor is stronger when comparing a worker who is part of a one-earner couple with children with another who is part of a childless couple in which both spouses work. As for the number of hours of paid work, although it is a significant determinant of poverty for workers it plays a small role compared to family characteristics and labour force status.

Table 4.3b clearly demonstrates that family characteristics have the greater explanatory power, followed by self-employment status, the wage level of salaried workers and then the number of hours worked.

Table 4.3b Estimation of the impact of family characteristics, number of hours of paid work and labour force status on the probability of being poor for workers, 2001				
	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
1. Family Characteristics				
Family type				
Unattached individual	2.0410	0.0000	12.0%	10.0
Childless couple, one earner	1.7245	0.0000	9.3%	7.3
Childless couple, two earners (OMITTED)			2.0%	0.0
Couple with 1 or 2 children, one earner	2.6479	0.0000	18.6%	16.6
Couple with 1 or 2 children, two earners	0.5876	0.0005	3.5%	1.5
Couple with 3+ children, one earner	3.1762	0.0000	26.1%	24.1
Couple with 3+ children, two earners	1.2136	0.0000	6.1%	4.1
Lone-parent family	2.3567	0.0000	15.2%	13.2
Other family type	0.8933	0.0001	4.6%	2.6
2. Characteristics Related to Work				
Number of hours of paid work during the year				
910-1499	0.7979	0.0000	9.5%	4.5
1500+ (OMITTED)			5.0%	0.0
Labour force Status				
Self-employed	2.1380	0.0000	16.1%	13.5
Salaried who earned less than \$10/hr	1.6516	0.0000	11.1%	8.5
Salaried who earned \$10/hr or more (OMITTED)			2.6%	0.0
Pseudo R2: 22.8				
Area under ROC curve: 0.8370				
* All coefficients with a P-value <0.05 are statistically significant at a confidence level of 95%. ** pp means percentage point.				

4.5 Conclusion

Chapter three showed that in 2001, 1.5 million Canadians were part of a working poor family. Chapter three also suggested that some characteristics are more strongly associated with financial poverty among workers. However, those findings were based on descriptive statistics which do not take into consideration the possible interactions between the characteristics under examination, and therefore cannot lead to firm conclusions with respect to the *main determinants of poverty for workers*.

Chapter four presents the results of estimating logistic regression models to identify these determinants. The principal findings of the logistic regressions are the following:

- In most cases, the results obtained through regression models are similar to the results presented in chapter three. However, the effects of each of the characteristics considered on the risk of poverty among workers are in general less pronounced and sometimes much less significant than what descriptive statistics suggested.
- *Family characteristics play a key role in explaining the risk of being poor for workers.* Workers who are the *sole earner* in their family are much more at risk of poverty than other workers (this includes unattached individuals, lone parents and workers who are part of a one-earner couple). In addition, *having many children* increases the likelihood of having a low family income whether or not the worker is the sole earner in his/her family.
- *Low wages also play a significant role in explaining poverty among salaried workers, but they are not the most important determinant of poverty. Being self-employed is a more important determinant.*
- Other characteristics significantly increase the risk of being poor for workers. In decreasing order of importance, those are: not working full time, full year; working for a small business; having work limitations; being young (i.e. 18-24 years-old); being part of a high-risk group (i.e. to be a recent immigrant or an Aboriginal person living off-reserve); working for the sales and services industry; not having a high school diploma; and being female.
- Also, workers living in British Columbia and in the Atlantic provinces are at much greater risk of having a low family income than those living in Quebec.

Before going further, the authors considered it important to verify if the results obtained up to now were robust to definitional changes. The information presented in appendix D demonstrates the robustness of the determinants of poverty among workers to modifications to the low-income and work thresholds of the working poor definition developed in chapter two. As well, it demonstrates that the determinants of poverty for workers in 2001 and their order of importance were very similar to what they were in 1996. It also supports the authors' decision to exclude full-time students from the working poor population, as low-income workers who spend a significant amount of their time studying have characteristics and behaviours that are quite different from those of other low-income workers, as well as being significantly less vulnerable to long-term low-income.

However, the results presented in appendix D also show that depending on the definition used, the number of individuals identified as working poor persons changes. If this is more or less important from a research perspective, it has significant consequences from a program development point of view, in particular for the identification of eligible recipients.

Finally, although logistic regression is more efficient at identifying the determinants of poverty for workers than descriptive statistics, it does not provide solutions for preventing or overcoming working poverty in Canada. However, it does indicate some avenues to consider for policy development. For instance, as families depending on only one earner are at greatest risk of poverty than other families, it might be appropriate to consider implementing policies supporting greater labour market participation of all potential earners in Canadian families. Also, given that self-employed workers are much more likely to encounter financial difficulties than other workers, developing policies and programs specifically targeted to this group would also be worth exploring. Finally, as low hourly wages is another factor explaining vulnerability to poverty for salaried workers, one of the solutions could be an increase in working poor individuals' wages. The next three chapters will provide additional information on these important issues in order to feed the policy debate.

Chapter 5: Greater Family Work Effort as a Means of Escaping Working Poverty

5.1 Introduction

Chapter 4 clearly showed that for workers, the presence of a second earner in the family is an important factor for avoiding poverty. Workers who are the only breadwinner of the family are more likely to be poor than workers who rely on other earners. This result suggests that increased work effort by all working age family members would help working poor families escape poverty. This chapter tries to shed some light on this issue by studying the presence and characteristics of new potential earners in working poor families.

5.2 Working Poor Persons Living in Families With Further Work Potential

Two working poor persons out of five were unattached or lone parents and did not have the option of a second earner in 2001.

Table 5.1 shows that in 2001, of the 653,300 working poor Canadians, 185,700 were unattached individuals and 79,900 were living in families that did not have any other members between the ages of 18 and 64. This means that two working poor persons out of five could not have relied on a second earner in 2001. In comparison, working non-poor Canadians were less likely to have no other working-age member in their families in 2001 (1 out of 5 working non-poor Canadians).

Table 5.1 Number of unattached individuals and persons belonging to families with at least two members among workers, by low-income status in 2001				
	With a low-income (653,300)		Without a low-income (10,934,100)	
	#	%	#	%
Unattached individuals	185,700	28.4%	1,510,400	13.8%
Living in an economic family including nobody else between 18 and 64 years of age	79,900	12.2%	659,600	6.0%
Living in an economic family including somebody else between 18 and 64 years of age	387,600	59.3%	8,764,100	80.2%

Moreover, working poor persons were more likely than their non-poor counterparts to be the head of a lone parent family. Therefore, it would have been impossible for these individuals to rely on a second earner unless their children had joined the labour market (14% of working poor individuals who were part of a 2+ family were lone parents in

2001 compared to only 4% of the working non-poor, as indicated in Table 5.2). Also, compared to the working non-poor, the working poor were more likely to belong to a couple with young children, a family type faced with heavier family responsibilities.

Table 5.2 Distribution of <i>workers</i> belonging to families including at least two individuals, by family configuration and low-income status in 2001				
	Working poor individuals living in a 2+ family (467,600)		Working non-poor individuals living in a 2+ family (9,423,700)	
	#	%	#	%
Lone-parent family	64,700	13.8%	350,300	3.7%
Couple without children	105,900	22.6%	3,881,700	41.0%
Couple with children, the youngest of which is under 5	110,200	23.6%	1,374,200	14.0%
Couple with children, the youngest of which is 5+	135,700	29.0%	2,816,800	29.0%
Other family type	51,200	7.9%	1,000,800	7.6%

While there were other adults aged 18-64 in the families of 60% of working poor Canadians, only 40% of the working poor actually relied on a second earner, and 25% of those second earner had less than 910 hours of paid work in 2001 (see Table 5.3). These figures suggest that there was some potential for increasing the earnings of working poor families in 2001.

Table 5.3 Proportion of <i>workers</i> who relied on other earners and/or other workers, by low-income status in 2001		
	With a low-income (653,300)	Without a low-income (10,934,100)
Proportion of workers who are the family's sole earner*	60.5%	27.3%
Proportion of workers relying on other earners (regardless of the number of hours they cumulate)	39.5%	72.7%
Proportion of workers relying on other workers**	29.8%	65.5%

* An **earner** is a person between 18 and 64 years of age, who reported positive paid work hours in 2001.

** A **worker** is defined as an individual between 18 and 64 years of age who accumulated 910 or more hours of paid work in 2001. Exceptionally, in this chapter, students were not excluded from the sample of other earners and other workers.

In particular, Tables 5.4 and 5.5 show that of the working poor who were their family's sole earner, approximately 30% could have potentially relied on a second earner; and of those working poor who already had a second earner in their family, 31% could have seen their income increase if these earners had intensified their work effort.

Table 5.4 Proportion of workers who depended on their own earnings only and who could have relied on a second earner, by low-income status in 2001		
	With a low-income (395,000)	Without a low-income (2,984,000)
Proportion who could have relied on a second earner*	29.8%	24.9%
Proportion who could not have relied on a second earner	70.2%	75.1%

* Meaning that there was at least one individual in his/her family aged between 18 and 64 years who did not have any paid work in 2001.

Table 5.5 Proportion of workers who relied on a second earner who could have increased his/her work effort in 2001		
	With a low-income (258,300)	Without a low-income (7,950,200)
Proportion who could have relied on a second worker*	31.0%	22.2%
Proportion who could not have relied on a second worker	69.0%	77.8%

* Meaning that there were at least one individual in his/her family aged between 18 and 64 years of age who cumulated between 1 hour and 909 hours of paid work in 2001, hence who would have had the potential to cumulate more than 910 hours of paid work.

As a result, close to one out of three (**30%**) working poor Canadians could have experienced an increase in their income if working-age members of their families had either joined the labour market (18.0%) or worked more than 910 hours (12.3%) in 2001.

In comparison, **23%** of the working non-poor could have seen their family income increase if working-age members of their families had either joined the labour market (6.8%) or increased their work effort (16.1%)⁵⁵. Thus, the working non-poor were also likely to belong to families that did not use their full earning potential.

It is interesting to study the situation of workers who have no additional earnings potential in terms of their low-income status. If, in 2001, 77% of working non-poor persons would not have been in a position to see their family income increase, it was because most of the adults in their families were already working long hours, and would therefore have a hard time increasing their work effort. In comparison, 70% of working poor Canadians did not have a higher earning potential, but for them, the main reason for experiencing this situation was that they were not living with other adults who could have contributed to the family income.

⁵⁵ Specifically, of working non-poor persons who only depended on their own earnings 24.9% had another potential earner in their family. Of those who already relied on other earners, 12.3% could have benefited from a greater work effort on the part of these other earners.

5.3 Individuals Affected by Working Poverty who Lived in a Family with Greater Work Potential

In 2001, of all Canadians affected by working poverty, close to half lived in a family with greater earning potential, i.e. in a family where some of the adults worked little or did not work at all.

While approximately one third of working poor Canadians could have experienced an increase in family income if other members of their families had intensified their work effort in 2001, close to half of all individuals living in a working poor family could have benefited from a more substantial work effort on the part of other family members.

In 2001, approximately three quarters (73.8%) of the 1.5 million individuals living in a working poor family had at least two working-age adults in their families. While close to 60% of these 1.5 million of individuals were actually living in a family with a sole earner, 29% might have experienced an increase in their family income if another adult in their family had joined the labour market, and 19% could have benefited from a greater work effort from another member of their family⁵⁶.

Consequently, a policy aimed at encouraging all working-age members of working poor families to join the labour market could have, in the best of cases, benefited close to half of all individuals affected by working poverty in 2001. Indeed, 48.1% of them had new potential earners/workers in their families who could have increased their work effort. But in order to join the labour market, these individuals would have had to be in a position to do so. The following section looks at the characteristics of new potential earners and workers belonging to working poor families in 2001, comparing them to those of their non-poor counterparts and to those of all working-age Canadian adults.

5.4 Characteristics of New Potential Earners and Workers

New Potential earners and workers in working poor families are defined as follows:

- **New potential earners** are individuals aged 18 to 64 who had no paid work in 2001.
- **New potential workers** are individuals aged 18 to 64 who cumulated between 1 hour and 909 hours of paid work in 2001.

Three main findings arise from the results presented in Table 5.6. First, in 2001, new potential earners belonging to working poor families had a significantly different profile from that of the working-age population as a whole. Second, in working poor families, the characteristics of new potential earners differed somewhat from those of new potential workers. Finally, the profiles of new potential earners and new potential workers belonging to working poor families resembled, with a few exceptions, those of their non-poor counterparts in 2001.

⁵⁶ See tables E.1, E.2, E.3, E.4 and E.5 in Appendix E for the detailed statistical results for all persons affected by working poverty in 2001.

5.4.1 Characteristics of New Potential Earners in Working Poor Families

In 2001, the characteristics of new potential earners belonging to a working poor family were different from those of all working-age Canadians. The former were more likely than the latter to:

- Have a low education;
- Be young;
- Be studying;
- Face work limitations;
- Belong to groups at high risk of persistent low income;
- Be a woman; or
- Have dependent children.

In 2001, women accounted for the majority of workless individuals aged 18-64 living in a working poor family. While half of the adults under age 65 were female that year, women represented more than two-thirds of new potential earners in working poor families. Moreover, compared to working-age adults as a whole, new potential earners were far more likely to be young, studying or facing work limitations. Indeed, close to 30% of new potential earners in working poor families studied full- or part-time in 2001, compared to 16% of all Canadians between 18 and 64 years of age. Given their relative youth and greater likelihood of being students, it is not surprising that the majority of those new potential earners (51%) had less than three years' full-time work experience on the labour market, whereas this proportion was only 20% among the entire population between 18 and 64 years of age. As well, compared to others in the 18 to 64 age group, new potential earners were particularly likely to have a low education in 2001: 31% had not completed high school, compared to 17% of those in this age group. Interestingly, one quarter of new potential earners in working poor families were either recent immigrants or Aboriginal people living off-reserve. In comparison, only 7% of the people in the 18 to 64 age group belonged to one of these two groups. Finally, compared to the working-age population as a whole, new potential earners were particularly likely to belong to families with children, mainly young children. Indeed, while two out of five (41%) working-age adults belonged to families with children, three out of five (61%) new potential earners in working poor families were in this situation in 2001.

In short, when compared to Canada's working-age population as a whole in 2001, new potential earners who belonged to working poor families seemed to face more employment barriers because they were more likely to have a lower education, have work limitations or belong to groups at high risk of persistent low income (including recent immigrants and Aboriginal people living off-reserve). They also had greater family responsibilities as they were more likely to be women, in many cases with dependent children. Finally, they were particularly likely to be young and to study, which limited their potential participation in the labour market.

5.4.2 *New potential earners versus new potential workers*

Comparing the profiles of new potential earners and new potential workers belonging to working poor families, we observe that the latter, just like new potential earners, are more likely to be women, young, studying, to have a low education and little work experience and to belong to families with children than other adults under the age of 65. Yet, the characteristics of new potential workers are somewhat different from those of new potential earners. They are more likely to be young and to be studying. They are also more likely to have at least a high school diploma. This suggests that new potential workers in low-income working families have better job prospects, at least over the long term, than new potential earners.

5.4.3 *New potential earners Living in Working Poor versus Working Non-Poor Families*

Interestingly, new potential earners from working non-poor families also had a distinctive profile compared to working-age Canadians as a whole. Women, the young, individuals with work limitations, those without a high school diploma and/or with limited experience in the labour market were also over-represented among this group. This suggests that a large proportion of new potential earners from working non-poor families also faced significant barriers to employment.

Nevertheless, new potential earners from working non-poor families also differed in many way from their low-income counterparts. Amongst other things, they included higher proportions of individuals aged 55 to 64 and of individuals with more than three years of labour market experience. They were also less likely to be recent immigrants and/or Aboriginal people living off reserve. Finally, they were significantly less likely to have children than their low-income counterparts. These particular traits suggest the existence of a group that is less prominent among new potential earners of working poor families, namely individuals without significant employment barriers, who participated in the labour market at some point in time but have chosen—probably because they can allow themselves that choice—not to work.

Table 5.6 Characteristics of all individuals aged 18 to 64, new potential earners (NPE) and new potential workers (NPW) in working families, by family low-income status in 2001					
	All	Low-income families		Non-low-income families	
	18-64	NPE	NPW	NPE	NPW
1. Demographic Characteristics					
Sex					
Male	49.7	31.3	33.3	28.3	35.7
Female	50.3	68.7	66.7	71.7	64.3
Age					
18-24 years	14.3	21.1	38.0	21.1	47.1
25-34 years	21.3	24.5	22.3	14.9	17.9
35-54 years	49.4	42.3	36.8	40.7	28.4
55-64 years	15.0	12.2	X	23.4	6.7
Recent immigrant or Aboriginal person living off reserve *					
Yes	6.9	25.4	X	7.0	6.1
No	93.1	74.6	X	93.0	93.9
Work limitations					
Yes	7.4	16.9	X	19.6	8.2
No	92.6	83.1	X	80.4	91.8
2. Socioeconomic Characteristics					
Highest educational achievement *					
Less than HS	16.6	30.5	19.2	26.1	13.4
HS	26.8	35.7	32.0	30.2	29.9
Post-secondary	37.4	26.2	31.6	31.5	41.9
University	19.2	X	X	12.4	14.8
Full- or part-time student					
Yes	16.1	29.2	38.7	25.0	47.9
No	83.9	70.8	61.3	75.0	52.1
Labour market experience *					
Less than 3 years	19.8	51.0	54.9	39.7	53.9
3 years or more	80.2	49.0	45.1	60.3	46.1
3. Family Characteristics					
Children					
None	59.0	38.7	29.4	56.5	50.5
Child under 5 years of age	13.6	24.5	24.9	16.1	15.8
Children between 6 and 17 years of age	27.5	36.8	45.8	27.4	33.7

* Some values were missing for these variables. The proportions were calculated only for the observations where the information was known.

5.5 Conclusion

One of the main findings presented in this chapter is that close to half of individuals affected by working poverty in 2001 lived in families where some working-age adults were not working or were working very few hours. This suggests that increased work effort was possible and might have reduced the incidence of poverty among working poor families.

However, a closer look at the characteristics of adults living in working poor families in 2001, who were either working little or not working at all, reveals that these individuals had characteristics that could prevent them from increasing their work effort. These new potential earners and workers were more likely to be young, studying, have a low education or little labour market experience, to belong to a group at risk of persistent low income (i.e. recent immigrants, Aboriginal people living off reserve and/or to having work limitations), to be a woman and to be part of a family with children than their non-poor counterparts.

Chapter 6: Should Self-Employed and Salaried Working Poor Canadians be Treated Differently?

6.1 Introduction

As mentioned in chapters three and four, a high proportion (41%) of working poor Canadians went through a period of self-employment in 2001. Whatever the reasons for such a high incidence, regression analysis showed that being self-employed is the second most important factor explaining poverty among workers⁵⁷. It is, therefore, important to deepen the analysis of self-employed working poor Canadians in comparison to low-income salaried workers. It also makes sense to study the two groups separately because the information collected on the income of self-employed workers in surveys may not be as accurate as that collected for salaried employees. At the same time, self-employed workers⁵⁸ are more likely to face less favourable employment conditions than low-income salaried workers as they are often not covered under labour standards. The objective of chapter 6 is to shed some light on the similarities and differences between the two groups.

6.2 Comparison Between Self-Employed and Salaried Working Poor Canadians

6.2.1 Number of Self-Employed and Salaried Working Poor Canadians

Poverty is much more prevalent among self-employed Canadians than it is among low-income salaried workers.

In 2001, 265,900 working poor Canadians were self-employed (accounting for 15.5% of all self-employed workers) while 380,300 were salaried⁵⁹ (accounting for 3.9% of all salaried workers). Including dependants, 686,100 individuals lived in a family including

⁵⁷ In 2001, having a period of self-employment increased the risk of being poor for Canadian workers by about 8 percentage points.

⁵⁸ Note that in some instances, workers may have periods of both self-employment and salaried work in the same year. To avoid double counting those individuals, we defined salaried workers as workers who never had a period of self-employment during the reference year and who had a value for the variable CMPHRW28 (because the only workers who do are salaried). In opposition, self-employed workers are defined as workers who had at least a period of self-employment during the reference year (note that some of those individuals may also have had some salaried work).

⁵⁹ The addition of the number of salaried and self-employed working poor individuals differs from the total of working poor individuals found in previous chapters (646,100 versus 653,300). This difference is owed to the fact that we limited the sample of salaried workers to those who had a value for the variable CMPHRW28 (composite hourly wage for all paid-worker jobs). This decision was made in order to avoid including unreported self-employed workers in the sample of salaried workers.

at least one self-employed working poor person while 935,200 individuals lived in family including at least one salaried working poor person⁶⁰.

Over a longer time horizon (1996 to 2001), 10% of individuals who were salaried workers in 1996 experienced low income at least once between 1996 and 2001 while this proportion was over 30% for the self-employed. These figures indicate that poverty is much more prevalent among self-employed workers than it is among the salaried.

6.2.2 Work Effort

In 2001, self-employed working poor Canadians reported substantially more hours of work than low-income salaried workers (650 hours more, or the equivalent of 19 full-time weeks).

The differences between self-employed and salaried working poor persons are most striking with regard to their work effort. Indeed, in 2001 self-employed working poor Canadians worked on average 2,470 hours while salaried workers cumulated on average 1,820 hours of work.

While the substantial difference in hours might suggest that self-employed workers who have a low income tend to over-report the number of hours that they work, self-employed workers who were not poor in 2001 report an equally high number of hours (2,430 hours of work). Furthermore, self-employed Canadians who were working poor in 1996 cumulated 14,130 hours of paid work over 1996 to 2001 compared to 13,950 hours for those who were not poor in 1996, i.e. they essentially had the same work effort. It seems that working a high number of hours is quite common among those who are self-employed, whether they are poor or not; alternatively, all self-employed may over-report hours worked. There is, however, no way to shed light on this phenomenon using SLID data.

Interestingly, salaried working poor persons displayed very different behaviours. Not only did they cumulate less hours of work than their self-employed counterparts in 2001 but they were also less likely to have worked 1,500 hours or more in the same year (69% of them did so, compared to 87% of the self-employed) and to cumulate many hours of work over a longer period (salaried individuals who were working poor in 1996 cumulated 9,725 hours of paid work over 1996 to 2001 compared to 14,130 hours for self-employed individuals who were working poor in 1996)⁶¹.

⁶⁰ The addition of individuals living in both types of working poor families (1,621,300 individuals) is higher than the total number of persons living in a working poor family presented in chapter 3 (i.e. 1,500,000 individuals). The reason for this discrepancy is that in some cases working poor families include both self-employed and salaried working poor persons (thus some double counting). In 2001, 75,100 working poor individuals (143,094 persons including dependants) lived in such working poor families.

⁶¹ Note that many individuals had a missing value at alhrp28 (the variable used to identify the number of hours worked) at least one year over 1996-2001. In order to estimate the average number of hours worked we had to eliminate those individuals from the sample. This decreased the reliability of the estimates presented here. Between 1996 and 2001, 44.1% of self-employed working poor persons identified in 1996 had a missing value at alhrp28. The figures for self-employed working non-poor persons, salaried working poor persons and salaried working non-poor persons were, respectively, 36.5%, 27.9% and 19.3%.

Meanwhile, it is worth noting that over the 1996 to 2001 period, salaried workers who were not poor cumulated substantially more hours of work than their non-poor counterparts (11,128 hours) thus again suggesting that the number of hours worked is an important variable for explaining poverty among salaried workers but not among the self-employed. This is further supported by the fact that the proportion of salaried individuals who were working poor in 1996 and who were unemployed for at least one year between 1996 and 2001 was 22.7% while only 11.8% of their non-poor counterparts experienced such long term unemployment. Comparatively, the proportion of self-employed individuals who were working non-poor in 1996 and were unemployed at least one year over the same period was only 9%⁶².

6.2.3 Earnings

In 2001, self-employed working poor Canadians had much lower earnings than their salaried counterparts.

As shown in Table 6.1, as well as working substantially more hours than their salaried counterparts, self-employed working poor persons seemed to face much less favorable labour market conditions. In 2001, their average earnings were about half those of their salaried counterparts (\$5,854 compared to \$11,524). It is also noteworthy that self-employed workers who were not in low-income families had earnings that were very similar to those of their salaried counterparts (\$41,635 compared to \$41,511). Furthermore, 22.4% of self-employed working poor persons had zero or negative annual earnings⁶³ compared to only 5.6% of their non-poor counterparts.

Table 6.1 Average annual earnings of self-employed and salaried working poor persons and that of their non-poor counterparts in 2001		
	Average Annual Earnings	
	Working Poor	Working Non-Poor
Self-employed	\$5,854	\$41,635
Salaried	\$11,524	\$41,511

6.2.4 Depth of Poverty

In 2001, self-employed working poor Canadians were poorer than their salaried counterparts.

⁶² Unfortunately, we cannot disclose the proportion of self-employed individuals who was working poor in 1996 and was unemployed at least one year between 1996 and 2001 because the sample size is too small (n<25).

⁶³ Self-employed workers can report losses on their T1 files which explain why some of them end up with zero or negative earnings.

In 2001, the depth of poverty⁶⁴ of working poor persons who were self-employed was on average 38.5% compared to 25.1% for those who were salaried (see Table 6.2). It is also interesting to note that self-employed working poor persons were on average as poor as non-working poor persons⁶⁵ (whose depth of poverty was 35%, or \$6,465, in 2001), although they worked longer hours.

Table 6.2 Depth of poverty of self-employed and salaried working poor persons and that of their non-working counterparts in 2001		
	Poverty Depth	
Self-employed Working Poor Persons	38.4%	\$8,200
Salaried Working Poor Persons	25.1%	\$5,000
Non-Working Poor Persons	35.0%	\$6,465

6.2.5 Under Reporting of Earnings

The results presented previously indicate that earnings inequalities are much higher among self-employed workers than they are among salaried workers and that self-employed working poor Canadians are much poorer than those who are salaried. However, the wide gap between the earnings of self-employed and salaried working poor Canadians could be owed to reporting issues (at least in part). Indeed, a problem that can arise when attempting to estimate the income of self-employed workers in surveys is that those individuals can under-report their revenues or over-report their expenses. If this is the case, it could mean that net income is not representative of their real standard of living. Unfortunately, there is no data readily available that allows an assessment of whether working poor Canadians who are self-employed really experience financial deprivation to the degree that we observe in the SLID⁶⁶. Nevertheless, it is possible to check if self-employed and salaried working poor Canadians have significantly different profiles. This is the objective of the following sections.

6.2.6 Descriptive Profiles

Comparing both groups with respect to demographic characteristics (see Table 6.3) we found that most self-employed working poor persons were male rather than female (68.8% versus 31.2%). In comparison, salaried working poor persons were distributed almost equally between the two genders (48.1% were male and 51.9% female). Few self-employed working poor persons (about 9%) were less than 30 years old, while about a third of salaried working poor persons were in this age group. Also, while

⁶⁴ The poverty depth is calculated as follows: Poverty Depth = 1 - (MBM disposable income/ MBM threshold). Please note that negative incomes were set to zero before calculating this statistic.

⁶⁵ Recall that in this study 'non-working' does not imply that an individual did not work at all in the reference year but rather that he/she cumulated less than 910 hours or work (the threshold that we chose to identify working poor persons. See chapter two for more details on the definition).

⁶⁶ Note that this issue is not specific to Canada. Other countries such as European countries also find a high share of self-employed workers among the working poor. For this reason, Eurostat decided to analyze self-employed and salaried working poor Europeans separately.

about 6% of self-employed working poor persons lived in the Atlantic Provinces, close to 12% of poor salaried workers did so. It is also interesting to note that fewer self-employed working poor persons were single (singles accounted for 15.5% of all self-employed working poor persons but 37.1% of the salaried working poor). Finally, for both groups of workers, being part of a high risk group⁶⁷ or having work limitations was the exception, not the rule.

Turning to socio-economic characteristics, we found that self-employed working poor Canadians were more likely than their salaried counterparts to have some post-secondary education. It also appears that self-employed working poor persons were more likely to have significant labour market experience than low-income salaried workers in 2001 (over 60% of self-employed working poor persons had three years of experience or more compared to about 47% of low-income salaried workers).

Focusing on family characteristics, it is interesting to note that self-employed and salaried working poor persons were quite different. Close to a third of salaried working poor persons were unattached, compared to about a fifth of self-employed working poor individuals. As well, lone parents accounted for over 12% of salaried working poor persons as compared to only 6.5% of low-income self-employed workers. Finally, 7.5% of salaried working poor persons were part of a dual earner couple without children while this proportion was close to 17% among the self-employed.

Looking at labour market and job characteristics, fewer self-employed working poor individuals worked between 1,500 hours and 2,499 hours per year (close to 43% versus 58% of salaried working poor persons) but many reported working 2,500 hours or over (44% compared to only 10% of salaried working poor persons).

Interestingly, a higher proportion of self-employed working poor persons worked full-time in their main job (90.5%) compared to their salaried counterparts (about 80% did so). Also, a high proportion of salaried working poor individuals (40.2%) worked in the sales and services industry while this proportion was much lower among their self-employed counterparts (21.1%). Finally, 25.5% of self-employed working poor persons were incorporated in 2001 (in fact, logistic regressions show that being incorporated decreases the risk of having a low family income by over 7 percentage points (pp). See footnote 70 for more details).

With respect to government support, we found that less than 3% of self-employed working poor persons received any Social Assistance (SA) or Employment Insurance (EI) benefits in 2001⁶⁸. In comparison, 12% of salaried working poor persons received some SA and 21.2% some EI in the same year.

⁶⁷ In this study, being part of a high risk group means being a recent immigrant or an Aboriginal living off-reserve.

⁶⁸ Some workers who characterize themselves as being self-employed nonetheless do some salaried work and have access to EI benefits.

Table 6.3
Distribution of self-employed and salaried working poor individuals,
by characteristics in 2001

	Self-employed Working Poor	Salaried Working Poor
All Workers	100%	100%
1. Demographic Characteristics		
Gender		
Male	68.8%	48.1%
Female	31.2%	51.9%
Age		
18-29	9.2%	32.5%
30-44	46.7%	45.0%
45-64	44.1%	22.5%
Province of residence		
Atlantic provinces	6.4%	11.8%
Quebec	14.9%	15.5%
Ontario	32.1%	34.7%
Manitoba or Saskatchewan	7.6%	6.5%
Alberta	14.0%	9.6%
British Columbia	25.0%	21.8%
Marital Status		
Single	15.5%	37.1%
In a union	64.9%	46.6%
Separated, divorced or a widow	19.7%	16.3%
Recent immigrant or Aboriginal off-reserve		
Yes	10.0%	12.7%
No	80.5%	75.6%
Work limitations		
Yes	12.3%	11.0%
No	87.7%	89.0%
2. Socioeconomic Characteristics		
Highest level of education ⁶⁹		
Less than a high school diploma	18.4%	20%
High school diploma	23.6%	27.2%
More than a high school diploma	33.8%	28.3%
University	13.6%	9.7%
Part-time Student		
Yes	X	5.3%
No	97.2%	94.7%
Experience in the Labour Market		
Less than 3 years	X	12.0%
3 years or more	60.6%	46.5%

⁶⁹ In some cases, such as the education level, the sum of proportions is lower than 100% because many individuals had missing values.

Table 6.3 (End)		
	Self-employed Working Poor	Salaried Working Poor
3. Family Characteristics		
Family type		
Unattached individual	22.8%	32.7%
Childless couple, one earner	5.7%	4.1%
Childless couple, two earners	16.6%	7.5%
Couple with children, one earner	14.2%	11%
Couple with children, two earners	26.8%	24.3%
Lone-parent family	6.5%	12.4%
Other family type	7.4%	8.1%
4. Characteristics Related to Work Effort		
Number of hours of paid work during the year		
910-1499	13.4%	31.5%
1500-2499	42.5%	58.3%
2500+	44.0%	10.2%
Full-time job		
Yes	90.5%	79.9%
No	9.4%	12.6%
Cumulated more than one job during the year		
Yes	20.5%	31.8%
No	79.5%	68.2%
5. Characteristics Related to Main Job		
Type of occupation		
Business and finance	24.8%	16.9%
Arts, sciences and health	12.5%	12.4%
Sales and services	21.1%	40.2%
Other	40.4%	28.6%
Size of business		
Small (less than 20 employees)	92%	47.9%
Medium or large (20+ employees)	7.4%	48.1%
Incorporated (for the self-employed only)		
Yes	25.5%	N/A
No	74.5%	N/A

Note that in this Table figures in **bold** font are statistically different at confidence intervals of 95%.

The X means that the information cannot be disclosed because the sample size is too small (n<25).

6.3 Determinants of Low Income for Self-Employed and for Salaried Workers

The evidence presented so far indicates that self-employed working poor persons and their salaried counterparts have very different profiles. However, are the determinants of poverty the same for both groups of workers? The next sections shed some light on this issue.

6.3.1 Common Determinants of Low Income

Apart from the number of hours worked and the type of occupation, the characteristics that had the strongest impact on the likelihood of being poor in 2001 were the same for self-employed and for salaried workers.

In order to determine the factors that contribute to the risk of being poor for workers, self-employed or salaried in 2001, we conducted separate logistic regressions⁷⁰ (see Tables 6.4 and 6.5). We discovered that the overall incidence of poverty was much higher among self-employed workers than among those who were salaried in 2001 (15.5% versus 3.9%), and that the risk of being poor was consistently higher for those who were self-employed, whatever the category.

Nevertheless, apart from two factors⁷¹, all characteristics that had the strongest impact on the likelihood of being poor were the same for both groups of workers. In decreasing order of importance, those were:

1. To depend on only one earner (this includes unattached individuals, lone parents and one-earner couples);
2. To have children;
3. To live in British-Columbia or in the Atlantic provinces;
4. To be a recent immigrant or an Aboriginal living off-reserve;
5. To work for a small business;
6. To hold less than a high school diploma;
7. To have work limitations.

6.3.2 Distinct Determinants of Low Income

In 2001, working few hours or being employed in the sales and services industry had a strong impact on the risk of being poor for salaried workers only.

Although many factors increased the probability of being poor for both self-employed and for salaried workers, some factors did so for only one of the two groups. For instance, in 2001 living in Alberta only increased the risk of being poor for self-employed workers

⁷⁰ Because the sample sizes were too small for self-employed working poor persons who did not have three years of work experience and for those who studied part-time we had to exclude these explanatory variables from the logistic regressions in order to have results that were comparable for self-employed and salaried workers. Unfortunately, doing so most likely decreased the predictive power of the models. It is also interesting to note that when we did a separate logistic regression for self-employed workers and we included their incorporation status the model's predictive power was improved. Not being incorporated came out as a statistically significant factor to explain poverty among the self-employed. In fact, not being incorporated increased the probability for self-employed workers to be poor by 7.3%.

⁷¹ The number of hours worked and the industry in which the worker is employed.

(by 6.6 pp⁷²) while living in Ontario did so for salaried workers only (by 1 pp). Similarly, working in the sales and services industry, working less than 1,500 hours per year, being 18-29 years old, holding numerous jobs, and being a woman significantly increased the risk of being poor only for salaried workers (by 5.7 pp, 4.9 pp, 2.7 pp, 1.5 pp and 1 pp respectively). This indicates that in the case of self-employed workers, fewer factors allow us to predict their poverty status.

It is interesting to note that working few hours was one of the two factors that had a strong impact on the risk of being poor for salaried workers but had no significant impact on self-employed workers (the other factor being to work in the sales and services industry). Indeed, in the case of salaried employees, working less than 1,500 hours per year increased the risk of being poor by 4.9 pp (compared to working between 1,500 hours to 2,499 hours yearly). This factor came second in order of importance (behind family factors) to explain low income among salaried workers. In fact, it is probably because the number of hours worked had no impact on the risk of being poor for self-employed workers (who accounted for a large proportion of the working poor in 2001) that this factor did not stand out as a major determinant of low income for workers as a whole in that year (see chapter 4).

⁷² 'pp' stands for percentage point.

Table 6.4 Estimated coefficients, level of significance of coefficients, predicted probabilities and difference in relation to lowest predicted probability for all characteristics, 2001 – Logistic regression estimating the probability for self-employed workers to be poor⁷³ (model excludes incorporation status of worker)				
	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
All Workers			15.5%	
1. Demographic Characteristics				
Gender				
Female (OMITTED)			15.2%	0.0
Male	-0.0958	0.5411	16.2%	1.0
Age				
18-29	0.2205	0.3586	18.7%	4.2
30-44 (OMITTED)			16.1%	1.6
45-64	-0.1434	0.3387	14.5%	0.0
Province of residence				
Atlantic provinces	0.6409	0.0141	17.4%	6.5
Quebec (OMITTED)			10.9%	0.0
Ontario	0.2699	0.2319	13.3%	2.4
Manitoba or Saskatchewan	0.3712	0.1619	14.4%	3.5
Alberta	0.6459	0.0144	17.5%	6.6
British Columbia	1.2059	0.0000	25.3%	14.4
Recent immigrant or Aboriginal off-reserve				
Yes	0.8232	0.0098	25.1%	10.7
No (OMITTED)			14.4%	0.0
Work limitations				
Yes	0.5233	0.0093	21.4%	6.4
No (OMITTED)			15%	0.0
2. Socioeconomic Characteristics				
Highest level of education				
Less than a high school diploma	0.6378	0.0157	20%	7.2
High school diploma	0.2980	0.2505	15.9%	3.1
More than a high school diploma	0.2639	0.2690	15.5%	2.7
University (OMITTED)			12.8%	0.0

⁷³ The part-time student status as well as years of experience in the labour market could not be included in the regression because there were not enough observations for those two variables (n<30).

Table 6.4 (End)

	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
3. Family Characteristics				
Family type				
Unattached individual	1.9815	0.0000	34.4%	26.8
Childless couple, one earner	1.7459	0.0000	29.7%	22.1
Childless couple, two earners (OMITTED)			7.6%	0.0
Couple with children, one earner	2.6327	0.0000	48.6%	41.0
Couple with children, two earners	0.4513	0.0334	11.2%	3.6
Lone-parent family	2.2860	0.0000	40.9%	33.3
Other family type	0.6421	0.0878	13.1%	5.5
4. Characteristics Related to Work Effort				
Number of hours of paid work during the year				
910-1499	0.1573	0.4439	16.4%	1.7
1500-2499 (OMITTED)			14.7%	0.0
2500+	0.1275	0.4449	16.1%	1.4
Cumulated more than one job during a month				
Yes	-0.0766	0.7093	14.8%	0.9
No (OMITTED)			15.7%	0.0
5. Characteristics Related to Main Job				
Type of occupation				
Business and finance	0.3797	0.0992	15.2%	3.7
Arts, sciences and health (OMITTED)			11.5%	0.0
Sales and services	0.3544	0.1649	14.9%	3.4
Other	0.6421	0.0049	18.3%	6.8
Size of business				
Small (less than 20 employees)	0.8526	0.0001	16.7%	8.0
Medium or large (OMITTED)			8.7%	0.0
Pseudo R2: 0.1375				
Area under ROC curve: 0.7551				
* All coefficients with a P-value <0.05 are statistically significant at a confidence level of 95%.				
** pp means percentage point.				

Table 6.5 Estimated coefficients, level of significance of coefficients, predicted probabilities and difference in relation to lowest predicted probability for all characteristics, 2001 – Logistic regression estimating the probability for <i>salaried workers</i> to be poor⁷⁴				
	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
All Workers	-	-	3.9%	-
1. Demographic Characteristics				
Gender				
Female (OMITTED)			4.4%	1.0
Male	-0.3161	0.0070	3.4%	0.0
Age				
18-29	0.5600	0.0000	5.7%	2.7
30-44 (OMITTED)			3.6%	0.6
45-64	-0.2217	0.0918	3.0%	0.0
Province of residence				
Atlantic provinces	0.9593	0.0000	5.9%	3.3
Quebec (OMITTED)			2.6%	0.0
Ontario	0.3714	0.0386	3.6%	1.0
Manitoba or Saskatchewan	0.2793	0.1602	3.3%	0.7
Alberta	0.3356	0.1150	3.5%	0.9
British Columbia	1.0435	0.0000	6.3%	3.7
Recent immigrant or Aboriginal off-reserve				
Yes	0.8454	0.0000	7.3%	3.6
No (OMITTED)			3.7%	0.0
Work limitations				
Yes	0.4947	0.0036	5.6%	1.9
No (OMITTED)			3.7%	0.0
2. Socioeconomic Characteristics				
Highest level of education				
Less than a high school diploma	0.8094	0.0009	5.4%	2.7
High school diploma	0.4334	0.0546	4.0%	1.3
More than a high school diploma	0.1490	0.4752	3.1%	0.4
University (OMITTED)			2.7%	0.0

⁷⁴ Part-time student status as well as years of experience in the labour market were not included in the regression in order to be able to compare those results with those for self-employed workers. However, the rates of working poverty indicate that they may well have been significant explanatory variables had they been included in the regression.

Table 6.5 (End)				
	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
3. Family Characteristics				
Family type				
Unattached individual	2.4027	0.0000	8.3%	7.4
Childless couple, one earner	2.0653	0.0000	6.2%	5.3
Childless couple, two earners (OMITTED)			0.9%	0.0
Couple with children, one earner	3.1194	0.0000	14.4%	13.5
Couple with children, two earners	1.2091	0.0000	2.9%	2.0
Lone-parent family	2.746	0.0000	10.9%	10.0
Other family type	1.1224	0.0001	2.7%	1.8
4. Characteristics Related to Work Effort				
Number of hours of paid work during the year				
910-1499	1.1394	0.0000	8.0%	4.9
1500-2499 (OMITTED)			3.1%	0.0
2500+	0.1746	0.3180	3.6%	0.5
Cumulated more than one job during a month				
Yes	0.4025	0.0064	5.2%	1.5
No (OMITTED)			3.7%	0.0
5. Characteristics Related to Main Job				
Type of occupation				
Business and finance	0.0410	0.8308	2.7%	0.1
Arts, sciences and health (OMITTED)			2.6%	0.0
Sales and services	0.9181	0.0000	5.7%	3.1
Other	0.5516	0.0078	4.2%	1.6
Size of business				
Small (less than 20 employees)	0.5866	0.0000	5.1%	2.0
Medium or large (20+ employees) (OMITTED)			3.1%	0.0
Pseudo R2: 0.2283				
Area under ROC curve: 0.8455				
* All coefficients with a P-value <0.05 are statistically significant at a confidence level of 95%.				
** pp means percentage point.				

6.4 Low Income Trajectories of Self-Employed and Salaried Working Poor Canadians

Over 1996 to 2001, the patterns of exit from low income as well as the reasons explaining the exit from low income were quite similar whether a worker was self-employed or salaried.

We have seen in previous sections that over the 1996 to 2001 period self-employed working poor persons and salaried working poor persons exhibited fairly different work patterns. However, the pattern of exit from low income was quite similar for both groups

of workers (e.g. around 25% of both self-employed and salaried working poor persons identified in 1996 exited low income rapidly, i.e. in 1997, and definitively, i.e. did not re-enter it from 1998 to 2001). As well, both groups spent on average 3 years in low income. Moreover, 41.4% of self-employed working poor persons identified in 1996 experienced persistent poverty over 1996-2001, this proportion was about the same (38.1%) among their salaried counterparts.

Furthermore, the reasons explaining the exit from low income were quite similar for both groups. Among those who were self-employed working poor in 1996 and who exited low income subsequently, 51% did so because of an increase in their own earnings, 29% because of a change in their family structure and 20% because of an increase in another family member's earnings. In comparison, 49% of those who were salaried working poor persons in 1996 exited low income because of an increase in their own earnings, 35% did so because of a change in their family structure and 16% because of an increase in another family member's earnings. Consequently, self-employed working poor persons and their salaried counterparts seemed to have similar low-income trajectories over a longer time horizon.

6.5 Conclusion

This chapter compared self-employed working poor Canadians to their salaried counterparts. We found that in 2001, self-employed working poor persons:

- Worked substantially more than their salaried counterparts (650 hours more on average), but reported much lower earnings (about half those of salaried working poor persons);
- Were poorer than their salaried counterparts and as poor as the other low-income workers not working as much;
- Were much less likely to receive any SA or EI benefits than low-income salaried workers.

We also found that in 2001, low-income self-employed and salaried workers had quite different profiles. Nevertheless, apart from the number of hours worked and the industry in which they were employed, the characteristics that had the strongest impact on the likelihood of being poor in 2001 were the same for both groups of workers. Furthermore, over the long run, the patterns of exit from low income as well as the reasons explaining the exit from low income were quite similar for both groups. This indicates that even though self-employed workers may be over represented among the working poor (possibly because of potential under reporting of earnings) a common analysis of self-employed and salaried workers should not lead to biased results when analyzing working poverty in Canada.

Chapter 7: Impact of Increasing Hourly Wages on the Earnings of Salaried Workers

7.1 Introduction

While many of Canada's working poor are paid well above the minimum wage, low pay⁷⁵ is a reality for many. Therefore, it is useful to assess the potential impact of increasing the wages of salaried workers as a means of helping the working poor escape poverty.

One of the tools that automatically come to mind for increasing salaried workers' hourly wages is the minimum wage, as the minimum wage sets the lowest wage rate that an employer can pay to employees who are covered by the legislation, and as every province and territory in Canada provides for a minimum wage in its employment standards legislation⁷⁶. However, to the best of our knowledge, little Canadian research has been conducted to assess the overall impact of increasing the minimum wage on working poverty, and on low-income more generally.

In this chapter, we first review the literature on the minimum wage and its effect on poverty. We then look at what might have been the earnings impact of increasing the minimum wage in 2001, first, on working poor Canadians, and second, on low-income Canadians more generally. These estimates are defined using a static model where all factors other than the hourly wages of minimum-wage earners are held constant (such as the work effort of minimum-wage earners, the Canadian unemployment and youth drop-out rates, the prices of goods and services in the Canadian economy, etc.). Finally, we discuss the limitations of the simulations that were conducted.

7.2 Literature Review on the Minimum Wage

Minimum-wage workers, and the impacts of increasing the minimum wage, have been topics of interest for researchers for years. In Canada, many organizations have presented descriptive profiles of Canadians earning the minimum wage⁷⁷. However, few Canadian studies have tried to estimate, through econometric analysis or simulations, the impact of raising the minimum wage on employment and/or poverty levels. Furthermore, those that did generally focused on youths, students and/or women, (not surprisingly, as those groups are over-represented among minimum-wage earners) or on a specific

⁷⁵ Following the OECD, low paid individuals are individuals who earned two thirds of a country's median wage or less in the reference year. In Canada, this meant earning, on average, less than \$10 per hour in 2001.

⁷⁶ See Human Resources and Social Development Canada's *Database on Minimum Wages* for more details on the minimum wage.

⁷⁷ For instance, see the most recent information on minimum-wage workers in *Perspectives on Labour and Income*, September 2005, Vol. 6, no. 9.

province (as the minimum wage is regulated by provinces)⁷⁸. As we are interested in the impact of the minimum wage on all working poor Canadians whatever the province they live in, these studies provide limited information directly relevant to this study.

To our knowledge, the only recent Canadian studies⁷⁹ that tried to assess the poverty and/or labour market effects of increasing the minimum wage on all Canadians and for all provinces were conducted by Fortin and Lemieux (in 1998) and Goldberg and Green (in 1999).

Fortin and Lemieux compared the redistribution impact of minimum wages to that of other policy instruments. They concluded that:

“...individuals in the lower half of the distribution of the family income-to-needs ratio benefit the most from the minimum wage. Individuals in this part of the distribution account for close to 70% of the earnings of all minimum-wage workers. In this sense, the minimum wage is almost as ‘progressive’ as all government transfer programs considered together since 72% of these transfers are received by individuals in the lower half of the distribution. However, other government transfers, especially social assistance, are more directly targeted at individuals in the two lowest deciles of the distribution...the minimum wage is a small program since total earnings at the minimum wage only represent a third of total social assistance payments and a fifth of total unemployment insurance payments. The small size of the program is the main reason why the redistributive impact of the minimum wage is modest relative to other transfer programs. This is a different conclusion from the one reached by others who attribute the weak link between the minimum wage and family income to the fact that minimum-wage earners are drawn from all deciles of family income. This link may be weak compared to some ideal program, but it is not weak compared to the full set of transfer programs that currently exist in Canada (pages 30-31)”

Although interesting, the research by Fortin and Lemieux has an important drawback, the authors assumed that increasing the minimum wage would have no impact at all on employment, which may not be tenable in instances where the minimum wage increases substantially. Goldberg and Green conducted regression analysis to assess the employment effects of the minimum wage in Canada. They concluded that:

“The immediate impact of a change in the minimum wage in terms of changes in employment is very small for all gender and age groups, and is only statistically significantly different from zero for young adult males. The longer term employment impacts...are slightly negative...a 10% increase in the minimum wage produces declines in the employment-to-population ratio in the range of 0% to 2%, depending on the age and gender group⁸⁰. This is generally interpreted as a small disemployment effect (page ii).”

⁷⁸ For instance, see Dungan et Gunderson (1989), Cousineau et al (1992), Shannon (1996), Baker et al (1999), Campolieti et al (2005), etc.

⁷⁹ Mercier (1987) did a review of the Canadian (and US) econometric research that was conducted up to 1987 to assess the impact of the minimum wage on employment. Mercier refers to many studies that we do not mention in this section because they used data from the 1970s and their conclusions might no longer be applicable.

⁸⁰ This is comparable to the effect of a small recession.

The authors argue that their results are similar to those found in the literature. In fact, a leading US economics journal reported the results of a survey of economists' views of the best estimates of various economic parameters⁸¹. Results of this survey, which was conducted in 1996, indicated that the median best estimate of the minimum wage elasticity was -0.10 for teenagers while the mean was -0.21⁸², which are indeed indicative of small disemployment effects. Another report commissioned by the United Kingdom government on the impact of the introduction of a national minimum wage on employment (see Finn, 2005) appears to corroborate this finding: "*there have been few, if any, adverse employment effects*" (p.38).

On the other hand, Neumark and Adams note that recent US research⁸³ considering the effects of the minimum wage at different points in the wage distribution indicates that "*although the wages of low-wage workers increase, their hours and employment decline, and the combined effect of these changes is a decline in earned income (pages 9-10).*" As this conclusion applies to the US context we cannot be sure that it would hold true in Canada. Nevertheless, the finding that minimum wages may have adverse effects on the earnings of low-paid workers should not be taken lightly.

Furthermore, the largest increase in real minimum wages observed in Canada was an increase of about 20% in British Columbia in the 1970s. Consequently, the results of Goldberg and Green's research may not be useful in assessing larger increases in the minimum wage. For instance, we do not know if increasing the minimum wage nationally by 50% or to \$10 per hour⁸⁴ would have proportionally larger disemployment effects (this point was also raised by Sarlo, 2000).

Turning to the impact, on poverty, of raising the minimum wage, Goldberg and Green note: "*...minimum wage earners are disproportionately represented among families with low incomes. Thus, increases in the minimum wage will disproportionately benefit low-income families (p.i).*" This conclusion is based on descriptive statistics only, i.e. the authors did not estimate the impact of raising the minimum wage on the incidence and depth of poverty in Canada; and as such, is of limited interest.

In conclusion, these two Canadian studies did not assess the full impact, i.e. on poverty **and** on firms' and employees' behaviours, of raising the minimum wage.

It is interesting to note that both studies used the SLID to do their analysis. This is not surprising as the SLID is the only database that provides detailed information on the economic family income of Canadians, which is necessary to identify who is poor and who is not, while at the same time providing information on the wages of workers. Furthermore, both studies defined minimum wage earners as those individuals earning the minimum wage plus or minus twenty-five cents in their jurisdiction in the reference year.

⁸¹ See Neumark, David & Scott Adams (March 2000) *Do Living Wage Ordinances Reduce Urban Poverty?* US National Bureau of Economic Research (NBER), Working Paper No. w7606.

⁸² Idem.

⁸³ Neumark & al. (1999).

⁸⁴ I.e. to the level necessary to escape low pay.

In keeping with Canadian research on the links between the minimum wage and poverty, we defined minimum wage earners in the way just described.

In this study, minimum wage earners are salaried⁸⁵ individuals who earned the minimum hourly wage plus or minus twenty-five cents in their jurisdiction in the reference year.

7.3 The Impact of Increasing the Minimum Wage on Working Poor Canadians

This section provides information on the number of working poor Canadians who were low-paid or who earned the minimum wage in 2001. It then presents the results of simulations assessing the impacts of increasing the minimum wage as well as the limitations of those simulations.

7.3.1 *Wage Profile of the Working Poor*

In 2001, 48% of salaried working poor Canadians were low-paid (i.e. earned less than \$10 per hour) but fewer than 7% earned the minimum wage.

In 2001, of the 653,300 working poor Canadians, around 40% were self-employed and thus not covered by minimum wage legislation. Among the remaining 60% (380,300 salaried individuals), only 6.7% (or 25,300 individuals) earned the minimum wage while 48.2% (or 178,500 individuals) were low-paid (i.e. earned less than \$10 per hour)⁸⁶.

In comparison, less than 14% of all working non-poor Canadians were self-employed and among those who were salaried, only 1.6% (or 152,700 Canadians) earned the minimum wage while 25.5% (over 1.3 million Canadians) were low-paid. Those results indicate that in 2001, working poor Canadians were much more likely than their non-poor counterparts to earn the minimum wage or to be low paid (see Table 7.1).

⁸⁵ Individuals who experienced a period of self-employment in 2001 were excluded from the sample as self-employed workers are not affected, at least not directly, by changes in the minimum wage.

⁸⁶ Including dependants, 58,500 individuals lived in a low-income family where at least one member was a salaried working poor person who earned the minimum wage (this represents only 1.5% of all Canadians living in a low-income family in 2001), and 490,500 individuals lived in a family where at least one member was a salaried working poor person who earned less than \$10 per hour (this represents 12.7% of all Canadians living in a low-income family in 2001). Note that in 2001, according to the MBM there were 3,847,400 low-income individuals in Canada (this represents 12.6% of the total Canadian population for that year).

Table 7.1 Number of working poor (WP) and working non-poor (WNP) Canadians who had salaried work and who earned the minimum wage plus or minus twenty-five cents, or who had salaried work and who were low paid in 2001		
	WP	WNP
All individuals	653,300	10,934,100
Individuals who had some salaried work	380,300 (58% of all WP)	9,479,500 (86.7% of all WNP)
Individuals who had some salaried work and earned the minimum wage plus or minus twenty-five cents	25,300 individuals (3.9% of all WP & 6.7% of salaried WP)	152,700 individuals (1.4% of all WNP & 1.6% of salaried WNP)
Individuals who had some salaried work and were low paid	178,500 (27.3% of all WP & 48.2% of salaried WP)	1,309,800 (12% of all WNP & 25.5% of salaried WNP)

7.3.2 Results of the Simulations for Working Poor Canadians

There are two major issues surrounding the simulations: 1) the identification of individuals earning the minimum wage using SLID data may not be accurate; and 2) behavioural and macro-economic changes that could occur following a rise in the minimum wage are not reflected.

As mentioned at the beginning of this chapter, being low-paid (i.e. earning less than \$10 per hour) substantially increases the likelihood of being poor for salaried workers (by 8.5 percentage points in 2001)⁸⁷. Therefore, it is interesting to assess what might have been the impact on income of an increase in the minimum wage to \$10 per hour in 2001.

For this scenario, and for all other scenarios presented in this chapter, two options were tested:

1. Individuals affected by an increase in the minimum wage *retain 90% of their gross earnings* – Fleury, Fortin and Luong (2005) report in their research on the spending patterns of working poor Canadian families that in 2002 those families spent on average 10% of their before-tax income on income taxes and work-related contributions (such as EI, CPP, etc.). Option one reflects this finding;
2. Individuals affected by an increase in the minimum wage *retain 80% of their gross earnings* – in option two, workers affected by the minimum wage pay 10% more in income-tax. This allows us to test the robustness of the results to a decrease in net gains.

As shown by Fortin and Fleury (2005) it is the complete lack of work in a year that is the strongest predictor of poverty. Therefore, if a rise in the minimum wage led to higher long-term unemployment, this would contribute to a higher incidence of poverty in Canada. Unfortunately, none of the scenarios/options that were tested in this chapter takes into

⁸⁷ See chapter 4 for details on this result.

consideration the effects on the labour market or on inflation of increasing the minimum wage. As discussed in Fortin and Lemieux (1998), assessing these impacts would have required much more complex simulations. This was clearly beyond the scope of this chapter. Another issue with the simulations is the fact that the identification of individuals earning the minimum wage using SLID data may not be accurate. Consequently, the results presented in this section should be interpreted with caution (a detailed discussion of the limitations of the simulations can be found in appendix F).

Increasing the minimum wage to \$10 per hour in 2001 (the equivalent of erasing low pay in Canada) could have, at best, reduced poverty among workers by 0.5 percentage points (from 5.6% to 5.1%).

Considering those limitations, the simulations indicate that *increasing the minimum wage to \$10 per hour in 2001* (the equivalent of erasing low pay in Canada) could have, at best, reduced poverty among workers by 0.5 percentage points⁸⁸ (from 5.6% to 5.1%).

Given that raising the minimum wage to \$10 per hour represents significant increases in many jurisdictions and that the minimum wage is not uniform over all jurisdictions, two additional scenarios were tested⁸⁹:

- *A 10% increase in the minimum wage throughout Canada in 2001* – to test the impact of a relatively small increase in the minimum wage of all Canadian jurisdictions which, the literature would suggest, would likely have a limited effect on employment levels across Canada; and
- *A 25% increase in the minimum wage throughout Canada in 2001* – to assess the impact of an increase in the minimum wage comparable to the one that took place in Alberta in 2005. While not considered in this simulation, such an increase would more likely create some disemployment.

These simulations reveal that poverty among workers would have declined very little if all jurisdictions had increased their minimum wage by 10% or by 25% in 2001: by 0.2 percentage points at best (from 5.6% to 5.4%).

So far, we have assessed the impact of increasing the minimum wage on working poor Canadians. However, the working poor are not the only group who would have been affected by an increase in the minimum wage: students, workers who did not have a low income, and individuals who cumulated less than 910 hours of paid work in 2001 (whether they had a low income or not) would also have benefited from such a measure. It is, therefore, interesting to gather information on all Canadians affected by the minimum wage, to assess the impact of increasing the minimum wage on poverty more generally in Canada, and to discuss the costs and benefits associated with such a choice.

⁸⁸ The results vary slightly depending on whether option 1 or 2 is considered.

⁸⁹ See Table F.1 and F.2 (Appendix F) for details on the level of minimum wage by province in 2001 and on what would have been the impact of the three scenarios on those levels.

7.4 The Impact of Increasing the Minimum Wage on All Low-Income Canadians

This section provides information on all Canadians who earned the minimum wage in 2001. It also discusses what would have been the impacts of increasing the minimum wage on the incidence and depth of low-income in Canada, on costs borne by industries and on tax-revenues recovered by governments in that year.

7.4.1 *Canadians Affected by the Minimum Wage in 2001*

In 2001, of all Canadians affected by the minimum wage a vast majority (86%) were not poor and a large proportion (close to 50%) were studying full-time.

In 2001, over 13 million Canadians aged 16-64 had some salaried work. Of these, only 4.1% (or about 531,100 individuals) earned the minimum wage, of which fewer than 14% were poor. As expected, a large proportion (49%) of those who earned the minimum wage were full-time students (i.e. their wages did not necessarily reflect their ability to achieve long term economic and social goals). Interestingly, 52% of minimum wage earners did not cumulate 910 hours of paid work (i.e. were only partially active) and close to 18% were 16 or 17 years old.

7.4.2 *Results of the Simulations for all Low-Income Canadians*

Increasing the minimum wage to \$10 per hour in 2001 could have, at best, reduced the overall incidence of low income in Canada by 0.6 percentage points (from 12.6% to 12.0%).

In order to have results comparable to those derived for working poor Canadians, the scenarios and options previously presented were also tested for all low-income Canadians i.e., we assessed the impacts, on low-income and other outcomes, of increasing the minimum wage by 10%, 25% or to \$10 per hour throughout Canada in 2001, where minimum wage earners kept 90% or 80% of their gains.

The simulations show that the overall incidence of low income in Canada could have declined very slightly if all jurisdictions had increased their minimum wage by 10% or by 25% in 2001, at best by 0.2 percentage points (from 12.6% to 12.4%). Only when the minimum wage is increased to \$10 per hour nationally do we see stronger effects on low income. Still, even then, the overall Canadian poverty rate would have declined little, by 0.6 percentage points (from 12.6% to 12.0%).

The simulations also indicate that depending on the scenario/option considered, the direct cost to industries (or wage bill⁹⁰) could have been as high as \$4.5 billion. However, governments could have recovered up to one billion dollars in higher income-tax revenues, EI and CPP contributions, etc. (which could have been used to dampen the negative effects of increasing the minimum wage on the economy). Furthermore, the poverty gap (which indicates how far away families are from reaching the poverty line) could have been reduced by as much as \$418M (or 3.6%).

Again, it is essential to stress that because of the limitations of the simulations, the results presented in this section should be interpreted with caution.

7.5 Conclusion

According to simulations that were conducted, a substantial increase in the minimum wage would be needed to significantly reduce poverty among workers, and low-income more generally in Canada. However, the impact that such an increase would have on employment levels and/or on inflation is not known. As well, self-employed workers, who accounted for 41% of working poor Canadians and were poorer than their salaried counterparts in 2001, would not be affected (at least not directly) by an increase in the minimum wage. Furthermore, increasing the minimum wage would mainly benefit families who are not in urgent need of help as most minimum wage earners and low-paid salaried workers are not poor (close to 90% of both groups did not have a low family income in 2001).

This does not mean that the minimum wage should not be considered as a means to help the working poor but, rather, that it could be used as a complement to other more targeted measures⁹¹.

⁹⁰ In keeping with UK research, the direct cost to industry of increasing the minimum wage (or wage bill) is the summation, over all employees earning the minimum wage, of the difference between their actual wage and the new minimum wage times their actual work effort, assuming that the latter remains constant.

⁹¹ See Gerfin and Leu (2003) for a discussion of the relative efficiency of various measures to help the working poor, such as the minimum wage, the US Earned Income Tax Credit and the UK Working Tax Credit.

Chapter 8: The Situation of Working Poor Canadians Over the Longer Term

8.1 Introduction

In previous chapters, the focus was on identifying the working poor in a given year (2001), on identifying the characteristics that increased the risk of poverty for workers and on probing more specifically the main determinants of poverty among workers in that year. To better understand the situation of the working poor, it is essential to observe what happens to this population over time. As Finnie (2000) pointed out, the lack of information on the dynamics of poverty may be problematic when developing policies to prevent and/or reduce its incidence. Measures aimed at helping people exit working poverty after they have been in this situation for several years may be very different from those aimed at helping poor workers who are experiencing temporary financial difficulties. Thus, if this research is to guide the development of policies to help individuals who make a significant work effort it is important to examine the dynamics of low income among workers.

In this chapter, we present the financial situation and work effort of working poor individuals over several consecutive years. This allows us, among other things, to assess whether poverty experienced by working Canadians is temporary or permanent, and to identify the circumstances associated with exit from poverty.

8.2 Literature Review

As was the case with the identification of the determinants of poverty for workers, very few studies have looked at the dynamics of poverty among workers. To our knowledge, only one Swiss⁹² and one French study⁹³ have addressed this issue.

The Swiss study used panel data to analyse transitions between poverty and non-poverty for full-time workers over two consecutive years. An important finding of this research is that the financial situation of working poor families is characterized by great instability. Indeed, low-income families that work full time, frequently alternate between poverty and non-poverty. Analysis of the trajectories of the working poor over five consecutive years revealed that clear and definite paths are almost impossible to identify given the multitude of possible routes. However, it found that practically none of the workers was consistently poor over the five years considered.

The French study also looked at exit rates from poverty over two consecutive years using four years of the *European Community Household Panel* (1994 to 1997). It finds that family factors play the dominant role in explaining exit from poverty. Like the Swiss

⁹² *Les working poor en Suisse*, 2001.

⁹³ *Profils sur le marché du travail et caractéristiques familiales des actifs pauvres*, 2001.

study it was impossible to draw clear conclusions about the trajectories followed by the working poor over several consecutive years. According to the authors, it is difficult to draw clear-cut conclusions owing to the complexity of the concept of working poverty, which has two distinct components: employment (where the unit of analysis is the person) and low income (where the unit of analysis is the family), both of which are subject to changes over time.

In short, there are not many studies on the dynamics of poverty among the working poor, and the findings that emerge from the few available are not conclusive due to the complexity of the concept and because of the methodology. Yet these studies shed some light on the types of longitudinal analysis that should be undertaken to obtain meaningful and easy to interpret information on the long-term situation of workers.

8.3 Technical Details

8.3.1 *Data and Criteria Used to Select the Longitudinal Sample*

The data from the second panel of the Survey of Labour and Income Dynamics (SLID) are used for the analysis of the long-term low-income situation of Canadian working poor individuals. This panel (of more than 15,000 households or 30,000 individuals) started in 1996 and ended in 2001.

Only respondents who were interviewed each year from 1996 to 2001 (in other words, the longitudinal respondents) were selected. As was the case with the cross-sectional analysis, the target population is individuals aged 18 to 64 who are not full-time students. Since the age of respondents changes from year to year and their student status may also change over a six-year period, the target population is selected in the first year of observation, i.e. in 1996. Thus, the sample was limited to individuals who were not studying full time in 1996 and who were between 18 and 59 years of age that year, so that none of them would be over 64 years old at the end of the period under study, that is in 2001. When all the selection criteria were imposed, 14,900 individuals remained in the longitudinal sample (weighted, those individuals represent 13,109,100 Canadians).

Table 8.1 Number of individuals in the second panel of the SLID (1996-2001), before and after subsampling criteria were imposed		
	Unweighted	Weighted
Total number of longitudinal respondents	29,500	25,154,500
Number of respondents aged 18 to 59 in 1996	17,100	15,436,300
Number of respondents aged 18 to 59 who were not full-time students ⁹⁴ in 1996	14,900	13,109,100

⁹⁴ To ensure that there were no full-time students in the sample, the authors chose to exclude individuals for whom it could not be determined whether they were full-time students because values for variables *studtf26* and/or *flpr20* were missing.

8.3.2 Identification of Working Poor Individuals

Over a six-year period (1996-2001), 10% of working-age adults experienced a spell of working poverty in Canada.

As mentioned in Chapter 2, the Market Basket Measure (MBM) thresholds are available only for years 2000, 2001 and 2002, therefore it can not be used for longitudinal analysis of working poverty over 1996 to 2001. Consequently, in this chapter, low-income individuals are identified using Statistics Canada's post-tax low-income cut-offs (LICOs-iat). The criterion for identifying workers is the same as it was in previous chapters: only individuals who worked for pay at least 910 hours in the reference year are considered to be "workers".

Table 8.2 shows that 4% of the 1996 target population (or 513,700) could be considered working poor Canadians. However, a much higher proportion of working-age adults experienced at least one spell of working poverty between 1996 and 2001. In the target population, one out of ten individuals was working poor for at least one year over 1996-2001.

Table 8.2 Distribution of the target population by employment and low-income status in 1996		
	#	%
All longitudinal individuals aged 18-59 who were not full-time students in 1996	13,109,100	100.0
Who had a low family income in 1996	1,491,800	11.4
Who worked 910 hours or more in 1996	9,408,900	71.8
Who worked 910 hours or more and had a low family income in 1996	513,700	3.9
Who worked 910 hours or more and had a low family income for at least one year between 1996 and 2001	1,298,100	9.9

8.4 Longitudinal Analysis

In this section, we answer the questions: *What happened in subsequent years to individuals identified as being working poor in 1996? Did they manage to escape poverty? Did they leave the labour market?*

Longitudinal descriptive statistics are presented to answer these questions. First, it is important to reiterate that two components can affect the situation of the working poor over time: their labour market trajectory and their family income trajectory. A working poor individual can exit working poverty either by working less than 910 hours (i.e. no longer a worker) or by escaping poverty. Thus, to better understand changes in the economic situation of the working poor over time, it is essential to study the trajectories of these two components. To simplify the analysis, the trajectories are analysed separately.⁹⁵

⁹⁵ In this chapter, only estimates whose confidence interval is considered reasonably small and results for which there is a statistically significant difference between the working poor group and the working non-poor group are discussed.

8.4.1 Changes in Labour Market Participation

Over the long term, the intensity of the labour market participation of the working poor is comparable to that of other workers. However, the number of hours they worked is slightly more volatile.

In Chapter 3, it was shown that the work effort of working poor individuals was similar to that of other workers in 2001. It is important to understand their behaviours over time. Are they more likely to alternate between work, unemployment and inactivity? If so, is it possible to conclude that these transitions are voluntary?

Table 8.3 shows that very few of the individuals who were working poor in 1996 completely exited the labour market in the following five years. Only 15% of them did not work at all for at least one year between 1997 and 2001. This proportion was only slightly lower for individuals who were working non-poor in 1996 (11%). Moreover, during the period under review, the cumulated number of hours worked by the working poor was similar to that cumulated by workers who did not have a low family income in 1996 (11,490 hours compared to 11,460 hours).

However, although a large proportion of the individuals who were working poor in 1996 worked close to 2,000 hours a year on average over 1996-2001, they were more inclined than other workers to fall below the threshold of 910 hours of work (24% compared to 13%) or not to report the number of hours that they worked for at least one of the subsequent five years (22% compared to 16%). Thus, a smaller proportion of them systematically reported having cumulated at least 910 hours of work every year (39% as opposed to 59%) between 1996 and 2001.

In short, even over the longer term the working poor tend to cumulate, on average, as many hours of work as other workers. However, their labour market participation seems more unstable, possibly because they have more difficulty securing a large number of hours of work.

Table 8.3				
Labour market trajectory of workers over 1996-2001 by low-income status in 1996				
	Working poor in 1996		Working non-poor in 1996	
	#	%	#	%
Worked 910 or more hours in 1996	513,700	100.0	8,895,200	100.0
Worked at least 910 hours until 2001	199,400	38.8	5,265,100	59.2
Always worked but had at least one year with < 910 hours of work between 1997 and 2001	123,100	24.0	1,185,800	13.3
Spent at least one year without any hours of work between 1997 and 2001	76,600	14.9	1,015,500	11.4
Uncertain which of the 3 last categories they fall into	114,700	22.3	1,428,800	16.1
Average number of hours of work cumulated between 1996 and 2001*	11,490 h		11,460 h	

* This statistic was calculated for individuals who had no missing value in the "number of hours of work per year" variable at any year during the 1996-2001 period. It should be noted that the proportion of missing information on number of hours of work per year between 1997 and 2001 is higher among the working poor individuals identified in 1996 than among those who were working non-poor that year.

8.4.2 Dynamics of Family Income

The working poor are more likely to escape poverty in the longer run than the other poor. However, between 1996 and 2001, the working poor spent on average three years in low income and 40% of them experienced persistent poverty. Furthermore, even after exiting poverty, the family income of former working poor Canadians remained well below that of workers who did not experience poverty in 1996.

The following longitudinal descriptive statistics are presented to shed some light on the family income trajectories of working poor persons and to assess their ability to escape poverty: the proportion of working poor individuals who exited poverty at least once; the distribution of working poor individuals by the number of years spent in poverty between 1996 and 2001; the average number of years spent in poverty during this period;⁹⁶ and the proportion of individuals who experienced persistent poverty⁹⁷ (all the results are presented in Table 8.4).

As expected, working increases the chances of exiting poverty. Almost all (85%) of the Canadians who were working poor in 1996 exited poverty at least temporarily before 2002. Moreover, a larger proportion of them (60%) escaped persistent poverty compared to low-income individuals who did not work in 1996 (26%).

However, contrary to what we suspected, the rates of persistent poverty and exit from poverty between 1996 and 2001 were quite similar whether the individual worked a little (between 1 and 909 hours) or a lot (1,500 hours or more) in 1996. Thus, it would appear that over the longer term the fact that an individual has a job in a given year is a better predictor of his or her chances of exiting poverty than the number of hours spent working.⁹⁸

⁹⁶ It is important to point out that these last two statistics do not make a distinction between interrupted and uninterrupted low-income spells. They also take no account of the fact that some low-income spells may have started before 1996 and/or continued after 2001, which has the effect of underestimating the number of years actually spent in poverty. However, they do improve our knowledge about the duration of the low-income spells experienced by working poor individuals.

⁹⁷ Individuals are said to have experienced persistent poverty if their after-tax family income for all years between 1996 and 2001 was lower than the sum of the associated low-income cut-offs during these years. The advantage of this measure is that it is sensitive not only to whether an individual experienced poverty during the period under review and to how much time was spent in poverty, if any, but also to the average gap between income and the low-income threshold during the period of poverty, that is, the severity of the poverty situation.

⁹⁸ However, it is worth noting that there are two main ways for workers to exit low income, namely an increase in earnings (through increased work effort or wages) and a change in family conditions (through a change in the family structure or an improvement in family income from sources other than the worker's earnings). As it happens, those who work less have an opportunity to improve their working conditions by increasing their work effort, while those who already work many hours do not have such an opportunity, which limits their options for exiting poverty. This may explain why working poor individuals who work the equivalent of full time all year (1,500 hours or more) do not spend less time in poverty in the subsequent years than those who work less than half the year (between 1 and 909 hours), as one would be inclined to think. The reasons for exiting low income will be studied in more detail in Section 8.4.3.

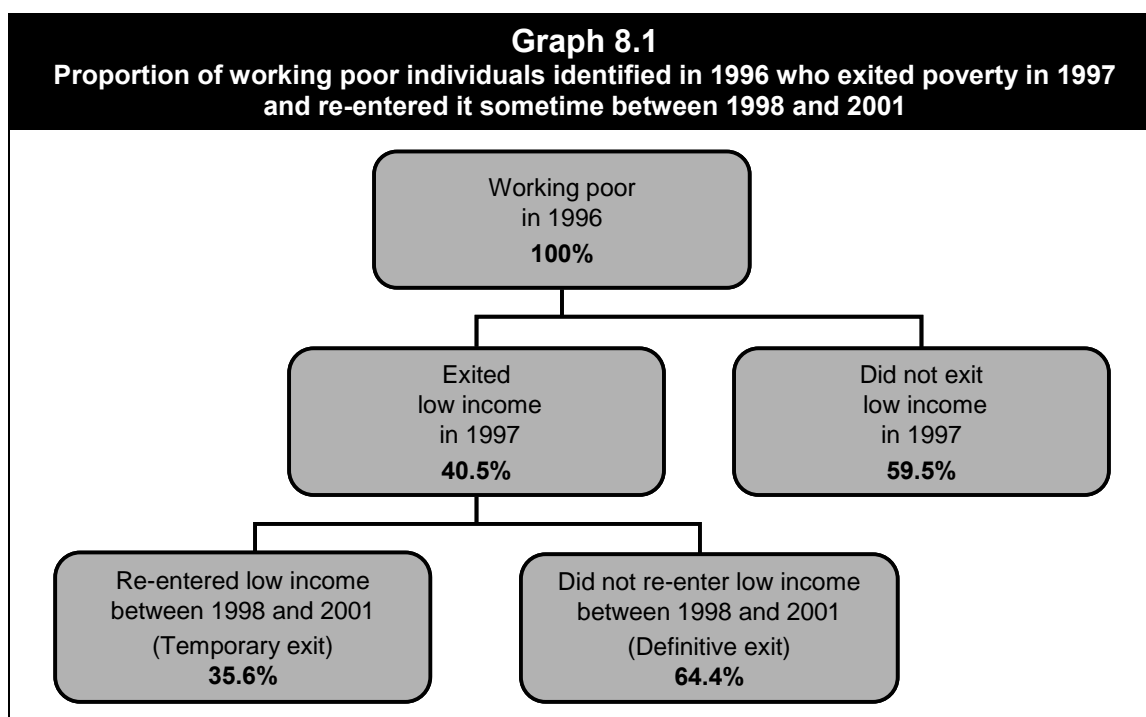
Table 8.4
Longitudinal descriptive statistics on low income (LI) between 1996 and 2001
by individual labour market participation in 1996

	Worked 910 hours or more in 1996 and had LI (WP)	Worked 1,500 hours or more in 1996 and had LI	Worked between 1 and 909 hours in 1996 and had LI	Did not work at all in 1996 and had LI
No. of people in the group	513,700	358,200	227,600	708,500
% who exited LI for at least 1 year	85.3%	84.5%	85.4%	57.1%
% with LI for 1 year	26.1%	25.7%	29.4%	7.9%
% with LI for 2-3 years	38.3%	37.7%	34.1%	20.6%
% with LI for 4+ years	35.6%	36.5%	36.5%	71.5%
Average no. years with LI	3.0 years	3.0 years	3.0 years	4.4 years
% who experienced persistent poverty	39.3%	40.3%	38.4%	73.6%

Nevertheless, not all working poor individuals manage to exit low income in the short term or even the longer term. Between 1996 and 2001, the working poor identified at the beginning of the period spent an average of three years under the low-income threshold. Close to three quarters of them were poor for at least two years, and 40% experienced persistent poverty during this period.

Moreover, as indicated in Graph 8.1, of the working poor who exited low income rapidly (i.e. in 1997), more than a third fell back into low-income in the short-term (between 1998 and 2001). Only about a quarter of individuals who were working poor in 1996 exited poverty the following year and never re-entered it (in other words, exited low income rapidly and definitively).⁹⁹

⁹⁹ For the purposes of the study, the authors chose to describe an exit from poverty in 1997 as “rapid” because the working poor individuals were identified the previous year. However, it should be remembered that, based on the data used, it is impossible to know how long they had been in poverty before 1996. Moreover, the authors chose to describe the exit of working poor individuals who exited poverty in 1997 and did not re-enter it between 1998 and 2001 as “definitive” even though they were aware that it was definitive only during the period under review (1996-2001), since it also cannot be determined from the SLID what happened to them after 2001.



Furthermore, even after definitively exiting low income, the average family income of former working poor individuals remained significantly below that of the rest of the population. In particular, during 1997-2001, the average disposable family income of working poor individuals who managed to exit poverty definitively was less than 75% of the income of workers who did not have a low income in 1996 (\$45,600 compared to \$62,200).¹⁰⁰

Table 8.5 Average income over the 1997-2001 period (2001 constant dollars) for all workers by low-income status		
	Average after-tax family income	Average after-tax family income adjusted for family size*
WP in 1996 who never exited poverty	\$12,300	\$8,500
WP in 1996 who exited poverty at least once between 1997 and 2001	\$33,700	\$19,100
WP in 1996 who exited poverty temporarily in 1997	\$26,800	\$15,500
WP in 1996 who exited poverty definitively in 1997	\$45,600	\$25,000
Workers who did not have a low income in 1996	\$62,200	\$36,100
Workers who never had a low income between 1996 and 2001	\$65,300	\$34,579

* Adjusted for family size is useful to take into consideration the principle that family needs increase with the number of dependents. The equivalence scale used for this adjustment is Statistics Canada's for the Low Income Measure (LIM, Catalogue No. 13-582).

¹⁰⁰ The ratio of average disposable income $((45,600/62,200)=0.733)$ is even lower when we control for family size in each of these groups $((25,000/36,100)=0.693)$.

In short, poverty is more dynamic among low-income individuals who work (regardless of the number of hours cumulated) than among those who do not work at all. The working poor generally spend less time in poverty than low-income individuals who do not have a job, suggesting that they would be more likely to benefit from temporary financial assistance. However, over 1996 to 2001 the vast majority of working poor individuals (74%) experienced poverty for more than one year, meaning that the situation of financial vulnerability in which many of them find themselves is more than transient. Moreover, when they exit poverty, they are quite likely to re-enter it; and even if they do not, their family income generally remains well below that of workers who never experienced poverty.

8.4.3 Factors Associated with Exiting Poverty

More than half (52%) of the “definitive” exits from poverty of working poor individuals can be explained by their family environment rather than by their progression in the labour market.

As can be seen in Table 8.6, close to half of those who exited poverty at least temporarily did so because of their family environment (46%) rather than because of their progression in the labour market (54%); this proportion is even higher among those who exited poverty definitively. For more than half of the latter, the exit was mainly owed to a change in their family structure (36%) or to an increase in the incomes of other family members and/or other transfers (16%).¹⁰¹

Table 8.6 Main reasons why working poor individuals identified in 1996 exited low income, by type of exit from low income			
	Exited at least once between 1997 and 2001	Exited temporarily in 1997	Exited definitively in 1997
Number of working poor individuals in 1996	438,300	74,100	134,100
Change in the worker's family structure or size	32.2%	X	35.7%
Change in the worker's earnings (increase in number of hours worked and/or wages)	53.5%	58.4%	48.0%
Change in other sources of income (increase in earnings of other family members and/or other sources of income)	14.2%	X	16.3%

¹⁰¹ The reasons for exiting low income were identified by comparing the family income level of each working poor individual in 1996 to the income in the year of exit from low income. Since several changes may occur in a given year (for instance, an individual may get divorced and obtain a promotion the same year), it was necessary to set an order of priorities. First, we checked whether the family structure had changed in some way, and if so, the reason for the exit was automatically attributed to a “change in the worker's family structure or size”. For the residual cases, we checked whether the increase in the worker's personal income had contributed to at least 50% of the increase in the worker's family income. If so, the reason for the exit was recorded as a “change in the worker's earnings”. If not, it was recorded as a “change in earnings of other family members and/or other sources”. There were not enough observations to refine the analysis to check the extent to which changes in family structure were attributable to union formation or child departure, for example.

8.4.4 Labour Market Progression between 1996 and 2001

On average, the earnings of working poor individuals increased considerably between 1996 and 2001. Yet 45% of them still had low earnings in 2001.

While the main reason for a definitive exit from poverty was often family-related rather than work-related, this does not imply that the working poor did not experience any progression in the labour market.

First of all, Table 8.7 shows that 75% of individuals who were working poor in 1996 were still working 910 hours or more in 2001, compared to 82% of other workers. Not surprisingly, the average work effort of those who reported the number of hours that they worked in 2001 and in 1996 did not increase significantly between those two years, as it was already very high in 1996 (1,980 hours of work in 1996 compared to 2,010 hours in 2001). However, their hourly wages and total earnings rose considerably over this period. On average, the hourly wages reported by those who were working poor in 1996 increased by more than \$3/hour and their average annual earnings more than doubled between 1996 and 2001, going from \$9,000 to \$18,300.

However, it should be noted that despite the important progress observed between 1996 and 2001, the average hourly wages and earnings reported by individuals who were working poor in 1996 did not rise to the levels of workers who were not poor in 1996. In 2001, the average annual earnings of the working poor were still less than half those of other workers, and nearly half of these working poor individuals (45%) continued to report low earnings in 2001.

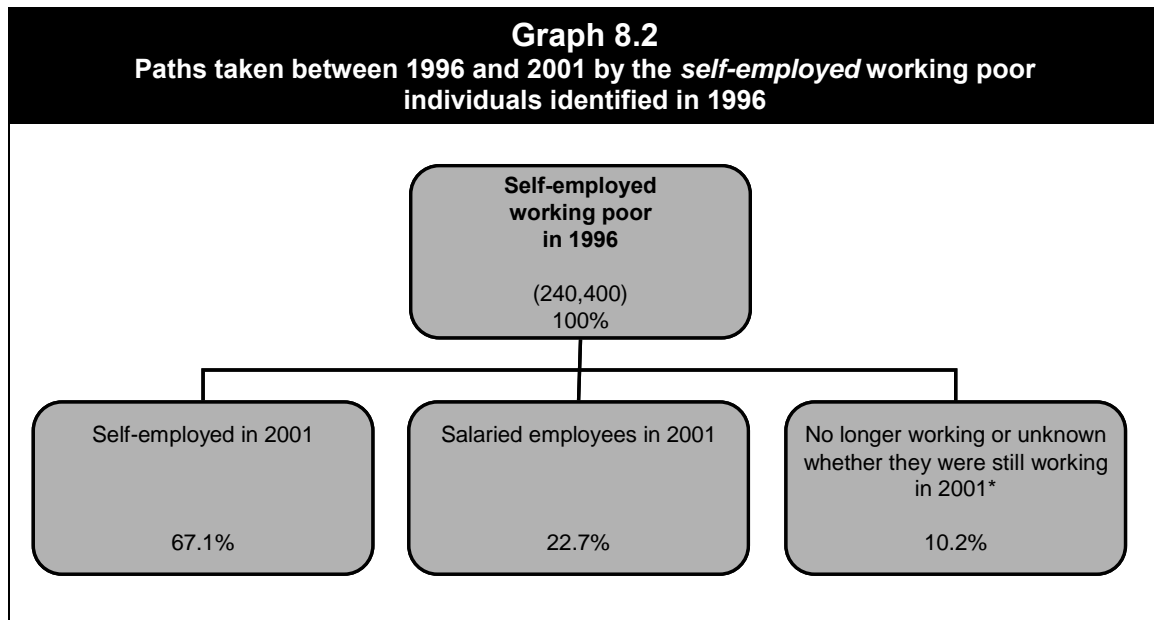
Table 8.7 Labour market situation in 1996 and 2001 of individuals who were working poor in 1996, average and median (in parentheses) values*				
	Working poor in 1996		Working non-poor in 1996	
	1996	2001	1996	2001
Average number of hours worked	1,979 (1,955)	2,013 (2,086)	2,031 (2,086)	1,879 (2,085)
Average hourly wage of salaried workers (\$/h, in 2001 constant dollars)	10.17 (9.31)	13.57 (11.70)	18.30 (16.88)	20.78 (19.11)
Average annual earnings (in 2001 constant dollars)	9,044 (8,139) ¹⁰²	18,324 (13,221)	38,089 (33,248)	40,811 (35,100)
Worked at least 910 hours during the year	100.0%	74.5%	100%	81.8%
Had low earnings ¹⁰³	73.6%	45.0%	10.4%	16.0%

* Only those observations for which there were no missing values in the variables of interest in 1996 and 2001 were retained. For hourly wages in particular, many of the observations were suppressed because of the workers who reported themselves as self-employed in one of the two years (no hourly wages are available for this category of worker). Moreover, negative incomes were set at 0 for the calculation of average and median values.

¹⁰² At first glance, it may be surprising to find that average earnings are much lower than the average calculated by multiplying the average hourly wage by the average number of hours reported. However, it is important to point out that the SLID information on hourly wages is available only for salaried employees, whereas employment earnings are recorded for both salaried employees and self-employed workers, who can report nil or even negative earnings. Moreover, according to Statistics Canada, some respondents may tend to overestimate the number of hours worked, especially those who are on call or who work irregular schedules, which may also explain the difference observed.

¹⁰³ This means that the worker could not have supported themselves alone or in other words, the worker's personal income did not exceed the low-income cut-off for an unattached individual in 2001.

As chapter 4 showed, being self-employed is a significant determinant of low income among workers. Thus, it is interesting to look at the extent to which the working poor moved away from this status. Graph 8.2 shows that only slightly more than 25% of the Canadians who were working poor and self-employed in 1996 became salaried employees by 2001. The vast majority (67%) of working poor individuals who reported at least one period of self-employment in 1996 were still self-employed in 2001. By contrast, less than 10% of Canadians who were working poor and salaried in 1996 became self-employed during this period (see Graph 8.3).



* There is no restriction on the number of hours worked in 2001 for being included in any of the three categories.

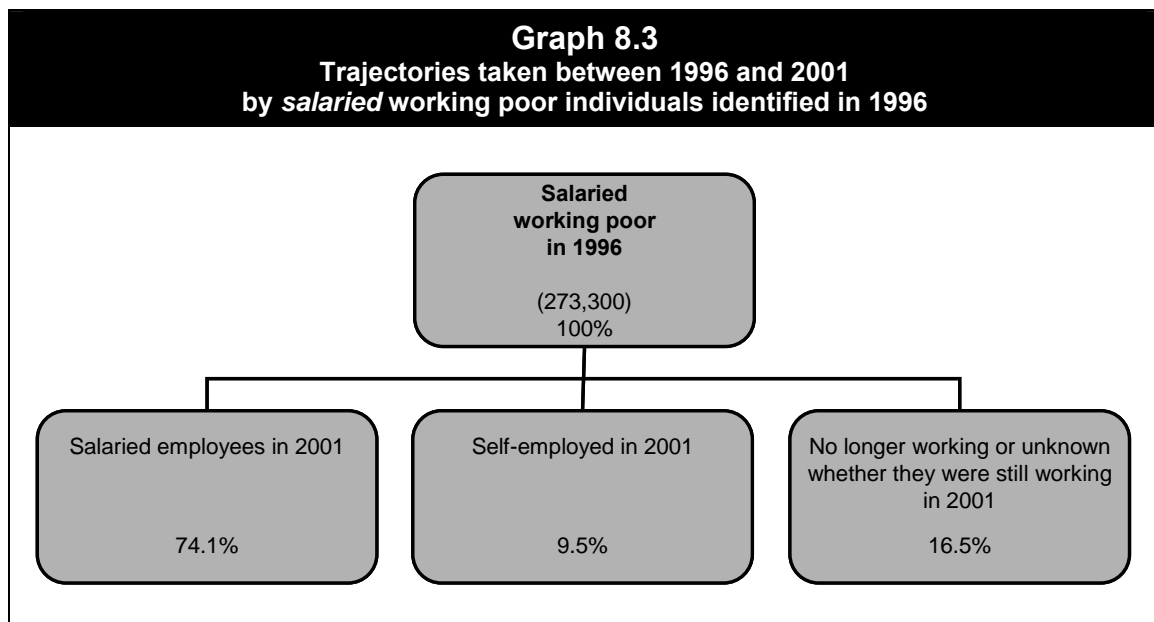


Table 8.8 shows that while the average earnings of working poor individuals doubled between 1996 and 2001, which clearly means that their labour market conditions improved, their family income increased even more, by 135%. This substantial increase in average family income can be explained in part by the fact that half of the individuals who were working poor in 1996 experienced a change in the composition or size of their family between those two years. While this proportion is comparable to that observed among working non-poor individuals, it shows that families not only play a key role in the current financial situation of workers but also greatly influence their financial situation over the longer term.

Table 8.8				
Family situation in 1996 and 2001 of individuals who were working poor in 1996				
	Working poor in 1996		Working non-poor in 1996	
	1996	2001	1996	2001
Average family income (2001 constant dollars)	15,605 (14,420)	36,647 (30,678)	58,301 (53,492)	65,601 (58,610)
Had a low family income	100.0%	29.1%	0.0%	3.2%
No change in family structure or size	n.a	49.7%	n.a	48.5%

While average and median values may draw a picture of overall trends, they do not inform about the dispersion of observations within a given group. To have a better idea of the change in the working conditions of the working poor, it is helpful to look at the proportion of them for whom conditions improved significantly, remained essentially the same or deteriorated over 1996-2001 (see Table 8.9).

When looking at the change in work effort, hourly wages and annual earnings of workers between 1996 and 2001, it becomes apparent that these are less stable among the working poor than among other workers. Working poor individuals are more likely to experience a significant increase or decrease in these three variables compared to other workers, which suggests more variability in labour market behaviour and/or opportunities. Close to 39% of those who were working poor in 1996 had significantly increased their work effort by 2001 and 36% of them had reduced it. In comparison, 45% of workers who did not have a low income in 1996 worked about the same number of hours in 2001, less than one quarter had increased their work effort while less than a third had decreased it. Between 1996 and 2001, the wages and earnings of approximately two thirds of the working poor increased significantly while they stagnated or decreased for most other workers.

Table 8.9 Distribution of individuals who were workers in 1996 by labour market progression between 1996 and 2001 and low-income status in 1996		
	Working poor in 1996	Working non-poor in 1996
Number of hours of work		
Significant increase ¹⁰⁴	38.8	24.4
No significant change	25.4	45.0
Significant decrease	35.7	30.3
Average hourly wage (in 2001 cst. \$)		
Significant increase	62.4	46.7
No significant change	24.3	35.8
Significant decrease	13.3	17.5
Employment earnings (in 2001 cst. \$)		
Significant increase	63.8	44.9
No significant change	13.2	26.8
Significant decrease	23.0	28.4

8.4.5 Use of Government Programs

Working poor individuals are more likely to be social assistance recipients than other workers. However, over 1996 to 2001, most of them did not receive any social assistance benefits and they were not more frequent users of employment insurance than other workers.

It is easy to imagine that the line between being working poor, being a social assistance recipient or being unemployed is sometimes a fine one. The more precarious the work, the fewer advantages it offers over not working and thus the more likely it is that workers will quit or lose their jobs and end up depending on government transfers. Thus, it is interesting to look at the dynamic that exists between being a working poor person, being a social assistance recipient and being an employment insurance beneficiary (see Tables 8.10, 8.11 and 8.12).

What we find is that the working poor are more likely to use social assistance than other workers.¹⁰⁵ In 1996 as in 2001, working poor individuals were far more likely than other workers to receive social assistance benefits during the year (12.5% vs. 1.5% in 1996 and 9.6% vs. 1.2% in 2001). Moreover, while only 6% of workers who did not have a low income in 2001 had used social assistance in previous years, this proportion was 30% among the working poor, for most of whom social assistance was the main source of family income in those years. Individuals who were working poor in 1996 were also

¹⁰⁴ “Significant” refers to an increase or decrease of more than 10% when compared to the initial value in 1996.

¹⁰⁵ The results presented in Table 8.11 are not exactly the same as those presented in Chapter 3 for year 2001. There are a number of reasons for the differences, including the sample used (in this chapter, the authors work with the SLID longitudinal sample, whereas in Chapter 3 they work with the cross-sectional sample) and the measure of low income used (in this chapter, the authors use the low-income cut-offs instead of the Market Basket Measure as in Chapter 3).

more likely to receive social assistance in the following five years than other workers (18% vs. 3%), although in this case, fewer than 40% of them relied on social assistance as their main source of income.

Still, it is noteworthy that the vast majority (70%) of individuals who were working poor in 2001 did not receive any social assistance (SA) benefits over the previous five years. This shows that, contrary to popular belief, the working poor are not necessarily former SA recipients who were forced to join the labour market.

Interestingly, working poor individuals are also not more frequent users of employment insurance than other workers. Whereas 12% of individuals who were working poor in 2001 received employment insurance benefits that year, this proportion was 13% among other workers. As well, the working poor were not more likely than other workers to have received employment insurance benefits in previous years, although when they did, employment insurance was their main source of family income more often than it was for other workers (30% vs. 16% respectively).

It should be noted that if the working poor were in general not more frequent users of employment insurance than other workers over 1996 to 2001 it is, in many cases, because they were less likely to qualify for the program because of their self-employed status. Indeed, limiting the sample to salaried workers, the working poor are slightly more likely than other workers to use employment insurance. Specifically, 42% of all individuals who were salaried and working poor in 2001 had received employment insurance in previous years, compared to 32% of workers who were salaried but who did not have a low income in 2001.

Table 8.10 Statistics on the use of social assistance (SA) or employment insurance (EI) by working poor status in 1996 and 2001				
	1996		2001	
	Working poor	Working non-poor	Working poor	Working non-poor
Received >\$1 of SA that year	12.5%	1.5%	9.6%	1.2%
– Average proportion of total personal income from SA among those who received some	0.44	0.26	0.44	0.25
Received >\$1 of EI that year	14.6%	15.3%	11.5%	12.7%
– Average proportion of total personal income from EI among those who received some	0.30	0.17	0.32	0.16
Salaried workers who received >\$1 of EI that year	25.3%	16.6%	19.6%	14.3%
– Average proportion of total personal income from EI among salaried employees who received some	0.22	0.17	0.33	0.15

Table 8.11 Statistics on the use of social assistance (SA) and employment insurance (EI) (between 1996 and 2000) by working poor status		
	Working poor in 2001	Working non-poor in 2001
Proportion who received at least \$1 of SA between 1996 and 2000	29.9%	5.8%
– Proportion whose SA benefits were their main source of income*	62.0%	40.0%
– Average no. of years for which they received SA (1996-2000)	3.0 years	2.3 years
Proportion who received at least \$1 of EI between 1996 and 2000	30.5%	30.3%
– Proportion whose EI benefits were their main source of income	30.1%	15.6%
– Average no. of years for which they received EI (1996-2000)	2.3 years	2.4 years
Proportion of salaried workers who received at least \$1 of EI between 1996 and 2000	42.3%	32.8%
– Proportion whose EI benefits were their main source of income	X	14.5%
– Average no. of years for which they received EI (1996-2000)	2.4 years	2.4 years

* That is, SA benefits represented 50% or more of their personal income for at least one year between 1996 and 2000.

Table 8.12 Statistics on the use of social assistance (SA) and employment insurance (EI) (between 1997 and 2001) by working poor status		
	Working poor in 1996	Working non-poor in 1996
Proportion who received at least \$1 of SA between 1997 and 2001	18.2%	3.4%
– Proportion whose SA benefits were their main source of income	38.9%	24.6%
– Average no. of years for which they received SA (1997-2001)	2.4 years	1.8 years
Proportion who received at least \$1 of EI between 1997 and 2001	31.9%	30.5%
– Proportion whose EI benefits were their main source of income	22.3%	18.2%
– Average no. of years for which they received EI (1997-2001)	2.3 years	2.2 years
Proportion of salaried workers who received at least \$1 of EI between 1997 and 2001	48.5%	37.7%
– Proportion whose EI benefits were their main source of income	X	18.2%
– Average no. of years for which they received EI (1997-2001)	2.2 years	2.2 years

8.4.6 *Determinants of Persistent Poverty*

All other things being equal, working poor individuals who are the sole earner in a family with children, who live alone and/or who are 45 to 59 years-old are at a greater risk of experiencing persistent poverty than other working poor individuals.

Finally, it is worth investigating which factors might explain why some working poor individuals are unable to escape persistent poverty while the majority do (60%). To identify the characteristics that increase the risk of experiencing persistent poverty among the working poor, a logistic regression model similar to the one presented in chapter 4 was

estimated. The only differences between the model used here and the one presented previously are the following: 1) the target population is no longer all workers but rather individuals who were working poor in 1996; and 2) the dependent variable now takes the value **1** if the working poor experienced persistent poverty between 1996 and 2001 and **0** otherwise. All explanatory variables were set at their 1996 value. This way, it was possible to identify **current** characteristics that predict the risk that a working poor individual will experience persistent poverty in subsequent years.¹⁰⁶

The regression results presented in Table 8.13 show that very few characteristics significantly increase or decrease the probability that someone who is working poor will experience persistent poverty. In fact, when all other characteristics are fixed, only older (45-59 years-old) working poor individuals, those unattached and those who are the sole earner in a two-parent family are at greater risk of experiencing persistent poverty. No other characteristic helps predict in any significant way the risk that a working poor individual will experience persistent poverty.

These results are not that surprising since studies on poverty in Canada have already identified unattached individuals aged 45 to 64 as a group that is particularly vulnerable to persistent poverty.¹⁰⁷ Moreover, since nowadays both parents in most two-parent families work (82% did in 2001¹⁰⁸), it is not surprising to see that families that depend on only one earner are financially disadvantaged in the short and long terms.

Table 8.13 Result of the logistic regression estimating the impact of the characteristics of individuals who were working poor in 1996 on the probability that they will experience persistent poverty between 1996 and 2001			
	Estimated coefficient*	Standard deviation	(P<=0.05)
All working poor individuals from 1996			
1. Demographic Characteristics			
Gender			
Female	0.1747	0.3338	0.61
Male	(OMITTED)		
Age			
18-29	-0.5944	0.4566	0.19
30-44	(OMITTED)		
45-59	1.0917	0.4265	0.01

¹⁰⁶ It should be noted that, given the small number of working poor individuals who experienced persistent poverty, some explanatory variables or groups of explanatory variables were modified from those found in chapter 4 in order to meet Statistics Canada's publication criteria. For instance, the authors could control for only three age categories (18-29, 30-44 and 45-59) rather than four (18-24, 25-34, 35-54 and 55-64). Moreover, the group of variables related to the main job had to be omitted because information about this was not available in the SLID longitudinal data. It should also be noted that, as explained in Appendix C.2, no correction was made to conduct this regression since the dependent variable was sufficiently balanced in this case (40% of 1 and 60% of 0).

¹⁰⁷ M. Hatfield, *Vulnerability to Persistent Low Income* (2004).

¹⁰⁸ *Income in Canada* 2003.

Table 8.13 (End)

	Estimated coefficient*	Standard deviation	(P<=0.05)
Province of residence			
Atlantic provinces	0.4460	0.5341	0.40
Quebec	0.2511	0.5580	0.65
Ontario (OMITTED)			
Manitoba or Saskatchewan	0.0106	0.5744	0.99
Alberta	0.0989	0.5489	0.86
British Columbia	0.7698	0.6000	0.20
Recent immigrant or Aboriginal living off-reserve			
Yes	0.6330	0.5896	0.28
No (OMITTED)			
Work limitations			
Yes	0.2112	0.5446	0.70
No (OMITTED)			
2. Socioeconomic Characteristics			
Highest level of education			
Less than HSD	-0.3048	0.6129	0.62
HSD	-0.0376	0.5845	0.95
More than HSD	-0.1977	0.5499	0.72
University (OMITTED)			
Labour market experience			
Less than 3 years	0.4053	0.5537	0.46
3 years or more (OMITTED)			
3. Family Characteristics			
Family type			
Unattached	1.7686	0.6688	0.01
Couple without children (OMITTED)			
Couple with children, one earner	1.9326	0.6997	0.01
Couple with children, two earners	0.5092	0.7807	0.51
Lone-parent family	1.2399	0.8162	0.13
Other family type	0.5459	0.9958	0.58
4. Characteristics Related to Work			
Number of hours of paid work during the year			
910-1,499	-0.1009	0.4114	0.81
1,500+ (OMITTED)			
Self-employed during the year			
Yes	0.0779	0.3793	0.84
No (OMITTED)			
Pseudo R2: 14.3%, Area above the ROC curve: 0.7406			

All coefficients with a P-value < 0.05 are statistically significant at a confidence level of 95%. In this case, this is maybe because of the small number of observations that so few coefficients are significant.

8.5 Conclusion

While experiencing poverty in a given year may be difficult, being poor for several consecutive years may have even more dire consequences, whether the person is working or not. In this chapter, we have presented results from the second panel of the Survey of Labour and Income Dynamics (SLID) in an attempt to provide a better understanding of the dynamics of low income among workers in Canada. To this end, we have been careful to make a distinction between the various factors that might influence these dynamics, namely work effort and labour market progression as well as changes in the family situation of working poor individuals. The key findings that emerge from this chapter are the following:

- In the long term, the work effort of working poor individuals is similar to that of other workers but slightly more volatile.
- Poverty among workers is dynamic: 85% of individuals who were working poor in 1996 exited poverty at least once before 2002, compared to 57% of low-income individuals who were not working in 1996.
- Even so, individuals who were working poor in 1996 spent an average of three years below the low-income cut-off between 1996 and 2001. Furthermore, even after exiting poverty, the family income of former working poor individuals remained well below that of other workers. In addition, more than half of the “definitive” exits from poverty can be explained by the worker’s family environment rather than by his/her progression in the labour market.
- Although half of individuals who were working poor in 1996 still had low earnings in 2001, on average their employment income improved considerably during this period.
- The working poor are more likely than other workers to receive social assistance (SA). However, the majority of them did not receive SA benefit between 1996 and 2001. Furthermore, overall, they are not more frequent users of employment insurance in either the short or long terms because many of them simply do not qualify owing to their self-employed status.
- All other things being equal, working poor individuals who are the sole earner in a family with children, unattached and/or who are between 45 and 59 years-old are at greater risk of experiencing persistent poverty than other working poor individuals.

Summary and Policy Considerations

I. Summary

In 2001, no less than 40% of all poor Canadians had at least one member in their family who had a strong attachment to the labour market (i.e. worked at least 910 hours during the year). This means that many Canadians who make significant efforts to be self-sufficient and who contribute to the prosperity of the country nevertheless struggle to make ends meet.

Poverty among workers is not a new phenomenon in Canada. As early as the sixties, studies showed that a large proportion of low-income individuals belonged to families where some members worked a significant number of hours. While researchers in the United States and Europe studied the phenomenon of working poverty, few studies have addressed this specific issue in Canada. Moreover, these studies generally focused on low-paid workers rather than on the working poor (two groups that are conceptually very different).

In fact, few Canadian studies have considered the economic well-being of workers on the basis of their family income, and those that did only presented descriptive profiles of the working poor according to various definitions. In order to conduct the extensive analysis presented in this report, the authors chose to develop and use the following definition of working poverty: *working poor individuals* are those individuals aged 18 to 64 who have worked for pay a minimum of 910 hours in the reference year, who are not full-time students, and who have a low family income according to the Market Basket Measure of low income (*working poor families* are those economic families where at least one member is a working poor individual). The main findings of the study are the following.

1. Who are the working poor?

Being a low paid worker is not synonymous with being working poor.

- In 2001, 88% of low-paid salaried workers were not poor. Conversely, many salaried workers who did not have low wages *were* poor, because their family income was insufficient to meet their family needs. In fact, over 50% of salaried working poor Canadians were not low-paid.

Many Canadians are affected by working poverty.

- In 2001, 653,000 Canadians were working poor. This meant that a total of 1.5 million Canadians were living in a working poor family, of which about one third were children under 18 and more than one quarter were children under 13. These 1.5 million individuals accounted for close to 40% of all low income Canadians.

2. How severe are their circumstances?

The poverty situation of the working poor is as severe as that of other poor Canadians.

- In 2001, the average poverty depth of working poor families (including unattached individuals) was not statistically different from that of the ‘welfare poor’.

3. What is their Labour Market Situation?

Working Poor Canadians demonstrate a strong attachment to the labour market.

- In 2001 the working poor worked, on average, as many hours as their non-poor counterparts, and 76% of them worked 1,500 hours or more (compared to 88% of other workers).

They enjoy less favorable employment conditions and have less access to employment-related benefits than other workers.

- In 2001, over 40% of working poor Canadians reported some self-employment. The working poor were also more likely than other workers to have an atypical work schedule. Those who were salaried earned on average two-thirds of the hourly wages of other salaried workers.
- In addition, individuals living in a working poor family were significantly less likely to have access to a dental care plan or a health insurance plan than those living in a non-poor family including at least one worker. Similarly, lower proportions of working poor Canadians had life and disability insurance, a pension plan, or were unionized.

Many salaried working poor Canadians are low-paid (i.e. earn less than \$10 per hour), but few earn the minimum wage.

- In 2001, 48% of salaried working poor Canadians were low-paid but fewer than 7% earned the minimum wage.
- Simulations indicate that increasing minimum wages, even substantially, would have a limited impact on (working) poverty. Everything else being kept constant, increasing the minimum wage to \$10 per hour (the equivalent of erasing low pay in Canada) could have, at best, reduced poverty among workers by 0.5 percentage points (from 5.6% to 5.1%) and the overall incidence of low income in Canada by 0.6 percentage points (from 12.6% to 12.0%).

The working poor are more likely than other workers to rely on public support.

- In 2001, total government transfers accounted for 30% of the income of working poor Canadians while representing less than 8% of the income of other workers.
- The working poor were more likely to use Social Assistance than other workers but they did not make greater use of Employment Insurance, in part because a large proportion of them were not eligible for EI because they were self-employed (indeed, limiting the sample to salaried workers, we find that 21% of the working poor received some EI compared to only 14% of the working non-poor in 2001).

4. What explains poverty among workers?

Sole breadwinners and those with many dependant children are much more likely than other workers to experience poverty.

- Workers who are the sole earner in the family, including the unattached, lone parents and the single earner in a couple, have a much higher probability of being poor than other workers.
- Workers who have many dependant children are also at higher risk of being poor, whether or not they are the sole breadwinner in the family.

The presence of a second earner in working poor families could greatly improve their situation. However, those potential earners often have limited earning possibilities and high costs of working.

- In 2001, close to 50% of Canadians living in a working poor family could have experienced an increase in their family income if other adult members of their family had either joined the labour market or increased their work effort.
- However, new potential earners in working poor families often had limited earnings potential and/or responsibilities that restricted their labour market activity. They were more likely than other working-age Canadians to be female, part of a family with children, young, students, recent immigrants or Aboriginal persons living off-reserve, to have work limitations, a low education and almost no experience in the labour market.

Contrary to popular belief, having low hourly wages is not the most important determinant of poverty.

- Having low hourly wages increases significantly the likelihood of poverty for workers. However, being the sole earner in the family and/or having many dependant children appear more important.
- Moreover, self-employed workers are at a greater risk of experiencing poverty than salaried workers, whether they earn low wages or not.

The self-employed working poor are in a worse situation than the salaried working poor.

- In 2001, self-employed working poor Canadians reported working considerably more than their salaried counterparts (on average, 650 hours per year more), but their poverty situation was more severe. In fact, they were as poor as those who did not work at all or worked less than 910 hours.

Nevertheless, the main determinants of poverty are the same for salaried and self-employed workers, and both categories of working poor have similar chances of exiting low income over the longer term.

- While the risk of being poor was consistently higher for the self-employed, the characteristics that had the strongest impact on the likelihood of being poor were the same whether a worker was salaried or self-employed in 2001.
- Furthermore, over 1996 to 2001, the patterns of exit from low income as well as the reasons explaining the exit were quite similar for salaried and for self-employed working poor Canadians.

Other characteristics increase the probability of being poor for workers:

- Not working full time, full year, working for a small business (less than 20 employees), and working in the sales and services industry;
- Having work limitations, being young (between the ages of 18-24), being part of a high-risk group (i.e. being a recent immigrant or an Aboriginal person living off-reserve), not having a high school diploma, and being female;
- Living in British Columbia or in the Atlantic provinces.

5. How do the working poor fare over time?

Between 1996 and 2001, the working poor demonstrated a sustained but more volatile attachment to the labour market.

- Few of those who were working poor in 1996 left the labour market in subsequent years, but they were far more likely than other workers to experience significant fluctuations in hours of work, and even to fall below the threshold of 910 hours of work at least once over 1997-2001.

Working is crucial but sometimes not sufficient to escape poverty.

- A great majority (85%) of those who were working poor in 1996 exited poverty at least once in the subsequent five years. This compares to only 57% of low income Canadians who did not work at all in 1996.
- However, over 1996 to 2001, working poor Canadians spent on average three years in low income and 40% experienced persistent poverty (where family income for the whole period was below the cumulated low-income thresholds).
- In addition, even when they exited poverty, the family income of working poor persons remained on average 40% lower than that of other workers.

Changes in family circumstances often explain the exit from poverty.

- Although work is a major factor for escaping poverty, nearly half of the exits from working poverty were the result of a change in the family environment, i.e. a change in the family structure following the formation of a union or the departure of a child, and/or a change in employment income of other family members.

Relatively few working poor individuals are former social assistance recipients.

- A large majority (70%) of those who were working poor in 2001 had not received any social assistance benefits in the previous five years.

Few factors are associated with persistent poverty for the working poor.

- The only factors that significantly increase the likelihood of experiencing persistent poverty for those who were working poor in 1996 were to be the sole earner in a family with children, to be unattached, or to be 45 to 59 years of age.

The findings presented in this study improve our understanding of working poverty in Canada. We now know the magnitude of the phenomenon, what the personal, family and labour market characteristics of working poor Canadians are, and what are the main factors associated with poverty for workers. We also know more about the longer term employment and low income trajectories of the working poor. However, some aspects of their situation have not yet been researched. For instance, we do not know what the financial assets and liabilities of working poor Canadians are compared to those of other workers and other poor. We know next to nothing about the physical and mental health status of children and adults living in working poor families, and about the intergenerational transmission of poverty among the working poor and how it might differ from the transmission of poverty among families who do not have a strong attachment to the labour market. Finally, we do not know much about the costs and benefits associated with different types of programs targeted at helping working poor Canadians. These are some of the important areas for further research on working poverty in Canada.

II. Policy Considerations

Many policies and programs in Canada benefit the working poor, e.g. the National Child Benefit, the Universal Child Care Benefit, the Employment Insurance program, Social Assistance, the minimum wage, various provincial earnings supplements, etc., though few are explicitly targeted at this group. But clearly, there remains more that can be done to alleviate poverty among workers and their families. The findings presented in this paper on the working poor, their families and their connection to the labour market provide some insights into the types of additional supports that could be most effective.

The research shows that *working is the key to avoiding poverty* and that *the working poor experience sizeable annual fluctuations in hours*. Therefore, policies that provide conditions favourable to economic growth and employment stability are an essential element to improving the situation of the working poor.

However, more is needed than the appropriate framework conditions to address the situation of the working poor. The research results show that attention needs to be given the family, its characteristics and behaviour, not simply the characteristics of the jobs held by poor workers. There can be a role to play for policies that make work pay, but should be targeted on the basis of family income. These policies can serve to increase

work effort as well as improve the situation of those already in work. Policies could be introduced to encourage the labour market participation of second earners where possible. Moreover, consideration should be given to whether the income support system is adequately structured to respond to specific circumstances of the working poor.

Numerous avenues exist to make work pay and increase the family income of the working poor. The United States and the United Kingdom have both introduced family-income tested benefits tied to earnings that are delivered through the tax system.

The literature provides consistent evidence, generated from a variety of empirical approaches, that the US Earned Income Tax Credit (or EITC) positively affects labour force participation (especially among lone mothers). However, the literature also finds smaller, negative effects on hours of work for people already in the labour market and for secondary workers.

In contrast to the EITC, the UK Working Tax Credit (or WTC) requires a minimum number of hours of paid work to be eligible¹⁰⁹ (note that the benefits in both programs are family-income tested). Because the WTC is targeted at those with a relatively strong attachment to the labour market, it is more effective than the EITC at helping working poor individuals (as they are defined in this document).

Whatever the design, it is important to be mindful of the fact that low-income individuals who work¹¹⁰ have an attachment to the labour market similar to their non-poor counterparts, but are more likely to experience either unemployment or a reduction in their hours of paid work. For this reason, if any financial assistance were to be offered conditional on work effort it would be useful to consider an individual's work history over several years to determine eligibility. Indeed, given that the number of hours worked in any one year is a function of market conditions as well as work-effort, single-year evaluation of work effort could be misleading in identifying the target population.

In short, the US EITC and the UK WTC appear to be effective tools in the fight against poverty (albeit on different groups of individuals). However, they can be costly and have the potential unwanted effect of depressing wages over time as employers allow real wages to drop in response to increased labour supply. Consequently, it may be desirable to establish and maintain a minimum wage at an appropriate level to avoid such erosion.

More targeted measures could also be implemented to help specific groups among the working poor. For instance, the research indicates that family characteristics are the main determinants of poverty for those in work. More specifically, *depending on only one earner and having many children to take care of significantly increase the risk of being poor for workers*. Consequently, policies that would encourage a second worker to join the labour market while relieving him/her of family responsibilities should be considered.

¹⁰⁹ The number of hours of paid work required to get compensation varies with family composition. For instance, unattached individuals and couples without children have to work 30 hours or more per week to get access to the WTC while couples with children and lone parents start receiving benefits when one of the adult in the family cumulates 16 hours of paid work or more per week.

¹¹⁰ This includes the working poor as well as those who cumulate between 1 hour and 910 hours of work. See Fortin & Fleury (2005) for more details.

Providing assistance for the purchase of child care to low income workers is one such policy that provides parents with the flexibility to choose the best option for their family¹¹¹. It would also help address challenges that arise with employment patterns seen more often with low income workers such as atypical work hours. Providing non-refundable tax breaks to the working poor would not be as helpful, as working poor Canadians, pay, on average, very little in income tax yearly¹¹².

It is also important to recognize that not all potential second earners could easily find employment. Some would need job search assistance. Others could require serious upgrading of their skills to raise their earnings potential and make work worthwhile. Such services could complement child care assistance. Also, because some of them have work limitations or are part of a high-risk group (i.e. are either Aboriginal persons living off-reserve or recent immigrants) it might also be appropriate to provide financial incentives for businesses to hire those individuals.

Moreover, as some potential earners are in the process of upgrading their own skills (many of them were studying either part-time or full-time in 2001), it would not make sense to provide incentives to work that might encourage those individuals to enter the labour market before they complete their education/training, since education is one of the best ways to improve employability. Therefore, for those who are studying it might be appropriate to consider providing financial assistance to better their economic situation so that they don't drop out before completing their education.

Finally, 28% of working poor Canadians (12% of all Canadians affected by working poverty) were unattached in 2001. Consequently, childcare would provide no assistance to these individuals. Therefore, other means would have to be considered to ensure adequate support to those individuals. This issue is particularly important to consider in the design of an earned income supplement.

In *'The Other Face of Working Poverty'* Fortin and Fleury (2005) show that the *Employment Insurance program* (EI) makes a huge difference in the lives of low-income Canadians not cumulating 910 hours of paid work yearly. The present research on working poor Canadians also shows that EI is more important for salaried workers with low incomes than it is for their non-poor counterparts. Consequently, improving access to EI benefits or increasing the family supplement would have the potential of lifting many low-income workers out of poverty. As well, because a large proportion of working poor Canadians are self-employed (41% in 2001), they are not covered by EI as it is currently designed. Broadening EI coverage or introducing an earnings supplement to include self-employed workers could therefore be considered as a way of helping working poor Canadians.

¹¹¹ Regardless of the type of assistance provided, consideration needs to be given to helping low income families address other barriers they may also face to employment such as race, culture or gender-bias.

¹¹² See Fleury, Fortin & Luong (2005) *What does it mean to be poor and working? An analysis of the spending patterns and living conditions of working poor families in Canada.*

Finally, Fleury, Fortin & Luong (2005) have looked into the *spending patterns of working poor families* for 2002 using Statistics Canada's Survey of Household Spending. Their research provides further indications of the kind of supplementary help that working poor Canadians could benefit from. Some points stand out from their research.

- *In 2002, from a spending point of view, working poor families appeared to have a much lower standard of living than other working families.*
- They were more likely to have time-saving household appliances and home entertainment equipment and their incomes were on average higher. However, *they had more mouths to feed, more time constraints, were more likely to borrow or sell assets to make ends meet, had more mandatory expenses related to work, had less access to subsidized housing, and appeared to be putting their long-term health at greater risk by reducing or delaying out-of-pocket spending on services not covered by government health insurance programs.*

These results indicate that better access to affordable housing, supplementary health care services (e.g. public drug insurance), transportation subsidies, etc. would also be useful to the working poor.

In short, many policies and programs could be implemented to help working poor Canadians escape poverty. Given the complexity of the working poor phenomenon, no single instrument is a panacea. Consequently, a mix of social and economic programs should be considered in any strategy to decrease both the incidence and depth of low income among Canadian workers.

Appendix A: Data

A.1 Statistics Canada's Survey of Labour and Income Dynamics (SLID)

This analysis of working poor Canadians is based on Statistics Canada's Survey of Labour and Income Dynamics (SLID). The SLID is a survey that has a longitudinal dimension. The main objectives of the SLID are to provide a better understanding of the changes that affect the economic well-being of Canadians over time and to identify the characteristics that have an impact on those changes. All persons selected in the first year of the Survey are part of what is called a panel. Each panel member is surveyed one or two times a year for a total of six consecutive years. They answer questions related to their labour market participation, income and family situation. Information on persons living with original respondents is also collected each year in order to provide cross-sectional data that are nationally representative in every given year.

A first panel of about 15,000 households or 30,000 individuals started in 1993. Since then, a new panel has been introduced every three years. When this study started, only the first two panels were completed (1993-98 and 1996-2001) and the most recent cross-sectional data were for year 2001. Thus, the authors chose to use the 2001 data for the purpose of their cross-sectional analysis and the 1996-2001 panel for their longitudinal analysis. Year 2001 includes data from the first two overlapping panels (a total of about 78,000 observations) while the 1996-2001 data are made of only one panel (a total of about 30,000 observations). When doing analysis with SLID, it is possible to get samples that are representative of the whole Canadian population with the use of weights.¹¹³ For cross-sectional analysis, the weighted sample is representative of the Canadian population in 2001 while for longitudinal analysis, it is representative of the Canadian population in the first year of the panel, i.e. 1996.

A.2 Missing Values

In this study, the target population includes all individuals aged 18 to 64 who are not studying full-time. To select this sample of the population, the authors chose to exclude all individuals for which they had no information relative to the student status (in other words, they excluded all observations for which values for the variables *flpft20* or *studtf26* were missing). This way, they insured that no full-time students were part of the final sample.

¹¹³ Excluding all residents of the Yukon, the Northwest Territories and Nunavut, residents of institutions and persons living on Indian reserves since they are not part of the SLID target population.

However, excluding observations may have had an impact on the representativeness of the sample. The objective of the following section is to check whether this hypothesis held true in this study.

Table A.2.1 Number of observations before and after the sample selection criteria were imposed, 2001		
	Weighted	Unweighted
Total	30,466,800	78,500
Individuals aged 18 to 64	19,880,900	49,800
Individuals aged 18 to 64 who are not fulltime students or whose student status is unknown*	17,937,900	45,500
Individuals aged 18 to 64 whose student status is known and who are not full time students	15,867,600	40,200

* Means that values for variables *flprt20* and *studtf26* are missing.

After the age criterion was imposed, around 10% of the observations still had an unknown student status. Table A.2.2 gives a portrait of the individuals who did not declare their student activities (missing values) and compares this portrait to that of the rest of the working-age population (non-missing values).

Table A.2.2 shows that the characteristics of individuals with missing values are somewhat different from those who do not have missing values. Indeed, individuals who did not report their student status were more likely to be male, single, to live in the province of Quebec, and not to have reported their education level in 2001. They were also, on average, younger and had, in general, lower personal and family incomes compared to persons whose student status was known. This profile of individuals with missing values suggests that those who did not report their student status in 2001 were particularly likely to be students.

Furthermore, it is worth noting that among all persons that were part of the group of individuals with missing values, 94% also had a missing value for the variable related to the number of hours of paid work during the year (*alhpr28*). Because the definition of working poor individuals require that they report the annual number of hours that they work, by excluding all individuals for which the student status was unknown, we ended up with only 1.7% of the sample that could not be classified either in the “worker” or “non-worker” categories.

Taken together, these results indicate that the choice of excluding individuals for which student status was unknown was a reasonable decision. However, it remains true that the profile of the omitted population is slightly different than that of the rest of the population and that, consequently, the sample used to conduct the analysis is not perfectly representative of the Canadian population.

Table A.2.2 Characteristics of the 18-64 population according to whether or not they had missing values for the SLID variables associated with their student status in 2001		
	Missing values	No missing values
Gender		
Female	47.4%	50.1%
Male	52.6%	49.9%
Education level		
Less than high school	14.6%	16.1%
High school diploma	18.8%	23.9%
Post-secondary education	22.9%	32.7%
University diploma	10.5%	16.0%
Education level unknown	33.2%	9.6%
Province of residence		
Atlantic provinces	5.5%	7.9%
Quebec	28.3%	23.8%
Ontario	39.8%	38.5%
Manitoba or Saskatchewan	4.9%	6.5%
Alberta	7.5%	10.2%
British Columbia	14.0%	13.2%
Marital status		
Single	36.3%	20.0%
Union	51.8%	68.9%
Separated/divorced/Widowed	11.7%	11.1%
Average age	38.6 years	42.0 years
Average disposable personal income	\$22,400	\$28,400
Average disposable family income	\$52,300	\$59,300

Bold characters indicate that values are statistically different at a confidence level of 95% between the missing and the non-missing categories.

Appendix B: *Logistic Regressions: Technical Details*

B.1 Details on the Sample and the Dependent Variable

As the target population of this research is working poor Canadians, we could have tried to answer the following question: “What are the factors that increase the probability for an **individual** to be working poor?” However, given the fairly complex nature of the concept of working poverty, which includes a work component (looked at from an individual perspective) and a poverty component (looked at from a family perspective), we sought instead to identify the factors that increase the probability for a **worker** to be poor.

For an individual, two conditions are necessary to be identified as being working poor: working enough hours and being part of a low-income family. This creates difficulties as most explanatory variables influence the probability of being a worker in the opposite way to the probability of being poor, and therefore the net effect of each characteristic on the probability of being working poor can be difficult to interpret.

For example, a low level of education generally decreases the probability that an individual will be working but increases the risk that this individual will have a low family income. In this case, the effect of a low level of education on the probability of being working poor would be positive only if the effect of the level of education on the probability of having a low-income is more significant than its effect on the probability of working, which may or not be the case. This is why the authors decided to examine the determinants of poverty among workers rather than the determinants of working poverty among all working-age adults in Canada.

B.2 Independent variables

Table B.2.1 Details concerning explanatory variables		
Groups of characteristics	Variables included in the groups (names and definitions)	
1. Demographic Characteristics		
	Gender	
	Female ¹¹⁴	Female
	Age	
	Age1824	18-24 years old
	Age2534	25-34 years old
	Age3554	35-54 years old
	Age5564	55-64 years old
	Province of residence	
	Atlant	Atlantic provinces (Nfld, PEI, NB or NS)
	Que	Quebec
	Ont	Ontario
	Prairie	Prairie provinces (Manitoba or Saskatchewan)
	Alb	Alberta
	BC	British Columbia
	Marital status	
	Sin	Single (never married)
	Union	In a union (married or common law)
	Sep	Separated, divorced or widowed
	Risk group	
	Hr	Recent immigrant or off-reserve Aboriginal person
	HRdk	High risk status unknown
	Work limitations	
	Limit	Has a health condition that limits work activities
2. Socioeconomic Characteristics		
	Level of education	
	Lesshs	Less than a high school diploma
	HS	High school diploma
	Postsec	Post-secondary education
	Univ	University diploma
	Educdk	Level of education unknown
	Student status	
	Student	Part-time student
	Work experience	
	Noexp	Fewer than 3 years of experience in the labour market
	Expdk	Work experience unknown

¹¹⁴ All of the characteristics are modelled by one or more dummy explanatory variables. Accordingly, for each characteristic, if the respondent fits the profile then the corresponding explanatory variable is set at 1; otherwise it is set at 0. For instance, for all female respondents the *female* variable is set at 1 while for all male respondents the *female* variable is set at 0. When one of the characteristics is modelled by more than one dummy explanatory variable, such as age, only the variable that fits the respondent's profile is set at 1. For instance, for a 19-year-old respondent the variable *age1824* is set at 1, while the variables *age2534*, *age3554* and *age5564* are all set at 0.

Table B.2.1 (End)

Groups of characteristics	Variables included in groups (names and definitions)	
3. Family Characteristics		
	Family type	
	Unatt	Unattached individual
	Couple1e	Childless couple, one earner
	Couple2e	Childless couple, two earners
	Couple2c1e	Couple with 1 or 2 children, one earner
	Couple2c2e	Couple with 1 or 2 children, two earners
	Couple3c1e	Couple with 3+ children, one earner
	Couple3c2e	Couple with 3+ children, two earners
	Lone	Lone-parent family
	Otherfam	Other family type
4. Characteristics Related to Work Effort		
	Number of hours of paid work during the year	
	Hours	910-1499 hours
	Hourm	1500-2499 hours
	Hourl	2500 hours or more
	Number of jobs during year	
	Onejob	Only one job during the year
5. Characteristics Related to Main Job		
	Self-employed	
	Selfemp	Was self-employed during the year
	Type of occupation	
	Finance	Business and finance
	Arts	Arts, sciences and health
	Sales	Sales and services
	Occother	Other
	Occdk	Type of occupation unknown
	Size of business	
	Sizes	Small (fewer than 20 employees)
	Sizem	Medium-sized (20-99 employees)
	Sizel	Large (100 employees or more)
	Sizedk	Size of business unknown

Appendix C: Logistic Regressions: Methodological Details

C.1 Description of the Method of Estimation: Logistic Regression

To answer the question “*What are the characteristics that increase the probability of a worker having a low family income?*” a logistic regression model was constructed. For all members of the sub-sample, namely individuals aged 18-64, who were not full-time students and who worked for pay at least 910 hours in 2001, we modelled the risk of having a low family income, based on their demographic, socioeconomic and family characteristics as well as those related to their work effort and main job. The dependent variable (Y) that we sought to model is a dichotomous variable set at:

- 1** if the worker was a member of a low-income family in 2001
- 0** if the worker was not a member of a low-income family in 2001

To clearly identify the characteristics having a statistically significant impact on the probability that $Y=1$, assumptions had to be formulated with respect to the probability $P(Y=1)$ in keeping with the laws of probability. One function frequently used when the dependent variable is binary is called the Logit:

$$P(Y=1) = \frac{e^{Xb}}{1 + e^{Xb}} ,$$

where Y is the vector of values associated with the dependent variable,
 X is the matrix of values associated with explanatory variables, and
 b is the vector of the coefficients associated with X .

Another frequently used function is called Probit, i.e.

$$P(Y=1) = \Phi(Xb) ,$$

where Φ represents the normal cumulative function.

When either of those functions is maximized by maximum likelihood, it is possible to find B , i.e. the vector of the estimated coefficients. In each case, to estimate b , it is essential to exclude a variable for each of the characteristic groups when the latter are expressed in multiple dummy explanatory variables; otherwise, the equation system becomes insoluble. The variables omitted (indicated in Tables 4.3a and 4.3b) thus become benchmark variables, i.e. those that serve as a points of reference when the results are being interpreted.

It should be noted that in most cases the estimations based on the latter two functions (Logit and Probit) are very similar and almost equivalent. However, it is quicker and easier to apply the model and to interpret the results when a logistic distribution is used, which is why that method was chosen in this study.

C.2 Correction for the Small Number of Poor Individuals in the Sample

It is important to note that a correction was made to the Logit in order to take into account the fact that our sample was not balanced, i.e. it included a much higher number of observations for which $Y=0$ than $Y=1$. Indeed, only 5.6% of the sample had a value $Y=1$. As noted by Tomz, King and Zeng (1999), having a low rate of $Y=1$ along with a small sample can skew the coefficients estimated using the Logit as well as the predicted probabilities arising from it. Therefore, we used the RELOGIT procedure proposed by those authors to correct that potential bias. However, it turned out that doing so changed only slightly the coefficients that were obtained (differences observed at the 4th or 5th decimal only). Given that those differences were so small, and because of the constraints imposed by that procedure (which does not lend itself to the use of bootstrap weights or to the calculation of average individual predicted probabilities), we ultimately decided not to use the proposed RELOGITQ procedure to calculate the predicted probabilities.

C.3 Correlations between Explanatory Variables

To neutralize the effect of other factors and to identify the relationship between each of the explanatory variables selected and the probability of a worker having a low family income, the variables were cross-tabulated in order to detect potential correlations. All (ρ) higher than 0.30 were thoroughly analyzed and choices were made on that basis in order to select the preferred model.

Table C.3.1 Couples of variables highly correlated		
Cross-tabulated variables		ρ
Single	Unattached individual	0.46
Separated/divorced/widowed	Unattached individual	0.30
Separated/divorced/widowed	Lone parent	0.38
Working full time	Fewer than 1500 hours of paid work	-0.51
Self-employed during the year	Business with fewer than 20 employees	0.35
Self-employed during the year	More than 2500 hours of paid work	0.35
Fewer than 3 years of experience	Aged 18-24	0.39
Male	Other type of occupation	0.36
Single	Aged 18-24	0.38

C.4 Evaluating the goodness of fit of the Model

One way of evaluating the goodness of fit of a Logit (or Probit) regression model is to calculate the percentage of cases in which individuals can be properly classified. With a logistic model, the predicted probability that $Y=1$ for an individual i is equal to

$$\overline{P}_i(Y = 1 | X_i) = \overline{\pi} = \frac{e^{X_i B}}{1 + e^{X_i B}},$$

and, as a general rule, it is predicted that $Y=1$ for individuals for whom

$$\bar{\pi} = \frac{1}{1+C} > 0.5,$$

where C indicates the extent to which the fact of incorrectly predicting a genuine $Y=1$ is more costly than incorrectly predicting a genuine $Y=0$. Since it is generally considered that both types of incorrect predictions are equally costly, C is set at 1 and it is predicted that $Y=1$ when $\bar{\pi} > 0.5$.

In a case such as ours, in which the actual number of $Y=1$ for workers is very low (only 5.6% of the sample), practically no $Y=1$ can be predicted when $\bar{\pi} > 0.5$, regardless of the number of regressors included in the model. Accordingly, the percentage of accurate classifications is not a good indicator of the predictive capability of the model, and the area over the ROC curve is a more appropriate measurement. It indicates the extent to which $Y=1$ and $Y=0$ can be accurately predicted when C varies. More specifically, for different values of C , the ROC curve is formed from the percentage of accurate predictions of 1 on the vertical axis and the percentage of accurate predictions of 0 on the horizontal axis. The diagonal line illustrates how the ROC curve would look if all Y values had been attributed randomly. The farther the ROC curve associated with a particular model is from the diagonal (or the larger the area under the ROC curve), the greater the estimated model's predictive capability (for further details on that method, see King and Zeng, 2001).

C.5 Interpretation of the Coefficients, Predicted Probabilities and Marginal Effects

The coefficients estimated using a logit are difficult to interpret since the logit function is not linear. In fact, the only information that each of the estimated coefficients provides pertains to the direction and magnitude of the correlation between each of the explanatory variables and the dependent variable. If a coefficient is higher than 0, it is because the explanatory variable associated with it increases the probability that $Y=1$ and vice versa. Moreover, the proximity of 0 indicates the magnitude of the impact. The farther the estimated coefficient is from 0, the greater the impact of the explanatory variable on the probability and vice versa. In order to assess whether the estimated coefficients are significant, the level of confidence that was chosen is 95%. This means that the effect of each of the explanatory variables is deemed significant when the likelihood of the estimated coefficient associated with it equalling 0 is less than 5% or, in other words, when $(\text{Prob}>|T|)<0.05$.

For a more accurate idea of the quantitative impact of each characteristic on the probability of being poor for workers, predicted probabilities can be calculated. There are two ways of obtaining predicted probabilities: by taking the average of the individual predicted probabilities or by calculating the predicted probabilities at the average values of the explanatory variables, taking the estimated coefficients into account. When the data processing is not overly complicated, the first way is preferred since it allows us, in a finite sample, to obtain predicted probabilities that are precise rather than approximate, and that is what the authors chose to do.

Finally, when the value of each of the dummy explanatory variables is set at 1 and then at 0, it is possible, first, to calculate the predicted probability of a worker with that characteristic being poor and, second, to obtain marginal effects, i.e. to determine the impact on the predicted probability of having a particular characteristic compared with not having it. For example, to assess the impact of a worker's gender on the probability of being poor, we compare:

$$\bar{P}(Y=1) = \frac{1}{N} \times \sum_{i=1}^N \frac{e^{1*B_1 + \sum_{k=2}^K X_{ik} B_k}}{1 + e^{1*B_1 + \sum_{k=2}^K X_{ik} B_k}} \quad \text{and} \quad \bar{P}(Y=0) = \frac{1}{N} \times \sum_{i=1}^N \frac{e^{0*B_1 + \sum_{k=2}^K X_{ik} B_k}}{1 + e^{0*B_1 + \sum_{k=2}^K X_{ik} B_k}}$$

where

\bar{P} is the average of the individual predicted probabilities when *Female*=1 and then *Female*=0

B_1 is the estimated coefficient associated with the *Female* variable

B_K is the vector of estimated coefficients associated with variables other than *Female*

X_i is the vector of the values of the explanatory variables for all individuals in the sample

K is the total number of explanatory variables other than *Female*.

Appendix D: Robustness of the Results to Definitional Changes

In chapter two, a new definition of working poverty was developed. This new definition was then used throughout the following chapters to gain a better understanding of working poor Canadians. However, one could argue that the information collected on working poor Canadians is a function of the way that they were defined in the first place. Thus, this appendix presents alternative definitions of working poverty and tests the robustness of the main results presented in this document to changes in the preferred definition.

D.1 Including Full-Time Students in the Working Poor

In this Working Paper, working poor individuals and families are defined as follows:

- *Working poor individuals* are those individuals aged 18 to 64 who have worked for pay a minimum of 910 hours in the reference year, *who are not full-time students*, and who have a low family income according to the Market Basket Measure of low income; and
- *Working Poor Families* are economic families where at least one member is a working poor individual.

One of the choices that were made when defining the working poor was to exclude full-time students from the sample. This decision was made on the basis that jobs are often transitory for full-time students, taken on to provide a supplementary income while they are studying and not reflective of their ability to achieve long term economic and social goals. But was this a wise choice? Are full-time students who are working poor so different from other working poor persons that their exclusion from the sample was warranted? The following sections present detailed information on this group which support this decision.

D.1.2 Number of Full-Time Students who Are Working Poor

In 2001, there were about 94,000 full-time students who could have been considered as working poor (FTSWP¹¹⁵), of which a large majority (over 65%) were unattached (see Table 5.1). When including dependants, about 115,000 individuals were part of a family including a FTSWP, of which less than 18% were children under 18.

¹¹⁵ FTSWP are individuals aged 18 to 64 who have worked for pay a minimum of 910 hours in the reference year, who are full-time students, and whose family income falls below the MBM.

Without the restrictions on full-time students, the total number of working poor Canadians would have climbed to over 747,000 individuals. Including dependants, over 1.6 million individuals would have been part of a working poor family, of which about a third would have been children under 18.

D.1.3 Work Effort

In 2001, FTSWP worked on average 1,392 hours and 31% worked the equivalent of full-time, full-year. In comparison, working poor individuals had a much stronger attachment to the labour market (they worked on average 700 hours more in 2001, and a large majority, 76%, reported 1,500 hours of paid work or more during the year).

D.1.4 Labour Market Conditions

In 2001, salaried FTSWP earned on average \$9.76 per hour, about 14% of them earned the minimum wage¹¹⁶, and almost 66% were low-paid (defined as earning \$10 per hour or less). The situation was rather different for salaried working poor persons who earned on average 26% more (close to \$12 per hour), were a lot less likely to earn the minimum wage (only 6.7% of them did) and to be low-paid (48.2% of salaried working poor Canadians were low-paid in 2001).

D.1.5 Descriptive Profile

Table D.1 provides detailed information on FTSWP including their demographic, socioeconomic, family and labour market characteristics. The next paragraphs comment in detail on those results and clearly show significant differences in the profiles of FTSWP and other working poor persons. Please note that the only proportions that are discussed in this section are those that are statistically different between the two groups at confidence intervals of 95%.

In 2001, there were more women than men among FTSWP (57% compared to 43%) and most FTSWP (over 65%) were under 25 year old. A large majority (83%) were single and almost none of them were part of a high risk group¹¹⁷. In comparison, working poor persons were more likely to be male than female, only 12% were 18-24 and 54% were in a union.

Looking at socioeconomic characteristics, over 65% of FTSWP had completed a high school diploma or more, this compares to about 48% of all working poor persons. These results confirm that the current financial situation of FTFSW is not representative of their long term social and economic potential.

¹¹⁶ In this chapter and in chapter 7, individuals who earned the minimum wage were defined as individuals earning plus or minus 25 cents around the actual minimum wage available in their province in 2001. Chapter 7 discusses the rationale supporting this choice.

¹¹⁷ High risk groups include recent immigrants, Aboriginals living off-reserve and persons with work limitations.

Turning to family characteristics, a large majority (close to 66%) of FTSWP was unattached. This proportion was less than half as high among working poor individuals, who were much more likely to be part of a couple (about 54% of working poor persons were in this situation in 2001 compared to less than 18% of FTSWP).

Moving to labour market characteristics, in 2001 most FTSWP (69%) worked less than 1,500 hours per year; a similar proportion worked full-time in their main job and 51.3% cumulated more than one job during the year. On the other hand, most FTSWP (over 65%) had less than three years of experience in the labour market. In contrast, working poor persons worked a lot more, were much more likely to have at least three years of work experience but were a lot less likely to have cumulated more than one job during the year.

Finally, one of the most striking results of this part of the research is that less than 5% of FTSWP were self-employed while this was the case for over 40% of other working poor persons. Looking at job characteristics, most FTSWP (over 54%) worked for a small enterprise and a majority (over 50%) worked in the sales and services industry. In comparison, working poor persons were more likely than FTSWP to work in a small business. However, even though a large proportion of other working poor persons worked in the sales and services industry, they were still a lot less likely than FTSWP to do so¹¹⁸.

D.1.6 Rates of Poverty

In 2001, only two factors significantly increased¹¹⁹ the rate of poverty for full-time students who were working (FTSW), those were: 1) to be unattached; and 2) to live in one of the Western provinces.

In chapter 4, results from logistic regressions showed that the factor which most increased the risk of having a low family income for workers was to depend on only one earner. This is, to some extent, reflected in the importance of being unattached for FTSW. Living in British Columbia was also a significant risk factor for workers. Again, this is somewhat reflected in the importance of living in Western Provinces for FTSWP. On the other hand, many factors of no importance at all to FTSW were crucial in explaining the incidence of poverty among workers, e.g. to have many children and to be self-employed.

¹¹⁸ It is likely that the self-employment status is highly correlated with the sector of employment. However, descriptive statistics do not allow controlling for correlations between variables.

¹¹⁹ We did not conduct logistic regressions to identify with more precision which factors would, indeed, have increased the probability of being poor for FTSW. The rates of poverty for FTSW were so different from those observed among other workers that we can safely assume that these differences would be reflected in logistic regression results.

Table D.1 Number of full time students who were working (FTSW), number of full time students who were working poor (FTSWP), proportion of the different groups among all FTSWP, rates of FTSWP among FTSW and difference with the smallest rate, 2001					
	Nb FTSW	Nb FTSWP	Proportion of FTSWP	Rate of FTSWP among FTSW	Difference with the smallest rate
All Individuals	765,900	94,100	100%	12.3%	
1. Demographic Characteristics					
Gender					
Male	387,300	40,300	42.8%	10.4%	0.0
Female	378,600	53,900	57.2%	14.2%	3.8
Age					
18-24	497,600	61,800	65.7%	12.4%	0.4
25-64	268,300	32,300	34.3%	12%	0.0
Province					
Eastern Provinces (QC, NFLD, PEI, NB or NS)	235,000	27,400	29.2%	11.7%	2.3
Ontario	287,500	27,000	28.7%	9.4%	0.0
Western Provinces	146,600	39,700	42.1%	19.7%	10.3
Marital Status					
Single (was never married)	593,000	78,400	83.3%	13.2%	4.1
In a union, separated, divorced or a widow	173,000	15,700	16.7%	9.1%	0.0
Immigrant or Aboriginal living off-reserve					
Yes	45,100	X	X	X	X
No	667,100	79,600	84.6%	11.9%	X
Work Limitations					
Yes	26,600	X	X	X	X
No	739,300	91,000	96.6%	12.3%	X
2. Socioeconomic Characteristics					
Highest level of education					
HSD or less	223,100	29,900	31.7%	13.4%	1.8
More than a HSD	487,100	56,300	59.8%	11.6%	0.0
Work Experience					
Less than 3 years	325,500	45,300	48.1%	13.9%	0.0
3 years or more	202,000	23,700	25.2%	11.7%	2.2

Table D.1 (End)					
	Nb FTSW	Nb FTSWP	Proportion of FTSWP	Rate of FTSWP among FTSW	Difference with the smallest rate
3. Family Characteristics					
Family Type					
Unattached	151,600	61,900	65.8%	40.8%	35.3
Couple	481,900	16,700	17.8%	3.5%	0.0
Other family type	132,300	15,500	16.4%	11.7%	8.2
4. Characteristics Related to Work Effort					
Number of hours worked					
910-1,499 hours	440,200	65,200	69.3%	14.8%	5.9
1,500 hours and more	325,700	28,900	30.7%	8.9%	0.0
Worked full time in main job					
Yes	498,900	61,800	65.6%	12.4%	0.0
No	217,200	27,600	29.3%	12.7%	0.3
Cumulated more than one job during the year					
Yes	347,000	48,300	51.3%	13.9%	2.9
No	419,000	45,900	48.7%	11%	0.0
5. Characteristics Related to Main Job					
Self employed during the year					
Yes	26,900	X	X	X	X
No	739,000	89,400	95%	12.1%	X
Type of Occupation					
Finance, business, arts, sciences & health	305,400	27,000	28.6%	8.8%	0.0
Sales and services	318,200	47,300	50.3%	14.9%	6.1
Other occupation	135,000	19,100	20.3%	14.2%	5.4
Size of Business					
Small (<20 employees)	306,500	49,000	52%	16%	6.4
Medium or large (20+ employees)	432,200	41,300	43.9	9.6%	0.0

D.1.7 Longitudinal Analysis

In order to get a fuller picture of the FTSWP we also looked at their long-term low-income situation and work progression. Table D.2 shows that over the long run, the FTSW have quite different outcomes from other working poor persons. Those who had a low income in 1996 (based on the LICOs) cumulated a lot less hours of paid work over 1996-2001, and were also almost twice as likely to spend at least one year without working. However, a larger proportion of the FTSWP left low income within two years, and close to 90% avoided persistent low-income compared to 60% of working poor persons. This means that, as expected, the FTSWP are not as vulnerable to long-term low-income as other working poor individuals.

Table D.2 Longitudinal results for individuals identified as WP in 1996 or FTSWP in 1996 (LICO-IAT)		
	FTSWP in 1996	WP in 1996
Hours of paid work cumulated over 1996-2001	7,935 hours	11,494 hours
Proportion who spent one year without working	27%	15%
Proportion who left low income within two years	76%	64%
Proportion who avoided persistent low income	89%	60%

D.1.8 Summary

The analysis of full-time students who are working poor (FTSWP) clearly indicates that they have characteristics and behaviours quite different from those of other working poor persons, and as such likely have different needs. Consequently, the decision to exclude full-time students from the sample of working poor individuals appears to be warranted and, in fact, desirable from a policy-making perspective.

D.2 Changing the Low-Income Measure

The main determinants of low income for workers are, in general, robust to changes in the low income measure.

The objective of this Working Paper is to better understand poverty among workers. Therefore, the measure used to identify who is poor and who is not may have had an influence on the results presented.

As discussed in Chapter 2, there is no official definition of poverty in Canada. There are, however, various measures of low income: the low income cutoffs (LICOs), the low income measure (LIM) and the market basket measure (MBM). For reasons discussed earlier, the MBM was chosen to measure poverty in the cross-sectional part of this study. Still, it is worthwhile checking whether the use of an alternative measure of low income, in this case the LICOs, leads to different conclusions in terms of the determinants of poverty among workers in 2001, in which case it would not be possible to conclude that the results are robust.

As illustrated in Graph D.1, using the original and alternative definitions result in different number of individuals identified as working poor. Similarly to the overall incidence of low income in Canada, the incidence of low income among Canadian workers is higher when the MBM, rather than the LICO, is used (5.6% vs. 4.0%). With the MBM, over 653,000 Canadians were identified as working poor in 2001 while only around 460,000 were so when using the after-tax LICOs.

Also, with the LICOs, a greater proportion of working poor individuals are unattached. As can be seen in Table D.3, two working poor individuals out of five (40%) were not part of a family of two persons or more in 2001 with the LICOs while less than 30% were so when using the MBM.

Looking at the factors that increase the likelihood of being poor for workers, the original and alternative definitions pinpoint the same characteristics though. Independently of the characteristics, the probability of having a low income is always higher when the MBM is used (see Tables D.5 and D.6). However, the characteristics that increase the risk of low income for workers and their order of importance remain virtually the same whatever the measure, thus indicating that the determinants of poverty among workers identified earlier are robust.

Indeed, family characteristics as well as the self-employment and low-pay status of workers are the most significant determinants of poverty, whether the MBM or the LICOs are used. The only characteristics that have a stronger impact on the probability of poverty among workers when using the LICOs rather than the MBM are to have work limitations and to be unattached. With the LICOs, having work limitations seems more important than being a recent immigrant or an Aboriginal person living off-reserve in explaining poverty among workers, while the opposite is observed with the MBM. Nevertheless, being part of a high-risk group (i.e. to be a recent immigrant, an Aboriginal person living off-reserve or having work limitations) is a significant determinant of poverty among workers whatever the measure.

Using the LICOs rather than the MBM also increases the risk of poverty for workers who are unattached, to the point that, with that measure, those workers seem to be at greater risk of poverty than workers who are heads of lone-parent families. This finding reinforces the authors' decision to use the MBM instead of the LICOs. Indeed, intuition would suggest that lone parents who work are more vulnerable to poverty than unattached workers. Lone parents support not only themselves but also their children, whereas unattached individuals have only their own needs to meet. Moreover, lone parents have more work-related expenses such as childcare. It is true that lone parents have more access to government income security-related programs, as those programs are most of the time targeted to families with children. However, such programs usually cover only a fraction of child rearing costs. Therefore, even with equal incomes, it is reasonable to assume that lone parents have a lower standard of living than unattached individuals. The LICOs do not reflect that fact since, unlike the MBM, they do not take families' "mandatory" expenses into account.

Finally, with the LICOs, the province of residence is not identified as a key determinant of poverty among workers, whereas with the MBM it is clear that workers living in British Columbia are at much greater risk than workers living in Quebec. This is because the LICOs do not consider the variations in the cost of living among the various provinces and regions of Canada, whereas the MBM does.

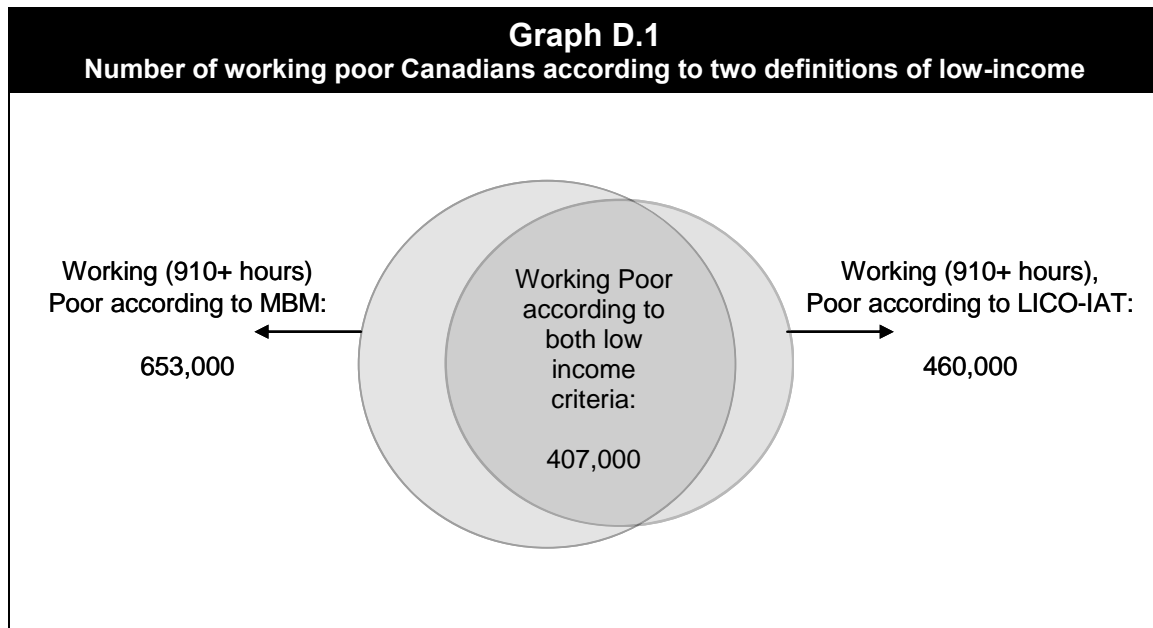


Table D.3
Number of working poor (WP) individuals, unattached WP, member of WP families and number of members of working poor families in 2001, according to the original and alternative measures of low income

Low income measure	Working poor	Unattached WP	Member of WP 2+ families	Total of individuals living in a working poor family
MBM	653,300	28.0%	72.0%	1,500,000
LICOs	459,700	40.0%	60.0%	963,700

Table D.4
Labour force status of working poor and working non-poor individuals in 2001, according to the original and alternative measures of low income

	Working poor (MBM)	Working poor (LICOs)	Working non-poor (MBM)	Working non-poor (LICOs)
Self-employed	40.7%	40.4%	13.2%	13.7%
Salaried workers earning less than \$10/h	26.8%	29.6%	11.1%	11.3%
Salaried workers earning \$10/h or more	32.5%	30.0%	75.6%	75.0%

Table D.5 Estimated coefficients, level of significance of coefficients, predicted probabilities and difference in relation to lowest predicted probability of poverty among workers for all characteristics when the LICOs are used to identify low-income individuals, 2001				
	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
All workers			4.0%	
1. Demographic Characteristics				
Gender				
Female	0.3395	0.0036	4.6%	1.1
Male (OMITTED)			3.5%	0.0
Age				
18-24	0.7844	0.0000	6.6%	3.1
25-34	0.1952	0.1827	4.2%	0.7
35-54 (OMITTED)			3.6%	0.1
55-64	-0.0386	0.8332	3.5%	0.0
Province of residence				
Atlantic provinces	0.1634	0.2999	3.9%	0.5
Quebec	0.2975	0.0871	4.4%	1.0
Ontario (OMITTED)			3.4%	0.0
Manitoba or Saskatchewan	0.0602	0.6845	3.6%	0.2
Alberta	0.2235	0.1766	4.1%	0.7
British Columbia	0.3992	0.0281	4.7%	1.3
Recent immigrant or Aboriginal off-reserve				
Yes	0.6927	0.0005	6.6%	2.7
No (OMITTED)			3.9%	0.0
Work limitations				
Yes	0.7476	0.0000	6.7%	3.0
No (OMITTED)			3.7%	0.0
2. Socioeconomic Characteristics				
Highest level of education				
Less than high school diploma	0.5748	0.0158	4.8%	1.8
High school diploma	0.3390	0.1328	4.0%	1.0
Post-secondary	0.2580	0.2149	3.7%	0.7
University (OMITTED)			3.0%	0.0
Part-time student				
Yes	-0.4666	0.0825	2.7%	0.0
No (OMITTED)			4.0%	1.3
Experience in the labour market				
Fewer than 3 years	0.5069	0.0114	5.0%	1.7
3 or more years (OMITTED)			3.3%	0.0

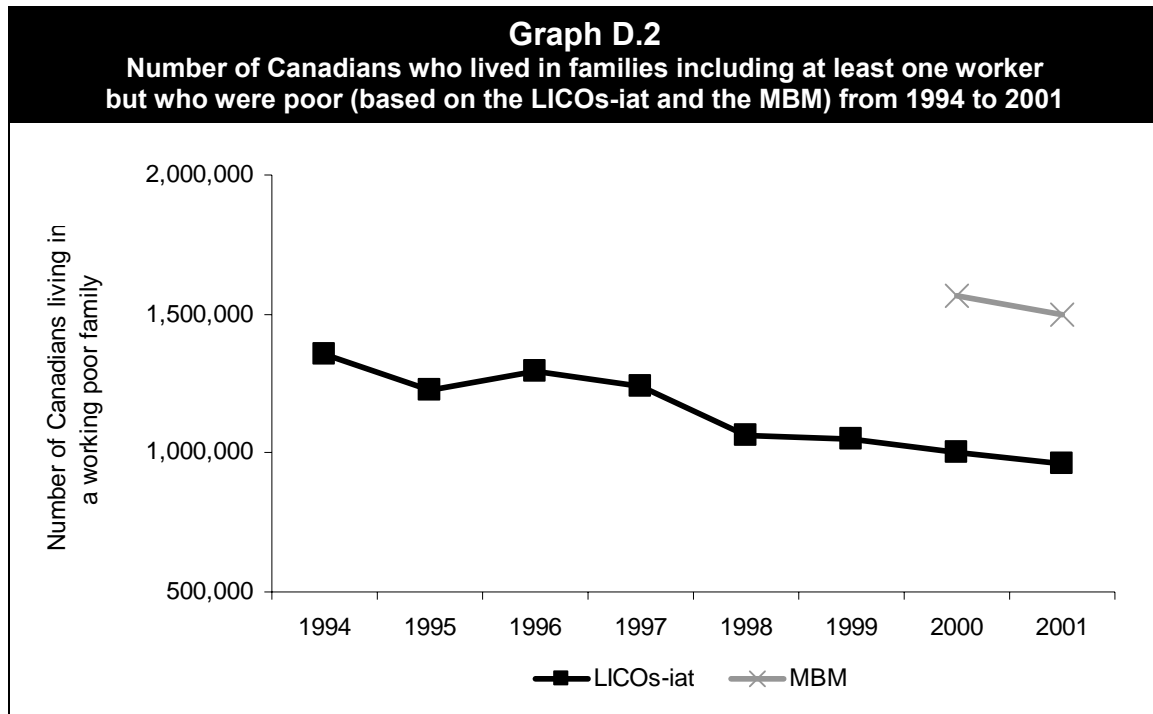
Table D.5 (End)

	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
3. Family Characteristics				
Family type				
Unattached individual	2.7684	0.0000	11.6%	10.6
Childless couple, one earner	2.1315	0.0000	7.0%	6.0
Childless couple, two earners (OMITTED)			1.0%	0.0
Couple with 1 or 2 children, one earner	3.1392	0.0000	15.1%	14.1
Couple with 1 or 2 children, two earners	0.4270	0.0823	1.5%	0.5
Couple with 3+ children, one earner	3.3837	0.0000	17.9%	16.9
Couple with 3+ children, two earners	0.9869	0.0004	2.6%	1.6
Lone-parent family	2.5946	0.0000	10.2%	9.2
Other family type	1.1400	0.0007	3.0%	2.0
4. Characteristics Related to Work Effort				
Number of hours of paid work during the year				
910-1499	0.9567	0.0000	6.9%	3.7
1500-2499 (OMITTED)			3.2%	0.0
2500+	0.3377	0.0345	4.2%	1.0
Only one job during the year				
Yes	-0.1958	0.1284	3.8%	0.0
No (OMITTED)			4.5%	0.7
5. Characteristics Related to Main Job				
Self-employed during the year				
Yes	1.4798	0.0000	9.3%	6.4
No (OMITTED)			2.9%	0.0
Type of occupation				
Business and finance (OMITTED)			3.5%	0.7
Arts, sciences and health	-0.2806	0.1395	2.8%	0.0
Sales and services	0.5548	0.0001	5.5%	2.7
Other	0.1525	0.3620	4.0%	1.2
Size of business				
Small (<20 employees)	0.9066	0.0000	4.9%	2.6
Medium-sized (20-99)	0.4771	0.0062	3.5%	1.2
Large (100+) (OMITTED)			2.3%	0.0
* All coefficients with a P-value <0.05 are statistically significant at a confidence level of 95%.				
** pp means percentage point.				

Table D.6 Estimation of the impact of family characteristics, hourly wages and number of hours of paid work on the probability of being poor for workers when the LICOs are used to identify low-income individuals, 2001				
	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
1. Family Characteristics				
Family type				
Unattached individual	2.7231	0.0000	11.9	10.9
Childless couple, one earner	1.9890	0.0000	6.6	5.6
Childless couple, two earners (OMITTED)			1.0	0.0
Couple with 1 or 2 children, one earner	3.0713	0.0000	15.3	14.3
Couple with 1 or 2 children, two earners	0.3543	0.1541	1.5	0.5
Couple with 3+ children, one earner	3.2934	0.0000	17.9	16.9
Couple with 3+ children, two earners	0.8661	0.0018	2.4	1.4
Lone-parent family	2.5185	0.0000	10.2	9.2
Other family type	1.2207	0.0002	3.3	2.3
2. Characteristics Related to Work				
Hours of paid work				
910-1499	0.9256	0.0000	7.2	3.8
1500+ (OMITTED)			3.4	0.0
Labour force Status				
Self-employed	2.2484	0.0000	11.7	10.0
Salaried who earned less than \$10/hr	1.8009	0.0000	8.3	6.6
Salaried who earned \$10/hr or more (OMITTED)			1.7	0.0
* All coefficients with a P-value <0.05 are statistically significant at a confidence level of 95%. ** pp means percentage point.				

D.2.1 Trend in the Number of Working Poor Canadians Using the After-Tax LICOs

It should be noted that with the use of the LICOs-iat instead of the MBM, it is possible to observe the trend in the number of Canadians affected by working poverty over a longer time period. As can be seen in Graph D.2, the number of individuals being part of a working poor family decreased over the 1994 to 2001 period, going from more than 1.3 million to a little less than 1 million.



More details about the trends in the number of working poor individuals in Canada from 1994 to 2001 can be found in the following tables.

Table D.7 Number of individuals before and after sample selection criteria have been imposed, from 1994 to 2001 using the LICOs-iat								
	1994	1995	1996	1997	1998	1999	2000	2001
Total	28,430,900	28,733,700	29,056,500	29,367,700	29,627,100	29,898,200	30,179,500	30,466,800
18-64	18,215,100	18,415,600	18,645,700	18,891,600	19,118,900	19,357,200	19,614,100	19,880,900
18-64, not FTS	14,896,800	15,154,800	15,360,500	15,707,000	15,765,700	15,994,100	15,467,300	15,867,600

Table D.8 Number of low income individuals, workers and working poor individuals among the targeted population, from 1994 to 2001 using the LICOs-iat								
	1994	1995	1996	1997	1998	1999	2000	2001
low income persons	1,652,800	1,590,900	1,829,600	1,799,900	1,600,400	1,672,200	1,491,300	1,388,900
workers (910+ hours)	10,242,000	10,552,800	10,426,500	10,699,900	10,892,100	10,968,000	10,904,500	11,587,400
working poor persons (WP)	583,400	545,100	578,500	575,300	499,100	493,300	468,400	459,700

Table D.9 Number of working poor individuals who were unattached, heads of 2+ families, and total number of individuals who were part of a working poor family, from 1994 to 2001 using the LICOs-iat								
	1994	1995	1996	1997	1998	1999	2000	2001
Unattached WP	159,000	215,200	222,200	225,600	197,000	219,200	185,300	183,900
Head of 2+ WP family	333,900	270,000	291,600	279,800	244,600	232,900	232,200	229,500
Children living in WP family	419,600	374,500	439,700	389,900	334,600	332,500	330,900	307,400
All dependants in WP family	864,400	738,300	782,200	734,700	619,200	595,600	585,700	550,400
All persons affected by Working Poverty	1,357,300	1,223,500	1,295,900	1,240,100	1,060,800	1,047,700	1,003,200	963,700

Table D.10 Depth of poverty among working poor individuals, from 1994 to 2001 using the LICOs-iat								
	1994	1995	1996	1997	1998	1999	2000	2001
Poverty depth	30.3%	33.4%	29.0%	28.1%	30.7%	29.7%	29.9%	31.6%

Table D.11 Statistics on the poor and working poor population, from 1994 to 2001 using the MBM								
	1994	1995	1996	1997	1998	1999	2000	2001
low income persons	-	-	-	-	-	-	1,866,900	1,738,600
working poor persons (WP)	--	-	--	-	--	--	670,500	653,300
Unattached WP	-	-	-	-	-	-	178,100	185,700
Head of 2+ WP family.	-	-	-	-	-	-	387,100	370,600
Children in WP family	-	-	-	-	-	-	552,600	511,300
All dependants in WP family	-	-	-	-	-	-	999,900	943,700
All persons affected by Working Poverty	-	-	-	-	-	-	1,565,100	1,500,000
Poverty depth	-	-	-	-	-	-	28.6%	30.5%

D.3 Tightening the Work Criterion

In the original definition, the number of hours worked is used to identify who is a worker and who is not. According to this definition, workers are individuals who worked for pay at least 910 hours in the reference year. We chose this threshold because it recognizes that unemployment is sometimes out of an individuals' control. However, some could argue that to be working poor an individual should demonstrate a very strong attachment to the labour market.

This section looks into what would have happened to the main findings on working poor Canadians if we had tightened the work criterion to include only full-time full-year workers¹²⁰.

Table D.12 shows that one of the main difference between the original definition and the more restrictive definition that only includes full-time full-year workers is the number of individuals who would have been identified as being working poor in 2001 (as was the case with a change in the low-income threshold). Indeed, with the 910 hours threshold over 653,000 Canadians were identified as being working poor in 2001 while about 414,700 were so when keeping only full-time full-year workers. In addition, while a total of 1.5 million individuals were living in a working poor family in 2001 when using the original work criterion, this number falls to about 1.1 million persons when tightening the work criterion. Interestingly, unattached individuals account for a slightly higher share of workers who cumulated 910 hours of paid work or more than of those working full-time full-year in 2001.

Also, looking at the labour force status of individuals reported in Table D.13 we find a greater proportion of self-employed workers among full-time full-year workers than among those who worked at least 910 hours in 2001 (53% vs 41%).

As Table D.14 shows, the overall probability of being poor for full-time full-year workers in 2001 was 4.7% while it was 5.6% for workers identified using the original definition. In fact, the only factors that have a strongest influence on the risk of poverty when the sample is restricted to full-time full-year workers are to be self-employed, to have a limited number of years of experience in the labour market and to be a female. The influence of all other characteristics slightly decreases when tightening the work threshold. Still, when looking at the factors that mostly explain the likelihood of having a low family income for workers, the original and the more stringent work criteria identify the same characteristics, i.e. to depend on only one earner; to have many children; to be self-employed; to live in British-Colombia, to be part of a high risk group; to be young; etc. This confirms that the main conclusions on the determinants of poverty among Canadian workers hold even when considering only full-time full-year workers.

¹²⁰ In the SLID, Statistics Canada defines full-time full-year workers as those who work 30 hours or more per week for at least 49 weeks.

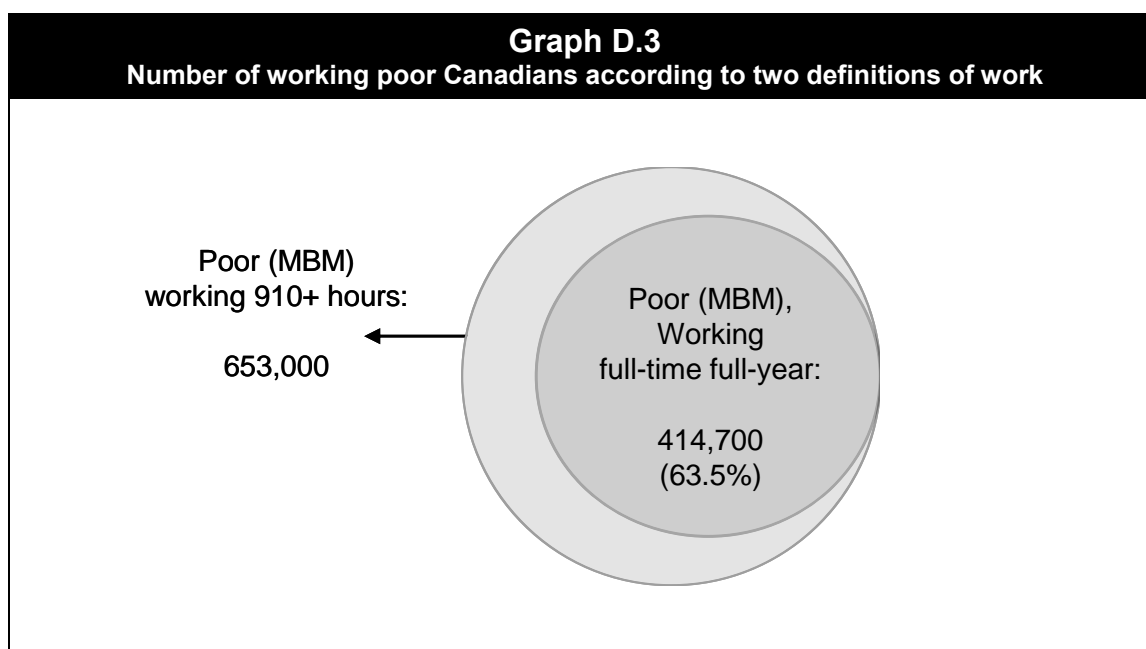


Table D.12
Number of working poor (WP) individuals, unattached WP, member of WP families and number of members of working poor families in 2001, according to the original and the more stringent criterion to identify workers

Work criterion	Working poor	Unattached WP	Member of WP 2+ families	Total of individuals living in a working poor family
910+ hours	653,300	28.0%	72.0%	1,500,000
FTFY	414,700	24.7%	75.3%	1,091,300

Table D.13
Labour force status of working poor individuals in 2001, according to the original and the more stringent criterion to identified workers

	Poor and working 910+ hours	Non-poor and working 910+ hours	Poor and working FTFY	Non-poor and working FTFY
Self-employed	40.7%	13.2%	52.7%	14.2%
Salaried workers earning less than \$10/h	26.8%	11.1%	20.0%	8.4%
Salaried workers earning \$10/h or more	32.5%	75.6%	27.3%	77.5%

Table D.14 Estimation of the impact of different characteristics on the probability of being poor for full-time full-year workers, 2001				
	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
All workers			4.7%	
1. Demographic Characteristics				
Gender				
Female	0.3564	0.0008	5.6%	1.4
Male (OMITTED)			4.2%	0.0
Age				
18-24	0.7086	0.0014	7.6%	3.4
25-34	0.1864	0.1823	5.1%	0.9
35-54 (OMITTED)			4.4%	0.2
55-64	-0.0559	0.7802	4.2%	0.0
Province of residence				
Atlantic provinces	0.5901	0.0000	6.7%	3.6
Quebec	-0.3757	0.0284	3.1%	0.0
Ontario (OMITTED)			4.2%	1.1
Manitoba or Saskatchewan	-0.0613	0.7093	4.0%	0.9
Alberta	0.1229	0.4963	4.6%	1.5
British Columbia	0.7972	0.0000	7.8%	4.7
Recent immigrant or Aboriginal off-reserve				
Yes	0.8688	0.0000	8.8%	4.3
No (OMITTED)			4.5%	0.0
Work limitations				
Yes	0.5078	0.0040	6.7%	2.2
No (OMITTED)			4.5%	0.0
2. Socioeconomic Characteristics				
Highest level of education				
Less than high school diploma	0.8696	0.0001	6.3%	3.2
High school diploma	0.5712	0.0067	5.0%	1.9
Post-secondary	0.3102	0.1069	4.0%	0.9
University (OMITTED)			3.1%	0.0
Part-time student				
Yes	-0.4080	0.1670	3.4%	0.0
No (OMITTED)			4.7%	1.3
Experience in the labour market				
Fewer than 3 years	0.5387	0.0469	6.5%	2.3
3 or more years (OMITTED)			4.2%	0.0

Table D.14 (End)

	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
3. Family Characteristics				
Family type				
Unattached individual	1.9513	0.0000	9.4%	7.6
Childless couple, one earner	1.6541	0.0000	7.5%	5.7
Childless couple, two earners (OMITTED)			1.8%	0.0
Couple with 1 or 2 children, one earner	2.6238	0.0000	15.1%	13.3
Couple with 1 or 2 children, two earners	0.5745	0.0035	3.0%	1.2
Couple with 3+ children, one earner	3.2534	0.0000	22.5%	20.7
Couple with 3+ children, two earners	1.3526	0.0000	5.9%	2.6
Lone-parent family	2.3550	0.0000	12.6%	10.8
Other family type	0.7262	0.0098	3.4%	1.6
4. Characteristics Related to Work Effort				
Only one job during the year				
Yes	-0.0841	0.5452	4.6%	0.0
No (OMITTED)			4.9%	0.3
5. Characteristics Related to Main Job				
Self-employed during the year				
Yes	1.7758	0.0000	12.0%	9.2
No (OMITTED)			2.8%	0.0
Type of occupation				
Business and finance (OMITTED)			3.7%	0.2
Arts, sciences and health	-0.0723	0.6736	3.5%	0.0
Sales and services	0.5337	0.0001	5.7%	2.2
Other	0.5154	0.0005	5.6%	2.1
Size of business				
Small (<20 employees)	1.0189	0.0000	6.0%	3.5
Medium-sized (20-99)	0.4948	0.0038	3.9%	1.4
Large (100+) (OMITTED)			2.5%	0.0
* All coefficients with a P-value <0.05 are statistically significant at a confidence level of 95%. ** pp means percentage point.				

Table D.15 Estimation of the impact of family characteristics and labour market status on the probability of being poor for full-time full-year workers, 2001				
	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
1. Family Characteristics				
Family type				
Unattached individual	1.7918	0.0000	8.9%	7.1
Childless couple, one earner	1.5738	0.0000	7.5%	5.7
Childless couple, two earners(OMITTED)			1.8%	0.0
Couple with 1 or 2 children, one earner	2.6165	0.0000	16.4%	14.6
Couple with 1 or 2 children, two earners	0.5170	0.0085	3.0%	1.2
Couple with 3+ children, one earner	2.9420	0.0000	20.3%	18.5
Couple with 3+ children, two earners	1.2046	0.0000	5.5%	3.7
Lone-parent family	2.1994	0.0025	12.2%	10.4
Other family type	0.8283	0.0000	3.9%	2.1
2. Characteristics Related to Work				
Labour force Status				
Self-employed	2.5226	0.0000	15.8%	14.1
Salaried who earned less than \$10/hr	1.9222	0.0000	9.8%	8.1
Salaried who earned \$10/hr or more (OMITTED)			1.7%	0.0
* All coefficients with a P-value <0.05 are statistically significant at a confidence level of 95%. ** pp means percentage point.				

D.4 Identifying the Determinants of Poverty for Workers in 1996

In 1996, the determinants of poverty for workers were similar to what they were in 2001.

Finally, it is worth checking whether the determinants of poverty among workers are unique to 2001 or whether they apply to other years as well. To that end, we applied a model similar to the preferred model (presented in chapter 4) for 2001 to the 1996 data, but using the LICOs¹²¹ instead. The results are presented in Table D.16.

Overall, the risk of poverty for a worker was higher in 1996 than it was in 2001 (5.5% vs. 4% according to the LICOs) and the impact of almost all determinants identified in 2001 was stronger in 1996.¹²² However, the same characteristics were identified as determinants

¹²¹ Since MBM levels are available for 2000, 2001 and 2002 only, the authors had to make comparisons for the results obtained (in 1996 and in 2001) using the model that relied on the LICOs in order to identify low-income individuals.

¹²² It is not obvious why workers were more likely to have a low family income in 1996 than in 2001. That period was clearly one of economic growth during which the overall situation of workers improved. Yet it was also a period of reforms to social assistance programs that likely forced a number of people whose benefits would be reduced to join the labour force. However, it is important to note that, without a more comprehensive longitudinal analysis, it is difficult to explain the trend identified in relation to the overall rate of low income observed among workers between those two years.

of poverty among workers in both years and the order of importance of those determinants remained essentially the same, although their importance varied. For example, the probability for a self-employed worker to be poor was 8.7 percentage points higher than for a salaried worker according to the 1996 data, while the 2001 data indicated that the same probability was only 6.4 percentage points higher.

In an economic context where all workers were more vulnerable to poverty, it is not surprising to note that the impact of characteristics already identified as being risk factors in 2001 was slightly more pronounced in 1996. Nevertheless, being a recent immigrant or an Aboriginal person living off-reserve and/or being young are the only characteristics whose negative impact on workers financial situation were significantly stronger in 1996 than in 2001.

The only characteristics that had a significantly lesser impact on the probability of being poor for workers in 1996 than in 2001 were the gender of the worker and the fact that he/she lived in a one-earner couple without children or in another type of family. Indeed, contrary to the 2001 results, in 1996, being female did not significantly increase the probability of low income for workers. Nevertheless, it is important to mention that even in 2001, the gender was far from being the strongest determinant of low income for workers.

Table D.16 Estimation of the impact of various characteristics on the probability of being poor for workers in 1996, when the LICOs are used to identify those who are poor				
	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
All workers			5.5%	
1. Demographic Characteristics				
Gender				
Female	0.0664	0.5671	5.7%	0.3
Male (OMITTED)			5.4%	0.0
Age				
18-24	0.9307	0.0000	9.8%	6.0
25-34	0.2505	0.0393	6.0%	2.2
35-54 (OMITTED)			5.0%	1.2
55-64	-0.3581	0.0676	3.8%	0.0
Province of residence				
Atlantic provinces	-0.1202	0.3955	5.0%	0.1
Quebec	0.1197	0.4193	6.0%	1.1
Ontario (OMITTED)			5.5%	0.6
Manitoba or Saskatchewan	0.0650	0.6746	5.7%	0.8
Alberta	0.1344	0.4040	6.0%	1.1
British Columbia	-0.1481	0.3474	4.9%	0.0
Recent immigrant or Aboriginal off-reserve				
Yes	0.1073	0.0000	11.1%	6.0
No (OMITTED)			5.0%	0.0
Work limitations				
Yes	0.5367	0.0013	8.0%	2.6
No (OMITTED)			5.4%	0.0
2. Socioeconomic Characteristics				
Highest level of education				
Less than high school diploma	0.7045	0.0003	7.5%	3.1
High school diploma	0.2154	0.2503	5.2%	0.8
Post-secondary	0.2280	0.1901	5.3%	0.9
University (OMITTED)			4.4%	0.0
Part-time student				
Yes	-0.3728	0.1040	4.2%	0.0
No (OMITTED)			5.6%	1.4
Experience in the labour market				
Fewer than 3 years	0.5173	0.0033	7.7%	2.5
3 or more years (OMITTED)			5.2%	0.0

Table D.16 (End)

	Estimated coefficient*	(P<=0.05)	Predicted probability	Difference with lowest probability in pp**
3. Family Characteristics				
Family type				
Unattached individual	2.7525	0.0000	15.1%	13.5
Childless couple, one earner	1.7227	0.0000	7.1%	5.5
Childless couple, two earners (OMITTED)			1.6%	0.0
Couple with 1 or 2 children, one earner	2.9048	0.0000	16.7%	15.1
Couple with 1 or 2 children, two earners	0.7807	0.0002	3.2%	1.6
Couple with 3+ children, one earner	3.0858	0.0000	18.8%	17.2
Couple with 3+ children, two earners	1.1113	0.0000	4.3%	2.7
Lone-parent family	2.4109	0.0000	11.9%	10.3
Other family type	0.3930	0.2010	2.2%	0.6
4. Characteristics Related to Work Effort				
Number of hours of paid work during the year				
910-1499	0.8836	0.0000	9.2%	4.4
1500-2499 (OMITTED)			4.8%	0.0
2500+	0.0397	0.7610	5.0%	0.2
Only one job during the year				
Yes	-0.3149	0.0087	5.2%	0.0
No (OMITTED)			6.6%	1.4
5. Characteristics Related to Main Job				
Self-employed during the year				
Yes	1.5806	0.0000	12.6%	8.7
No (OMITTED)			3.9%	0.0
Type of occupation				
Business and finance (OMITTED)			4.9%	1.3
Arts, sciences and health	-0.3842	0.0601	3.6%	0.0
Sales and services	0.6458	0.0000	8.0%	4.4
Other	0.0321	0.8310	5.1%	1.5
Size of business				
Small (<20 employees)	1.2559	0.0000	7.2%	4.6
Medium-sized (20-99)	0.6076	0.0006	4.3%	1.7
Large (100+) (OMITTED)			2.6%	0.0
* All coefficients with a P-value <0.05 are statistically significant at a confidence level of 95%.				
** pp means percentage point.				

D.5 Considering Revisions to Data

The authors used the 2001 SLID data for the purpose of their cross-sectional analysis and the 1996-2001 panel for their longitudinal analysis because those were the most recent available years of data when they started doing the research. However, since then, SLID data for years 2002, 2003 and 2004 have been released. Moreover, the 2003 SLID release included historical revisions to income and low income data going back to 1980.

D.5.1 Details on the revisions

First, important revisions were made to the SLID and the SCF (Survey of Consumer Finance) weights to make results more consistent with :

- 1) The most recent Census demographic projections (2001 Census rather than the 1996 Census).
- 2) The real income distribution of wages and salaries which are important components of income in Canada. Indeed, for some time, researchers and data analysts suggested that Statistics Canada's Surveys on household income under-reported households at the bottom and at the top ends of the income distribution. As a consequence, Statistics Canada has made some adjustments to make earnings reported in surveys more representative of what is reported in income tax files.

Second, Low Income Cut-Offs have been revised to reflect an historical re-weighting of the 1992 Family Expenditure Survey.

All these revisions had an impact on low income statistics. For instance, using the LICOs, the overall incidence of low income among Canadians in 2002 increased from 9.5% to 11.6% as a result of the revisions. Thus, it is quite possible that those revisions had an impact on the incidence of low income among workers as well (this is the focus of the next section). However, it is worth noting that although the revisions had an impact on the incidence of low income, the trend of low income over many years remained very similar.

The following section provides an overview of various statistics relating to working poor individuals in 2001 based on revised SLID data and compares these new statistics to the ones obtained before the revisions were made.

D.5.2 Profile of Working Poor Canadians for 2001, Before and After Statistics Canada's Revisions to the SLID

Table D.17 illustrates that revisions to the SLID increased the number of individuals that can be classified as working poor by about 60,000 (or 9%) in 2001.

This table also shows that the increased number of working poor individuals following the revisions has not been proportional to the increase in the overall number of low income individuals. Among the 206,000 additional low income individuals observed, 28% were working poor while the working poor accounted for 38% of this population prior to the revisions. However, the rate of low income among workers (which rose from 5.6% to 6.5%) indicates that this is not because the risk of poverty among workers became less prevalent but, rather, because fewer individuals are identified as 'workers' with the revised data.

Table D.17 Numbers of individuals aged 18-64 who were not full-time students, who were workers, poor and Working Poor (WP) in 2001, before and after revisions to the SLID							
	Nb. of persons	Nb. of working	Nb. of poor	Nb. of WP	WP Rate	WP among the Poor	WP among Workers
BEFORE	15,867,600	11,587,400	1,738,600	653,300	4.1%	37.6%	5.6%
AFTER	15,686,000	11,024,900	1,945,000	711,600	4.5%	36.6%	6.5%

Table D.18 shows that a large share (46.3%) of those who were not considered to be working poor before the revisions but who were so after are unattached individuals. Consequently, the increase in the total number of persons affected by working poverty is more limited. Nevertheless, after the revisions were made, we find a total of 1.58 million of Canadians who were living in a low income family including at least one worker in 2001 while this number was 1.5 million before the revisions were made. In other words, revisions to the SLID led to an increase of about 5% in the number of Canadians affected by working poverty in 2001.

Table D.18 Number of unattached working poor persons, heads of working poor families, dependants and children living in a working poor family and total number of individuals living in a family headed by a working poor in 2001, before and after revisions of the SLID					
	Unattached	Heads of WP families	Dependants (0+) in WP families	Children in WP families	Total of individuals living in a working poor family
BEFORE	185,700	370,600	943,700	511,200	1,500,000
AFTER	212,700	391,400	975,200	541,300	1,579,200

Table D.19 shows that the impact of the revisions on the severity of poverty among working poor individuals has not been significant. Indeed, the poverty depth of working poor individuals has remained about the same before and after the revisions to SLID data were made. This observation is also true for the work effort and hourly wages of working poor individuals.

Table D.19 Depth of poverty, work effort and wages of working poor individuals in 2001, before and after revisions of the SLID					
	Poverty Depth (%)	Poverty Depth (\$)	Average number of hours worked	Prop. who worked 1500+	Average wages of salaried workers
BEFORE	30.5%	6,310\$	2,090h	75.7%	\$12.3/h
AFTER	31.4%	6,430\$	2,080h	75.1%	\$12.4/h

Looking at the profile of the 711,600 working poor individuals identified with the revised data (see Table D.20), we can conclude that none of their characteristics are significantly different from those of the 653,300 working poor individuals previously identified. It is nonetheless interesting to note that the proportion of working poor individuals who reported some self-employment during the year is even more important than it was when using unrevised data (44% with revised data compared to 41% with unrevised data).

Table D.20 Distribution of working poor individuals by characteristic in 2001, before and after revisions of the SLID		
	BEFORE	AFTER
All individuals	100%	100%
1. Demographic Characteristics		
Gender		
Male	56.5%	56.1%
Female	43.5%	43.9%
Age		
18-24	11.9%	10.9%
25-34	24.8%	25.0%
35-44	31.7%	32.0%
45-54	21.9%	21.8%
55-64	9.7%	10.3%
Province		
Atlantic Provinces (Nfld, PEI, NB or NS)	9.6%	8.2%
Quebec	15.2%	15.0%
Ontario	33.7%	35.9%
Manitoba or Saskatchewan or Alberta	18.4%	17.3%
BC	23.1%	23.6%
Marital Status		
Single (was never married)	28.1%	29.0%
In a union (married or not)	54.4%	53.5%
Separated, divorced or a widow	17.5%	17.5%
Immigrant or Aboriginal living off-reserve		
Yes	11.5%	11.5%
No	77.8%	77.8%
Work Limitations		
Yes	11.6%	12.2%
No	88.4%	87.8%
2. Socioeconomic Characteristics		
Highest level of education		
Less than a high school diploma	19.6%	19.1%
HSD	25.9%	26.3%
More than a HSD	30.3%	30.9%
University	11.2%	11.2%
Part-time Student		
Yes	4.2%	4.2%
No	95.8%	95.8%

Table D.20 (End)

	BEFORE	AFTER
3. Family Characteristics		
Family Type		
Unattached	28.4%	29.9%
Couple without children, one earner	4.8%	5.3%
Couple without children, two earners or more	11.4%	12.7%
Couple with one or two children, one earner	8.3%	7.6%
Couple with one or two children, two earners or more	16.2%	17.0%
Couple with three children or more, one earner	4.3%	4.4%
Couple with three children or more, two earners or more	8.9%	6.9%
Lone Parent family	9.9%	10.1%
Other family type	7.8%	6.1%
4. Characteristics Related to Work Effort		
Number of hours worked		
910-1,500 hours	24.3%	24.9%
1,501-2,499 hours	51.4%	50.6%
2,500 hours or more	24.3%	24.4%
Labour Market Experience		
Less than 3 years	8.9%	7.8%
3 years or more	52.3%	51.5%
Worked full-time in main job		
Yes	84.1%	83.2%
No	11.5%	12.0%
Cumulated more than one job during the year		
Yes	26.8	24.3%
No	73.2	75.1%
6. Access to Government Transfers		
Received some Government Transfers	89.8%	89.9%
Received some Employment Insurance Benefits	13.4%	11.7%
Received some Social Assistance Benefits	7.9%	8.8%
7. Characteristics Related to Main Job		
Self-employed during the year		
Yes	40.7%	44.0%
No	59.3%	56.0%
Type of Occupation		
Finance and Business	20.4%	20.9%
Arts, sciences & health	12.3%	12.7%
Sales and services	32.2%	30.5%
Other occupation	33.4%	34.4%
Size of Business		
Small (<20 employees)	66.2%	68.1%
Medium (20-99 employees)	19.3%	17.5%
Large (100+ employees)	12.0%	11.6%

According to Table D.21, the main determinants of poverty among workers identified using the SLID revised data are very similar to those identified using the original data.

Table D.21 Results of the preferred model before and after Statistics Canada revisions of the SLID, 2001				
	BEFORE		AFTER	
	Predicted probability	Difference vs. lowest prob. in pp	Predicted probability	Difference vs lowest prob. in pp
All workers	5.6%		6.5%	
1. Demographic Characteristics				
Gender				
Female	6.3%	1.1	7.4%	1.5
Male (OMITTED)	5.2%	0.0	5.9%	0.0
Age				
18-24	8.5%	3.8	9.3%	3.4
25-34	6.3%	1.6	7.2%	1.3
35-54 (OMITTED)	5.2%	0.5	5.9%	0.0
55-64	4.7%	0.0	6.0%	0.1
Province of residence				
Atlantic provinces	7.9%	4.0	8.0%	3.6
Quebec	3.9%	0.0	4.4%	0.0
Ontario (OMITTED)	5.1%	1.2	6.1%	1.7
Manitoba or Saskatchewan	5.0%	1.1	5.5%	1.1
Alberta	5.5%	1.6	6.1%	1.7
British Columbia	9.3%	5.4	10.9%	6.5
Recent immigrant or Aboriginal off-reserve				
Yes	9.9%	4.5	10.8%	4.7
No (OMITTED)	5.4%	0.0	6.1%	0.0
Work limitations				
Yes	8.0%	2.6	9.2%	3.0
No (OMITTED)	5.4%	0.0	6.2%	0.0
2. Socioeconomic Characteristics				
Highest level of education				
Less than high school diploma	7.6%	3.5	8.8%	4.0
High school diploma	5.9%	1.8	7.0%	2.2
Post-secondary	4.9%	0.8	5.9%	1.1
University (OMITTED)	4.1%	0.0	4.8%	0.0
Part-time student				
Yes	5.1%	0.0	6.0%	0.0
No (OMITTED)	5.7%	0.6	6.5%	0.5
Experience in the labour market				
Fewer than 3 years	6.7%	1.7	7.3%	1.7
3 or more years (OMITTED)	5.0%	0.0	5.6%	0.0

Table D.21 (End)

	BEFORE REVISIONS		AFTER REVISIONS	
	Predicted probability	Difference vs. lowest prob. in pp	Predicted probability	Difference vs. lowest prob. in pp
3. Family Characteristics				
Family type				
Unattached individual	11.8%	9.8	13.8%	11.3
Childless couple, one earner	9.9%	7.9	11.0%	8.5
Childless couple, two earners (OMITTED)	2.0%	0.0	2.5%	0.0
Couple with 1 or 2 children, one earner	17.6%	15.6	16.7%	14.2
Couple with 1 or 2 children, two earners	3.5%	1.5	4.1%	1.6
Couple with 3+ children, one earner	26.0%	24.0	26.9%	22.8
Couple with 3+ children, two earners	6.4%	4.4	7.4%	4.9
Lone-parent family	15.4%	13.4	17.1%	14.6
Other family type	4.1%	2.1	3.9%	1.4
4. Characteristics Related to Work Effort				
Number of hours of paid work during the year				
910-1499	9.2%	4.5	10.7%	5.3
1500-2499 (OMITTED)	4.7%	0.0	5.4%	0.0
2500+	5.8%	1.1	6.5%	1.1
Only one job during the year				
Yes	5.3%	0.0	6.2%	0.0
No (OMITTED)	6.8%	1.5	7.3%	1.1
5. Characteristics Related to Main Job				
Self-employed during the year				
Yes	12.5%	8.4	13.9%	9.3
No (OMITTED)	4.1%	0.0	4.6%	0.0
Type of occupation				
Business and finance (OMITTED)	4.7%	0.6	5.5%	0.8
Arts, sciences and health	4.1%	0.0	4.7%	0.0
Sales and services	7.1%	3.0	7.6%	2.9
Other	6.3%	2.2	7.5%	2.8
Size of business				
Small (<20 employees)	7.1%	3.9	8.1%	4.4
Medium-sized (20-99)	4.9%	1.7	5.3%	1.6
Large (100+) (OMITTED)	3.2%	0.0	3.7%	0.0

Bold characters indicate that the difference with the lowest probability is statistically significant.

Results of the longitudinal analysis based on the revised data are also very similar to the original results. The only results that seem to be slightly different are the proportions of individuals who experienced persistent poverty between 1996 and 2001. However, according to the confidence intervals of both proportions, we can conclude that this difference is not statistically significant.

Table D.22 Number of individuals in the second panel of the SLID (1996-2001), when subsampling criteria are imposed and distribution of the target population by employment and low-income status in 1996, before and after Statistics Canada revisions of the SLID		
	BEFORE	AFTER
Total number of longitudinal respondents	25,154,500	24,652,900
Number of respondents aged 18 to 59	15,436,300	15,048,200
Number of respondents aged 18 to 59 who were not full-time students in 1996	13,109,100	12,731,200
Who had a low family income in 1996	1,491,800	1,565,800
Who worked 910 hours or more in 1996	9,408,900	8,908,100
Who worked 910 hours or more and had a low family income in 1996	513,700	531,700
Who worked 910 hours or more and had a low family income for at least one year between 1996 and 2001	1,298,100	1,311,700

Table D.23 Longitudinal descriptive statistics on low income (LI) between 1996 and 2001, before and after Statistics Canada revisions of the SLID		
	BEFORE	AFTER
No. of people in the group	513,700	531,700
% who exited LI for at least 1 year	85.3%	85.5%
Average no. years with LI	3.0 years	3.0 years
% who experienced persistent poverty	39.3%	37.2%

In short, revisions of the SLID led to an increase of about 9% in the number of working-age individuals identified as working poor in 2001 and of about 5% in the number of Canadians affected by working poverty that year.

However, the profile of the 711,600 working poor individuals identified with the revised data is quite similar to the profile of the 653,300 working poor individuals previously identified. Furthermore, the main determinants of poverty among workers identified using revised data are very similar to those identified using the original data.

Appendix E: Earning Potential of Working Families

In 2001, 7,807,900 families (including unattached individuals) could be identified as 'working' families as they included at least one member aged 18 to 64 who was not a full time student and who worked for pay at least 910 hours in the reference year. Of these working families, 556,300 (or 7.1%) had a low income and 7,251,600 (or 92.9%) did not have a low income.

In 2001, 1,500,000 individuals were members of a working poor family compared to 20,348,800 individuals who were members of a working non-poor family.

Table E.1 Distribution of <i>members of working families</i> depending on whether these individuals are unattached or part of a family, by low-income status, 2001				
	With a low income (1,500,000)		Without a low income (20,348,800)	
	#	%	#	%
Unattached individuals	185,700	12.4%	1,510,400	7.4%
Living in an economic family including nobody else between 18 and 64 years of age	206,600	13.8%	1,693,400	8.3%
Living in an economic family including somebody else between 18 and 64 years of age	1,107,700	73.8%	17,144,900	84.3%

Table E.2 Distribution of <i>members of working families including at least 2 persons</i>, by family type and low-income status, 2001				
	With a low income (1,314,300)		Without a low income (18,838,400)	
	#	%	#	%
Lone-parent family	184,900	14.1%	935,000	5.0%
Couple without children	192,000	14.6%	5,650,900	30.0%
Couple with children, the youngest of which is under 5	384,200	29.2%	3,562,200	18.9%
Couple with children, the youngest of which is 5+	438,600	33.4%	6,715,300	35.6%
Other family type	114,600	8.7%	1,975,000	10.5%

Table E.3 Distribution of <i>members of working families depending on more than one earner or worker</i>, by low income status, 2001				
	With a low income (1,500,000)		Without a low income (20,348,800)	
	#	%	#	%
Working families with only one earner	876,800	58.5%	5,809,600	28.6%
Working families with more than one earner (whatever the number of hours cumulated)	623,200	41.5%	14,539,200	71.4%
Working families with more than one worker	380,000	25.3%	11,838,600	58.2%

Table E.4 Distribution of <i>members of working families depending on only one earner who could have relied on a second earner</i>, by low income status, 2001				
	With a low income (876,800)		Without a low income (5,809,600)	
	#	%	#	%
Proportion of members who could have relied on a second earner	433,300	49.4%	2,373,300	40.9%
Proportion of members who could not have relied on a second earner	443,600	50.6%	3,436,300	59.1%

Table E.5 Distribution of <i>members of working families depending on more than one earner who could have relied on a second worker</i>, by low income status, 2001				
	With a low income (623,200)		Without a low income (14,539,200)	
	#	%	#	%
Proportion of members for whom the second earner did not cumulate 910 hours of work	287,200	46.1%	4,702,100	32.3%
Proportion of members for whom the second earner already cumulates 910 hours of work	336,000	53.9%	9,837,100	67.7%

Appendix F: Limitations and Mechanics of Simulations Conducted to Assess the Impact on (Working) Poverty of Increasing the Minimum Wage

This annex first discusses the limitations of the simulations that were conducted to assess the impact of increasing the minimum wage on (working) poverty. It then presents the detailed results of those simulations.

F.1 Details on the Limitations of the Simulations

There are many issues surrounding the simulations of changes in the minimum wage using data from the SLID. The first is the identification of individuals earning the minimum wage. Because the variable that was used to identify individuals earning the minimum wage is calculated using the number of hours worked reported by the respondent in the reference year, an individual's hourly average wage may be under or over estimated. Consequently, there is no certainty that those identified as earning the minimum wage really did so.

Furthermore, because the variable used for the identification of minimum wage earners is an average of wages from all jobs occupied during a year, it can only lead to an underestimation of the real number of individuals who, at some point in time, might have been working at the minimum wage (the variable used is the composite hourly wage for all paid-worker jobs during the reference year (cmphrw28); this variable is calculated based on the implicit hourly wages for all paid-worker jobs, weighted using total hours paid for each¹²³).

In fact the following figure is a bit puzzling. Of the 531,100 Canadians aged 16-64 who had some salaried work and who earned the minimum wage in 2001, only 13.8% (or 73,100 individuals) earned on average exactly the minimum wage. A large proportion (61%) earned less than the minimum wage¹²⁴. Many factors can explain this result. Some persons may have over estimated the number of hours that they worked. It could also be that some persons worked extra hours without being paid for their work. Finally, some individuals may have fallen under special provisions of provincial minimum wage regulations (e.g. if they worked as waiters/waitresses in a restaurant where they earned tips, they may have had an average wage that was under the provincial minimum wage).

¹²³ If there is a problem with the earnings data from the labour interview, CMPHRW28 may be imputed using annual wages and salaries (from the income interview) and total hours paid. Persons with zero paid hours in any paid worker job have a "Not Applicable" value.

¹²⁴ As mentioned at the beginning of this chapter, minimum wage earners are individuals earning the minimum wage plus or minus 25 cents in their province. When we say that some individuals earned less than the minimum wage we mean that they earned between the minimum wage minus 25 cents and the minimum wage.

As mentioned in chapter 7, another issue surrounding the simulations is that they do not reflect behavioural and macro-economic changes that might occur following a rise in the minimum wage, such as an increase in labour supply (as higher wages may entice some persons to start working); a ripple effect on the wages of workers earning slightly over the minimum wage which could encourage employers to invest more in their existing workforce to reduce turnover; a rise in youth drop out rates (students enticed to start working because of better wages); and potentially higher unemployment rates (a significant increase in the minimum wage would translate into higher costs of production for many Canadian businesses which, in turn, could reduce their workforce or pass on the increased cost of production to consumers).

Because of all those limitations, the results presented next (and summarized in chapter 7) are best estimates of the impact of increasing the minimum wage on (working) poverty.

F.2 Detailed Results of the Simulations

Keeping everything else constant, we estimated, for each salaried individual earning wages in the bracket comprising the minimum wage minus 25 cents up to the new minimum wage, the additional earnings that those individuals would gain if the minimum wage had been increased up to a certain level in 2001 (the additional earnings are the product of an individual's number of hours of paid work times the difference between the new minimum wage and the actual wage of the individual). We then summed up the additional earnings within economic families and added this total to the original economic family income to come up with a new economic family income, which was then compared to the relevant MBM threshold to determine who was still poor after an increase in provincial minimum wages. We proceeded this way because an increase in the minimum wage may affect more than one person living in a working poor family and because the *economic family income*, not individual earnings, determines the poverty status of an individual.

It is also essential to mention that although 25,300 working poor Canadians earned the minimum wage in their province in 2001, a higher number of working poor persons would have been affected by a change in the minimum wage¹²⁵. Indeed, any person earning between the initial minimum wage and the new minimum wage would have been affected by such a change. For instance, if the initial minimum wage was \$7 per hour in 2001, then a 10% increase in the minimum wage would have affected not only those earning \$7 per hour but also anyone earning between \$7 per hour and \$7.70 per hour (see tables F.1 and F.2 for details on the level of minimum wage by province in 2001 and what would have been the impact of the three scenarios on those levels). Table F.3 shows the number of working poor Canadians who would have been affected by a change in the minimum wage under the following scenarios and options: 1) a 10% increase in provincial minimum wages; 2) a 25% increase in provincial minimum wages; and 3) an across-the-country increase in minimum wages to \$10 per hour. For each of those scenarios, two options were tested: 1) individuals affected by an increase in the minimum wage retain 90% of their gross earnings; and 2) individuals affected by an increase in the minimum wage retain 80% of their gross earnings.

¹²⁵ This rationale also applies to low-income individuals more generally.

In order to get a rough idea of the cost of raising minimum wages, we also estimated a ‘lower bound’ of those cost for each of the scenarios and options above-mentioned (the lower bound of the cost of increasing the minimum wage is the summation, for all minimum-wage earners, of the number of hours worked by those individuals times the difference between the new minimum wage and their actual hourly wage). Those estimates are ‘lower bounds’ because they do not give a sense of the other potential costs of raising minimum wages such as higher youth drop out rates and unemployment rates, inflation, etc. As those externalities could be important, the figures presented in Tables F.4 to F.6 reflect the **approximate cost** to be supported by the society if the minimum wage was increased. It is noteworthy that in all scenarios, employers absorb all direct costs of increasing the minimum wage (in keeping with UK literature these costs are called the ‘wage bill’¹²⁶), while governments actually benefit from it (through higher income-tax revenues).

Finally, a reduction in the poverty gap was computed for all scenarios and options. The reduction in the poverty gap (in \$) is: (the summation, for all low-income individuals affected by the minimum wage, of their poverty depth before the increase in the minimum wage took place) minus (the summation, for all individuals who still have a low income once the minimum wage has been increased, of their new poverty depth).

Table F.1				
Minimum wage by province in 2001, and the impact of increasing it by 10% or by 25%				
	Minimum Wages in 2001	Scenarios 1-2: Increasing Minimum Wages by		
		10%		25%
	\$/hour	\$/hour		\$/hour
Newfoundland	5.50	6.05		6.88
P.E.I	5.80	6.38		7.25
Nova Scotia	5.80	6.38		7.25
New Brunswick	5.90	6.49		7.38
Quebec	7.00	7.70		8.75
Ontario	6.85	7.54		8.56
Manitoba	6.25	6.88		7.81
Saskatchewan	6.00	6.60		7.50
Alberta	5.90	6.49		7.38
British Columbia	8.00	8.80		10.00

¹²⁶ See Low Pay Commission (2005).

Table F.2 Minimum wage by province in 2001 and the impact of an increase to 10\$/h.			
	Minimum Wages in 2001	Scenario 3: Increasing Minimum Wages to 10\$/hours	
	\$/hour	\$/hour	% of increase
Newfoundland	5.50	10.00	81.8
P.E.I.	5.80	10.00	72.4
Nova Scotia	5.80	10.00	72.4
New Brunswick	5.90	10.00	69.5
Quebec	7.00	10.00	42.9
Ontario	6.85	10.00	46.0
Manitoba	6.25	10.00	60.0
Saskatchewan	6.00	10.00	66.7
Alberta	5.90	10.00	69.5
British Columbia	8.00	10.00	25.0

Table F.3 Number of working poor Canadians who would have been affected by a change in the minimum wage in 2001		
If the minimum wage had been increased by 10%	If the minimum wage had been increased by 25%	If the minimum wage had been increased to \$10 per hour
45,800 individuals	89,600 individuals	136,600 individuals

Table F.4 Impact of a 10% increase in minimum wages in Canada in 2001					
	Nb of WP persons before min. wage increase	Nb of WP persons after min. wage increase	LIC exiting poverty after min. wage increase	Lower bound of the cost of raising min. wages by 10%	Reduction in the poverty gap**
Option 1	45,800	40,500	15,100	WB: \$514M -TG: <u>\$52M</u> NCS: \$462M	\$56M (a 0.5% drop from the original level)
Option 2	45,800	40,800	14,200	WB: \$514M\$ -TG: <u>\$103M</u> NCS: \$411M	\$50M (a 0.4% drop from the original level)

Table F.5 Impact of a 25% increase in minimum wages in Canada in 2001					
	Nb of WP persons before min. wage increase	Nb of WP persons after min. wage increase	LIC exiting poverty after min. wage increase	Lower bound of the cost of raising min. wages by 25%	Reduction in the poverty gap**
Option 1	89,600	68,700	68,500	*WB: \$2.2B -TG: <u>\$0.3B</u> NCS: \$1.9B	\$212M (a 1.8% drop from the original level)
Option 2	89,600	71,400	63,900	WB: \$2.2B -TG: <u>\$0.5B</u> NCS: \$1.7B	\$191M (a 1.6% drop from the original level)

Table F.6 Impact of a pan-Canadian increase in minimum wages to \$10 per hour in 2001					
	Nb of WP persons before min. wage increase	Nb of WP persons after min. wage increase	LIC exiting poverty after min. wage increase	Lower bound of the cost of raising min. wages to \$10 per hour	Reduction in the poverty gap**
Option 1	138,600	80,900	181,600	*WB: \$5.3B -TG: <u>\$0.6B</u> NCS: \$4.7B	\$418M (a 3.6% drop from the original level)
Option 2	138,600	85,000	167,900	WB: \$5.3B -TG: <u>\$1.1B</u> NCS: \$4.2B	\$385M (a 3.3% drop from the original level)

* WB stands for wage bill (i.e. direct cost to the industry of increasing the minimum wage); TG stands for taxes and other monies recovered by governments; NCS stands for net cost to the society.

** The reduction in the poverty gap (in %) is calculated as follows: [the difference between the original poverty gap for all low-income Canadians (\$11.7 billions) and the new poverty gap once minimum wages have been increased)/ the original poverty gap].

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