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LIVING STANDARDS DOMAIN OF THE CANADIAN
INDEX OF WELLBEING

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Living Standards Domain of the Canadian Index of Wellbeing

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Living Standards Domain of the Canadian Index of Wellbeing

Abstract

This report, which constitutes the living standards domain of the new Canadian Index of Wellbeing (CIW), provides a comprehensive overview of trends in a number of indicators of living standards over the 1981-2008 period in Canada. Part one examines trends in average and median income and wealth indicators in Canada. Part two looks at the distribution of the income and wealth of Canadians over time, including trends in poverty. Part three discusses trends in income fluctuations or volatility. Part four analyzes trends in the economic security of Canadians, including labour market security, food security, housing security, and the security provided by the social safety net. The report also presents a synthesis of overall trends in living standards, discusses living standard measurement issues, and puts forward a set of headline indicators to capture the essentials of what has been happening to the living standards of Canadians. Finally, the report comments on the sustainability of current levels of living standards.

Looking at the nine headline indicators for which time series are available, one can immediately see that living standards of Canadians have not unambiguously improved between 1981 and 2008. Indeed, Canadians experienced a widening of income and wealth inequalities. There have been large poverty reductions. There have been large increases in wealth inequality. The unemployment rate is down to a record low for the 1981-2008 period, and yet the incidence of long-term unemployment was higher in 2008 than in 1981. Economic security measured by the CSLS index has also fallen, spurred by a significant decrease in economic security caused by the financial risk associated with illness. Since 1981, many dimensions of living standards in Canada have not improved, and that in spite of a 52.6 per cent surge in gross domestic product per capita.

The bottom line is that Canada has become a much richer country, but the top quintile has received the lion's share of rising income and wealth. Looking forward, the challenges for Canada's policymakers are significant, but need to be tackled if Canada is to become a fairer and richer country.

Living Standards Domain of the Canadian Index of Wellbeing

Executive Summary

Have the living standards of Canadians improved or deteriorated in recent years? An answer to this seemingly straightforward question is actually very difficult. This is because of the large number of possible indicators that could be chosen to track trends in living standards. This report, which represents the living standards domain of the new Canadian Index of Wellbeing, provides a comprehensive overview of trends in a number of indicators of living standards over the 1981-2008 period in Canada.

Living Standards: What is Covered and Why?

A given level of national income may be associated with the cost of increased inequality or greater economic insecurity. It may be fuelled by poor quality job creation or fail to achieve basic economic outcomes, such as reducing poverty or providing basic housing to individuals and family. The objective of the living standards domain is to track not only the capacity of the Canadian economy to grow, but more importantly its capacity to transform economic growth into stable income streams for all Canadians.

To select which indicators must be reviewed if we are to obtain a complete picture of living standards in Canada, we rely on a conceptual framework. The conceptual framework we use identifies the following aspects as key for living standards: living standards at present times, as captured by income levels and distribution, and the sustainability of current income levels, as captured by measures of wealth and the extent of economic security experienced by individuals (Executive Summary Table 1). This framework guides us in the selection of relevant indicators to be reviewed. Of course, to operationalize this framework in the context of the CIW, we adapt the choice of indicators by taking into account that some indicators may be more or less covered by other domains.

Concept	Present	Future
“Typical Citizen” Or “Representative Agent”	Average Flow of Current Income / Consumption	Aggregate Accumulation of Productive Stocks
Heterogeneity of Experiences of all Citizens	Distribution of Income - Inequality and Poverty	Insecurity of Future Incomes

The report is divided into four major parts. Part one examines trends in average and median income and wealth indicators in Canada. Part two looks at the distribution of the income and wealth of Canadians over time, including trends in poverty. Part three discusses trends in income fluctuations or volatility. Part four analyzes trends in the economic security of Canadians, including labour market security, food security, housing security, and the security provided by the social safety net.

Based on a detailed examination of the data presented in this report, five main conclusions or messages have emerged related to the evolution of living standards in Canada over the last quarter century. These conclusions are highlighted below.

Canadians are on average better off in terms of income and wealth

The first message from the data is that Canadians have on average higher income in 2007 and 2008 than in 1981. But the magnitude of the real income gains is very sensitive to both the choice of unit of analysis (persons versus households) and the choice of income measure (total or pre-tax versus after-tax income).

The number of households grew almost 60 per cent faster than the number of persons over the 1981-2007 period (51.5 per cent versus 32.7 per cent) so real income trends on a household basis show much less progress than on an individual basis. As the average tax rate also increased over the period, after-tax income measures show less growth than pre-tax measures.

National account income measures show that between 1981 and 2007 real personal income per capita rose 34.8 per cent, and real personal disposable income per capita 25.9 per cent (and 36.5 per cent and 28.8 per cent respectively for the 1981-2008 period). In contrast, income estimates from household surveys (SCF/SLID), which are currently only available to 2007, show that total real income per household increased 17.2 per cent and after-tax real income per household rose 15.5 per cent. Greater growth in the number of households than persons account for these differences. Part of the increase in real income of course reflected an increase in hours worked, with the average weekly hours worked per person of working age up 3.2 per cent over the 1981-2008 period.

The average wealth of Canadians also increased substantially over the 1981-2008 period. National accounts balance sheet estimates show that average real net worth was up 73.3 per cent on a per capita basis and 51.7 per cent on a household basis.

Income and Wealth Inequality Has Increased

The second message is that income growth has been unevenly shared among Canadians, with the rich garnering a disproportionately large portion of the gains. For economic families, the after-tax income of the top quintile, or fifth, of households, adjusted for family size, rose 39 per cent between 1981 and 2007, while the increases for the other quintiles were in the 20-25 per cent range. An even more unequal pattern was observed for total and market income. This led to a significant rise in the income share of the top quintile, offset by declines in the income shares of the other four quintiles. These developments resulted in the Gini coefficient, a measure of overall income inequality, increasing significantly, with most of the increase in the 1990s. The Gini coefficient for market income increased by 16.8 per cent between 1981 and 2007. The increase in inequality was greatest for market income and least for after-tax income, implying that increases in both government transfers and taxes offset somewhat the rise in market income inequalities, at least in the 1980s.

The rising inequality also meant that median income measures performed much worse than average income measures. Indeed, over the 1981-2007 period, median market income per household

actually declined 4.8 per cent, while median total income rose 2.9 per cent and after-tax income rose 4.2 per cent.

The picture of living standard trends provided by median income is inconsistent with the widespread impression Canadians have of a steady progression in living standards based on average income per capita measures. Median after-tax income of all family units only surpassed 1981 levels in 2006. Not only does it imply a decrease in living standards for the median Canadian household between 1981 and 2005, but it also means that government redistribution, through transfers and taxes, did not totally offset the reduction in median market income per family unit until 2006.

Wealth distribution also became much more unequal between 1984, 1999 and 2005. This trend was particularly obvious between 1999 and 2005, the two years for which data on the distribution of wealth include pensions. Indeed, median real net worth per household increased only 23.2 per cent between 1999 and 2005 compared to 29.6 per cent for average net worth. Median real net worth for the bottom quintile fell 9.1 per cent, compared to a 28.5 per cent rise for the uppermost quintile.

Some Progress has Been Made in Reducing Poverty

The third message is that the rising income inequality has meant that while the increased real average income has translated into some improvement in the poverty rate, these improvements would likely have been greater if income gains had been more evenly shared. Nonetheless, poverty has fallen to a record low, with the after-tax Low Income Cut-off (LICO) rate for all persons 2.4 percentage points lower in 2007 than in 1981 (9.2 per cent versus 11.6 per cent). Poverty in 2007 reached its lowest level since Statistics Canada began tracking it in 1976, and was down 1.3 percentage points from its previous low of 10.5 per cent in 2006. The poverty gap, that is the amount of money by which the average poor family unit falls short of the poverty line, was the same in 2007 and in 1981 – \$6,700 (2007 dollars).

Overall Improvement in Labour Market Conditions

The fourth message is that there has been improvement in overall labour market conditions, a key determinant of living standards, over the 1981-2008 period. Within the period, there were two sub-periods of very poor labour market conditions, namely the early 1980s and first half of the 1990s. The unemployment rate in 2008 was 6.1 per cent, down from 7.6 per cent in 1981. Despite the lower unemployment rate, the proportion of long-term unemployed, that is those who had been unemployed 52 weeks or more, was greater in 2008 than in 1981 – 6.7 per cent versus 5.7 per cent.

The most important development has been the increased employment rate, that is, the ratio of the employed to the working age population. This rate reached 63.6 per cent in 2008, up from 60.1 per cent in 1981 due to the rise in the aggregate participation rate (67.8 per cent versus 65.0 per cent), which itself was driven completely by the increased labour force participation of women. Another positive development has been the decline in the incidence of job loss from 8.0 per cent in 1981 to 5.4 per cent in 2008.

Frayed Social Safety Net Provides Less Support for the Disadvantaged

Certain key social programs for working age people now provide less income support to the disadvantaged than they did in the past. Welfare benefits, expressed in constant dollars, were significantly lower for all four types of welfare recipients in 2007 than in 1986. Employment insurance in 2008 was less generous, in terms of required qualification period and duration of benefits, than in 1981. These developments have likely contributed to the increase in income inequality.

On the other hand, the introduction of the child tax credit and the National Child Benefits Supplement in the mid-1990s, the only major new social program established since the 1970s, has provided additional income to poor working families and lowered the poverty rate for this group somewhat. Equally, the national minimum wage in 2008 represented 42 per cent of the average industrial wage, up from 35 per cent in 1983.

Headline Indicators

Keeping in mind the objective of the living standards domain, the conceptual framework which buttresses it and the key messages that have emerged, the CIW National Working Group selected eleven indicators for the living standards domain of the Canadian Index of Wellbeing:

- After-tax median income
- Income distribution (ratio of top to bottom quintile)
- Incidence of low income (LICO)
- CSLS Economic Security Index
- Long-term unemployment
- Employment rate
- CIBC Employment Quality Index
- Housing affordability
- Wealth distribution
- Persistence of low income
- Food security

Unfortunately, annual time series data are available for only nine of the eleven indicators. There were no consistent time series estimates for the persistence of low income (estimate for 2000 only) and the prevalence of food insecurity (estimate only for a few selected years). Moreover, data on wealth distribution were available only for 1984, 1999 and 2005.

Only six of the eight headline indicators with time series data have estimates for the entire 1981-2008 period. Estimates for the CIBC employment quality index are only available from 1988 and for the RBC housing affordability index since 1985. Because of these data limitations, and because of data limitations in other domains, headline indicators for the living standards domain are reported only starting in 1988. As a result, the key trends discussed in this section differ slightly from those observed for the 1981-2008 period highlighted throughout the report.

Of the eight headline indicators, four experienced increases and four deteriorations between 1988 and 2008 (Executive Summary Table 2). The largest improvement was in the incidence of long term unemployment which witnessed a 22.5 per cent decrease (1.9 percentage points). The second largest improvement was in the incidence of low income for economic families (down 27.5 per cent per cent or 2.2 percentage points). There are also notable increases in after-tax real median family income, up 14.4 per cent, and the employment rate which is up 3.2 per cent (1.9 percentage points).

Executive Summary Table 2: Index of Living Standards Indicators for Canada

Year	Ratio of top to bottom quintile of economic families (after tax)	After tax median income of economic families (2007\$)	Incidence of economic families in poverty (%)	Scaled value of economic security	Incidence of long-term unemployment (%)	Employment rate (%)	CIBC index of employment quality (1994 Q1=100)	RBC housing affordability index
1988	4.16	54,000	8.0	0.654	8.7	61.7	112.6	41.3
1989	4.23	54,800	7.5	0.667	8.1	62.2	113.5	44.3
1990	4.38	52,700	9.1	0.654	7.1	61.7	111.7	49.0
1991	4.48	50,700	9.9	0.621	8.9	59.7	108.6	42.6
1992	4.59	51,100	9.9	0.603	13.2	58.3	104.0	40.0
1993	4.44	49,500	11.0	0.592	16.2	57.9	101.8	38.9
1994	4.46	50,400	10.8	0.592	17.4	58.4	100.6	42.5
1995	4.53	49,900	10.9	0.599	16.3	58.7	101.6	39.2
1996	4.74	49,800	11.7	0.586	16.4	58.4	100.1	36.7
1997	4.86	50,100	11.6	0.575	15.6	58.9	100.1	35.1
1998	4.99	52,000	10.1	0.581	13.3	59.7	100.4	34.5
1999	4.86	53,700	9.5	0.584	11.2	60.6	104.4	35.6
2000	5.11	54,600	9.0	0.593	10.7	61.3	105.3	36.6
2001	4.99	56,800	7.9	0.571	9.0	61.1	105.7	34.3
2002	5.09	56,700	8.6	0.537	9.2	61.7	102.9	35.1
2003	4.98	56,700	8.5	0.534	9.6	62.4	100.2	35.5
2004	5.15	57,400	8.0	0.549	9.1	62.7	99.2	36.7
2005	4.97	58,400	7.4	0.544	9.2	62.7	99.3	37.3
2006	4.88	59,600	7.0	0.558	8.3	63.0	98.5	41.0
2007	4.86	61,800	5.8	0.563	7.1	63.5	97.7	44.9
2008	4.86	61,800	5.8	0.558	6.7	63.6	99.9	45.2
	Change, 1988-2008							
Absolute change	0.7	7,800	-2.2	-0.096	-1.9	1.9	-12.7	3.9
Per cent change	16.6	14.4	-27.5	-14.7	-22.5	3.2	-11.3	9.5

Note: Data were interpolated linearly for missing data points. If data points were missing for 2008, they were assumed to be the same as in 2007

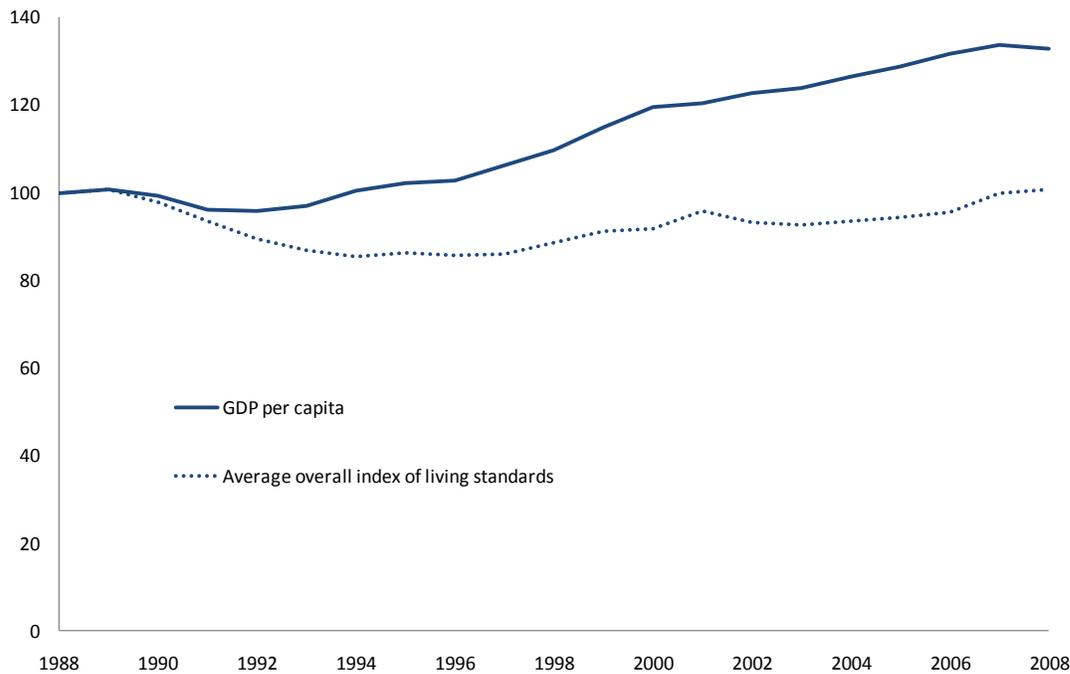
The headline indicator that suffered the largest deterioration over the 1988-2008 period was the ratio of the after-tax incomes of the top to bottom quintile (up 16.6 per cent), followed by

economic security (down 14.7 per cent) and employment quality (down 11.3 per cent). The RBC Housing Affordability Index saw the smallest change among the indicators that experienced downward movement; the index was up 9.5 per cent, indicating a fall in housing affordability.

Over the 1988-2008 period real GDP per capita rose 33 per cent (Figure 1). In contrast, the composite indicator of living standards, giving equal weight to each of eight variables, increased only 4.5 per cent.

The current recession will reduce income, raise unemployment, and increase labour market insecurity. Yet, the recession may also temporarily reduce house prices, which will translate into more affordable housing. Nonetheless, it is likely that the recession will translate into a falling composite index for the living standards domain. Indeed, in the wake of both the early 1990s and the 2001 slowdowns, the composite index of the living standards domain fell (Figure 1).

Figure 1: Trends in GDP per Capita and Composite Index of Living Standards for Canada, 1988-2008
1988=100



Tables 7A and 63

Conclusion

This report provides a comprehensive examination of a large number of indicators of living standards in Canada over the last quarter century and identifies a number of these indicators as headline indicators for the new Canadian Index of Wellbeing. The bottom line is that Canada has become a much richer country, but the top quintile has received the lion’s share of rising income and wealth.

Looking at the eight headline indicators for which time series are available, one can immediately see that living standards of Canadians have not unambiguously improved between 1981 and 2008. Indeed, Canadians experienced a widening of income inequalities. The incidence of poverty has decreased. The unemployment rate in 2008 was near the record low for the 1981-2008 period, and yet the incidence of long-term unemployment is slightly higher now than in 1981. Economic security measured by the CSLS index has also fallen, spurred by a significant decrease in economic security caused by the financial risk associated with illness. Since 1981, many dimensions of living standards in Canada have not improved, and that in spite of a 52.6 per cent surge in Gross Domestic Product per capita. These conclusions remain largely accurate for the 1988-2008 period, in spite of a 33 per cent increase in GDP over that short time period. Looking forward, the challenges for Canada's policymakers are significant, but need to be tackled if Canada is to become a fairer and richer country.

Living Standards Domain of the Canadian Index of Wellbeing¹

I. Introduction

Have the living standards of Canadians improved or deteriorated over the last quarter century? Answering this seemingly straightforward question is actually very difficult. This is because of the large number of possible indicators that could be chosen to track trends in living standards. This report, which represents the living standards domain of the new Canadian Index of Wellbeing, provides a comprehensive overview of trends in a number of indicators of living standards over the 1981-2007 period in Canada, and up to 2008 when data are available.²

To decide on which indicators must be reviewed if we are to obtain a complete picture of living standards in Canada, we rely on the framework outlined in Osberg and Sharpe (2002), which was originally laid out in Osberg (1985). This conceptual framework identifies the following aspects as key for living standards: living standards at present times, as captured by income levels and distribution, and the sustainability of current income levels, as captured by measures of wealth and the extent of economic security experienced by individuals (Figure 1). This framework guides us in the selection of relevant indicators to be reviewed. Of course, to operationalize this framework in the context of the CIW, the choice of headline indicators must take into account that some aspects of living standards (e.g. time use) may be more or less covered by other domains, as well as must reflect the views of other CIW experts.

Figure 1: Dimensions of Economic Wellbeing		
Concept	Present	Future
“Typical Citizen” Or “Representative Agent”	Average Flow of Current Income / Consumption	Aggregate Accumulation of Productive Stocks
Heterogeneity of Experiences of all Citizens	Distribution of Income - Inequality and Poverty	Insecurity of Future Incomes

The report focuses on trends in living standards at the national level in Canada, although certain key regional developments are noted. Data on trends at the national as well as the provincial

¹ This report was written by Andrew Sharpe and Jean-François Arsenault with assistance from Patrick Alexander, Graham Beattie, Benjamin Evans, Peter Harrison, Sharon Qiao, Christopher Ross, Faustine Roussel, and Jeremy Smith. We would like to thank Alex Michalos, Tim Sargent, Janie Saumure, Alex Seychuk and Benjamin Tal for assistance in data compilation. Earlier versions of this report were presented at of the CIW Working Group meetings held on June 28-29, 2005, June 27-28, 2006, November 8-9, 2006, June 5-6, 2007, and November 25-26, 2008 and the CSLS session on wellbeing indicators at the annual meeting of the Canadian Economics Association May 26-28, 2006. We would like to thank participants in these events for comments. We would in particular like to thank Andrew Jackson from the Canadian Labour Congress, Kim Lauzon of Statistics Canada, Paul Bernard from the Université de Montréal, Ron Colman from GPI Atlantic and four external referees for detailed comments. All tables referenced in this study are found in an Excel file published with the study on the Canadian Index of Wellbeing website (www.ciw.ca) and the Centre for the Study of Living Standards website (<http://www.csls.ca/reports/csls2009-4-tables.pdf>).

² For a discussion of the importance of the current economic crisis on living standards, see the forthcoming report by Arsenault and Sharpe (2009).

and territorial levels for almost all indicators discussed are provided in the extensive set of tables that accompany this document.³ Space limitations, however, preclude discussion of these provincial trends. Indeed, a report similar in length to this document (more than 100 pages) could be produced for each province. Equally, time and space considerations have meant that comparisons of trends in living standards in Canada with those of other countries have also not been included in this report. Future work may focus on international comparisons.

This report largely focuses on aggregate trends in living standards over time, and is not a cross-section examination of the current state and trends in this state of living standards for various socio-economic, age, gender, ethnic, and linguistic groups in society at a particular point in time. While some indicators are presented on a disaggregated basis for the most recent year or over time, a full examination of trends in living standards for all societal groups in Canada, either at a point in time or over time, is beyond the scope of this report.

Conclusions about trends in living standards can be very sensitive to the time period chosen. A comparison of current living standards with those in the 1930s will not surprisingly show a much greater improvement than a comparison with the 1980s. This report takes a medium-term perspective on trends in living standards in Canada, tracking living standards over the last quarter century. The initial year for most time series analyzed in the report is 1981, a business cycle peak and the first year for which many of the data series are available. Almost all time series extend to 2008 or 2007, providing as up-to-date a picture as available data allow on current living standards in Canada. The report has been revised in June 2009 to incorporate revised national accounts estimates for 2008. Within the 1981-2008 period the years 1989 and 2000 are often used to create sub-periods. Like 1981, these two years were business cycle peaks so the 1981-1989 and 1989-2000 periods are cyclically neutral in a peak-to-peak sense, minimizing the impact of the business cycle on trends. The 2000-2007 period is also a cyclically neutral period. The 2000-2008 period is also relatively cyclically neutral, as real output continued to rise in 2008, albeit slowly. Given the recession that began in late 2008, if the analysis were to extend to 2009 or 2010 the trends in living standards would be much worse, reflecting the effects of the business cycle on many the indicators surveyed in this report.

Most of the data presented in this report represent objective indicators of trends in living standards, but in a number of cases they have been supplemented with subjective indicators of the perceptions Canadians have about more objective living standards indicators. There is a lively debate in the living standards literature on the relative weight that should be given to objective and subjective indicators of trends in living standards. Some argue that the focus should be on objective indicators which capture true trends in underlying reality. Others make the case that perceptions are reality at the level of individuals and that therefore these perceptions determine wellbeing and should be of interest. For example, even though the actual chances of losing one's job may be falling, if workers think that the chances of losing their jobs are rising, due to extensive media coverage of high-profile layoffs, they may suffer increased job anxiety. Some argue that since this perception of reality, although inaccurate, may make workers worse off, it has relevance for any study of trends in living standards. Others feel that while this perception (or more accurately misperception) may be of interest

³ Data at the census metropolitan areas (CMAs) are also available for many of the indicators discussed in this report, but they are not included in the tables because of space limitations.

to psychologists, it should not be a prominent part of an analysis of trends in living standards, which should be measured by objective indicators.⁴

This report adopts a number of conventions. Growth rates are expressed in terms of compound (geometric) growth with the first year of the period as the base year. For example, the period 1981-2008 uses 1981 as the base for growth rate calculations, not 1980. Growth rates are based on real or constant price estimates unless nominal estimates are explicitly mentioned.

The data used in this report largely come either directly or indirectly from Statistics Canada, with a small number of exceptions.⁵ The key sources of data from Statistics Canada used in the report are: the system of national accounts, which provides estimates of GDP, personal income, personal disposable income, and net worth; the Survey of Labour and Income Dynamics (SLID), which supplies household income and low income estimates; the Survey of Financial Security (SFS), which provides estimates of wealth; and the Labour Force Survey (LFS) which provides unemployment and employment estimates.

This report is a description and examination of trends in living standards indicators in Canada based on an analysis of the data. It does not survey the extensive literature on these trends, much of it published by Statistics Canada through flagship publications such as the *Canadian Economic Observer*, *Perspectives on Labour and Income* and *Canadian Social Trends* as well as through numerous research papers. Other sources of general analysis of recent trends in living standards in Canada include the volume *Falling Behind: The State of Working Canada, 2000* by Andrew Jackson and published by the Canadian Centre for Policy Alternatives, and the 2001 volume *Canada in the*

⁴ This note provides a simple typology of states associated with objective and subjective indicators of the same phenomenon, such as the state of living standards. Individuals can be classified into four quadrants. Persons in the northwest quadrant perceive an increase in their living standards and objective indicators point in this direction. Perceptions align with objective reality, a state of bliss. In the southeast quadrant, persons perceive a fall in living standards. This perception is confirmed by objective data, a situation of misery. In the other two quadrants, perceptions do not match objective reality. In the northeast quadrant, persons believe that their living standards are increasing, but this perception is not supported by empirical data, a situation that can be characterized as one of false consciousness or denial. In the southwest quadrant, persons feel living standards are deteriorating, but in reality they are rising. An example of the disconnect between subjective and objective indicators concerns social mobility. In the United States, public opinion polls show that most Americans believe that the extent of social mobility is high. Yet studies have shown that the extent of social mobility is in fact low. The political implications of this situation are ambiguous. Does the fact that Americans appear content with the status quo on social mobility mean that this issue is not important? Or rather does the low degree of social mobility in and of itself make social mobility an important issue irrespective of public opinion?

		Objective Indicators	
		Good	Bad
Subjective Indicators	Good	Bliss	False consciousness
	Bad	Neurosis	Misery

⁵ Welfare rates are from the National Welfare Council, minimum wage rates from Labour Canada, the the Employment Insurance disincentive index from Finance Canada, housing affordability index from the Royal Bank of Canada, and employment quality index from the Canadian Imperial Bank of Commerce (CIBC).

1990s: The Longest Decade, edited by Keith Banting, Andrew Sharpe and France St-Hilaire and published by the Centre for the Study of Living Standards and the Institute for Research on Public Policy.⁶

As noted earlier, the organization of this report has been motivated by the work on the Index of Economic Well-being that the Centre for the Study of Living Standards has undertaken since 1998 (Osberg and Sharpe, 2002, 2009a and 2009b). This index is organized around four components or dimensions of economic wellbeing: consumption flows, stocks of wealth, income inequality, and economic security. Data on these four dimensions are examined closely in this study.

The report is divided into four major parts. Part one examines trends in average and median income and wealth indicators in Canada. Part two looks at the distribution of the income and wealth of Canadians over time, including trends in low income. Part three discusses trends in income fluctuations or income volatility. Part four analyzes trends in the economic security of Canadians, including labour market security, food security, housing security, and the security provided by the social safety net.

The body of the report has been written for a general audience interested in trends in living standards and the authors have tried to keep jargon and non-essential technical information to a minimum. The report also includes a detailed set of footnotes that will be of interest to specialists.

II. Average and Median Income and Wealth

By a global standard, Canada is considered a country with a high level of living standards, and its citizens are generally regarded as economically well off. Even though it is recognized that there is more to living standards and economic wellbeing than money, the standard metric for such judgments is levels of income and wealth defined in monetary terms. Consequently, the point of departure for any analysis of living standards is an examination of data on income and wealth.⁷

This section of the report looks at trends in the average and median income and wealth of Canadians from 1981 to 2007 and to 2008 when data are available. The section is divided into three parts. The first part is an examination of trends in national accounts-based measures of per capita income, including gross domestic product (GDP) per capita, personal income (PI) per capita, and personal disposable income (PDI) per capita as well as a brief discussion of trends in wages and productivity. The second part looks at household-based income measures including trends in the number of households, and trends in average and median income measures (market, total, and after-tax income). It also includes a discussion of the perceptions of Canadians on their financial situation. The third part presents both national accounts and household survey estimates of wealth.

⁶ In the United States, *The State of Working America* published by the Economic Policy Institute is one of the main sources of analysis of recent trends in living standards.

⁷ The term social wage is also often used in the context of living standards. The social wage is generally meant to refer to public expenditure on health, education, housing and social welfare. In other words, it represents the portion of government services which benefit individuals and could be considered as a part of their compensation. In this report, we do not focus on the concept of social wage because its most important components, health and education, are covered by other domains of the Canadian Index of Wellbeing.

For a country as a whole, income is synonymous with gross domestic product (GDP). However, personal income per capita tends to be closer to the public's definition of income and bears a closer resemblance to the reality of daily life.⁸ Unfortunately, national accounts data do not gather socio-economic characteristics, and as such do not allow for socio-economic disaggregation.

In this regard, household surveys, such as the Survey of Labour and Income Dynamics (SLID), which replaced the Survey of Consumer Finances (SCF) in 1998, are much more detailed. Not only do they provide estimates of average income per family unit, but they also provide median estimates and data can be disaggregated by socio-economic characteristics. These estimates are available for the 1980-2007 period. For SLID, the time between the end of the reference period and the release of estimates, also called release lag, is currently around 16 months, compared to only two months for estimates based on the national accounts.

In terms of wealth information, Statistics Canada has published, as part of the national accounts balance sheets, estimates of net worth for the 1961-2008 period. By using net worth of individuals and unincorporated businesses as a proxy for personal wealth, we will observe the evolution of aggregate per capita wealth. No disaggregation by individual or household characteristics is possible for this series. Wealth estimates are also available from Statistic Canada's Survey of Financial Security (SFS), which was conducted in 1999 and 2005. As the SFS is a household survey, individual or micro data are available so the distribution of wealth and median wealth estimates can be calculated. However, because the SFS is conducted so infrequently, no annual time series can be derived.

A. Income Per Capita - National Accounts-Based Estimates

In building a set of indicators of living standards for Canada, the notion of income comes naturally. Estimates from the system of national accounts, released by Statistics Canada, are published with a lag of only two months. Data are available on a consistent basis covering the period of 1981-2008, are comprehensive and draw on many data sources, which enhances their reliability. Unfortunately, income measures from the national accounts cannot be disaggregated by socio-economic characteristics of the population.

Of course, the most well known national accounts-based measure is Gross Domestic Product (GDP) per capita. This measure is followed closely by the media, politicians and economists. However, if we want to analyze the living standards of individuals, we tend to downplay GDP per capita, because it includes retained corporate profits and depreciation, which are not received by individuals, and does not include transfer payments, which are received by individuals. Personal income and personal disposable income, which do include transfer payments and exclude corporate

⁸ Estimates of personal income and personal disposable income are part of the system of national accounts produced by Statistics Canada. Estimates of GDP are available starting in 1926 on a national basis and from 1961 on a provincial basis. Personal income and personal disposable income data for Canada and the provinces are available for 1926-2008. However, the Consumer Price Index (CPI), the main price index used to deflate nominal personal income and nominal personal disposable income to obtain real estimates, only goes back to 1979 for the provinces. Moreover, the most recent consistent time series for provincial GDP is for the 1981-2008 period. Given these data limitation, and more importantly because we are focusing our analysis on developments during the last quarter century, we will use data covering the 1981-2008 period.

profits and depreciation, match more closely the definition of living standards on an individual basis. We now examine trends for these three indicators over the 1981-2008 period.

1) Gross Domestic Product Per Capita

GDP represents the total value of the goods and services produced in a country or region for a given period. It can be calculated in three ways, i.e. expenditure-based, income-based or value added-based.⁹

Between 1981 and 2008, real GDP per capita in Canada has increased at an annual compound rate of 1.58 per cent, a 52.6 per cent total increase for the period, from \$26,074 to \$39,790 chained 2002 dollars (Summary Table 1 and Chart 1a). Real GDP per capita has grown every year since 1981, with the exception of 1982, the 1989-1992 period, and 2008. Growth was rapid in the 1980s, with real GDP per person increasing 20.7 per cent between the trough of 1982 and the peak of 1989. After retreating 4.9 per cent in the 1989-1992 period, real GDP per capita resumed its upward trend until the downturn in 2008. Between 1992 and 2007, real GDP per capita grew steadily, increasing 39.4 per cent over the period. In 2008, real GDP per capita declined 0.7 per cent, the first annual decline since 1992.

Summary Table 1: National Accounts-Based Measures of Real Aggregate Income in Canada, Average Annual Change (per cent), 1981-2008

	Real GDP per capita	Real Personal Income per capita	Real Personal Disposable Income per capita
81-89	1.86	1.55	1.11
89-00	1.57	0.63	0.27
00-08	1.30	1.49	1.71
81-08	1.58	1.16	0.94
Total Growth			
81-08	52.6	36.5	28.8
Sources: Tables 7A, 8B and 9B			

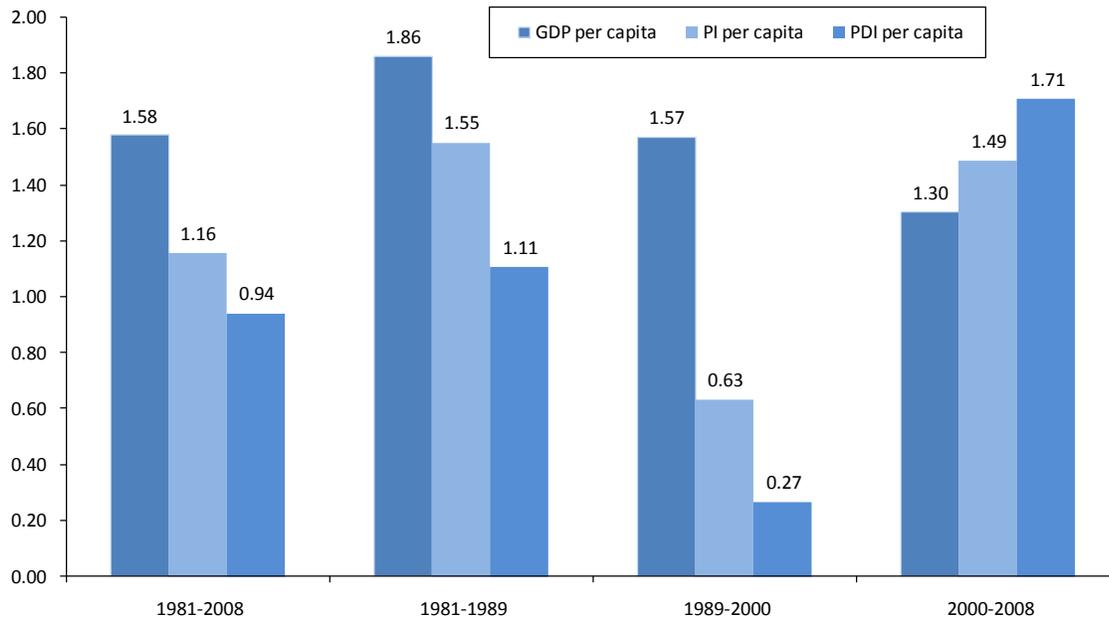
GDP is not the only measure of aggregate economic performance.¹⁰ Gross national product (GNP) and gross domestic income (GDI) are two other measures of the aggregate performance of Canada. GNP is a broader measure than GDP as it also includes the balance of international flows of interest and dividend payments. Over the past three decades, net investment income from non-

⁹ Expenditure-based GDP is the measure of total final sales of current production and includes personal and government expenditures, business investment as well as exports and imports. Income-based GDP is the measure of total income earned in current production and includes wages, corporation and government business profits, interest and investment income, unincorporated business net income, taxes less subsidies and capital consumption allowances. Value-added GDP is the measure of total net value added in current production and includes the value added for each industry.

¹⁰ In a forthcoming paper, Sharpe and Ross (2009) explain the differences between various measures of income and output and compare these measures for the economies of Canada and the United States. Measures analyzed include GDP, GDI, GNP, GNI, NDP, NDI, NNP and NNI.

residents has been negative in Canada, which explains why GNP has been lower than GDP over the 1981-2008 period (Chart 1b). Nonetheless, over the 1981-2008 period, GNP grew slightly faster than GDP.

Chart 1a: National Accounts-Based Measures of Real Aggregate Income in Canada
Average Annual Growth, 1981-2008, per cent



Source: Table 7a, Table 8b and Table 9b

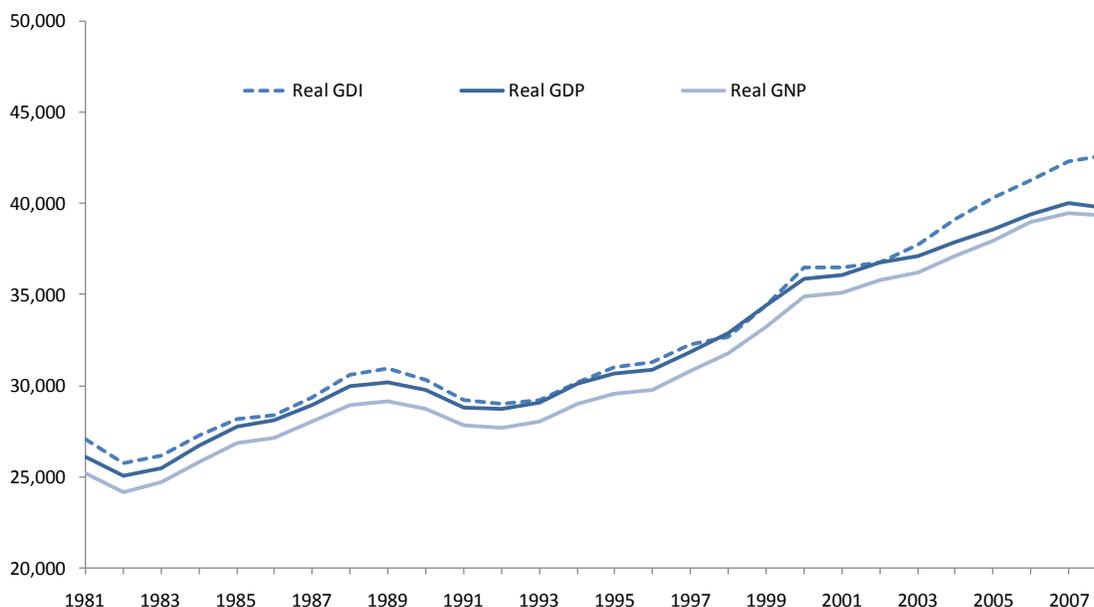
The difference between GDP and GDI in real terms (as the measures must be equal in current dollars) stems from changes in Canada's international terms of trade, the ratio of export to import prices. Over the 1981-2002 period, terms of trade were relatively stable in Canada. Between 2002 and 2008, however, with the rapid increase in commodity prices, particularly oil, the price of Canada's exports grew much more rapidly than the price of imports and GDI significantly outperformed GDP (Chart 1b). In other words, aggregate income in Canada (GDI) increased faster than aggregate production, because the prices of goods and services exported from Canada increased faster than the prices of goods and services imported to Canada. In any case, all three measures show similar gains in terms of aggregate income, with GDP suggesting a slightly lower increase than the other two measures. Given these strong similarities, using GDP as a starting point for our analysis appears reasonable.

Real GDP per capita growth varied by province over the 1981-2008 period. The four Atlantic provinces enjoyed above average GDP per capita growth while all three provinces with above average income, Ontario, British Columbia and Alberta, experienced below average growth. Alberta grew only slightly slower than the national average, however, and its nominal GDP growth was faster than average. These trends resulted in a significant decline in disparities in GDP per capita levels between the provinces.¹¹

¹¹ As shown in Table 7D, current dollar GDP per capita as a proportion of the national average rose in Newfoundland and Labrador from 61.7 per cent in 1981 to 128.8 per cent in 2008, in Prince Edward Island from 59.5 per cent to 70.1 per

Chart 1b: A Comparison of Real Gross Domestic Product (GDP), Real Gross Domestic Income and Real Gross National Product on a per Capita Basis

2002 chained dollars, 1981-2008



Source : Table 6b, Table 6d, Table 6e and Cansim Series v647785.

Canada's GDP per capita performance might seem impressive, but how did it affect the living standards of the average Canadian? Do Canadians really feel 53 per cent richer today than they did in 1981? Gross Domestic Product per person is generally not considered the most appropriate indicator of living standards at the level of the individual because, as noted earlier, it includes corporate profits and depreciation and excludes government transfers payments to persons. For this reason, personal income is considered a better income measure for tracking trends in living standards. And this measure exhibited less than one-half the growth of GDP per capita.

2) Personal Income Per Capita

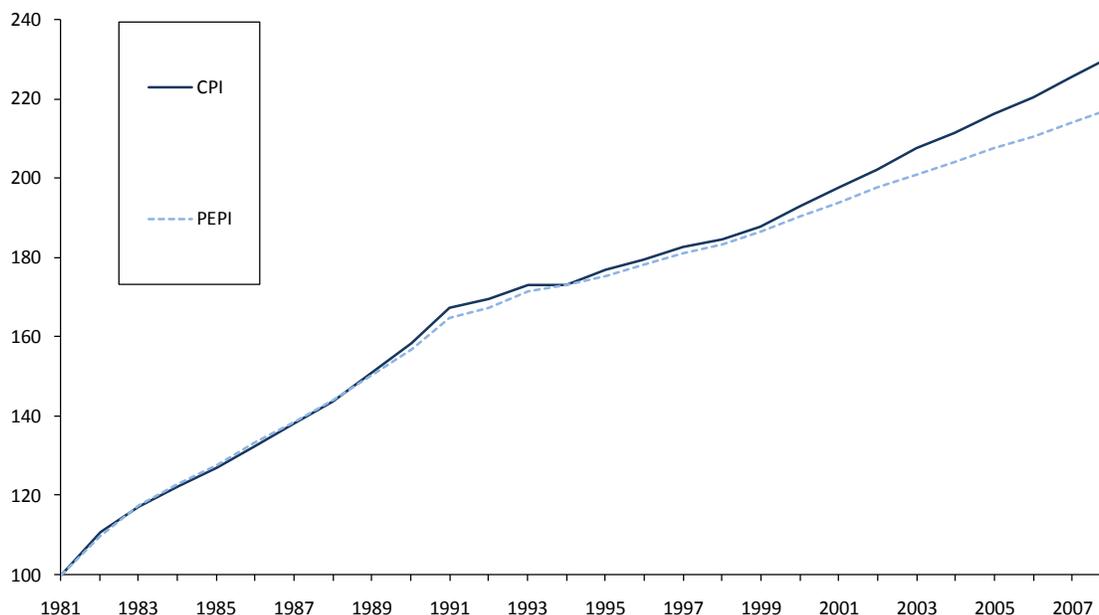
Personal income includes employment earnings, interest payments, dividend payments and government transfers to persons. Estimates of nominal personal income per capita are part of the system of national accounts produced by Statistics Canada and are available at both the national and the provincial level since 1926.¹² To deflate nominal personal income and obtain real or constant-dollar estimates, one can use either the Consumer Price Index (CPI) or the Personal Expenditure Price

cent, in Nova Scotia from 64.1 per cent to 75.6 per cent, and in New Brunswick from 61.8 per cent to 75.1 per cent. Equally, in two of the three provinces with above average GDP per capita in 1981, GDP per capita as a proportion of the national level fell over the 1981-2008 period, from 102.4 per cent of the national average to 94.5 per cent in Ontario, and most importantly, from 109.3 per cent to 94.5 per cent in British Columbia.

¹² Note that personal income is not only the sum of all income received by persons residing in Canada, but also includes the investment income that associations of individuals defined as non-profit institutions serving households, such as churches, labour unions, charitable organizations, credit unions, trusted pension plans, life insurance companies, fraternal societies and mutual non-life insurance companies, accumulate on their own behalf or on behalf of persons. In this regard, personal income can be misleading as it includes elements not directly linked with persons.

Index (PEPI). While the CPI compares the cost, through time, of a fixed basket of commodities, the Personal Expenditure Price Index is based on actual expenditures by Canadians, including expenditures overseas. As the CPI is the best known measure of inflation relating to households, and since it is the most widely used series to deflate nominal personal disposable income, it is the deflator used in this report. However, it is important to recognize that the choice of deflator can influence the magnitude of the trends.¹³

Chart 1c: Consumer Price Index (CPI) and Personal Expenditure Price Index (PEPI)
Index (1981 = 100), 1981-2008



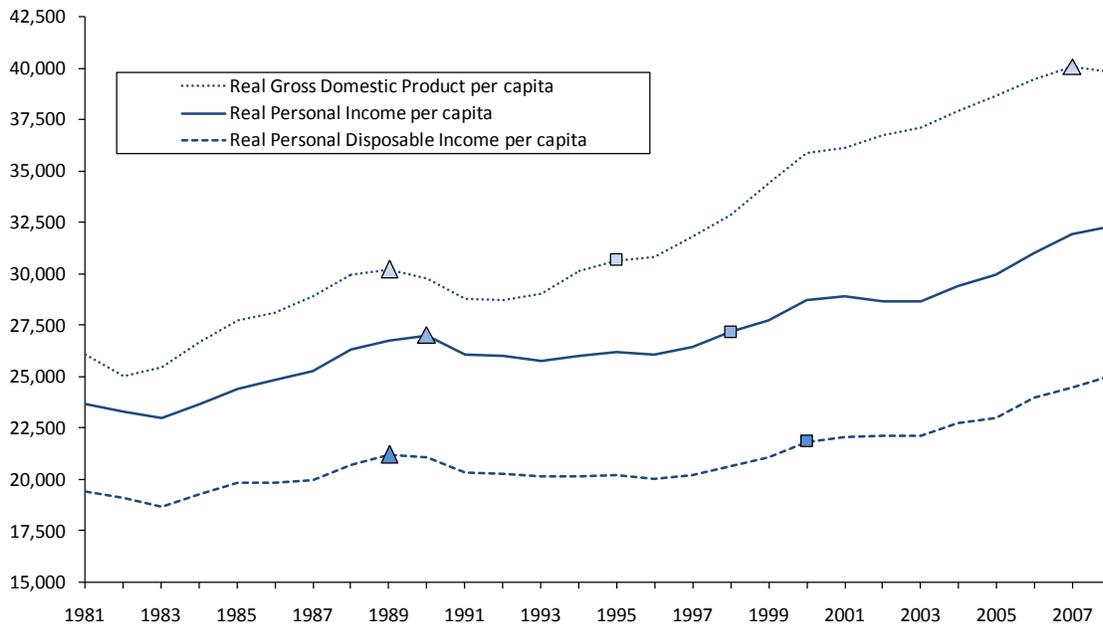
Source : Table 4 and Table 5

The difference between the CPI and the PEPI is particularly important for the period from 2000 to 2008, when the PEPI grew significantly more slowly than the CPI (1.68 per cent versus 2.26 per cent per year) (Chart 1c). The PEPI is wider in scope, and generally includes spending by Canadian residents and non-profit institutions serving them. It also includes some of the expenses funded by government agencies and includes imputation for some services obtained without explicit charges, such as free savings accounts. In comparison, the CPI covers out-of-pocket expenses by households. Other methodological differences, such as how components are weighted or how price information is obtained, also create discrepancies. In any case, it is common practice in Canada to use the CPI to deflate income measures at the individual or household level.

¹³ Over the 1981-2008 period, the CPI for Canada grew at a compound annual rate of 3.14 per cent, compared to 2.92 per cent for the Personal Expenditure Price Index (Table 4 and Table 5). If we used the Personal Expenditure Price Index (PEPI) instead of the CPI to deflate personal income over the 1981-2008 period, the compound annual growth rate obtained is 0.22 percentage points higher, accumulating to a difference of 13.1 per cent, which is not trivial. As noted in the text, most of the difference took place between 2000 and 2008. Over that period, the difference between the two indicators was .58 percentage points. In any case, personal income would have shown greater growth if we had used the PEPI instead of the CPI. The CPI is used to deflate all income and wage measures in this report. If we had used the PEPI, growth in median and average income and wealth would have been 6 per cent higher over the 1981-2008 period, and growth would have been 0.22 percentage points higher annually.

Real personal income per capita grew 36.5 per cent over the 1981-2008 period, an average of 1.16 per cent per year (Summary Table 1). It is important to note that real personal income per person grew at a significantly slower rate than real GDP per capita (Chart 1a). This is partly due to the faster growth of the CPI compared to the GDP deflator used to deflate nominal GDP, which accounts for 52 per cent of the difference. Also, faster growth of corporate profits, which are included in GDP but not in personal income, contributed to the difference.¹⁴

Chart 2a: Gross Domestic Product, Personal Income and Personal Disposable Income on a per Capita Basis (\$2002), 1981-2008



Source : Table 7, Table 8B and Table 9B

▲ Peak

■ Year where previous peak value was equalled or exceeded

Within the 1981-2008 period, the movement of real personal income per capita followed the business cycle, falling in recessions and rising in expansions. After declining during the recession of the early 1980s, real personal income grew 17.5 per cent between 1983 and 1990, rising from \$23,003 to \$27,018 (\$2002). After 1990, personal income fell three years in a row, then grew sluggishly, reaching its previous 1990 peak only in 1998 (Chart 2a). It continued to grow up to 2001. It then fell in 2002, stayed constant in 2003 and then rebounded. By 2008 it was 11.8 per cent above its 2001 peak and stood at \$32,307.

¹⁴ Real personal income per person average annual growth for 1981-2008 was 1.16 per cent, compared to 1.58 per cent for real GDP per capita, a difference of 0.42 percentage points. As noted in the text, the most important factor was the difference between the CPI and the GDP deflator, which accounted for 0.22 percentage points, or about 52 per cent of the gap. A decomposition of nominal GDP sheds more light on the remaining 0.24-percentage point discrepancy (Table 32 and Table 33). During the 1981-2008 period, nominal wages, salaries and supplementary income annual growth averaged 5.44 per cent, slightly lower than nominal GDP growth of 5.68 per cent. Moreover, corporate profits, which represented approximately 14.5 per cent of GDP in 2008, grew on average 6.64 per cent annually, pulling GDP growth up. In other words, not only are the deflators used for GDP and personal income significantly divergent, but the components of GDP that are not part of personal income grew faster than the one that are part of personal income.

As was the case for GDP per capita, the four below-average income Atlantic provinces enjoyed above average growth in real personal income per capita over the 1981-2008 period, while two of the three provinces with above average income, Ontario and British Columbia, experienced below average growth. This again resulted in a significant decline in provincial disparities in personal income per capita.¹⁵

3) Personal Disposable Income Per Capita

Personal disposable income is defined as personal income less current transfers (basically direct taxes, such as personal income taxes) to governments. To ascertain trends in the actual spending power of Canadians, real personal disposable income per capita is sometimes considered a better indicator than real personal income per capita since it represents the average after-tax spending power of individual Canadians. Estimates of nominal personal disposable income per person are part of National Accounts produced by Statistics Canada and are available at both the national and the provincial levels back to 1926.

A quick look at trends in real personal disposable income (PDI) per capita reveals an interesting story. During the 1980s, growth in nominal personal disposable income per capita in Canada outpaced the CPI. As a result, between the trough of 1983 and the peak of 1989, real personal disposable income per person grew at a very strong annual compound rate of 2.13 per cent, and reached \$21,211 per person (\$2002) in 1989 (Table 9B). However, this trend was reversed as the Canadian economy experienced a sharp downturn in the following years, i.e. the downturn of 1990-1991 and a subsequent slow recovery. It took the boom of the late 1990s to return PDI per capita to a level equal to that attained in 1989, with the level of \$21,847 being attained in 2000. Real personal disposable income per capita has since advanced steadily at a 1.71 per cent average annual rate and in 2008 was \$25,019. This rocky road for real personal disposable income per person in Canada over the 1981-2008 period translated into overall growth of 28.8 per cent between 1981 and 2008, which represents a compound annual rate of only 0.94 per cent. This was less than two-thirds of the 1.58 per cent compound rate of growth of Canadian real GDP per capita over the same period.

Moreover, while real personal disposable income per capita generally moved in line with real personal income per capita, it grew more slowly than the latter. This is explained by the dramatic increase of the implicit tax rate in the 1980s and the 1990s, from 17.95 per cent in 1981 to 22.56 per cent in 2008 (Chart 2b and Table 10A). The implicit tax rate peaked in 1998, reaching 23.99 per cent. However, can we consider a tax hike as having an adverse effect on wellbeing? If we assume governments are efficient and reflect the preferences of the population, one might conclude that personal income is a better indicator of wellbeing because every penny paid in taxes would be gained in government services.¹⁶ Nonetheless, there is no agreement on whether higher taxes and the

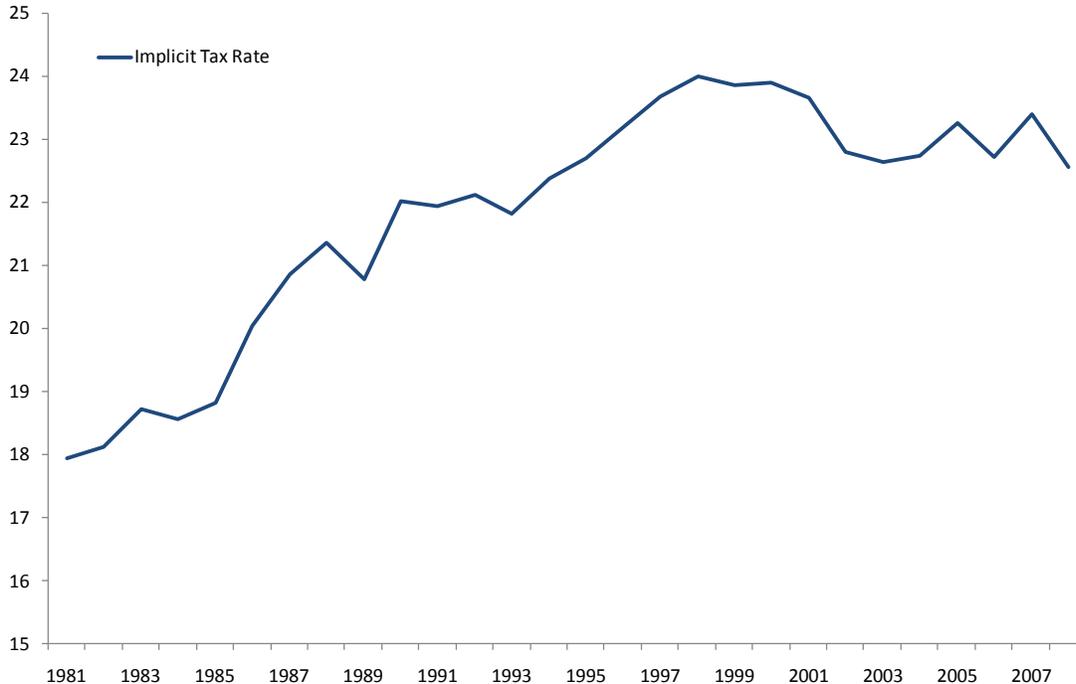
¹⁵ As shown in Table 8D, personal income per capita as a proportion of the national average rose in Newfoundland and Labrador from 62.6 per cent in 1981 to 82.6 per cent in 2008, in Prince Edward Island from 67.2 per cent to 76.3 per cent, in Nova Scotia from 79.0 per cent to 85.3 per cent, and in New Brunswick from 72.9 per cent to 85.0 per cent. Equally, in two of the provinces with above average personal income per capita in 1981, relative personal income per capita fell over the 1981-2008 period, from 108.5 per cent of the national average to 101.9 per cent in Ontario and from 107.4 per cent to 100.5 per cent in British Columbia.

¹⁶ This depends on one's view of the value of government expenditures as well as on the proportion of each tax dollar that does not translate into government services due to, for example, administrative costs and reduced work incentives.

resulting lower after-tax income improve, worsen, or have no effect on wellbeing, so difficulties in deciding on the most appropriate indicator of living standards remain.

Chart 2b: Implicit Tax Rate

1981-2008, per cent



Source: Table 10a

4) Wages and Productivity Measures

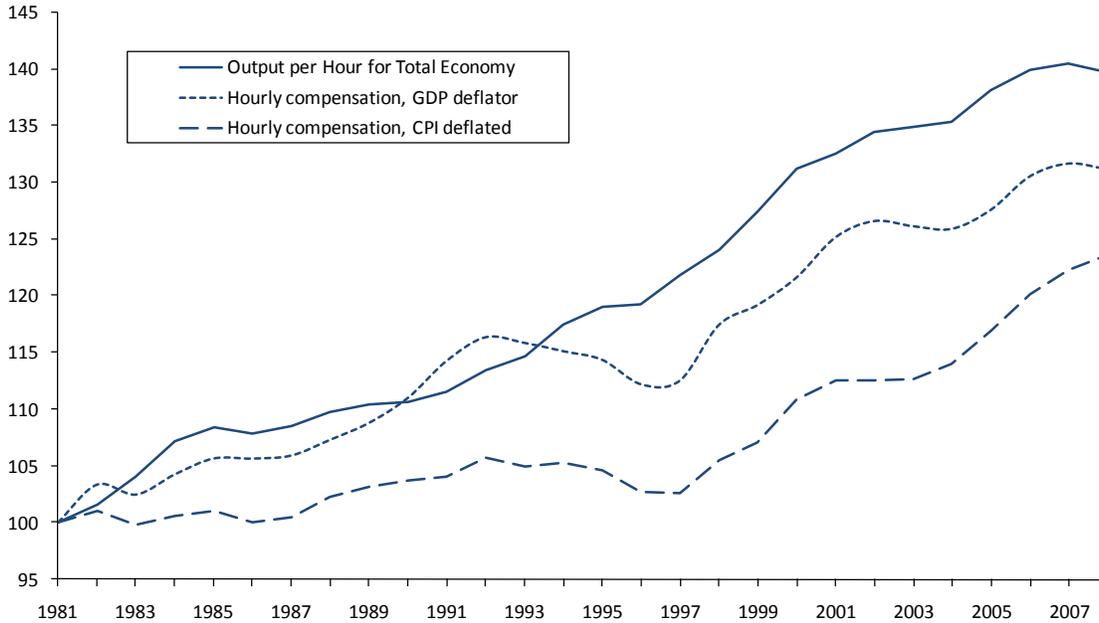
Since wages represent around two-thirds of personal income, trends in wages largely determine trends in aggregate personal income. In the long-term, the key driver of trends in real wages is labour productivity growth. An increase in the amount of output a worker produces creates an equivalent increase in the amount of income, and this income translates into higher wages and profits. Consequently, it is useful to compare real wage and productivity growth to ascertain if real wage gains are keeping pace with productivity growth, and if not, why.

Labour productivity, defined as total economy output per hour worked, increased at an average annual rate of 1.30 per cent over the 1981-2008 period. Consequently, one might expect real wages to have increased at a comparable rate. However, this has not been the case (Chart 3). Real hourly compensation, which includes wages and in-kind benefits, grew much more slowly, at an average rate of only 0.82 per cent per year, a little over one-half the rate of productivity growth. This represents a difference of 0.48 percentage points per year (Summary Table 2a).¹⁷ If wages are

¹⁷ Another issue related to wages concerns the male-female wage differential. Nominal growth in both average and median hourly wages for women outpaced those for men over the 1997-2008 period, according to data from the Labour Force Survey (Table 60). The average female hourly wage rose from 81.6 per cent of that of males in 1997 to 83.8 per cent in

narrowly defined, the gap is even more substantial. Over the 1997-2008 period, real median hourly wages of employees (instead of real hourly compensation), increased only 0.55 per cent per year and real average hourly wages increased 0.73 per cent per year (Table 73b), much slower than real hourly compensation which increased 1.71 per cent per year.

Chart 3: Real Hourly Compensation and Productivity Indexes
(1981=100), 1981-2008



Source : Table 23

The first reason behind this variation in productivity and wage growth is the use of different price indexes to deflate nominal hourly compensation and nominal output. The Consumer Price Index (CPI) is used to deflate nominal labour compensation as the real wages of workers are determined by this price index. The GDP deflator is used to deflate nominal output as it captures the prices of output, including exports and intermediate and capital goods that are not purchased by consumers and hence not directly included in the CPI. With the CPI growing 0.23 percentage points per year faster than the GDP deflator over the 1981-2008 period, (3.14 per cent versus 2.91 per cent),¹⁸ the differential deflator growth explains 48 per cent of the productivity/wage growth gap.

The remaining 52 per cent of the gap can be accounted for by faster growth in nominal GDP than nominal labour compensation, that is, a falling labour share. Since wages are already included in income-based GDP and account for about one half of GDP, faster growth in the non-wage components of GDP must explain the remaining part of the gap. During the 1981-2008 period, average annual growth of nominal wages, salaries and supplementary income was 5.44 per cent, lower than nominal GDP growth of 5.68 per cent per year, and significantly slower than the 5.76 per cent per year rate of increase of nominal GDP excluding wages and inventory (Table 32). All non-

2008. Equally, the median hourly wage for females rose from 78.8 per cent to 84.2 per cent that of males over the same period.

¹⁸ The slower growth in the GDP deflator reflects low rates of increase in the price of investment goods due to the falling absolute price of information and communications technologies.

wage components of income-based GDP except interest and miscellaneous investment income contributed to the faster growth of GDP relative to wages. Profits, in particular, growing at a robust 6.64 per cent per year, made the most important contribution.¹⁹ In 1981, profits represented 11.3 per cent of GDP. By 2008, the share had risen to 14.5 per cent. In this context, the reasons behind slower wage growth compared to productivity growth are two-fold: the use of different deflators for wages and output and the faster growth in components of income-based GDP, such as corporate profits, which are not part of worker compensation.²⁰

Summary Table 2a: Measure of Wage in Canada Compared to Productivity, Average Annual Change (Per Cent)

	Hourly compensation, total economy, CPI deflated	Hourly compensation, total economy, GDP deflator	Productivity in the total economy, GDP per hour
81-89	0.39	1.06	1.25
89-00	0.66	1.02	1.58
00-08	1.37	0.95	0.79
97-08	1.71	1.41	1.25
81-08	0.82	1.05	1.30
Total Growth Rate, %			
81-08	23.6	31.3	39.7
Source: Table 23			

More recently, the public debate over the dichotomy in the growth of real wages and that of labour productivity has centered on the wage estimates from the 2006 Census. The 2006 Census found that median earnings for individuals working on a full-time full-year basis barely increased between 1980 and 2005. Adjusting for inflation, annual earnings increased from \$41,348 to \$41,401 (in 2005 constant dollars), a mere \$53 over 25 years. Over the same time period, labour productivity in Canada rose 37.4 per cent. The stagnation in real median earnings reflects not only the falling labour share and the CPI/GDP deflator differential, factors which were noted earlier, but also measurement issues and increasing income inequality.

Sharpe, Arsenault and Harrison (2008) decomposed the census median earnings and labour productivity growth gap and found that a small part of the gap between real earnings and labour productivity is a result of inconsistent measurement. As shown in Summary Table 2b, about one-fifth

¹⁹ Table 32 shows that nominal net income of unincorporated businesses including rent grew at a 6.52 per cent average annual growth rate between 1981 and 2008, with capital consumption allowances increasing at a 6.00 per cent average annual rate, and net taxes (taxes less subsidies) at a 5.60 per cent rate. Interest and miscellaneous investment income advanced at only a 3.37 average annual rate. In relative terms, the faster growth of corporate profits accounts for 101.5 per cent, or 35.2 percentage points, of the 34.7-percentage-point difference between the growth of wages and the growth of GDP minus wages and inventories for the 1981-2008 period. Taxes less subsidies contributed 10.5 per cent, capital consumption allowance about 46.1 per cent, unincorporated businesses 38.5 per cent and interest and investment income, which grew slower, had a negative contribution of 96.6 per cent.

²⁰ One can note that the comparison of wages (total wages per hour) and productivity (output per hour) growth is analogous to the comparison of personal income per capita and GDP per capita. In each comparison the denominator is the same (hours worked in the first and population in the second). In the first comparison, personal income is compared with output, while in the second wages, the key component of personal income, is being compared with output.

of the 1.26-percentage-point gap between annual median earnings growth and annual labour productivity growth over the 1980-2005 period was due to inconsistent measurement.

Summary Table 2b: Factors Explaining the Difference Between Median Real Earnings and Labour Productivity Growth in Canada, 1980-2005

	Absolute (points per year)	Relative (per cent)
Median Real Earnings and Productivity Gap, of which:	1.26	100.0
Measurement Issues	0.25	19.8
Growing Inequality	0.35	27.6
Falling Labour's Terms of Trade	0.42	33.3
Falling Labour Share	0.25	19.8

Source: Sharpe, Arsenault and Harrison (2008)

To make a meaningful comparison between real earnings and labour productivity, the same unit of labour input must be used. While census earnings are reported for full-time full-year workers, productivity is reported for all workers and is generally expressed on an hourly basis. In this analysis, the transformation from full-time, full-year workers to hours was divided in two steps (Summary Table 2c). First, note that the average earnings of full-time full-year workers grew at about the same rate as the earnings of all earners, where an earner is defined as anyone with earnings during the year rather than an average of the monthly number of earners as is the case for the definition of annual average employment. Second, the number of hours worked per earner has increased slightly over the 1980-2005 period, up 2.25 per cent or 0.09 per cent on an annual basis.²¹ Adopting a more appropriate measure of labour input, namely hours worked, thus increases the gap by 0.10 percentage points (7.9 per cent).

Second, the census definition of earnings excludes supplementary labour income (SLI). On an annual basis, average labour compensation grew 0.35 percentage points faster than average earnings, in part because labour compensation includes SLI and earnings do not. This difference in growth rates explains slightly more than one-quarter of the gap between the growth in real median earnings and labour productivity.²²

²¹ The number of hours worked per earner tends to be pro-cyclical, i.e. favorable labour market conditions tend to increase the average number of hours worked for individuals working in a given year. Over the 1980-2005 period, the number of hours worked per earner per year reached a trough in 1982 at 1,463 hours and peaked in 1998 at 1,593 hours (Labour Force Survey). In this context, the difference between 1980 and 2005 is relatively small at 35 hours per year, from 1,521 hours in 1980 to 1,556 in 2005.

²² Statistics Canada defines supplementary labour income to include employer contributions to pension plans (private or public), supplementary health benefits, employment insurance (EI) and worker's compensation. Since 1961, SLI has risen from 5 per cent of labour income to 12 per cent in 2008. This increasing importance is attributable primarily to: (1) a significant increase in contribution rates for the Canada and Quebec Pension Plans particularly since 1998; and (2) the increasing importance of welfare benefits such as private health and dental benefits plans, which represented 3.0 per cent of labour income in 2005, up from only 1.0 per cent in 1961. All other components of SLI increased in importance over the 1961-2005 period; private pensions (2.4 to 3.8 per cent); employment insurance payments (0.7 to 1.5 per cent); retiring allowances (0.0 to 0.7 per cent); and worker's compensation payments (0.8 to 1.3 per cent).

Summary Table 2c: Reconciling Growth in Median Real Earnings and Labour Productivity Growth in Canada, 1980-2005

Earnings and Productivity Growth Gap	Compound Annual Growth Rates	
	Real median earnings of full-time full-year workers	0.01
Labour productivity (Real output per hour)	1.27	
Total gap	1.26	
Contribution to Median Real Earnings and Productivity Gap	Absolute (points)	Relative (per cent)
From median to average earnings	0.35	27.6
Change in definition of labour input, of which:	-0.10	-7.9
from full-time full-year workers to all earners	-0.01	-0.6
from earners to hours	-0.09	-7.3
From earnings to total compensation	0.35	27.8
From CPI to GDP deflator	0.42	33.3
Change in the labour share of nominal GDP	0.25	19.8
Total – All Factors	1.26	100.0

Source: Sharpe, Arsenault and Harrison (2008)

The use of median earnings instead of average earnings accounted for about one-quarter of the gap between median real earnings and labour productivity growth. The difference between median and average earnings growth reflects increasing earnings inequality in Canada over the period. Median real earnings of the top 20 per cent of full-time full-year earners grew 16.4 per cent, while those of the bottom 20 per cent fell 20.6 per cent. The reasons for the growing earnings inequality are poorly understood. Some argue that this development reflects market forces at play and more specifically the growing demand for highly skilled labour. Others make the case that it reflects governance structures that allow persons in positions of power, such as Chief Executive Officers, to obtain earnings increases not commensurate with their contribution to output.²³

As noted earlier, the use of different deflators, i.e. the change in labour's terms of trade, is also an important factor. It accounted for one-third of the median earnings/labour productivity growth gap between 1980 and 2005. From a consumer perspective, total compensation must be adjusted using a consumption deflator, such as CPI, in order to obtain a consistent indicator of purchasing power that is comparable over time. Over the 1980-2005 period, the CPI grew 0.42 percentage points faster than the GDP deflator. Yet, the theoretical link between real wages and labour productivity requires that

²³ Saez and Veall (2005) find that the increase in total income since the late 1970s in Canada is concentrated among the top one per cent of earners, whose share of income increased from 5 per cent in the late 1970s to 10 per cent in 2000. The top 0.1 per cent in turn accounted for much of the increase, with their share going from 1.0 to 4.3 per cent over the period. They suggest that the threat of migration to the United States, where the surge in top income share started earlier (1970), might have spurred the surge in Canada. They support their case with evidence from Quebec where residents have a lower propensity to migrate because of language and cultural differences and where the top income share increase has been much more modest. While the finding of increased income inequality due to the fast rise of incomes at the top of the scale has been confirmed in many subsequent studies (Murphy, Michaud and Wolfson (2008) and Heisz (2007) for example), the drivers behind this trend remain contentious.

both variables be deflated using the same deflator. When both measures are deflated using the same deflator, a further 0.42 percentage points, or 33.3 per cent, of the gap is explained.

The remaining 0.25 percentage points (19.8 per cent) median earnings/labour productivity gap was due to the falling labour share in GDP, a result in line with that obtained earlier. Some of the factors behind the falling labour share are easy to identify; a rising profit share that can be linked to rising resource rents and increasing returns to capital. As was noted earlier, faster growth in the non-wage components of GDP explains the falling labour share. Profits, growing at a robust 6.59 per cent per year, made the most important contribution. Factors driving the fall in the labour share and factors explaining the change in the labour's terms of trade are explored in more detail in Sharpe, Arsenault and Harrison (2008) and Harrison (2009).

B. Income Per Family Unit – Based on Household Surveys

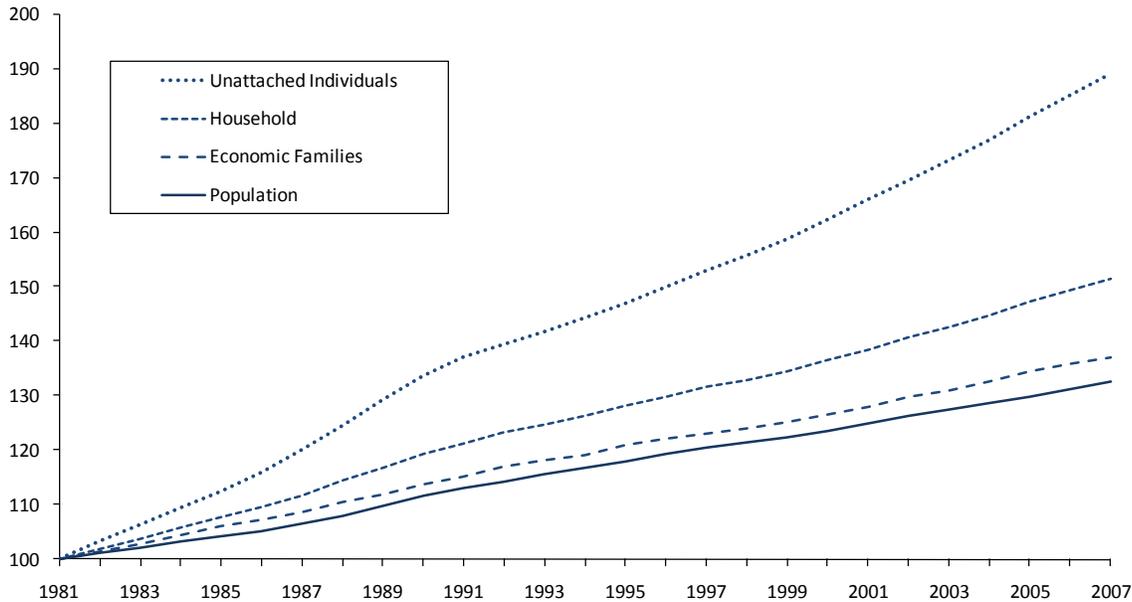
While personal disposable income based on the national accounts is an important indicator of the average after-tax income of Canadians and, by extension, of standards of living based on private consumption, it cannot be disaggregated by socio-economic characteristics, and median income cannot be calculated. However, such data can be obtained from other sources, namely the Survey of Labour and Income Dynamics (SLID), which replaced the Survey of Consumer Finances (SCF) in 1998.²⁴ These household surveys were specifically designed to monitor economic shifts experienced by individuals and families and to provide a comprehensive set of national data on the fluctuations in income of a typical family or individual over time. The SLID estimates have been traditionally released with a lag of 16 months from the reference year, compared to a two month lag for national accounts-based income estimates. It is important to note that these estimates are not completely consistent with national accounts, since they use somewhat different definitions of income and do not cover an identical population.²⁵

Household survey-based income estimates are available at the national and provincial level from 1980 to 2007 on a consistent basis. However, since we use national accounts data starting in 1981, we only use SCF/SLID data starting in 1981. We first concentrate on the impact of the growth in the number of family units over time, followed by an analysis of the evolution of both average and median household income.

²⁴ The SLID began collecting longitudinal data in 1993. Its estimates replaced SCF estimates starting in the 1998 reference year. There was a five-year overlap which confirmed the relative consistency of the data between the two surveys.

²⁵ The SLID excludes residents of the Yukon, the Northwest Territories and Nunavut, residents of institutions and persons living on Indian reserves (less than 3 per cent of the population). Multiplying the average after-tax income of family units by the number of family units, we obtain an aggregate household income of \$794 billion in 2007 (2007 dollars) according to SLID. By comparison, personal disposable income according to the national accounts stood at \$951 billion in 2007 (current dollars). The SLID aggregate was thus 83 per cent of the national accounts aggregate. Most of this difference is due to the fact that the national accounts include income to associations of individuals serving households, which appear mainly in the “unincorporated business net income” and “Interest, dividends and miscellaneous investment income” portions of personal disposable income (see earlier footnote for more details).

Chart 4: Growth in Population, Number of Households, Unattached Individuals and Economic Families
Index (1981 = 100), 1981-2007



Source : Table 1, Table 2A, Table 2B and Table 2C

1) Trends in the Number of Family Units

In the SLID, households are called family units. Statistics Canada differentiates between two main categories of family units, i.e. economic families and unattached individuals.²⁶ Trends in the number of households have a considerable impact on the average and median income of family units over time. In Canada, the growth in the number of households consistently outpaced population growth (Chart 4 and Tables 1 and 2A). For the 1981-2007 period, the number of family units increased at an annual compound rate of 1.61 per cent, while population grew only 1.09 per cent annually. In other words, the number of households increased 51.5 per cent compared to a 32.7 per cent increase for population. Consequently, the average number of persons per family unit fell from 2.72 in 1981 to 2.38 in 2007, down 12.4 per cent (Table 3).

The fall in the number of persons per family unit can be explained by the rapid growth in the number of unattached individuals, up 89.2 per cent between 1981 and 2007. Their share of the total population increased from 10.3 per cent to 14.8 per cent and their share of total family units increased from 27.6 per cent to 34.5 per cent. The rapid growth in the number of unattached individuals and falling economic family size are the result of numerous factors including increased divorce and

²⁶ An economic family is defined as a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common law or adoption. An unattached individual is a person living either alone or with others to whom he or she is unrelated, such as roommates or lodgers. A child must be the child of the major income earner (by birth, adopted, step, or foster) and be under age 18. "Other relatives" are persons related to the major income earner by blood, marriage, adoption or common-law which are not their spouse or children. Lone-parent families exclude families where the parent is 65 years or older.

separation rates, fewer children and more widows and widowers due to an aging population. This trend is offset somewhat by more adult children staying at home.²⁷

As just pointed out, growth in the number of households during the 1981-2007 period was 51.5 per cent, driven by population growth but also by changes in the composition of households. Among non-elderly economic families (families of two persons or more for which the major earner is under 65 years old), the fastest growing categories were other non-elderly families (203.4 per cent), lone-parent families (62.7 per cent)²⁸ and married couples (64.5 per cent), the groups that are likely to have a smaller household size (Summary Table 3 and Table 2D).

On the other hand, the number of non-elderly two-parent families fell 6.0 per cent, likely due to the rising number of baby-boomers' children reaching majority age and leaving the family house. At the same time, growth in the number of unattached individuals (89.2 per cent) was strong, with non-elderly males driving the increase (up 114.4 per cent). The changes in the composition of households, with the number of persons living alone, the number of married couples without children and the number of lone-parent families all increasing considerably and the number of two-parent families with children decreasing, led to a decrease in average family size.

²⁷ Falling household size might seem unimportant, but it has a considerable impact on the living standards of ordinary Canadians. In effect, "economies of scale" inherent to larger families, such as the common use of refrigerators and furniture or the savings related to buying food in bulk, are lost. In order to take into account "economies of scale" of larger families, Statistics Canada uses an equivalence scale where the oldest person in the family is given a factor of 1.0, the second oldest a factor of 0.4, every other family member aged 16 or over a factor of 0.4 and every other family member under the age of 16 a factor of 0.3. Then, the income is divided by the sum of the family factors. However, this adjustment is used only for the quintile distribution of income and for calculating the Low-Income Cut-Offs (LICOs). It is generally not used for median and average income or in the calculation of income distribution indicators such as the Gini coefficient.

Equivalence scales are widely used in analysis of income trends (Phipps and Garner, 1994). The OECD uses an equivalence scale, with a factor of adjustment for family size equal to the square root of the number of family members. For example, for a family of three, the adjusted income will be equal to "family income / 1.73". It is interesting to note that for a small family, there is almost no difference between the OECD and Statistics Canada's equivalence scale. For two, three- or four-person families, the adjustment factors will likely be 1.4, 1.7 and 2.0 respectively, both with Statistics Canada and the OECD scale. However, as families become larger, the difference widens. For example, a family with two adults and six children will have an adjustment factor of 3.2 with Statistics Canada scale compared to 2.8 with the OECD scale.

Using an equivalence scale is in some way a compromise between per capita measures (which assume no economies of scale) and per household measures (which assume infinite economies of scale). An example might provide more clarity. For example, let us suppose a two persons family, each earning \$35,000. In this case, the income *per household* is \$70,000. In the case of divorce the average household income drops to \$35,000. On the other hand, in both scenarios (married or divorced) per capita income is unchanged at \$35,000. If we apply an equivalence scale to approximate the living standards of the aforementioned family, their equivalent income on a *per capita* basis is equivalent to an income of \$50,000 (\$70,000/1.4). In the case of divorce, equalized income falls 30 per cent, compared to a 50 per cent decrease according to the household measure and no change according to the per capita measure. Adjusted for family size, growth in average after-tax income per household is 29.7 per cent over the 1981-2007 period, compared to 22.5 for unadjusted household income, a difference of 7.2 percentage points (Table 11G).

²⁸ The strong growth in lone-parent families was accompanied by a compositional shift, with male lone-parent families increasing its share of lone-parent families from 15.2 per cent in 1981 to 18.2 per cent in 2007. In fact, the number of male lone-parent families grew almost twice as fast as female lone-parent families, with growth reaching 95.4 per cent and 56.9 per cent respectively.

Summary Table 3: Trends in the Number of Family Units, by Family Type, 1981 and 2007

	Family Units (thousands)		Change (per cent)	Share (per cent)		Change (points)	Average Size (person)		Change (persons)
	1981	2007	1981- 2007	1981	2007	1981- 2007	1981	2007	1981- 2007
All family units	9,132	13,837	51.5	100.0	100.0	-6.9	2.67	2.33	-0.34
Economic families, two persons or more	6,611	9,067	37.2	72.4	65.5	1.1	3.31	3.02	-0.29
Elderly families	806	1,370	70.0	8.8	9.9	-8	2.35	2.19	-0.16
Non-elderly families	5,805	7,698	32.6	63.6	55.6	1.3	3.44	3.17	-0.27
Married couples without children	1,354	2,228	64.5	14.8	16.1	-12.8	2.00	2.00	-
Two-parent families with children	3,081	2,897	-6.0	33.7	20.9	0	4.21	4.13	-0.08
Married couples with other relatives	643	972	51.2	7.0	7.0	0.3	3.55	3.58	0.03
Lone-parent families	429	698	62.7	4.7	5.0	3.2	2.99	2.89	-0.10
Other non-elderly families	298	904	203.4	3.3	6.5	6.9	2.43	2.77	0.34
Unattached individuals	2,521	4,769	89.2	27.6	34.5	0.3	1.00	1.00	-
Elderly males	191	339	77.5	2.1	2.4	0.4	1.00	1.00	-
Elderly females	529	863	63.1	5.8	6.2	4.4	1.00	1.00	-
Non-elderly males	965	2,069	114.4	10.6	15.0	1.6	1.00	1.00	-
Non-elderly females	837	1,498	79.0	9.2	10.8	-6.9	1.00	1.00	-

Source: Table 2D

2) Average Income Per Family Unit

The data on average and median household income can be presented using either market, total or after-tax income.²⁹ As with personal disposable income, the income measure most closely related to consumption and personal savings possibilities of the average household is after-tax income. Effectively, it represents the average amount of money left after direct taxes on consumption and saving for each family unit. However, an analysis of all three statistics can be interesting in pinpointing the different sources of income. All income measures from SLID published by Statistics Canada were already deflated using the CPI. As noted earlier, if the PEPI had been used, annual

²⁹ Market income is the sum of earnings (from employment and net self-employment), net investment income, (private) retirement income, and the items under "Other income". It is equivalent to total income minus government transfers. It is also called income before taxes and transfers. Total income refers to income from all sources including government transfers before deduction of federal and provincial income taxes. It may also be called income before tax (but after transfers), money income or nominal income. All sources of income are identified as belonging to either market income or government transfers. After-tax income is total income, which includes government transfers, less income tax. Income tax includes taxes on income, capital gains and withdrawals from Registered Retirement Savings Plans, after taking into account exemptions, deductions, non-refundable tax credits and the refundable Quebec abatement. Contributions to Employment Insurance (EI) and the Canada and Quebec Pensions Plans (CPP and QPP) are not included in income taxes, nor are they deducted from income to arrive at after-tax income. However, the Canadian System of National Accounts (CSNA) definition of taxes on production includes these payroll taxes, in accordance with international recommendations on national accounting.

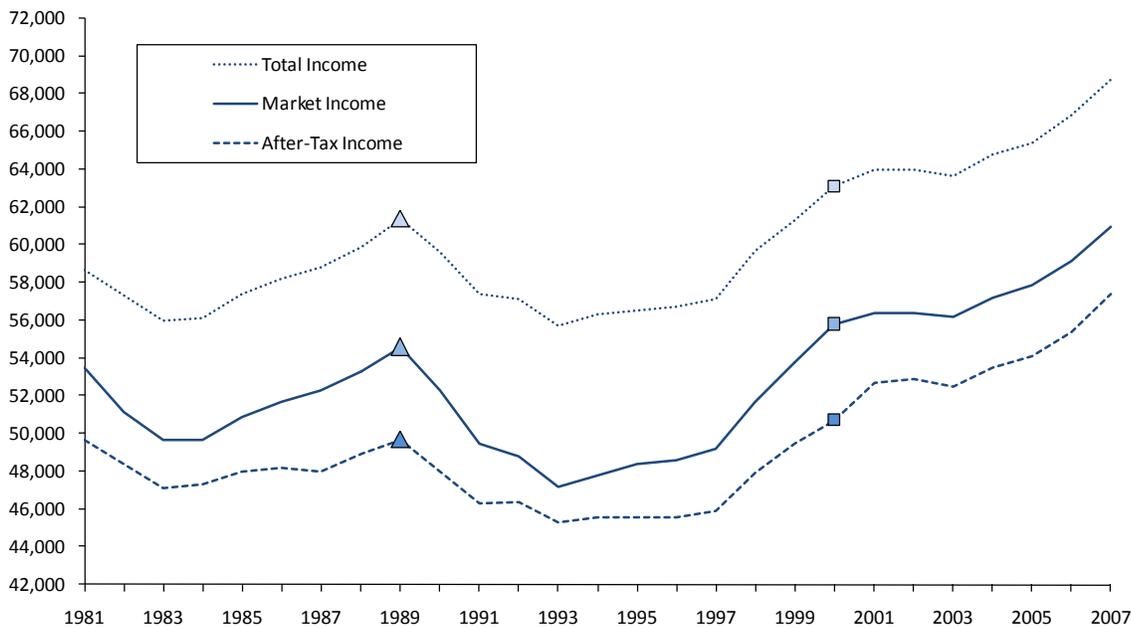
growth for all income measures would have been about 0.22 percentage points higher on average over the 1981-2007 period, and about 0.58 percentage points higher on average over the 2000-2007 period.

Summary Table 4: Household-Based Measures of Real Aggregate Income in Canada, Average Annual Change (per cent)

	Average market income per household	Average government transfer per household	Average total income per household	Average income tax per household	Average after-tax income per household
81-89	0.25	3.41	0.56	3.33	0.00
89-00	0.20	0.65	0.25	0.46	0.18
00-07	1.28	1.13	1.24	-0.96	1.79
81-07	0.51	1.62	0.61	0.95	0.56
Total Growth, %					
81-07	14.0	51.9	17.2	27.8	15.5
Source: Table 10B, Table 10E, Table 11A, Table 11B and Table 11C					

Average market income expressed in constant 2007 dollars for all family units in Canada grew from \$53,500 in 1981 to \$61,000 in 2007, an average annual growth of 0.51 per cent or a total of 14.0 per cent, below the 25.9 per cent growth of real disposable income per capita over the same period (Summary Table 4 and Chart 6). Of course, the much greater growth in the number of households relative to population accounts for this difference.

Chart 5: Average Market, Total and After-Tax Income per Family Unit \$2007, 1981-2007



Source : Table 11A, Table 11B and Table 11C ▲ Peak ■ Year where peak value was equalled or exceeded

In a manner similar to national accounts aggregate income measures, average market income rises during economic expansions and falls during recessions and periods of weak growth (Chart 5). This is reflected in an increase in average market income during the 1984-1989 expansion, followed by four years of falling income and, finally, an upward trend from 1994 to 2001. In 2001, market income leveled off. Over the 1996-2001 period, average market income increased 16.0 per cent, significantly more than in any other five-year period for which data are available. This represents a compound annual growth rate of 3.02 per cent per year, much higher than the second-best period at 1.94 per cent (1984-1989).³⁰ Between 2001 and 2007, market income grew 1.32 per cent per year on average.

Average total income of all family units followed similar trends, increasing 17.2 per cent between 1981 and 2007 or 0.61 per cent per year, outpacing average market income by 3.2 percentage points (Summary Table 4). Government transfers, which increased 51.9 per cent between 1981 and 2007, explain the difference.³¹ In relative terms, the importance of government transfers increased between 1981 and 2007, from 8.8 per cent of total income to 11.4 per cent (Summary Table 5). Over the 1981-1989 period, average total income increased 4.6 per cent, reaching \$61,400 in 1989 (\$2007). Then, between the peak of 1989 and the trough in 1993, average total income fell 9.3 per cent. Only in 2000 was the 1989 level reached again (Chart 5). Between 2000 and 2007, average total income increased 9.0 per cent.

Summary Table 5: Implicit Income Tax and Government Transfers Rate (per cent)

	Implicit income tax rate	Implicit rate of government transfers
1981	15.3	8.8
1989	19.0	11.0
1995	19.3	14.3
2000	19.6	11.5
2007	16.7	11.4
Source: Table 10C and 10F		

From the point of view of individual purchasing power, the trend in average after-tax income is more relevant than that of total income. Average after-tax income followed a fairly similar path as average market income, growing slightly slower over the 1981-2007 period at 15.5 per cent or 0.56 per cent per year (Table 11C). In absolute terms, after-tax household income increased from \$49,700 in 1981 (2007 dollars) to \$57,400 in 2007. This slower growth meant that taxes increased faster than total or pre-tax income, which is consistent with our analysis of real personal disposable income.

³⁰ If we use SLID income aggregate to calculate the growth of income per person for the 1981-2007 period, we obtain an average annual growth for average market income per person of 1.02 per cent, for average total income per person of 1.13 per cent and for average after-tax income per person of 1.07 per cent.

³¹ In fact, the increase over the 1981-2007 period has taken place mostly during downturns. Indeed, while growth in average total income closely followed growth in average market income during the boom period of 1983-1989 (9.6 per cent compared to 9.9 per cent) and 1996-2001 (12.9 per cent compared to 16.0 per cent), it diminished considerably less than market income did during the recessions of the early 1980s and 1990s. This translated into an increase in transfers over the cyclically neutral period of 1981-2007

Indeed, the implicit income tax rate increased from 15.3 per cent in 1981 to 16.7 per cent in 2007, although it was down significantly from 19.6 per cent in 2000 (Summary Table 5). As noted above, whether higher taxes are contributing to wellbeing depends on the extent to which increased government services are contributing to wellbeing.

Interestingly, all three measures of average household income show similar results (Chart 5). All the ground gained from 1981 to 1989 was lost in the first half of the 1990s. From 1996 to 2001, Canadians enjoyed a steady rise in income and the 1989 peak was regained. All three measures show that income growth stagnated in the 2001-03 period and then picked up in 2004, but it this growth will not be sustained in the recession that began in 2008.

3) Average Income by Family Type

Average market income growth between 1981 and 2007 was shared unequally among different types of families. Average market income for economic families (\$77,300 in 2007) grew 21.0 per cent during the period, with two-parent families with children growing (\$93,300 in 2007) among the fastest at 31.4 per cent (Table 11H). Lone-parent families' average market income grew 25.3 per cent between 1981 and 2007 (\$37,200 in 2007), but this was partly due to a compositional shift, i.e. the share of male lone-parent families, who have a much higher average market income than their female counterparts (\$55,800 compared to \$33,100 in 2007), was higher in 2007 than in 1981, going from 15.2 per cent to 18.2 per cent.³² Finally, average market income for unattached individuals grew 14.2 per cent between 1981 and 2007.

Trends in average total income by family type show widespread growth between 1981 and 2007, with all family types in positive territory (Table 11I). There was strong growth among the elderly population's average total income. Total income of elderly families grew 32.5 per cent, while that of elderly male unattached individuals was up 44.0 per cent and that of elderly female unattached individuals 41.9 per cent. Both the income of economic families (24.4 per cent) and of unattached individuals (16.7 per cent) grew significantly.

Average after-tax income by family type followed similar trends (Summary Table 6 and Table 11J). Between 1981 and 2007, income for economic families (22.5 per cent) grew faster than income for unattached individuals (14.2 per cent). Among non-elderly economic families, the income for two-parent families with children increased 30.4 per cent, from \$62,900 in 1981 to \$82,000 in 2007, recording strong growth. Elderly unattached individuals' income grew 35.4 per cent during the 1981-2007 period, with males' average after-tax income reaching \$31,000 and females' income reaching \$25,800 in 2007. However, average after-tax income for non-elderly unattached males increased only 2.5 per cent. The trend for lone-parent families was encouraging, with a 27.4 per cent increase over the 1981-2007 period, bringing the average after-tax income for that group at \$41,800 in 2007.

³² The above average increase in incomes of lone parents may also reflect the movement of a significant numbers of single parents from welfare to the workforce. While gross incomes may be higher, childcare costs and work-related expenses may mean that the net income of lone parents did not increase.

Summary Table 6: Trends in Average After-tax Income Per Family Unit, by Family Type, 1981 and 2007, in \$2007

	1981	2007	Total Growth Rate, %
All family units	49,700	57,400	15.5
Economic families, two persons or more	58,700	71,900	22.5
Elderly families	42,200	54,200	28.4
Non-elderly families	60,900	75,000	23.2
Married couples	57,400	70,000	22.0
Two-parent families with children	62,900	82,200	30.4
Married couples with other relatives	82,200	101,100	23.0
Lone-parent families	32,800	41,800	27.4
Other non-elderly families	50,700	62,500	23.3
Unattached individuals	26,100	29,800	14.2
Elderly males	22,900	31,000	35.4
Elderly females	19,100	25,800	35.1
Non-elderly males	31,900	32,700	2.5
Non-elderly females	24,700	27,800	12.6

Source: Table 11J

4) Government Transfers and Taxes

As discussed earlier, one of the effects of transfers and income tax in Canada is to reduce inequalities. In 2007, the average government transfer was \$7,900 per household (\$2007) and the average income tax paid was \$11,500 (Table 10D and Table 10G). Therefore, the net effect was that average after-tax income per family unit was \$3,600 lower than average market income. However, the differences among quintiles were considerable. In absolute terms, it was the second quintile which benefited the most, receiving an average government transfer of \$10,000 and paying an average income tax amount of only \$2,800, which translated into an average \$7,200 increase in after-tax income compared to market income. The first or lowest quintile received \$6,800 more in government transfers (\$7,700) than it paid in income tax (\$900). At the other end of the spectrum, households in the highest quintile received only an average of \$5,200 in government transfers while paying an average of \$34,800 in income tax, a net effect of -\$29,600 on their after-tax income. Overall, the bottom quintile received about 19.6 per cent of all government transfers and paid 1.6 per cent of all income tax while the top quintile received 13.2 per cent of government transfers and paid 60.6 per cent of the country's income tax. Government transfers were thus more equally distributed among quintiles than income tax. More than 80 per cent of all income tax revenue was paid by the top 40 per cent of households.

5) Median Income of Family Units

While average income is a convenient way to control for population growth when tracking aggregate income, it has certain drawbacks. First, it is sensitive to extreme values. Unusually high or low income will have a large impact on the average income of Canadians, which may not give

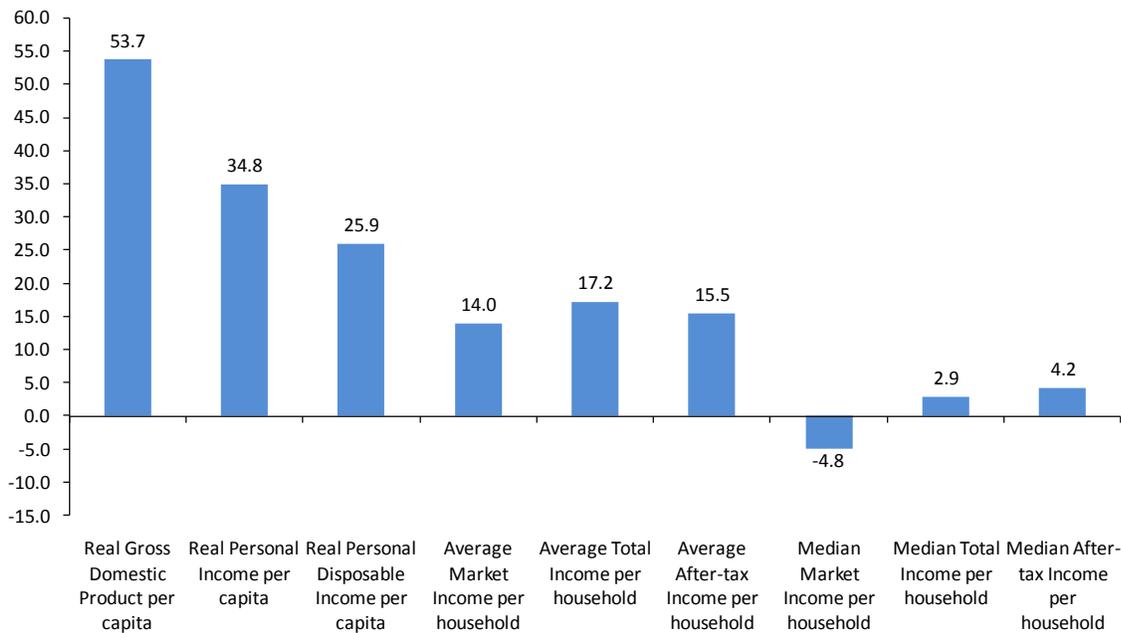
accurate information about the change in income for a majority of families. The second disadvantage follows from this: average income does not give any information about the distribution of income. This is where median income becomes a useful measure. The median corresponds to the midpoint of the distribution. Hence, it is not affected by extreme values. Also, it can shed light on the distribution of income. If median income is lower than average income, the distribution is skewed to the left and vice-versa. In general, income distributions are skewed to the left, which means they are more concentrated at the low end. Thus, median income is generally lower than average income.

In Canada, trends in median income tell a much different story than trends in average income. One of the three measures of median income actually decreased and the other two experienced very little growth over the 1981-2007 period (Chart 6 and Summary Table 7).

The difference between median and average income is striking. In 1981, median market income per family unit was \$6,000 (\$2007) below average income per family unit, and was equivalent to 89 per cent of average market income. This gap more than doubled to \$15,800 in 2007, with median market income equivalent to only 74 per cent of average market income (Chart 7). This suggests that as the country has become richer as a whole, middle-class and lower income families have seen their market income fall relative to that of richer family units.

Chart 6: Measures of Real Income on a per Capita and per Household Basis

Total Growth, per cent, 1981-2007



Source : Tables 7a, 8b, 9b, 11a, 11b, 11c, 12a, 12b and 12c

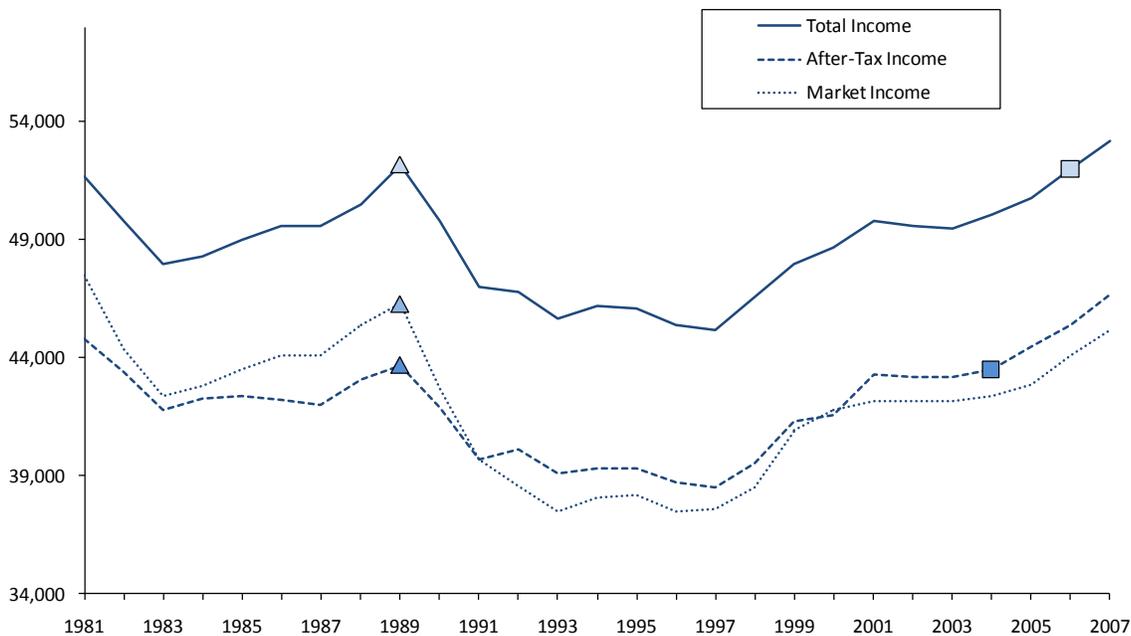
In addition, while median market income was falling considerably in absolute terms during recessions and periods of slow growth, it did not fully recover during the expansion that followed. For example, median market income per household fell \$8,800 between 1989 and 1993, from \$46,300 to \$37,500, but regained only \$7,700 in the following recovery and expansion, reaching \$45,200 in 2007. In 1997, median market income was 21.0 per cent lower than its 1981 peak. Thus, despite a

rebound of over 20.2 per cent between 1997 and 2007, median market income was still 4.8 per cent lower in 2007 than in 1981.

Summary Table 7: Median Income per Household in Canada, Average Annual Change (per cent)

	Median market income per household	Median total income per household	Median after-tax income per household
81-89	-0.32	0.12	-0.31
89-00	-0.93	-0.63	-0.45
00-07	1.12	1.27	1.67
81-07	-0.19	0.11	0.16
Total Growth, %			
81-07	-4.8	2.9	4.2
Source: Tables 12A, 12B and 12C			

Chart 8: Median Market, Total and After-Tax Income per Family Unit
\$2007, 1981-2007



Source : Table 12A, Table 12B and Table 12C ▲ Peak ■ Year where peak value was equalled or exceeded

Median household total income saw a small increase of 2.9 per cent during the same period, 1981-2007 (Table 12B). The difference between market and total median income, attributable to government transfers, is larger than the one observed between average market and total income. Naturally, this suggests, in line with intuition, that government transfers are aimed towards the low end of the distribution. Nonetheless, the 2.9 per cent increase in median total income per household is in marked contrast to the 53.7 per cent increase in GDP per capita.

Finally, after-tax median income per family unit increased \$1,900 or 4.2 per cent between 1981 and 2007 (Table 12C). Similarly to total and market median income, it reached a low point in 1997, a level 14.1 per cent under the previous high of 1981 (Chart 8). Since then, it has marched forward, but only passed the 1981 level in 2006.

The picture of living standards trends provided by median income is inconsistent with the widespread impression Canadians have of a steady progression in living standards based on average income measures, and on persons, not households. Not only does it imply an only moderate change of ambiguous direction for the living standards of the median Canadian between 1981 and 2007, but it also means that government redistribution, through transfers and taxes, did not totally offset the reduction in median market income per family unit until 2006. Different income measures tell different, indeed contradictory, stories.

6) Median Income by Family Type

The fall of 4.8 per cent in median market income for all family units over the 1981-2007 period did not affect every family type. For example, median market income for elderly families increased 41.3 per cent over the period, from \$17,900 to \$25,300, due mainly to a very robust 85.4 per cent increase in elderly married couples' median market income (Table 12G). Similarly, median market income for non-elderly families increased 9.9 per cent over the period, led by a 20.3 per cent increase in two-parent families with children. However, the faster growth in the number of elderly families (with lower median income) compared to other types of economic families translated into slow growing median market income for economic families between 1981 and 2007 (5.7 per cent). Also, while median market income for unattached individuals grew only per year 1.5 per cent during the 1981-2007 period, elderly males and elderly females recorded strong income growth (108.3 per cent and 155.2 per cent respectively).

The main factor behind the low growth of 2.9 per cent in median total income per family unit over the 1981-2007 period was also the compositional shift from higher income family units to lower income family units. For example, median total income for economic families increased 11.5 per cent over the period, from \$63,500 in 1981 to \$70,800 in 2006 (Table 12H), but its share of the number of family units fell from 72.4 per cent to 65.5 per cent. Meanwhile, the median total income for unattached individuals increased 11.3 per cent from \$23,900 in 1981 to \$26,600 in 2007, and its share of the number of family units grew from 27.6 per cent to 34.5 per cent. Yet, the stronger growth in the number of low-income level family types (unattached individuals) led to an much smaller increase in household median total income than for either family type. Similarly, stronger growth in the number of elderly families (which have an total income level of about two-thirds that of non-elderly families) dragged down growth in median total income for economic families, despite 41.7 per cent income growth for elderly families and 14.2 per cent growth for non-elderly families.

Trends in median after-tax income are similar to median total income trends. Between 1981 and 2007, median after-tax income for economic families increased 13.6 per cent and unattached individual's median after-tax income increased 11.5 per cent, but due to the compositional change whereby there were more unattached individuals in 2007 than in 1981, there was only a 4.2 per cent increase in the all family units' median after-tax income (Summary Table 8 and Table 12I). The two groups reporting a decline in median after-tax income were non-elderly unattached males (-7.1 per

cent) and non-elderly unattached females (-1.3 per cent). Elderly unattached females were the group with the lowest median after-tax income (\$21,300 (\$2007)), while non-elderly married couples with other relatives, at \$93,800 in 2007, were the group with the highest median after-tax income.

Summary Table 8: Trends in Median After-Tax Income per Family Unit, by Family Type, 1981 and 2007, in \$2007

	1981	2007	Total Growth 1981-2007
All family units	44,800	46,700	4.2
Economic families, two persons or more	54,400	61,800	13.6
Elderly families	32,900	44,900	36.5
Non-elderly families	56,800	65,500	15.3
Married couples	55,100	61,000	10.7
Two-parent families with children	58,400	73,000	25.0
Married couples with other relatives	77,400	93,800	21.2
Lone-parent families	28,400	36,300	27.8
Other non-elderly families	46,400	57,900	24.8
Unattached individuals	21,700	24,200	11.5
Elderly males	16,500	23,400	41.8
Elderly females	14,500	21,300	46.9
Non-elderly males	29,700	27,600	-7.1
Non-elderly females	23,000	27,100	-1.3
Source: Table 12I			

7) Trends in the Subjective Economic Situation of Families

It is useful to compare actual income trends with the perceptions of Canadians toward the economy and their own personal economic situations. These perceptions influence Canadians' wellbeing. If Canadians think the economy is heading towards a recession, they might be anxious about losing their job or the adequacy of their savings. On the other hand, if they are upbeat about the economy, they might feel more economically secure and hence less apprehensive about the future, which in turn would increase their wellbeing.

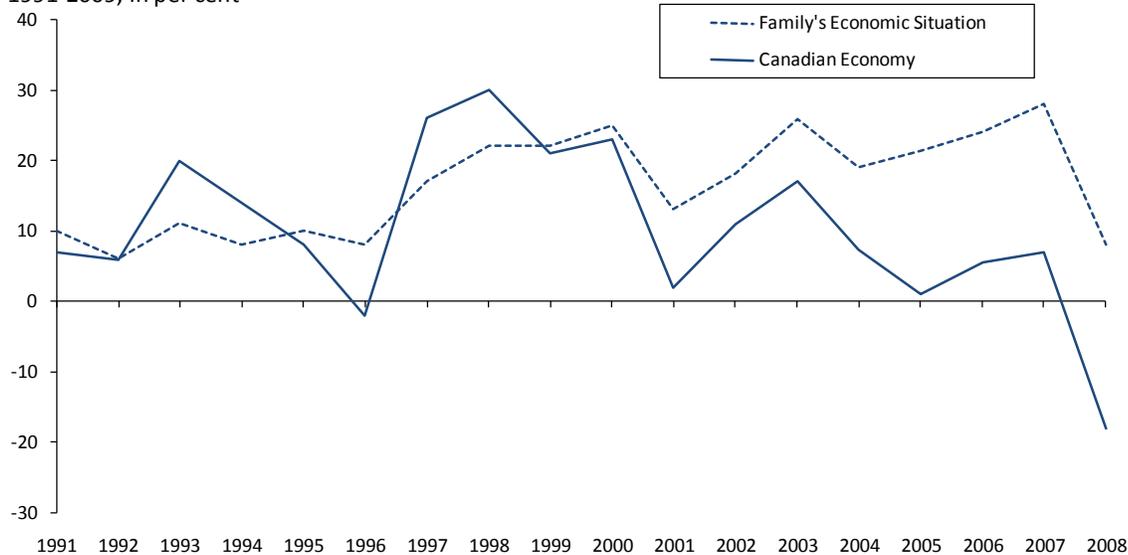
Ipsos Reid, a polling firm, has conducted a quarterly survey concerning Canadians' expectation for the future of the Canadian economy and their personal situation since 1991. Results for most provinces are also available, but the Atlantic provinces are aggregated and so are Saskatchewan and Manitoba. The most relevant questions for this report are:

- *Thinking about the next year or so, do you, yourself, generally feel that the Canadian economy will improve, stay about the same, or get worse?*
- *Thinking about your family, do you feel that your own economic situation will improve, stay the same, or get worse?*

Data about the proportion of respondents expecting the economy to improve, stay the same or get worse are available (Table 28A and Table 28B). Here we focus on the balance of opinions, i.e. the percentage of respondents expecting an improvement minus the percentage expecting the situation to worsen, to examine changes in expectations. Therefore, a positive balance of opinions means that more people expect the situation to improve, while a negative balance of opinions indicates that more respondents expect the situation will worsen.

Chart 9: Balance of Opinions (Positive minus Negative) About the Future of the Canadian Economy and the Economic Situation of One's Family

1991-2009, in per cent



Source : Table 28A and Table 28B.

Note: For the family economic situation, data for 2003 -2009 are based on an average of all surveys in the year.

For the Canadian economy, there are no data for 1994. Data is thus interpolated for that year. Moreover, data for 2002-2009 are based on an average of all surveys in the year.

In general, Canadians have positive expectations for the future of the economy. In fact, between 1991 and 2008, the only years in which the balance of opinion was negative was in 1996 (-2 per cent) and 2008 (-18 per cent) (Chart 9). In every other single year, there were more Canadians who thought the economy would improve than Canadians who believe it would get worse. Starting in 1997, Canadians expected a buoyant economy, with the optimists outnumbering the pessimists by 26 per cent. This trend continued up to 2000, when the balance of opinion was still 23 per cent. However, in 2001, with the bursting of the high tech bubble, Canadians' expectations for the economy fell drastically but stayed positive, at +2 per cent. The balance of opinion then quickly rebounded, reaching roughly 15 per cent in 2003, and then hovered between 0 and 10 for the following three years, before turning negative in 2008.³³ These trends more or less reflected the evolution of the business cycle.

³³ This question may be a bit misleading for some people because an "improvement" is not clearly defined. If GDP goes up, one could say the economy has improved. But some people prefer to look at the rate of growth of GDP, which means that even if the economy is growing, respondents might consider that the Canadian economy is worsening if the rate of growth is slowing down.

When asked about their own economic situation, Canadians were definitely more optimistic than pessimistic over the 1991-2008 period. The lowest balance of opinion registered was 6 per cent in 1992, immediately following the recession. This constant positive perception by Canadians of their personal economic outlook is interesting because it suggests that individuals thought they were generally outpacing the economy. In the early 1990s there was a higher proportion, between 17 and 19 per cent, of Canadians who believed their economic situation would worsen. However, the proportion who thought their situation would improve was slightly larger, fluctuating between 24 and 29 per cent. In 1997, the economy roared ahead, and so did Canadians' personal expectations. During that year, the balance of opinion reached 17 per cent. The gap between optimists and pessimists continued to widen, peaking in 2000 at 25 per cent. After edging down in 2001, Canadians' expectations reached their highest level in February 2003, with 44 per cent of Canadians expecting an improvement in their economic situation and only 10 per cent expecting a worsening. Since then, the balance of opinion remained high, around 20 per cent.³⁴ Even in 2008, when Canadians were expecting a downturn, the balance of opinions averaged 8 per cent.

C. Wealth Per Capita

Trends in the state of economic wellbeing cannot be captured only with income data. Not only can we enjoy today's income in the present, but we can also transform wealth accumulated in the past into present consumption. As well, wealth can provide economic security and a personal safety net in cases of economic adversity, such as a death or disability of a family member in the workforce. Therefore, to measure economic wellbeing at any point in time, one needs to take into account both income and wealth.

The national balance sheet accounts publish estimates of different types of financial and non-financial wealth holdings from which average net worth³⁵ per person or per family unit can be calculated. These estimates seem to match very closely estimates from household wealth surveys, but no socio-economic disaggregation of national accounts wealth estimates is possible. Estimates for net worth from the national balance sheet accounts are available from 1961 to 2008 in current dollars. Since the wealth of individuals can be considered as future spending power or consumption, those values are deflated by the CPI to obtain a time series in real terms.

Household wealth surveys provide a much more complete picture of wealth holdings and wealth distribution, but they are conducted infrequently in Canada. The most recent estimates available are from the 2005 Survey of Financial Security, the first such survey since 1999. Earlier wealth surveys in 1970, 1977 and 1984 were conducted jointly with the annual Survey of Consumer Finances (SCF), the predecessor to SLID. Unlike national account estimates, wealth data from household surveys cannot easily be compared across time as they use slightly different definitions of wealth (e.g. including public pensions or not). On the other hand, these surveys not only provide

³⁴ The dichotomy between Canadians expectations for the economy and their personal economic situation might stem from the fact that they do not see their personal economic situation in terms of growth *rate*, but simply in terms of growth.

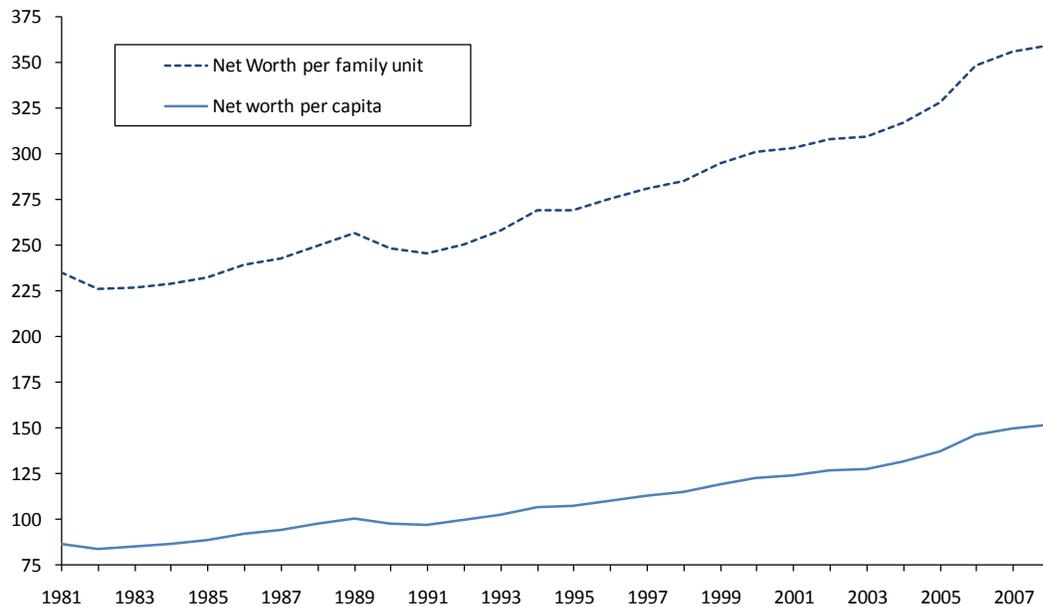
³⁵ Net worth is assets minus liabilities. Both non-financial (residential structures, non-residential structures, machinery and equipment, consumer durables, inventories, land) and financial (official reserves, currency and bank deposits, deposits in other institutions, foreign currency deposits, consumer credit, trade accounts receivable, bank loans, other loans, Canada short-term paper, other short-term paper, mortgages, Canada bonds, provincial bonds, municipal bonds, other Canadian bonds, life insurance and pensions, corporate claims, government claims, shares, foreign investments, other financial assets) assets and liabilities are included.

estimates of average and median wealth, but also allow the disaggregation of wealth holdings by socio-economic characteristics.

1) Wealth – National Accounts Estimates

The most striking element in the national balance sheet is the importance of the persons and unincorporated business sector in total net worth (Table 13A). In 2008 the total net worth of this sector stood at \$5.2 trillion, 86.5 per cent of the national balance sheet net worth (Table 13A and Table 13F). Most of Canada's wealth lies in the hands of individuals as opposed to its corporations or government. Of course, this is not too surprising, since corporations are publicly held through the stock market or privately held by individuals.³⁶

Chart 10: Average Net Worth of Persons and Unincorporated Business, per Capita and Family Unit
(thousands of \$2007), 1981-2008



Source : Table 13B and Table 4

Canadians are greatly affected by the extent of their wealth holdings. Most consider their assets, such as their house or their financial assets, as delayed consumption, either for them in retirement or for their descendants through bequests. To adjust the aggregate nominal net worth of persons and unincorporated business for inflation and population/household growth, we used the CPI and population/family unit estimates from the SLID (Table 13B). Interestingly, the wealth of Canadians seems to be increasing more steadily and more rapidly than all income measures. Over the 1981-2007 period, wealth per capita increased an average of 2.11 per cent every year, while wealth

³⁶ It is also interesting to note the steady decline of the government's net worth between 1981 and 1996 resulting from continuous deficits, which was related to the steady increase of non-residents' net worth as government deficits were largely financed abroad. In 2007, after numerous consecutive years of frugal fiscal policy, the government had a positive net worth for the first time since 1984; the government had a nominal net worth of \$14 billion in 2007 (\$64.9 billion in 2008) compared to a net worth of -\$395 billion in 1996.

per family unit increased 1.59 per cent annually over the period 1981-2008 (Summary Table 9). Real net worth fell only in 1982 and during the 1990-1991 downturn (Chart 10).

Summary Table 9: Real Net Worth of Persons and Unincorporated Business, Annual Change (per cent)

	Net worth per capita	Net worth per family unit
81-89	1.86	1.09
84-89	3.02	2.28
89-00	1.83	1.47
00-08	2.57	2.14
81-08	2.11	1.59
Total Growth Rate, %		
84-99	38.2	28.9
81-07	75.6	53.1
Source: Table 13B		

One factor explaining this growth could be an aging population. As people age, they tend to accumulate more wealth (Table 19B). Consequently, as the Canadian population grew older, aggregate wealth grew too. However, this cannot entirely explain the rapid expansion of Canadian wealth. Other factors that have contributed to increased wealth from 1981-2007 include large increases in housing prices and the increased value of the stock market. As the next section demonstrates, this increase in wealth has been very unevenly distributed among Canadians.

Another element affecting Canadians' wealth, natural resources, is not taken into account when calculating the national net worth from the national balance sheet accounts. However, estimates of the value of natural resources are available in the national wealth accounts. It is interesting to see the continuous growth in the value of natural resources in Canada (Table 13C). With data from the national wealth account, starting in 1981, we can see that the value of resources such as timber (188.9 per cent), energy resources (454.3 per cent), metallic minerals (110.4 per cent) and non-metallic minerals (948.8 per cent) increased significantly between 1981 and 2008. Of course, these estimates are in current dollars, and the progression in real terms is considerably smaller. Nonetheless, in 2008, energy resources were valued at \$1.12 trillion, more than 14 per cent of Canada's tangible assets. Metallic and non-metallic minerals together represented about \$325.8 billion and timber alone represented \$257.3 billion. Because most of these resources are non-renewable, it may seem surprising to see their value increase. This is due not only to price movements, but also to the constant stream of new discoveries. Natural resources have played an important role in the development of the Canadian economy and the growth in Canadian living standards and they still represent a major element of the country's wealth.

2) Wealth – Based on Household Surveys

The definition of wealth has changed over the years for the Survey of Financial Security (SFS) in Canada. Before 1999, wealth did not include the contents of the home, collectibles and valuables and annuities and registered retirement income funds. Moreover, the 1999 survey introduced an

innovation to Canadian wealth measurement in the form of a new methodology to estimate the wealth value of employer pension plans. To allow comparison between the 1999 results and those of earlier wealth surveys, Statistics Canada has produced data for 1999 which are adjusted using the earlier surveys' definition. Such adjustments were not made to estimates from the 2005 SFS, and the latter can thus only be compared directly with estimates from 1999.

In the first section, we examine trends between 1970 and 1999, using the earlier definition of wealth. In the second section, we discuss the trends in wealth between 1999 and 2005 using the new definition introduced in 1999. The reader should note that for this reason, estimates for 1999 contained in the first section will differ from estimates for 1999 discussed in the second section.

a. Trends in wealth from 1970 and 1999

Using data adjusted to reflect the older definition of wealth, we find a definite upward trend in average wealth per family unit (Table 19D). At the aggregate level, the average wealth per family unit increased 112.1 per cent in real terms between 1970 and 1999, or \$93,072 (\$1999). However, the increase was not steady over time, with about half (48.2 per cent) taking place between the 1970 and 1977 surveys, a stagnation (1.2 per cent) between the 1977 and 1984 surveys and the other half (50.7 per cent) between 1984 and 1999. For the 1984-1999 period, average wealth per family unit increased 36.6 per cent, compared to a 30.8 per cent increase according the national accounts estimates for the same period.

The analysis of wealth by family type for the 1999 survey arrives at conclusions similar to those on income by family type. The main winners were elderly couples and elderly unattached individuals (Table 19G). Between 1984 and 1999, the former increased their average wealth by 41.3 per cent or \$81,989 (1999\$) while the latter increased its average wealth by 75.5 per cent or \$59,433 (\$1999). Surprisingly, the increase in the median wealth for those group were also quite high, with elderly couples increasing their median wealth by \$56,425 (46.6 per cent) and elderly unattached individuals by \$28,620 (69.2 per cent). Other groups that performed well between 1984 and 1999 were couples without children and lone-parent families (at least in relative terms). Unattached individuals under 65 posted weak gains, their average wealth increasing only \$16,684 and median wealth increasing a meager \$228 over the 1984-1999 period.

b. Trends in wealth from 1999 and 2005

The Survey of Financial Security conducted in 2005 gives an in-depth picture of the wealth of Canadians. Interestingly, estimates of net worth per household obtained from the SFS in 2005 are relatively close to national accounts estimates of net worth per households.³⁷ In the 2005 SFS, average net worth per household was estimated at \$364,300 (\$2005). In comparison, the estimate of net worth per household for the same year from the national accounts was \$315,296³⁸ (\$2005). The similarity in the estimates adds credibility to both sources.

Based on the current definition of wealth used by Statistics Canada, the average family unit net worth grew 29.6 per cent between 1999 and 2005, from \$281,000 (constant 2005 dollars) to

³⁷ Using the number of households from SLID.

³⁸ Table 47B lists this value in \$2001. For comparison within the paper, this value was converted to \$2005.

\$364,300 (Table 49). Growth of real median net worth was over 20 per cent for almost every family type over the 1999-2005 period. The one exception was unattached individuals; this group saw only 3.9 per cent growth, from \$33,400 (2005\$) in 1999 to \$34,700, and also had the lowest median net worth. Other non-elderly families had the highest growth in median net worth (46.1 per cent), increasing from \$144,300 in 1999 to \$210,800 in 2005. Elderly families had the highest net worth of all family units in 2005, at \$443,600, and also saw high net worth growth at 29.3 per cent over 1999-2005. Economic families had higher median net worth and saw higher growth than unattached families. Economic families saw growth of 29.9 per cent over the 1999-2005 period, moving from a median net worth of \$177,400 in 1999 to \$230,500 in 2005. The higher net worth growth of economic families likely reflects more than just age and earning ability differences in comparison to unattached individuals, it also reflects the economies of scale that allow for savings within family units.

More recent insights on the wealth of Canadians can be gained from a paper by James B. Davies (2009) that explores the impact of asset prices changes on the economic security of Canadian over the 2005-2009 period. While Davies notes that significant declines in asset values have occurred between May 2008 and February 2009, he concludes that, in the absence of changes in asset quantities, the result of the price declines has been to return mean family wealth in real terms, as of February 2009, to the level observed in the 2005 SFS.

III. Income and Wealth Distribution

Osberg (1985), in his paper entitled “The Measurement of Economic Welfare”, explained precisely the importance and difficulties involved in measuring income and wealth distribution in the context of economic wellbeing:

“When we ask for a measure of the economic wellbeing of society, we are asking for a way of summarizing the experiences of dissimilar individuals, a way of weighing the losses of the losers against the gains of the winners and deciding which is greater.”

There are different approaches and ethical questions related to the effect of income distribution on economic wellbeing. First, does it matter at all? Does a dollar enhance the wellbeing of a rich individual as much as the same dollar would improve that of a poor individual? In general, in line with the notion of fairness, most people would agree that economic wellbeing is dependent on the status of the least well-off. However, even if one agrees with this proposition, we then face a second issue. Should we focus on absolute measures of poverty, i.e. do the least well-off have the basic means to live properly; or on relative measures of poverty, i.e. are the least well-off increasingly poor when compared to the average citizen? In this report, we discuss both measures.

We will focus our attention on a number of measures of income inequality and poverty (or low income). The data used to analyze income inequality and low income comes from the SLID/SCF household surveys available for the 1980-2007 period. We will first look at trends in the quintile distribution of income and at income inequality using quintile income ratios (e.g. ratio of average income of the top to bottom quintile). Next, we will examine income inequality based on the most widely used measure, namely the Gini coefficient. We will then look at estimates of the after-tax Low Income Cut-Offs (LICOs) published by Statistics Canada, which are also based on the SLID/SCF estimates. The discussion will include trends in the incidence of low income as well as trends in the

depth of low income (low income gap). We will also focus on the Low Income Measure, a purely relative measure of low income based on the estimates for families and individuals gathered from T1 files, i.e. administrative tax return data. This data can be disaggregated by socio-economic characteristics (although with less detail than SLID estimates) and by geographic unit (with more detail than SLID estimates). Finally, we will examine data from the Market Basket Measure of low income (MBM), an absolute measure of low income.

Constraints on the availability of data on wealth distribution will make it difficult to have as clear a picture of trends in income distribution. We will use data provided in the Surveys of Financial Security (SFS) of 1999 and 2005, and in earlier wealth surveys conducted in 1970, 1977 and 1984, to provide an overall portrait of wealth distribution in Canada, especially using median wealth and disaggregating by socio-economic characteristics.

A. Income Distribution

Income disparities have a number of negative implications for society. Not only do they affect the wellbeing of those who they do not benefit from the creation of wealth, but inequalities can also affect the wellbeing the entire population through lessened social cohesion, increases in crime or, more generally, widespread discontent. Moreover, economic inequality may also in some cases slow down economic growth (Sharpe, 2003). Most people would agree that a society not only has the duty to create wealth, but also to have a certain degree of fairness in its distribution.

1) Income Trends by Quintile

Before we examine the quintile³⁹ distribution of income, it is important to note certain points. First, the population used for the quintile distribution excludes unattached individuals, taking into account only economic families. This is due to the unavailability of quintile data including unattached individuals. Moreover, income of economic families is adjusted for family size using the Statistics Canada equivalence scale described earlier. Therefore, the inequalities captured by trends in the quintile distribution are not affected by different family sizes and the change over time in the composition of households.

In 2007, the adjusted market income of the first quintile of economic families was \$10,000 (\$2007) compared to \$98,500 for the top quintile, a difference of \$88,500 (Chart 11). The difference for total income was slightly smaller, at \$84,200. Finally, the gap between the bottom and the top quintile was smallest for adjusted after-tax income, with the bottom quintile adjusted income at \$16,100 and the top quintile almost five times as high at \$78,200, a difference of \$62,100.

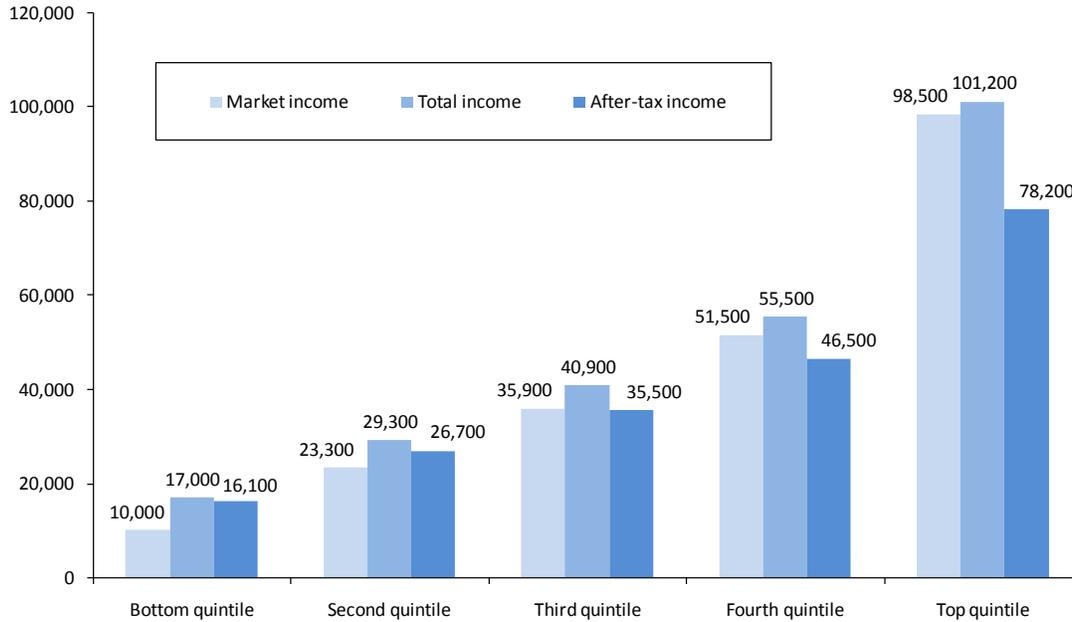
An analysis of the income distribution by quintile reveals that the real adjusted⁴⁰ income of the top quintile of economic families increased much more rapidly than that of the other four quintiles for all three measures of household income (market, total and after-tax). For example, adjusted after-tax

³⁹ A quintile is a portion of a frequency distribution containing one-fifth of the total sample. In this case, the top quintile represents the average adjusted income of the 20 per cent of all economic families who recorded the highest income. The bottom quintile is the average adjusted income of the 20 per cent of economic families with the lowest income.

⁴⁰ See an earlier footnote in Section IIB for a quick review of the methodology used to adjust income using an equivalence scale.

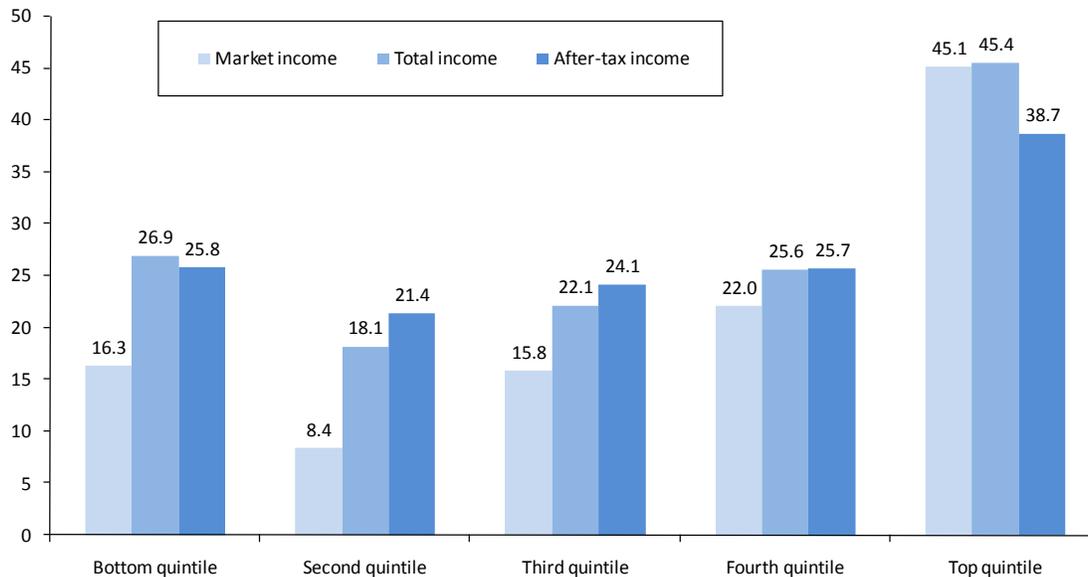
income of the top quintile rose by 38.7 per cent during 1981-2007, while the increase for all four other quintiles was only in the 25 per cent range (Chart 12). In other words, the adjusted after-tax income of economic families in the top quintile was increasing more than 50 per cent faster than that of persons in the other four quintiles during the period. Trends in the quintile distribution of market and total income were even more skewed towards the top quintile.

Chart 11: Adjusted Market, Total and After-Tax Income by Quintile, Economic Families, 2007, \$2007



Source : Table 24A, Table 24B and Table 24C

Chart 12: Adjusted Market, Total and After-Tax Income, Economic Families, Change by Quintile for the Total 1981-2007 Period, per cent



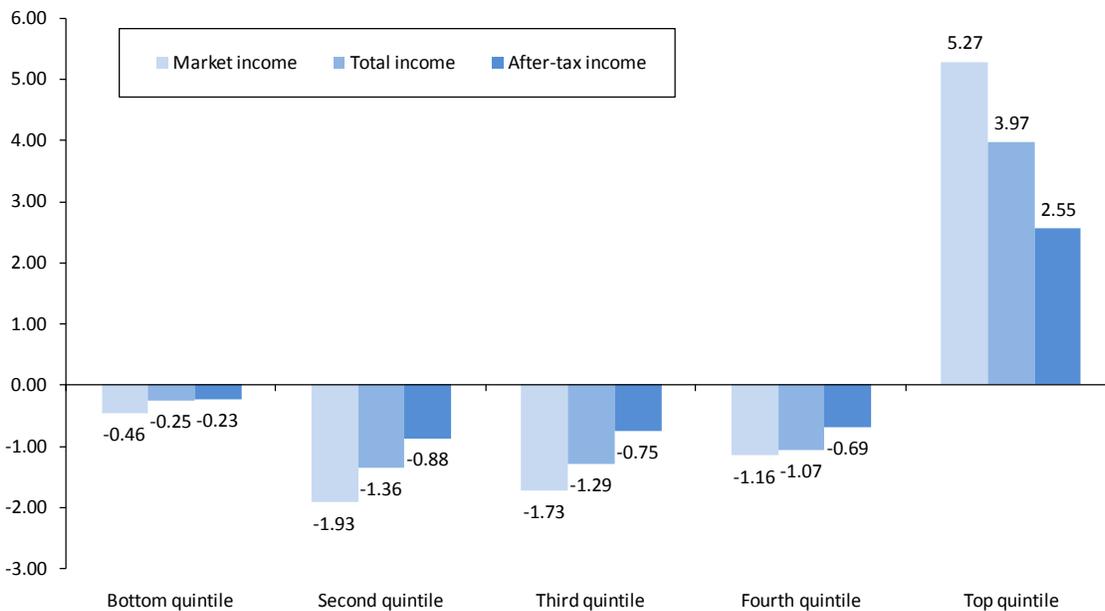
Source : Table 24A, Table 24B and Table 24C

The change in the quintile distribution of adjusted income between 1981 and 2007 indicates clearly that income generated during that period went predominantly to the top 20 per cent of the income distribution. Indeed, of the \$9,300 average increase in adjusted after-tax income per economic family, 46.9 per cent can be accounted for by the increase in the income generated by the top quintile, which increased by an average of \$21,800 between 1981 and 2007.⁴¹ For total income, it was 54.0 per cent that went to persons in the top quintile and for market income it represented a stunning 63.8 per cent of the increase.

Because the adjusted income of the top quintile was rising more rapidly, its share of total adjusted income rose considerably (Chart 13). In fact, the increase in the share of total adjusted income appropriated by the top quintile overshadowed all other quintiles. For example, the share of adjusted market income of the top quintile increased 5.2 percentage points between 1981 and 2007, from 39.7 per cent to 44.9 per cent. Because the total adjusted income of the top quintile was growing more rapidly and because its initial income was higher, the share of total adjusted income received by other quintiles decreased. Over the 1981-2007 period, the share of market income generated by the lowest quintile fell from 5.0 per cent to 4.6 per cent or 0.46 percentage points (Chart 13). The share of adjusted market income of the second quintile decreased 1.93 percentage points, the third quintile 1.73 percentage points and the fourth quintile 1.16 percentage points.

Chart 13: Quintile Shares of Adjusted Market, Total and After-Tax Income, Economic Families, Change Between 1981 and 2007

percentage points

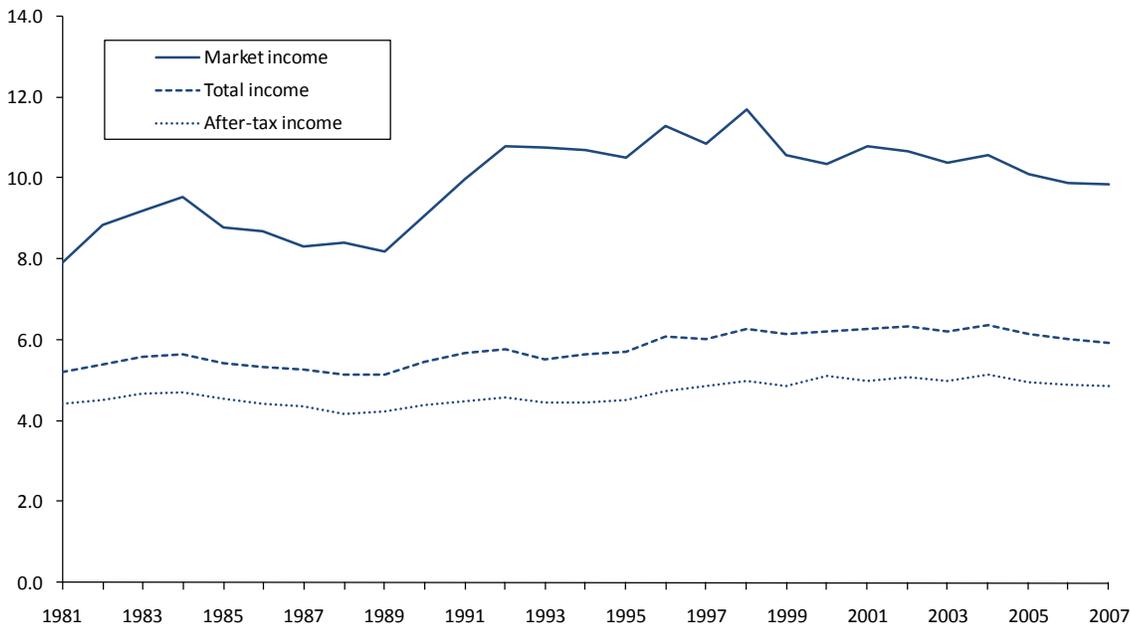


Source : Table 24B, Table 24C and Table 24D

⁴¹ For comparison, the bottom quintile accounted for 7.1 per cent, the second quintile for 10.1 per cent, the third quintile for 14.8 per cent and the fourth quintile for 20.4 per cent.

A relative measure of income inequality is the ratio of the top to bottom quintile income of economic families. Assuming the validity of the equivalence scale, we can say that the ratio really does describe the level of income available to the top 20 per cent of the population compared to the bottom 20 per cent. In other words, we can interpret a ratio of four by saying that for each dollar of income received by the lowest quintile, the highest quintile received four dollars. Note that if both the lowest and the highest quintile increase their income by one dollar, the new ratio would be lower, even though the absolute gap between poor and rich would remain the same.⁴²

Chart 14: Top to Bottom Quintile Ratio for Market, Total and After-Tax Income, Economic Families, 1981-2007



Source : Table 15A, Table 15B and Table 15C

The trends in the ratio of the top to bottom quintile for market income appear to follow the business cycle (Chart 14). The ratio hovers around 10, which means that the top 20 per cent of the population earns ten times more than the bottom 20 per cent (Summary Table 10 and Table 15A). Over the 1981-2007 period, this gap grew 24.8 per cent. It was at a low point in 1981, at 7.90. After reaching 10.77 in 1993, this ratio fluctuated between a peak of 11.71 in 1998 and a trough of 9.85 in 2007.

If we look at the ratio for total income, we come to similar conclusions. Over the 1981-2007 period, the ratio of the top to bottom quintile of total income increased 14.6 per cent, from 5.19 in 1981 to 5.95 in 2007. The startling element is the impact of government transfers on the level of the ratio. While the ratio hovers around ten to one for market income, it is only about six to one for total income (Summary Table 10). This is the result of the high government transfer rate for the lowest

⁴² One can see that easily if we assume a \$10 income for the lowest quintile and a \$40 income for the highest quintile. In this case, the ratio is 4. If the income of the lowest quintile increases by \$1 and that of the highest ratio increases by \$4, the ratio remains unchanged ($44/11 = 4$). Yet, the absolute gap increases from \$30 to \$33. Therefore, a stagnant ratio signifies that the gap between poor and rich widens in absolute terms, even though it does not change in relative terms.

quintile (amounting to 41.2 per cent of adjusted total income) compared to the highest quintile (2.7 per cent) (Tables 24a and 24b). The main notable difference between market income ratios and total income ratios is the relative stability of the latter, which did not increase as significantly in the early 1990s and, in turn, did not decrease as much in the second half of the 1990s. The stability of the quintile ratio of total income – compared to the increase in the market income quintile ratio – means that the gap between rich and poor, in absolute or per cent terms, did not widen as much as the one for market income.

Summary Table 10: Ratio of Top to Bottom Quintile in Canada, Adjusted for Family Size

	Market income	Total income	After-tax income
1981	7.90	5.19	4.41
1989	8.18	5.14	4.23
2000	10.36	6.22	5.11
2007	9.85	5.95	4.86
Point change			
81-89	0.29	-0.05	-0.17
89-00	2.18	1.08	0.88
00-07	-0.51	-0.27	-0.26
81-07	1.95	0.76	0.45
Total growth, %			
81-07	24.8	14.6	10.2

Source: Table 15A, Table 15B and Table 15C

The analysis for the ratio of the top to bottom quintile of after-tax income is slightly different. Between 1981 and 2007, the ratio of the top to bottom quintile for after-tax income also increased, from 4.41 in 1981 to 4.86 in 2007, a 10.2 per cent increase. Broadly, the same trend seems to apply to after-tax ratios as applies to total income ratios, except for the somewhat larger decrease in the after-tax ratio in the latter part of the 1980s and its smaller increase in the following economic downturn (Table 15C).

In 1994, the after-tax income quintile ratio was virtually at the same level as it was in 1981. In comparison, the total income ratio was 8.9 per cent higher in 1994 than in 1981. However, as GDP growth accelerated in the latter part of the 1990s, after-tax income ratios edged up, reaching 4.86 in 2007, 10.2 per cent higher than in 1981. Thus, it appears that the top 20 per cent of the population became richer faster than the bottom 20 per cent. In absolute terms, the difference was even starker: for every new dollar in the pockets of the bottom quintile, the income of the top quintile was increasing by approximately five dollars.

2) Gini Coefficient

To track broad trends in income inequality, the Gini coefficient is a well accepted indicator. It reflects the dispersion of the income distribution, and its value ranges from 0 to 1. While a value of zero would indicate that income is equally divided among Canadians, a value of 1 would mean that

only one household receives all the income in the economy. Therefore, when income inequality increases, the Gini coefficient goes up and vice-versa.

Summary Table 11: Gini Coefficient in Canada for All Family Units, Absolute Value and Total Absolute and Percentage Change Over the Period

	Market income	Total income	Effect of Transfers	After-tax income	Effect of Taxation	Effect of Transfers and Taxes
	(1)	(2)	(3) = (2) - (1)	(4)	(5) = (4) - (2)	(6) = (3) + (5)
1981	0.434	0.374	-0.060	0.348	-0.026	-0.086
1989	0.46	0.385	-0.075	0.351	-0.034	-0.109
2000	0.515	0.431	-0.084	0.392	-0.039	-0.123
2007	0.507	0.429	-0.078	0.393	-0.036	-0.114
Average Annual Growth Rate, %						
81-89	0.73	0.36	2.83	0.11	3.41	3.01
89-00	1.03	1.03	1.04	1.01	1.26	1.10
00-07	-0.22	-0.07	-1.05	0.04	-1.14	-1.08
81-07	0.60	0.53	1.01	0.47	1.26	1.09
Total point change						
81-89	0.026	0.011	-0.015	0.003	-0.008	-0.023
89-00	0.055	0.046	-0.009	0.041	-0.005	-0.014
00-07	-0.008	-0.002	0.006	0.001	0.003	0.009
81-07	0.073	0.055	-0.018	0.045	-0.010	-0.028
Total per cent change						
81-89	6.0	2.9	25.0	0.9	30.8	26.7
89-00	12.0	11.9	12.0	11.7	14.7	12.8
00-07	-1.6	-0.5	-7.1	0.3	-7.7	-7.3
81-07	16.8	14.7	30.0	12.9	38.5	32.6
Source: Table 14A, Table 14B and Table 14C						

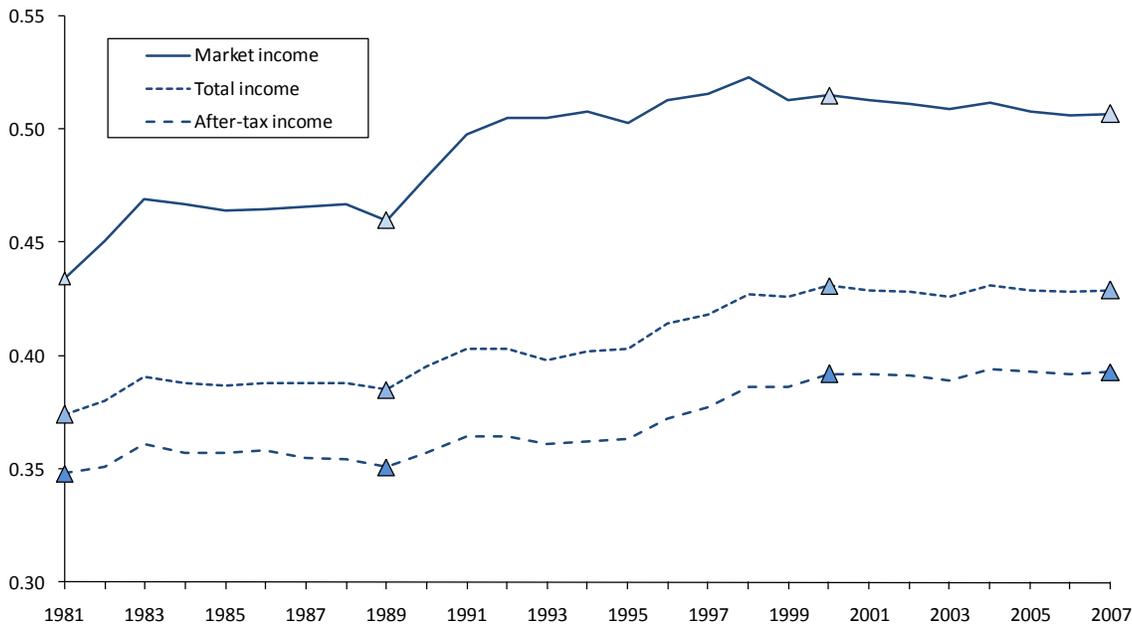
The choice of income measure (market, total or after-tax) will have an impact on the level of the Gini coefficient. Since government transfers and taxes are aimed at reducing income disparities, we should expect a higher Gini coefficient for market income than for total income and an even lower one for after-tax income. In fact, in 2007, the Gini coefficient for market income was 0.507, the one for total income was about 85 per cent of the market income Gini coefficient at 0.429 and the after-tax Gini coefficient was 78 per cent of the market income Gini coefficient at 0.393 (Summary Table 11). It is also important to keep in mind that since Statistics Canada does not adjust income for household size in the calculation of the Gini coefficient, its value is likely overstated compared to an estimate which adjusts for household size.⁴³ The Gini coefficient presented here is the one for all family units.

⁴³ For example, the Gini coefficient for a family of six earning a total of \$50,000 and an unattached individual earning \$50,000 would be 0. However, one cannot say this is a totally equal distribution as the unattached individual enjoys more income than each family member. It is possible to estimate a Gini coefficient using adjusted income with the SLID micro-data, but these values would not be easily available and could be subject to criticism because of a lack of transparency. If

Estimates for different types of unattached individuals and economic families of different sizes are also available.

Between 1981 and 2007, the Gini coefficient based on market income increased 16.8 per cent, from 0.434 to 0.507. At first glance, trends in the Gini coefficient of market income for all family units appear to be countercyclical. We can observe that during recessions, such as in 1982 and 1990-1991, sharp increases in the Gini coefficient occurred (Chart 15). Conversely, during periods of economic growth, the Gini coefficient seems to stabilize and even edge down slightly.

Chart 15: Gini Coefficient for Market, Total and After-Tax Income, All Family Units, 1981-2007



Source : Table 14A, 14B and 14C

▲ Business Cycle Peak

However, downward pressure seems to have been less intense than upward pressure. While the Gini coefficient increased 8.1 per cent between 1981 and 1983, it only edged down 1.9 per cent during the following recovery and expansion up to 1989. Similarly, while the Gini coefficient grew 7.7 per cent between 1990 and 1997, it shrank only 1.7 per cent during the 1997-2007 period. Apparently, the least well-off suffer more during a downturn and, similarly, seem to benefit somewhat more during better economic times. This is because the economically vulnerable lose their jobs during a downturn, increasing the market income gap between the low and high income households and gain employment during an upturn reducing the gap.

Analysis of the total income Gini coefficient is quite similar to that of market income. However, government transfers not only reduce inequalities, they also dampen the effects of the business cycle on the distribution of income. As noted earlier, the total income Gini coefficient is

one is interested mainly in the trend of inequality as opposed to the absolute level of inequality, the issue of the choice of the use of unadjusted or adjusted income for family size has little effect.

significantly lower than the one for market income, with a value of 0.429 in 2007 compared to 0.507 for market income (Summary Table 11 and Table 14B). These lower income inequalities are coupled with lower volatility in the distribution of income. In effect, the Gini coefficient of total income per family unit rose only 4.5 per cent during the 1981-1983 period and 5.8 per cent between 1990 and 1997. Similarly, the Gini coefficient decreased only marginally during the 1983-1989 recovery (1.5 per cent) and actually grew slowly during the boom of 1997-2007, increasing 2.6 per cent. As a result, the Gini coefficient of total income per family unit increased less than the one for market income, with a compound annual growth of 0.53 per cent per year and a total growth rate of 14.7 per cent, compared to annual growth rate of 0.60 per cent and total growth of 16.8 per cent for market income. However, it still does indicate a significant widening of the gap between have and have-not families.

Over the 1981-2007 period, the Gini coefficient of after-tax income increased 12.9 per cent, from 0.348 in 1981 to 0.393 in 2007 (Summary Table 11). As noted, Canada's progressive tax system, in the same way as government transfers, lessens income inequalities at a point in time. In fact, not only did it reduce the Gini coefficient, it also flattened it over time, diminishing the effects of unequal market income growth on income inequalities (Table 14C). For example, the Gini coefficient of after-tax income for all family units increased only 3.7 per cent between 1981 and 1983, compared to 4.5 per cent and 8.1 per cent for the total and market income Gini respectively. During the recovery and expansion up to 1989, it edged back down 2.8 per cent only to climb back up in the following years, particularly during the second half of the 1990s. In 2007, it was 12.9 per cent above its 1981 level, pointing to rising inequalities among Canadians, even based on after-tax income.

All in all, it appears that income inequalities are on an upward trend in Canada due to growing market income inequalities. These inequalities increase during recessions and do not return to pre-recession levels during the following recovery and expansion. Reasons for this situation are still poorly understood but may reflect growing demand for skilled workers and lower demand for unskilled and semi-skilled workers.

3) Low Income Measures

a. After-Tax Low Income Cut-Offs

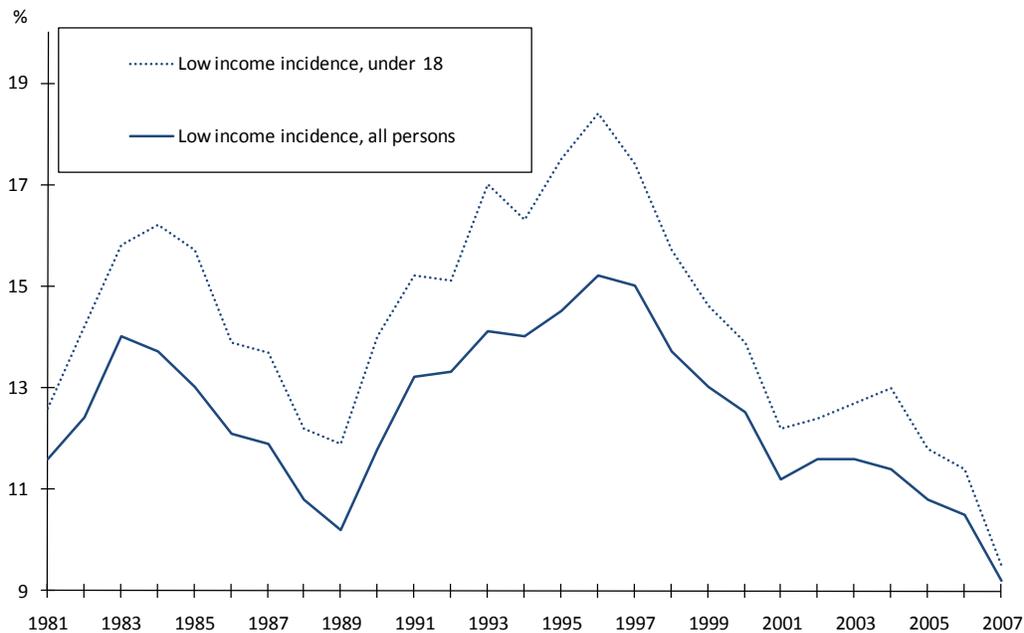
Low Income Cut-Offs (LICOs) are a threshold used to determine the number of people with low income. They represent a level of income at which a family of a certain size would have to spend 20 percentage points more of its income on food, shelter and clothing than the average family of the same size.⁴⁴ Statistics Canada calculates those values for both before-tax and after-tax income. However, we have restricted our analysis to after-tax LICOs as they represent the actual income used

⁴⁴ LICOs are established using data from the Family Expenditure Survey, now known as the Survey of Household Spending. They are calculated for seven different family size, from unattached individual to family of seven or more, and for five community sizes, from rural to urban areas with a population of more than 500,000. The average proportion of income spent on food, shelter, and clothing is calculated using the 1992 Family Expenditure Survey and then 20 per cent is added to find the proportion over which a family is considered low income. Using income data for that year, one can derive the cut-off values. Thereafter, the CPI is used to adjust the basic set of cut-offs for different years. According to Statistics Canada, LICOs should not be used to represent the poverty line because the debate on how to define poverty is still unresolved. For more information on Statistics Canada position on the use of LICOs as poverty line, see Fellegi (1999).

to purchase necessities. Along with LICOs, we include data on the average low income gap⁴⁵ to see if the depth of poverty – the difference between the income of low income households and the LICO line – has changed.

The percentage of persons in low income declined 2.4 percentage points between 1981 and 2007: 11.6 per cent versus 9.2 per cent (Chart 16a and Summary Table 12). The economic downturn of the early 1980s increased the percentage of persons in low income to 14.0 per cent in 1983, a 2.4 percentage point increase over the 1981 level. However, the following recovery and expansion lowered the proportion of persons in low income to a trough of 10.2 per cent in 1989. Then, the recession of the early 1990s hit hard, bringing the percentage of low income persons to a peak of 15.7 per cent in 1996. This peak in the low income rate occurred well after the output trough in 1992, because of the persistence of double digit unemployment rate up to 1996. The subsequent expansion brought the proportion of low income persons close to the pre-recession level, at 11.2 per cent in 2001. The percentage of low income persons rose slightly to 11.6 per cent in 2002 and 2003 before falling through 2007 to reach 9.2 per cent, the lowest rate seen over the entire 1981-2007 period.

Chart 16a: Percentage of All Persons (Including Children) Under the After-tax Low Income Cut-Offs (LICOs) (\$2007), 1981-2007



Source: Table 16B, Table 16D and Table 17A

The percentage of persons under 18 years old living in low income families followed roughly similar trends, although the incidence was higher for children than for all persons. Nonetheless, the proportion of persons under 18 living in low income families fell from 12.6 per cent in 1981 to 9.5 per cent in 2007. Child poverty was exacerbated by recessions, reaching 16.2 per cent in 1984 and

⁴⁵ The low income gap is the amount that a low income family falls short of the relevant LICO. For the calculation of this gap, negative incomes are treated as zero. For example, a family with an income of \$15,000 and a LICO of \$20,000 would have a low income gap of \$5,000. In percentage terms this gap would be 25 per cent. The average gap for a given population, whether expressed in dollar or percentage terms, is the average of these values as calculated for each unit.

18.4 per cent in 1996. These levels were respectively 2.5 per cent and 3.2 per cent higher than the levels observed in the overall population in the same years. It should be noted that the decline in child poverty rates observed in Canada is not only the result of better economic conditions, but also a consequence of effective policies such as the Canada Child Tax Benefit and the National Child Benefit Supplement.⁴⁶

Another distinct characteristic in trends in the percentage of persons under the after-tax LICO is the considerable fall in elderly poverty between 1981 and 2007, albeit from a high level (Table 16L). Elderly poverty fell 16.2 percentage points during the period, from 21.0 per cent in 1981 to only 4.8 per cent in 2007 (Summary Table 12). This development reflected the increased government transfers to the elderly in the form of Canada Pension Plan/Quebec Pension Plan, Old Age Security, and Guaranteed Income Supplement payments.⁴⁷

In contrast to the significant fall in the percentage of children and elderly persons under the after-tax LICO, the percentage of persons 18 to 64 years old below the after-tax LICO increased 0.1 percentage points, from 9.8 per cent in 1981 to 9.9 per cent in 2007. This increase was due to two key features: (1) a compositional change in the type of households toward family types with above average poverty levels; (2) and the performance of non-elderly unattached males, which form the only family type group that experienced an increase in its incidence of low income over the 1981-2007 period. While the compositional shift was the most important factor, the fact that non-elderly males experienced an increase in low-income incidence of roughly one-fifth (4.9 percentage points) while all persons experienced a decline of approximately the same magnitude (one-fifth, or 2.4 percentage points) should be noted. These data suggest that poverty declines were not necessarily related only to improving economic conditions, but also to programs which appear to have successfully lowered poverty in targeted populations (e.g. CCTB and NCB for children, GIS and CPP for the elderly).

As was noted earlier in the report, the number of unattached individuals grew much faster than the number of economic families between 1981 and 2007. Moreover, unattached individuals reported a consistently higher percentage of persons below the after-tax LICO compared to economic families. Indeed, despite falling from 35.5 per cent in 1981 to 27.4 per cent in 2007, the share of unattached individuals below the after-tax LICO was still much higher than that of economic families (6.0 per cent). As a result, even though both the percentage of persons in economic families and the percentage of unattached individuals below the after-tax LICO decline substantially (31.8 per cent and 23.6 per cent respectively), the increasing share of unattached individuals in the composition of family units reduced the gains in poverty reduction. Though the proportion of people living with after-tax low incomes has decreased (20.7 per cent) the fall would have been much greater were it not for the changing structure of families in Canada. In fact, if in 2007 family composition had been the

⁴⁶ Indeed, the introduction of the Canada Child Tax Benefit and the National Child Benefit Supplement in the 1995-1996 fiscal year has coincided with a considerable fall in the child poverty rate (Table 16L). In fact, since 1996, the percentage of persons under 18 years of age under the after-tax LICO decreased 8.9 percentage points, a larger decrease than for adults aged 18-64 (5.1 percentage points) or the elderly (4.9 percentage points) for the same period. This turn of events finally brought child poverty below the 1981 level of 12.6 per cent. The gains from poverty reduction for children in two-parent families, which decreased from 8.4 per cent in 1981 to 6.5 per cent in 2007, was offset somewhat by the increase in the share of family units that are single parent families. Female lone parent families had much higher child low income rates despite a substantial decline from 48.7 in 1981 to 26.6 in 2007.

⁴⁷ For example, CPP payments increased nearly ten-fold in nominal terms, from \$2.3 billion in 1981 to \$25.4 billion in 2006, the most recent year for which data were available (Table 64).

same as in 1981 (using the ten detailed family types in Table 16K), the percentage of persons under the LICO would have been one percentage point lower in 2007. For families, the percentage would have been nearly 2 percentage points lower based on the ten main family groups (Table 16I).

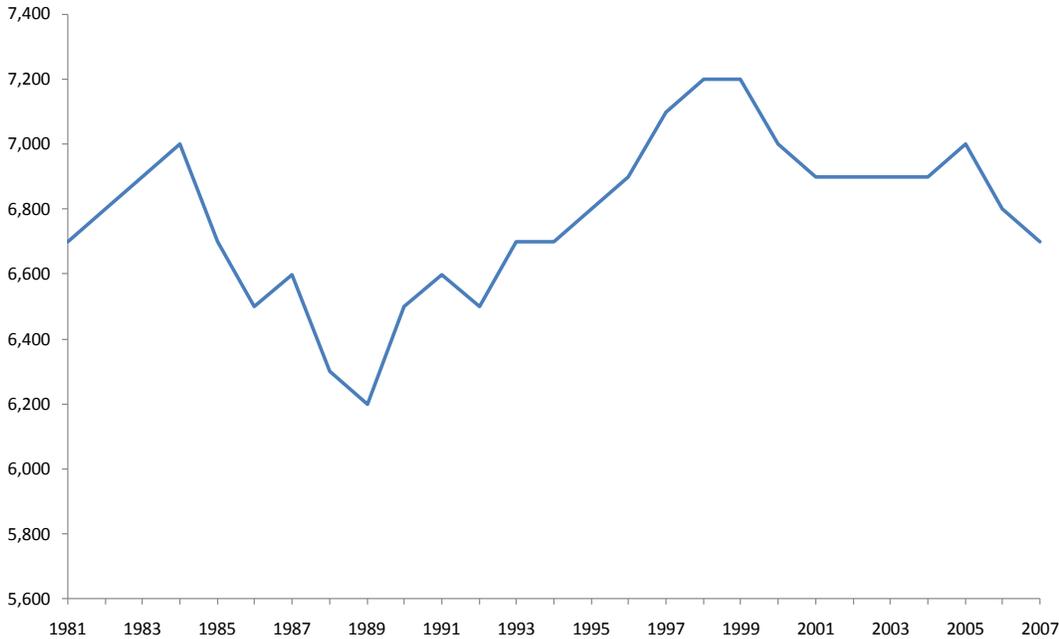
Summary Table 12: Trends in the Percentage of Persons Under the After-Tax LICO, by Age Group and Sex, 1981 and 2007, in per Cent, Unless Otherwise Indicated

	1981	2007	Per cent change, 1981-2007
All persons	11.6	9.2	-20.7
Under 18 years	12.6	9.5	-24.6
18 to 64 years	9.8	9.9	1.0
65 years and over	21.0	4.8	-77.1
Males	9.9	9.0	-9.1
Females	13.3	9.4	-29.3
Persons in economic families	8.8	6.0	-31.8
Males	8.1	5.7	-29.6
Females	9.6	6.3	-34.4
Elderly persons	7.3	1.1	-84.9
Under 18 years	12.5	9.4	-24.8
18 to 64 years	7.2	5.5	-23.6
Unattached individuals	35.5	27.4	-22.8
Males	27.2	27.4	0.7
Females	42.5	27.5	-35.3
Elderly persons	49.7	13.9	-72.0
Males	39.0	18.8	-66.7
Females	53.5	31.9	-73.3
Under 65 years	29.8	32.0	7.4
Males	24.8	29.7	19.8
Females	35.6	35.1	-1.4
Source: Table 16L			

The low income gap measures the average amount needed by a low income family to reach the LICO. It is expressed in constant 2007 dollars. In 2007, it stood at \$6,700, a level equal to the 1981 level (Table 17A). Over the 1981-2007 period, the low income gap did not fluctuate greatly, ranging from \$6,200 in the trough of 1989 to \$7,200 reached in 1998 and 1999 (Chart 16b). Thus, low income families remained at about the same distance from the LICO between 1981 and 2007.

The low income gap differs among different family types (Table 17C). For example, elderly families in 2007 had a low income gap of \$6,900 (\$2007) compared to \$7,200 for non-elderly families. For the 1981-2007 period, lone-parent families improved their position considerably, with their low income gap falling 27.8 per cent, from \$9,200 in 1981 to \$7,600 in 2007. It was the greatest improvement in all major categories of economic families. Among unattached individuals, elderly females notably saw a substantial reduction of 38.5 per cent, from \$3,900 in 1981 to \$2,400 in 2007.

Chart 16b: Estimates of the After-Tax Average Low Income Gap per Household
(2007\$, 1981-2007)



b. Low Income Measure

The low income measure (LIM) is a purely relative measure of low income and the threshold is calculated using median adjusted income. First, each household's income is adjusted using Statistics Canada's equivalence scale. Then the median income is calculated, i.e. the income where half the families have a higher adjusted income and the other half have a lower adjusted income. The LIM is then represented by half that median adjusted income.⁴⁸ The LIM is defined on a national level, which means the line is the same in Ontario as in Prince Edward Island or British Columbia. Also, estimates are presented on the basis of the number of persons and are currently available for the 1997-2006 period.⁴⁹

The LIM could be seen as an alternative measure to the LICO as it is easier to understand and more straightforward. However, the drawback is that it is purely relative. For example, if the real income of all households doubled, there would be no change in the percentage of persons under the LIM. Also, there is no adjustment for community size, and it is not based on a basket of goods. These

⁴⁸ The LIM is a fixed percentage (50 per cent) of median national adjusted family income where adjusted indicates a consideration of family needs. The family size adjustment reflects the precept that family needs increase with family size. A family is considered to be low income when their income is below the LIM for their family type and size. When the median adjusted income is determined, the LIM for family types other than unattached individual is found by multiplying the median adjusted income by the sum of the factors of the family size (e.g. one parent and two kids would be $1 + 0.4 + 0.3 = 1.7$). A low income person is a person part of a low income family.

⁴⁹ The LIM presented here is from T1 family files, for which estimates are currently only available back to 1997. It is not consistent with the dataset (which is survey based) used to estimate the MBM and the LICO. Historical data for the LIM could be obtained from other data sources (e.g. SLID), but Statistics Canada's only published measure of LIM on Cansim is the one based on the T1 family files discussed in this report.

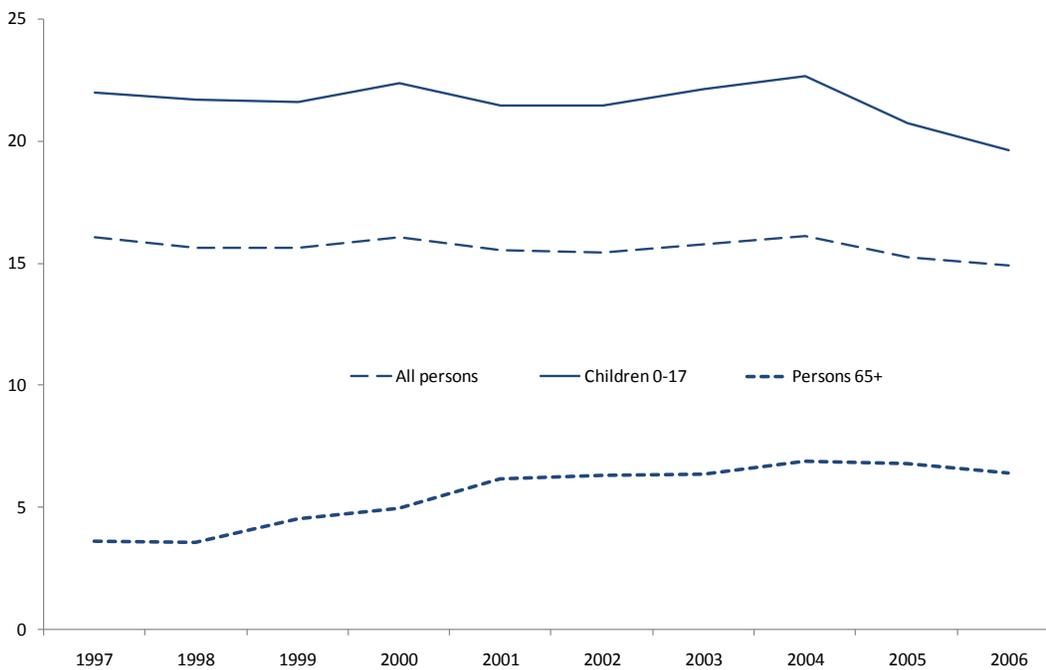
differences in definitions can lead to different changes in the LICO and the LIM. For example, between 1999 and 2000, while the percentage of persons under the LICO edged down 0.5 percentage points (Table 16L), the percentage of persons under the LIM increased 0.5 percentage points (Table 18B).

In 1997, 16.1 per cent of the population was under the LIM. There was a downward movement over the next nine years, with the LIM at 14.9 per cent in 2006 and fluctuating in a range from 16.1 per cent to 14.9 per cent over the 1997 to 2006 period (Chart 16c and Table 18B). LIM estimates currently give a higher percentage of low income persons than LICO estimates and tend to be more stable.

The LIM also suggests a much higher rate of child poverty, with 19.6 per cent of children (0-17 years of age) living in low income families in 2006 (Chart 16c and Table 18B). This was down from the 1997 value of 22.0 per cent, but is in sharp contrast with the 11.4 per cent estimates from the LICOs for 2006 (down from 17.8 per cent in 1997).

Chart 16c: Percentage of Persons Under the After-Tax Low Income Measure (LIM)

1997-2006



Source: Table 18B

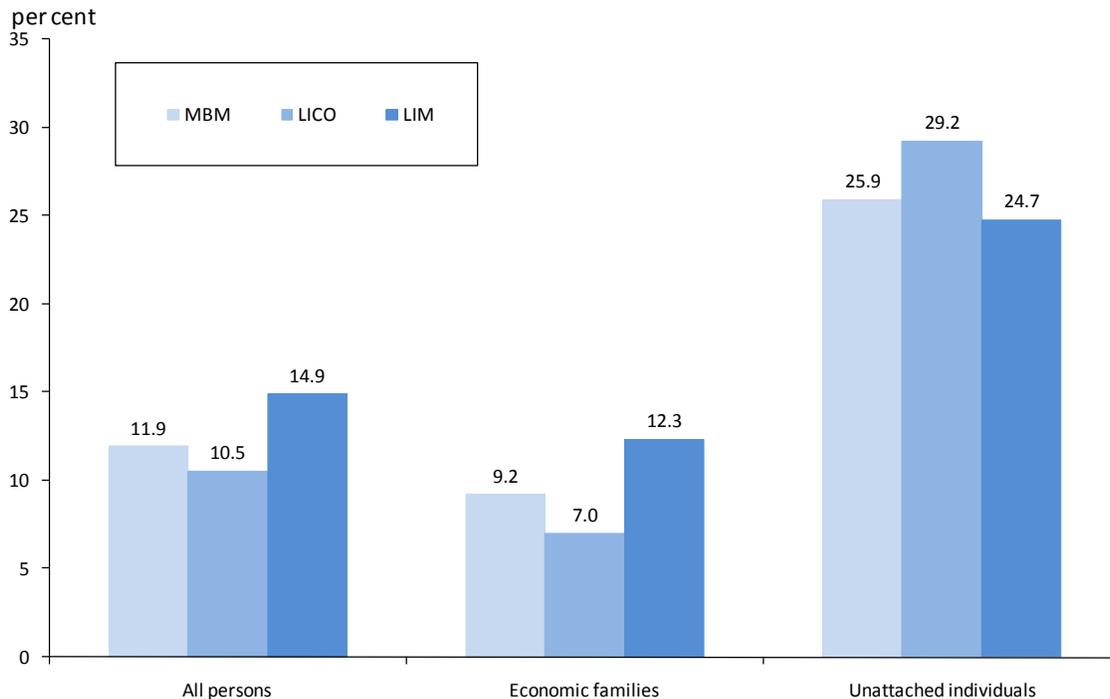
Similarly, the percentage of elderly persons in low income families is not moving in the same direction as the LICOs. Using the LIM, the percentage of elderly in low income families rose from 3.6 per cent in 1997 to 6.4 per cent in 2006, a 2.8 percentage point increase (Chart 16c). However, the LICOs suggest that the percentage of elderly persons in low income families fell 3.6 percentage points between 1997 and 2006, from 9.0 per cent to 5.4 per cent. Of course, those results not only suggest different realities, but also different policies to address those realities. The choice of the low income indicator can thus have considerable effect on our perception of the incidence of low income in Canadian society.

c. Market Basket Measure

The Market Basket Measure (MBM) is an absolute measure of low income developed by Human Resources and Skills Development Canada in partnership with provincial and territorial ministries responsible for social policy with the assistance of Statistics Canada. A specific basket of goods and services was selected and the prices of these goods and services monitored in different communities across Canada.⁵⁰ If a household's disposable income falls below the cost of the basket of goods and services in the MBM in their community (size and location), members of that household are considered to be in low-income. Different thresholds are estimated for different family size and composition.

The main difference with the LICOs is that the MBM takes into account the size of the communities not only for the cost of shelter, but for all components of the basket. Therefore, the incidence of low-income calculated by the MBM tends to be higher in higher cost communities.

Chart 17: Market Basket Measure (MBM), After-Tax LICO and After-Tax LIM, 2006



Source : Table 38

In 2006, the most recent year for which MBM estimates are available, 11.9 per cent of all persons were in low income on an after-tax basis according to the MBM. By comparison, the after-tax

⁵⁰ The basket includes specified quantities and qualities of goods and services related to food, clothing and footwear; shelter; transportation (public transit or use of a used vehicle); and other household needs such as school supplies, personal care products, a telephone, etc. Expenses such as child care and non-insured health costs are not included in the basket because they vary greatly from family to family. In order to account for these expenses, the cost of these items is deducted from the family's total money income before being compared to MBM poverty thresholds.

LICO estimate was 10.5 per cent and the LIM estimate was 14.9 per cent.⁵¹ While the incidence of low income measured by the MBM was higher than the LICO estimate for economic families, it was lower for unattached individuals (Chart 17 and Table 38a).

The MBM provides higher estimates of low income for lone-parent families than the low income cut-offs. This results from the MBM's definition of disposable incomes, since single-parent families are likely to have child care and health care expenses that are deducted from the family's total money income resulting in a higher gap between total and disposable income. For lone-parent families, in 2006, the MBM estimate was 30.3 per cent, the after-tax LICO estimate was 24.3 per cent, and the LIM estimate was 33.1 per cent. In general, the 2006 MBM low income estimates were higher than the LICO estimates. Overall, the MBM is a useful complementary measure to Statistics Canada's LICO, but the lack of historical estimates makes it difficult to use as an indicator of trends in low income.

d. Low Income Dynamics

Opportunities to improve one's situation are a core value of western societies. But an individual's power to make life better, to go up the social scale and improve one's family lot is not a given. The study of the dynamics of low income reveals that some have a harder time moving out of low income than others. This is an important factor for wellbeing, because not only are the long-term poor excluded from sharing the nation's wealth, but their low-income situation is not temporary, it is structural. Measuring the persistence of low income and understanding its determinants are essential to create appropriate policies because people in a state of persistent low income do not need the same types of support as people that suffer a temporary setback.

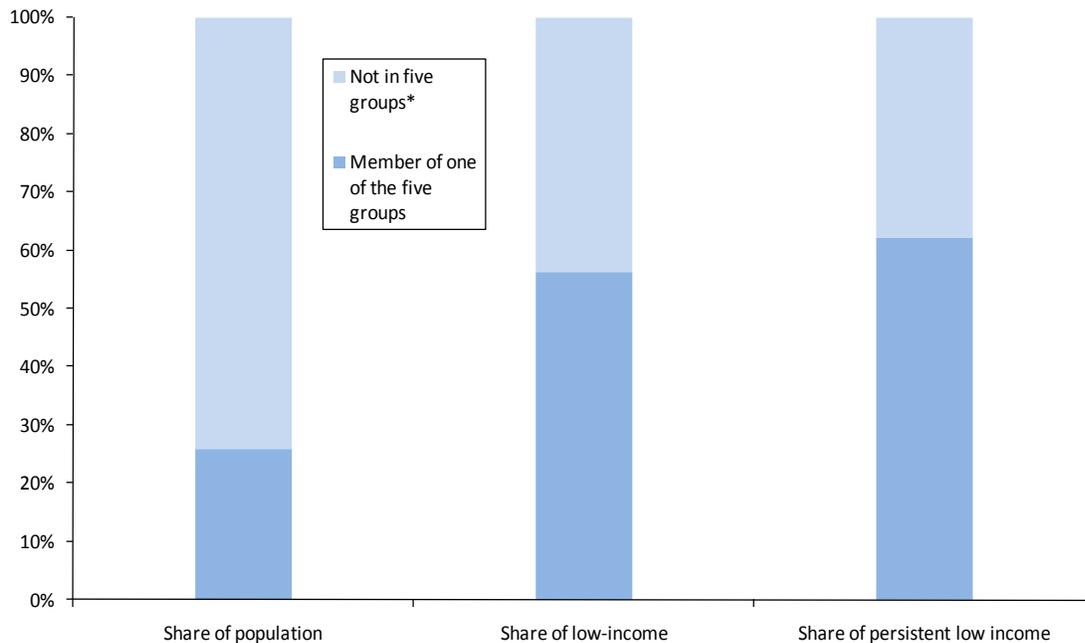
The study of low income dynamics was made possible by the initiation of longitudinal household surveys, such as the SLID. In one of the first attempts at analyzing low income dynamics in Canada, researchers at Human Resources Development Canada (2000) looked at the 1992-1996 period using the Longitudinal Administrative Databank (LAD). In that study, they defined as long-run poor someone who, during the five years covered by the study, was under the low income line for at least half of the period. They found this group to be sizeable, representing 6 per cent of the Canadian population and about 40 per cent of the low income population in any given year. The policy implications of these findings are important. The recognition of low income as both a temporary and a permanent state underlines the importance of diverse policies targeting different groups.

More recent work by Finnie and Sweetman (2003) using the same data and an entry and exit model of low income dynamics found that "family status is a strong determinant of movement into and out of low income". For example, they found that unattached individuals and lone parents had higher entry rates and lower exit rates than married persons. There was also an age factor, which indicated that younger families with children suffered more and longer low income spells. Interestingly, they also showed that long-term low income feeds itself, i.e. the more years spent in low income, the more likely one is to remain low-income in the future. Of course, these results were often inferred and generalized from static low income data, but this research paper documented the extent of low income as a dynamic phenomenon.

⁵¹ The estimates used to compare are the pre-revisions estimates given in HRDC (2003). In May 2005, Statistics Canada considerably revised LICOs estimates due to revisions in the SLID estimates for income.

Other studies, using a slightly different definition of persistent low income, produced similar results. Corak et al. (2003) used SLID data covering the 1993-1998 period and found that 2.9 per cent of Canadians were in a low income state for the entirety of the six year period. Also, of those in low income at the beginning of the period, 24.4 per cent were still in low income five years later. However, while almost a quarter of the Canadian population (24.1 per cent) experienced low income at least once during the period, 38.4 per cent were not in a state of low-income a year later. This confirms the HRDC findings that while low income is a temporary state for a large share of the population, it is persistent for a significant number of low-income individuals.

Chart 18: Share of Population, Low Income (2000) and Persistent Low Income (1996-2000) Depending on Socio-Economic Characteristics



* The five groups are lone parents, unattached 45-64, recent immigrants (10yrs), persons with a work-limiting disability and off-reserve aboriginal people.

Source : Table 30

Hatfield (2003) identified the groups most likely to be affected by persistent low income. In this case, a person was considered to experience persistent low income if the cumulative income of the economic family over the 1996-2000 period fell short of the cumulative amount of that family's post-transfer, post-income tax low-income cut-offs for this period as measured by Statistics Canada. Five groups, i.e. lone parents, unattached individuals aged 45-64, recent immigrants (less than 10 years), persons with work-limiting disabilities, and Aboriginal people living off-reserve, represented 25.9 per cent of the population but 62 per cent of persistent low income persons. As a comparison, people not included in those five groups represented 74.1 per cent of the population, but only 37.9 per cent of persistent low income persons (Chart 18). Over 1996-2000, 25.6 per cent of lone parents were considered to be in a persistent state of low-income (Chart 19). The proportions for recent immigrants and persons with work-limiting disabilities were similar. The group with the highest share of persistent low income was unattached individuals aged 45-64, at 33.7 per cent. Aboriginal people living off-reserve had a slightly better situation, with 17.2 per cent in persistent low income.

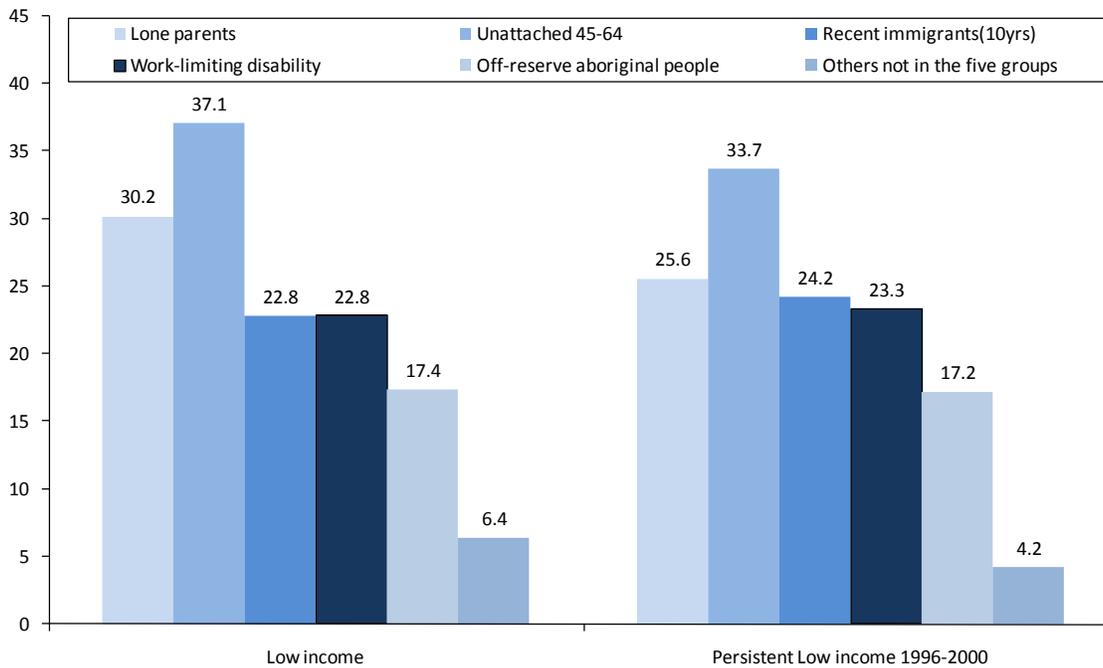
However, this compares unfavourably with the low-income persistence rate for the rest of the population – 4.2 per cent.

A more recent study by Statistics Canada (2009) used longitudinal data from the SLID for the years 2002-2007 period. The study found considerable turnover among those below the LICO. For instance, of those who had been below the LICO in 2006, 40 per cent were no longer below it in 2007. Results also show that for many, low income is a temporary phenomenon. From 2002 to 2007 one in five Canadians experienced at least one year below the LICO. Forty per cent of those Canadians who experienced low income did so for only one year, while 21 per cent experienced low income for two years.

The impact of persistent low-income on wellbeing is self-explanatory. Persons in a low income situation face the threat of social exclusion. This is worsened when low income is persistent and when opportunities for advancement are missing. Therefore, it is important that trends in the dynamics of low income be considered when developing a policy framework to fight low income.

Chart 19: Incidence of Low-Income (2000) and Persistent Low Income (1996-2000)

percent



Source : Table 30

B. Wealth Distribution

As with income disparities, wealth distribution has an impact on the wellbeing of Canadians. A society where the poor do not share the benefits of increasing wealth is poised to create social instability with its attendant costs, a growing sense of exclusion and a sense of unfairness. Everywhere in the world, one can see the disastrous consequences of inequitable wealth distribution. From landless Brazilian peasants calling for agrarian reform to the constant indignation caused by the publication of the Forbes list of the 500 wealthiest individuals, unbalanced wealth distribution

invariably leads to anger and social disruption, although at different degrees. Moreover, equitable wealth distribution contributes to the establishment of common social goals, i.e. to a society where citizens are willing to support wide-ranging policies aimed at increasing the country's wealth because they know that they will share in the new prosperity.

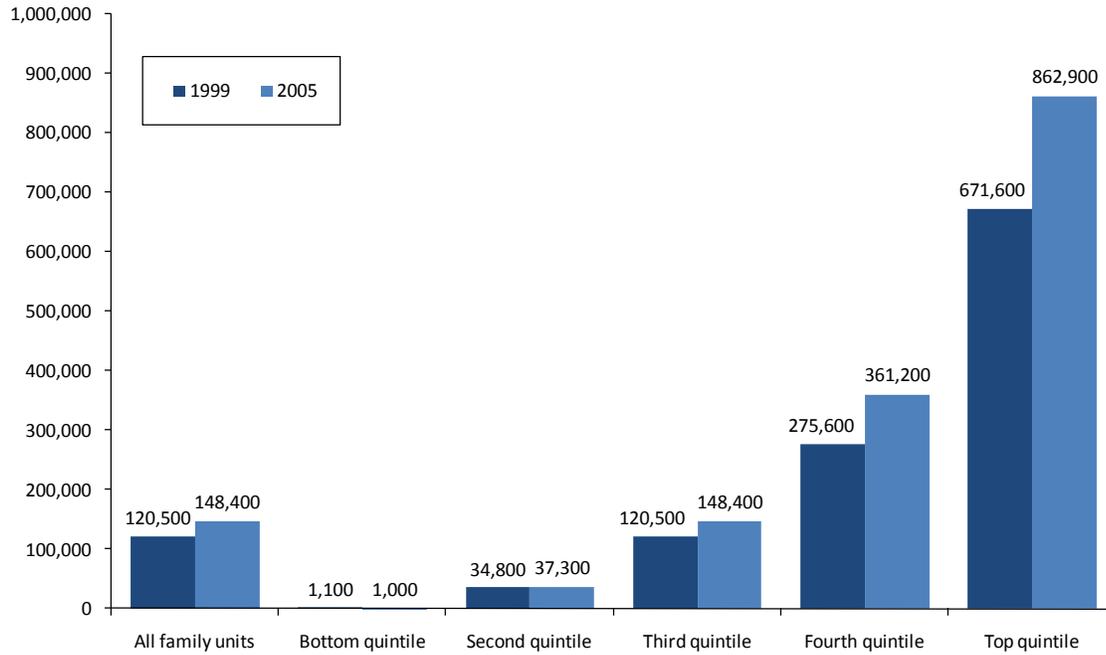
As was noted earlier, data on the wealth of households are released infrequently in Canada. The Survey of Financial Security (SFS) provides an extensive set of data concerning the accumulated wealth of Canadians and can be disaggregated by socio-economic characteristics. Unfortunately, only two wealth surveys were released in the last twenty years in Canada, one in 1999 and another in 2005. Earlier wealth surveys were conducted in 1970, 1977 and 1984, but they are not strictly comparable to the 1999 and 2005 surveys. As was noted earlier, Statistics Canada did provide adjusted estimates for 1999 which allow a comparison with earlier surveys, but no such estimates exist for the 2005 survey. In this part, we will first look at the change that occurred in median wealth and then we look at trends in the distribution of average wealth.⁵² In this section, the data is ordered based on wealth holdings, not on income. For example, the "bottom quintile" refers to household with the least wealth, not necessarily those with the least income.

1) Median Net Worth

The evolution of median net worth is quite interesting (Table 19B). If we include all family units, median real net worth increased 23 per cent between 1999 and 2005 (Chart 20b). However, if we look at the quintile distribution, we realize that wealthy families increased their median net worth much faster than poor families from 1999 to 2009. The bottom 20 per cent of the wealth distribution actually saw their median net worth decrease, by 9 per cent. The second bottom quintile slightly increased its median net worth, up 7 per cent on 1999. The largest per cent accumulation in total net worth was recorded by the second from top quintile, which advanced 31 per cent or \$85,600 in constant 2005 dollars. The largest gross increase was received by the top quintile; the top quintile saw median net worth grow 28 per cent or \$191,300 (Chart 20a). The middle quintile also saw high growth (23 per cent), but still well below the top two quintiles. Growth in net worth was clearly skewed in favour of the upper quintiles.

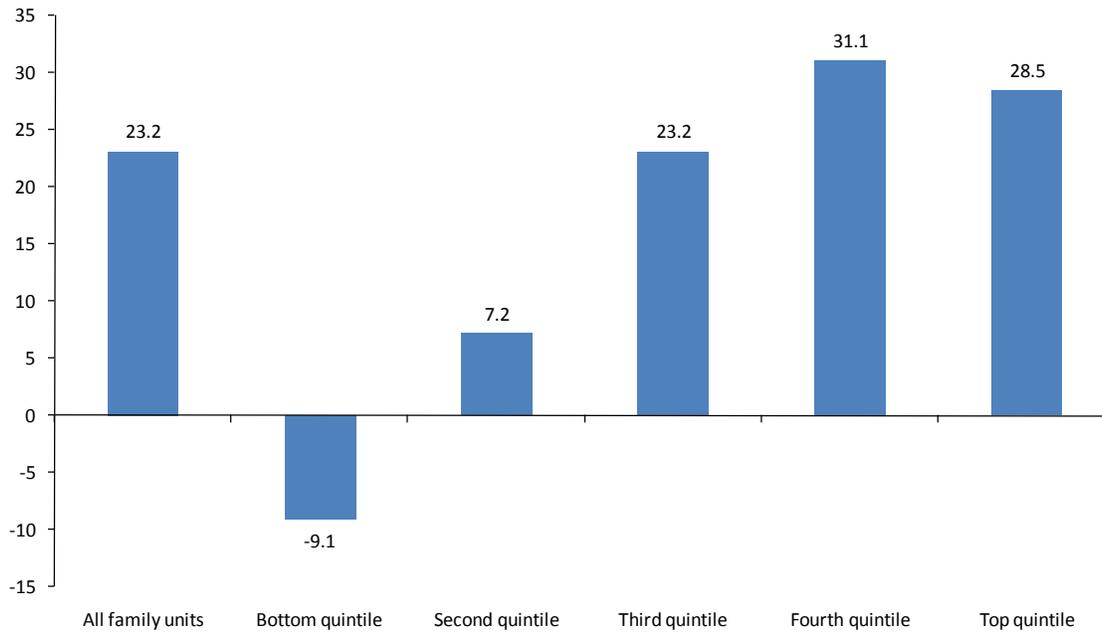
⁵² Household net worth distribution is influenced by a number of socio-economic factors. Since we focus on the change in wealth over time, as opposed to its distribution at any point in time, we decided to keep the discussion of these issues separated and include them in a footnote. Family composition has an impact on both average and median net worth. In 1999, unattached individuals had a lower average net worth than economic families, with respectively \$123,600 and \$308,800 (1999\$) (Table 19A). The difference in median net worth is more striking. The median economic family had a net worth five times larger than the median unattached individual. This unequal distribution seems to be worse for males than for females, with unattached men's median net worth amounting to \$21,800 compared to women's \$43,500 (which may be related to the different age structure across gender). Other obvious factors included age and income (Table 19B). Overall, both average and median net worth increased with age. This seems obvious given that the principal assets of Canadians are generally their house and their pensions, which are assets generally held in larger quantities by older households. However, this positive relationship between age and net worth did not hold for family units for which the major income recipient was 65 years old or more. Median net worth for that category was 22.3 per cent lower than the 55-64 age group, but still 9.6 per cent larger than the 45-54 age group. Of course, this is not a surprise as when people retired and start living off their pension, their net worth may decrease. The relation between income and net worth was even more direct. Income and wealth are related in the same way that investment and capital stock are. One is a flow and the other is a stock. Obviously, if the income flow is larger, chances are the wealth stock will also be larger. Effectively, both average and median net worth increases in line with income. Data from the 2005 survey confirms that median net worth for economic families is much greater than that of unattached individuals (over four times in the 2005 survey).

Chart 20a: Comparison of Quintile Median Net Worth in 1999 and 2005 (\$2005), All Family Units



Source :Table 19B

Chart 20b: Quintile Real Median Net Worth, All Family Units, Change Between 1999 and 2005
percent

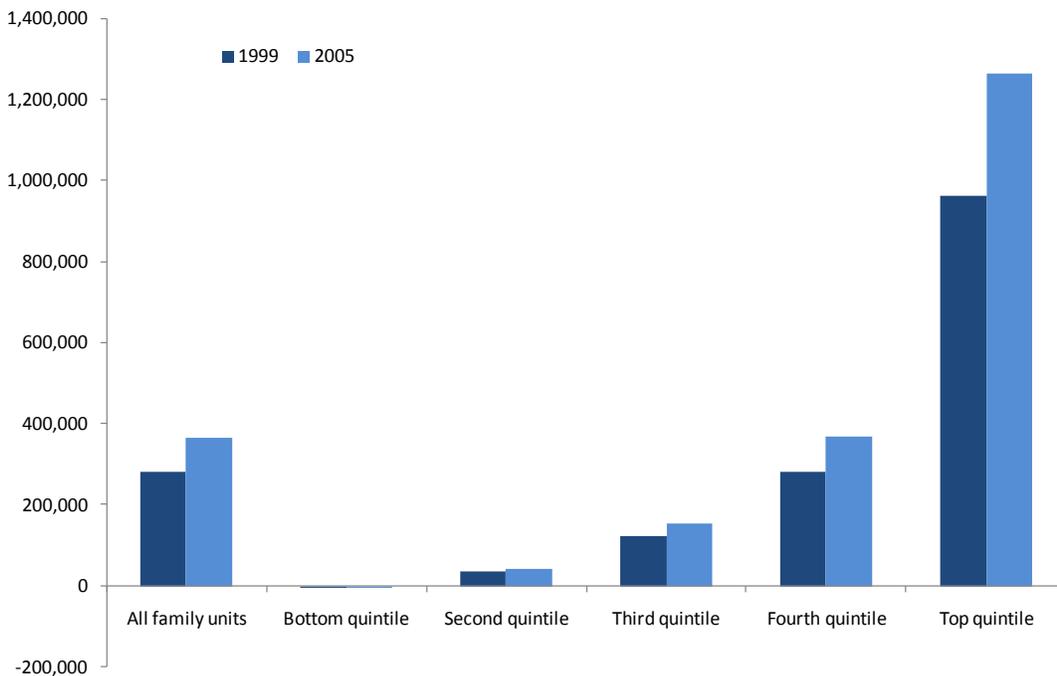


Source : Table 19b

2) Distribution of Average Net Worth

Average wealth by quintile shows that wealth is distributed even more unequally than is indicated by the quintile medians. The average net worth for all families was \$364,300 in 2005 (using 2005 dollars), up 29.6 per cent from \$281,000 in 1999 (Chart 21). The lowest quintile actually had a negative net worth, the average net debt was \$2,400. Each subsequent quintile saw greater growth than the last in both nominal and per cent terms. Growth was heavily skewed to the top quintiles and only the top two quintiles saw net worth growth above the national rate. The top quintile had the highest growth, having grown 31.2 per cent from \$963,300 in 1999 to \$1,264,200 in 2005. The top quintile was responsible for over 72 per cent of total net worth growth over the 1999-2005 period whereas the bottom quintile's net worth growth was equivalent to -0.2 per cent of net worth growth (roughly in line with their share of total wealth, 69 per cent and -0.1 per cent respectively)(Chart 22a). The top decile obtained 55 per cent of all new wealth created between 1999 and 2005, and was holding over half of the total net worth (50.9 per cent) of all wealth in 2005 (Table 19D).

Chart 21: Comparison of Quintile Average Net Worth in 1999 and 2005 (\$2005), All Family Units



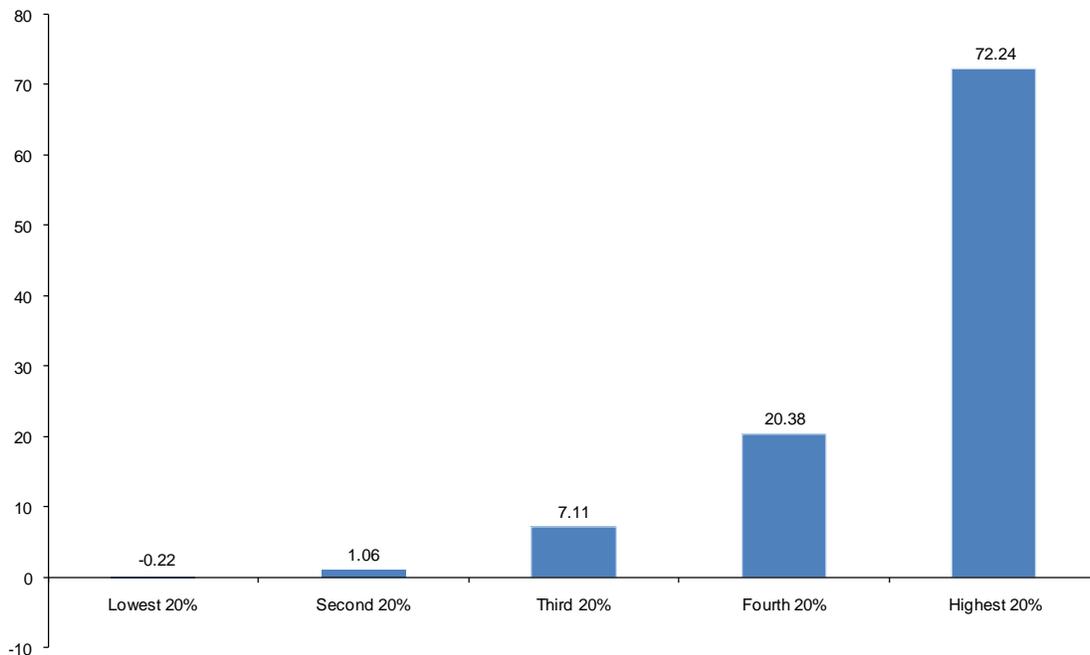
Source :Table 19I

As was noted earlier, to monitor the trends in net worth before 1999, some adjustments need to be made to the 1999 data. These adjustments have been made by Statistics Canada to provide comparable data between the two surveys.⁵³ They allow us to compare the change in the net worth of Canadians between 1984 and 1999.

⁵³ In 1984, net worth excluded the contents of the home, collectibles and valuables and annuities and registered retirement income funds. The 1999 SFS adjusted estimates differ considerably from non-adjusted data. For example, median net worth for all family units goes from \$109,200 to \$64,600, both expressed in constant 1999 dollars.

Using the earlier definition of wealth, between 1970 and 1977 the unequal distribution of newly created wealth was, in relative terms, to the disadvantage of the top decile, with their share of total wealth decreasing from 53.3 per cent to 50.7 per cent over the period. This trend was reversed between 1977 and 1984, and the concentration of wealth at the top decile intensified significantly between 1984 and 1999. In fact, between 1970 and 1999, 75.0 per cent of the wealth increase went to the top 20 per cent, with the top 10 per cent reaping 57.8 per cent of new wealth. By comparison, the average wealth of the bottom 20 per cent decreased by almost \$2,000 over the period (\$1999) and was still in negative territory in 1999 at \$-5,144. The bottom half only gained 4.2 per cent of the wealth created between 1970 and 1999, amounting to an average increase of \$7,750 per family unit. Conversely, the top half increased its average wealth by \$178,458. As was noted earlier, these same trends were observed between 1999 and 2005.

Chart 22a: Share of Total Net Worth Growth for All Quintiles, 1999-2005



Source : Table 19I

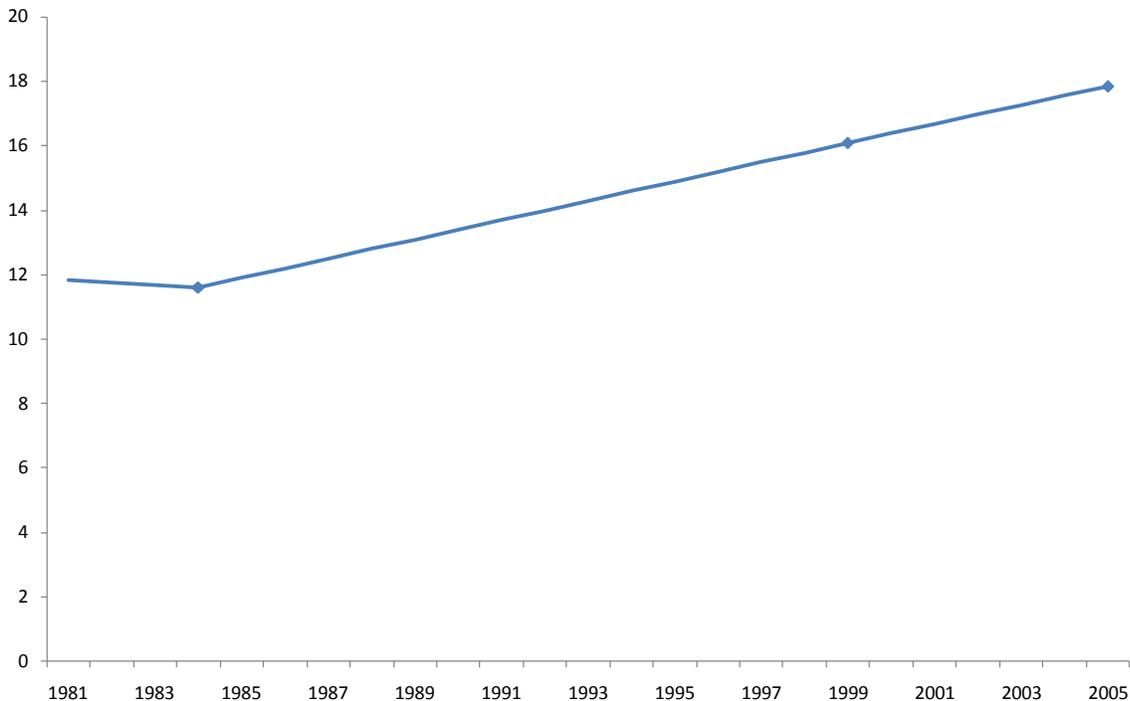
The skewed distribution of new wealth amplified existing inequalities in the wealth distribution in Canada. Between 1984 and 1999, the richest 10 per cent increased its share of wealth by 3.9 percentage points, from 51.8 per cent to 55.7 per cent (Table 19C). All other deciles saw a fall in their shares of wealth over the same period.

If we focus on an even smaller portion of the distribution, wealth appears to be even more concentrated than the previous analysis suggested, with 29.0 per cent of all wealth in the hand of the top 2.5 per cent of households in 1999 (Table 19E). Average wealth among the top 2.5 per cent was \$2,278,863, a number hard to grasp for the average Canadian. The increasing concentration of wealth and income in the hands of a fairly small portion of individuals seems to be taking place elsewhere as well, notably in the United States and the U.K. (Saez, 2004).

3) A Summary Measure of Wealth Distribution

In order to obtain a summary measure of wealth distribution, it is useful to focus on the ratio of wealth of the top half to the bottom half. Such a measure avoids focusing on a very narrow portion of the wealth distribution, which may be significantly affected by age. We derive a time series for these measures by using the 1999 and 2005 surveys as benchmarks, and then extending these estimates backwards using the estimated change in the measure from estimates using the earlier definitions for the 1977, 1984 and 1999 surveys. Data are interpolated for years between surveys (Table 19D and Table 62). Using these data, Chart 22b shows that wealth inequalities in Canada have unambiguously increased between 1981 and 2005. The ratio of the wealth held by the top half to the bottom half is estimated to have increased from 11.8 in 1981 to 17.8 in 2005.

Chart 22b: Average Wealth Distribution: Ratio of Top Half to Bottom Half of Wealth, 1981-2005



Source : Table 62: Data for 1999 and 2005 from SFS. Data for 1977 and 1884 obtained using rates of change from 77-99 and 84- 99. All other data imputed

IV. Income Volatility

Higher income volatility is a phenomenon that leads to heightened household economic risk. The *Los Angeles Times* published a series of articles in 2004 discussing the growth of economic risk for American families. In an article entitled “If America Is Richer, Why Are Its Families So Much Less Secure?” journalist Peter G. Gosselin discusses the broad reasons behind ever-larger swings in household incomes in the United States:

“...over the last 25 years, economic risk has been steadily shifted from the broad shoulders of business and government to the backs of working families...”

Economists started to look seriously into short-term income volatility with an article by Moffit and Gottschalk in 1994 entitled “The Growth of Earnings Instability in the U.S. Labor Market”. Using data from the Panel Study on Income Dynamics,⁵⁴ Moffit and Gottschalk differentiate between permanent and transitory earnings to ascertain if volatility in the latter has increased or decreased since the 1970s. To calculate volatility, they used the variance of transitory earnings. They not only found that fluctuations in transitory earnings have increased, but also that they were both large and widespread and that the effects were more pronounced with low-wage workers.

Increased income volatility not only contributes to financial insecurity. The impact on families can be disastrous. While the U.S. labour market definitely experienced a substantial increase in wage volatility, one can question whether this trend was also observed in Canada. In this section, we briefly review selected literature on the subject of earnings instability. We then discuss trends in bankruptcies in Canada.

A. Earnings instability

To produce an indicator of income volatility, panel data which track the same person over a number of years are essential. Income volatility needs to be calculated at an individual level, not at an aggregate level. In order to do this, one needs micro-data from the SLID. As SLID data only began in 1996 and follows people for a maximum of 6 years, it is difficult to create a long-term income indicator from this source.

An alternative to SLID is tax data. In a recent study using this data source Morissette and Ostrovsky (2006) examined earnings instability in Canada for different family types over the 1984-2004. Earnings instability was measured as the short-term (annual), up-and-down movements of an individual’s or family’s earnings around a longer-term moving average of six years. They found no strong evidence of a widespread increase in earning instability in the past two decades. Lone mothers in the bottom third of the earning distribution were found to have the highest earnings instability. Government transfer payments were found to play a particularly important role in reducing income instability. The report concluded that long-term earnings instability is concentrated among those with low earnings, hindering their financial security and social inclusion.

This finding was somewhat contradicted by another study focusing on the changes in earnings instability between the 1982-189 and 1990-1997 periods. Using tax data and the methodology of Moffit and Gottschalk (1994), Beach, Finnie and Gray (2006:8) find that there was an “increase in overall earnings variability between 1982–1989 and 1990–1997, largely confined to men. This increase was driven by widening long-run earnings inequality. Increased instability of workers’ earnings played a secondary role in the overall increase in men’s earnings variability.” This finding fits well with earlier data which suggested that unattached males were the only group experiencing an increase in the incidence of low-income.

⁵⁴ The Panel Study on Income Dynamics, or PSID, began interviewing in 1968 and has a sample of approximately 5,000 families. For more information, see <http://psidonline.isr.umich.edu> .

B. Personal bankruptcies

An interesting indicator of income volatility may be the number of consumer bankruptcies per capita. Since bankruptcies often are the outcome of a sudden and unpredicted loss of income, they could be a symptom of income volatility. Estimates for Canada and the provinces are provided to Statistics Canada by the Office of the Superintendent of Bankruptcy and are available for the 1976-2008 period. In discussing the effect of economic downturns on bankruptcy, it is also important to point out the other factors that play a role in the evolution of bankruptcies in Canada. Bankruptcy laws and changes in the perception and the stigma attached to bankruptcies can also affect the number of bankruptcies over time. Therefore, a change in the number of consumer bankruptcies per capita cannot necessarily be interpreted as a rise in income volatility. However, there is likely a relationship between the two phenomena.

The trend in consumer bankruptcies in Canada certainly points to a sharp rise in the risk shouldered by consumers (Chart 23). In 1976, consumer bankruptcies per 10,000 persons were only 4.3. In 1982, in the middle of an economic downturn, there were 12.2 consumer bankruptcies per 10,000 people, almost triple the rate observed six years earlier. However, as economic conditions improved, the rate of consumer bankruptcies fell back, reaching 7.6 in 1985. This subsequent drop confirmed that bankruptcies rose in the early 1980s mainly because of bad economic conditions.

Chart 23: Consumer Bankruptcies per 10,000 Persons, 1976-2008



Source : Table 21

Yet, the improvement would not last long. In 1986, bankruptcies started rising again, reaching 22.2 per 10,000 in 1991, more than five times the 1976 level. The level of bankruptcies receded only slightly in the following three years. Despite improving economic conditions, consumer bankruptcies started to rise again in 1995. Between 1996 and 2008, with the economy growing and the labour

market conditions steadily improving, consumer bankruptcies per capita averaged 25.7, almost six times the rate in 1976. This increase in bankruptcies cannot therefore be explained by an ailing economy. It cannot be explained by a weak labour market. In this case, rising consumer bankruptcies suggest a sharp increase in the amount of risk taken or shouldered by consumers. It points to higher income volatility. It may also reflect changes in bankruptcy law and evolving societal attitudes toward bankruptcy (e.g. less stigma). Nonetheless, this rise in bankruptcies is in line with the conclusions of Beach, Finnie and Gray (2006) pointing to increase income volatility in the 1990s than in the 1980s.

V. Economic Security

Economic security is a broad concept. It covers subjects such as employment security and opportunities, access to food and housing, and the existence of a social safety net. It is assumed that, in general, people are risk averse. They prefer to have a stable income, rather than an unstable income. They prefer to know the future rate of inflation in order to plan their retirement. There is a social cost to labour flexibility. Advocating a more flexible labour market, if it involves introducing more instability and uncertainty into individuals' lives, might reduce wellbeing.

Are Canadians given the opportunity to participate in the economic life of the country? To answer this question, we will first discuss the central issue of labour market security. We will look at the employment, participation and unemployment rates. Then we will discuss the incidence and duration of unemployment and alternative ways to measure involuntary aspects of work and the under-utilization of the workforce using broader indicators of unemployment. Then, we will address long-term unemployment, job quality, job anxiety and the incidence of low wages.

Next, we will look at housing security using the Royal Bank of Canada Housing Affordability Index and at census data on the adequacy, affordability and suitability of housing published by the Canada Mortgage and Housing Corporation (CMHC).

We will then talk about the availability and the relevance of food insecurity indicators to track living standards security. We will discuss the findings of a recent survey, namely the Canadian Community Health Survey (CCHS).

The subject of income and job security will be discussed using subjective answers given to questions asked for the Personal Security Index 2003 (PSI) and Ipsos Reid.

Finally, we will examine trends in the coverage provided by the social safety net in Canada. We will discuss trends in minimum wages, social assistance benefits, employment insurance, and child benefits, as well as provide a brief discussion of the CSLS aggregate economic security index and its components. The last section will discuss how minority groups, particularly immigrants and Aboriginal Canadians, have fared in recent years.

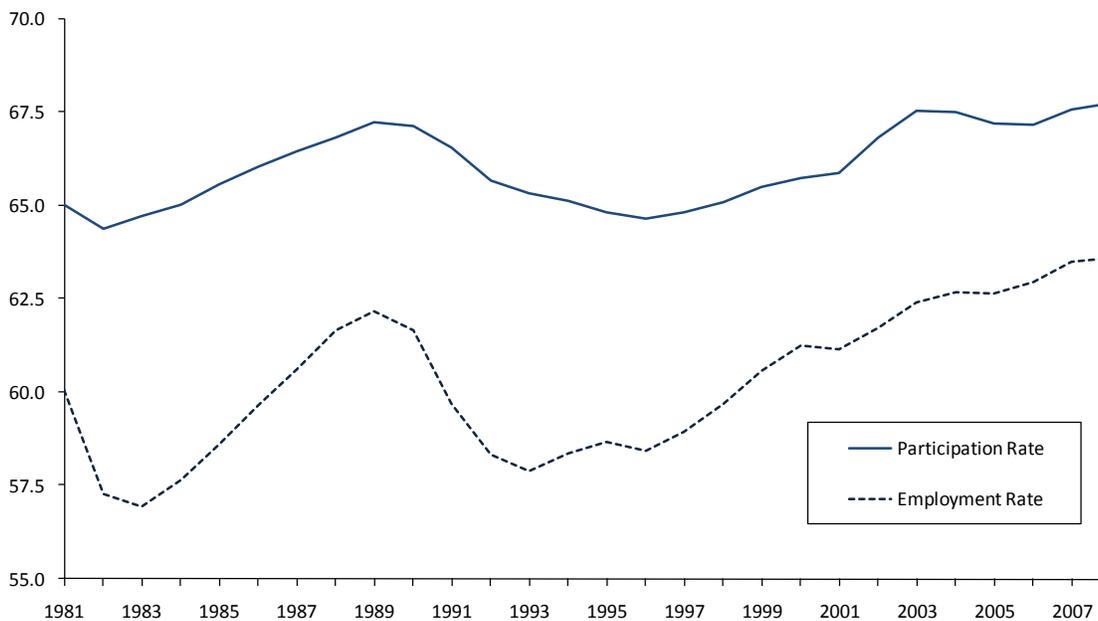
A. Labour Market Security⁵⁵

“A man without a job is a dead man”. Many have heard this sentence, and many more have felt the sting of unemployment. The impact of unemployment on an individual’s life is often drastic and rarely beneficial. Giving people ample opportunities to work certainly has a favourable impact on wellbeing. Fully utilizing all potential labour not only leads to superior economic output, but also to rising living standards and, to a certain degree, the prevention of social exclusion.

1) Employment Rate and Participation Rate

Over the 1981-2008 period, both the participation rate and the employment rate increased slightly. The participation rate represents the proportion of people searching for work or working as a percentage of the working age population, defined as persons 15 and over. In Canada, the steady rise in the participation rate amongst women pushed the overall participation rate up 2.8 percentage points, from 65.0 per cent in 1981 to 67.8 per cent in 2008. The employment rate, i.e. the number of persons employed as a proportion of the population of working age, followed similar trends. From 60.1 per cent in 1981, it increased 3.5 percentage points reaching 63.6 per cent in 2008. Overall, both the participation and the employment rate moved cyclically, falling in the recessions of the early 1980s and 1990s, and increasing in the ensuing recoveries and expansions (Chart 24).

Chart 24: Participation Rate and Employment Rate, 1981-2008, in Per Cent



Source : Table 37

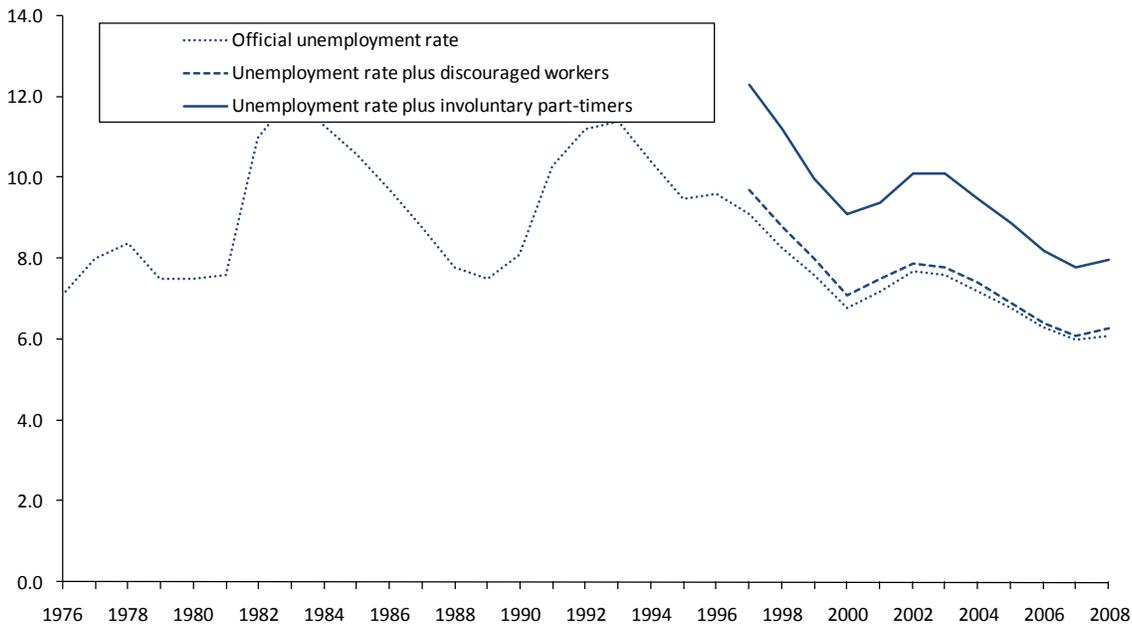
⁵⁵ For a comprehensive discussion of labour market trends over the 1976-2007 period, see Statistics Canada (2008).

2) Unemployment rate

The official unemployment rate is one of the most cited indicators of economic conditions. Official measures are available on a consistent basis for the 1976-2008 period for both Canada and the provinces. These estimates are based on the Labour Force Survey (LFS), which provides employment and unemployment estimates on a monthly basis and with a lag of eight to thirteen days for the reference month.

Unemployment is generally considered a lagging indicator, as opposed to a leading indicator, because it is generally the result of a slowdown in the economy, not the cause. During a recession, employment falls as businesses reduce production and layoff workers. In Canada, the official unemployment rate has closely followed the business cycle (Chart 25). In the five years before the 1981-82 recession, the unemployment rate averaged 7.7 per cent. During the recession of 1981-82, the labour market built up considerable slack, with the unemployment rate reaching a peak of 12.0 per cent in 1983. The economic recovery slowly opened new employment opportunities, integrating more and more workers into the workplace. In 1989, the unemployment rate was back where it was before the recession, at 7.5 per cent. Then, Canada suffered one of its most long-lasting recessions, triggered by the Bank of Canada's fight against inflation. The unemployment rate rose to a peak of 11.4 per cent in 1993. Both the employment and participation rate fell. The labour market conditions started to improve in 1994, with the unemployment rate falling steadily, down to 6.8 per cent in 2000. Between 2001 and 2006, the unemployment rate averaged 7.1 per cent, but by 2007 it had fallen to 6.0 per cent, the lowest rate recorded over the entire 1976-2008 period. In 2008 the rate of unemployment increased slightly to 6.1 per cent.

Chart 25: Official and Supplementary Measures of Unemployment Rate, 1981-2008



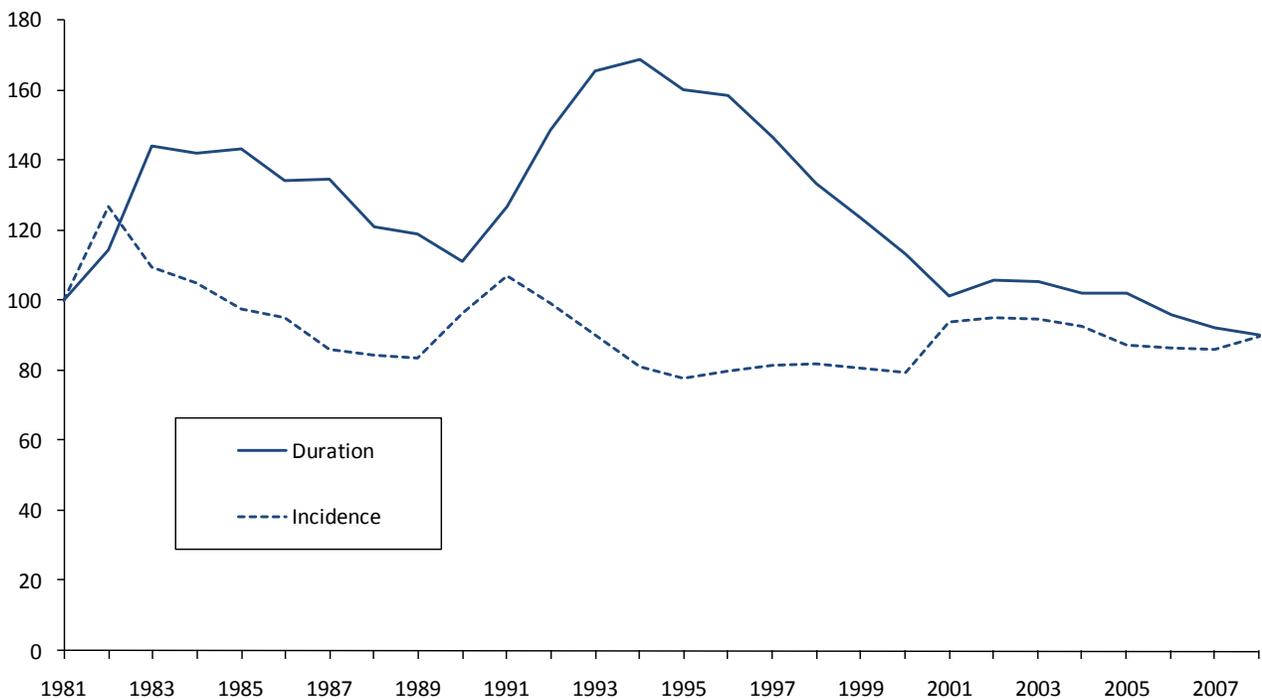
Source : Table 22A and Table 22B

Before the current economic crisis hit the Canadian economy in the latter part of 2008, compared to the situation in the first half of the 1980s and 1990s, the Canadian labour market offered much greater employment opportunities, as illustrated by frequent employer complaints of labour shortages, particularly in Western Canada. But, even then, unemployment remained high in certain regions, with Newfoundland and Labrador and Prince Edward Island both having unemployment rates above 10 per cent in 2008.

3) Incidence and Duration of Unemployment

The incidence of unemployment is the average number of persons experiencing a bout of unemployment in a given year over the number in the labour force. In Canada, the incidence of unemployment decreased 2.7 percentage points, or 10 per cent, between 1981 and 2008, from 26.0 per cent to 23.3 per cent. Within the 1981-2008 period, the incidence of unemployment was cyclical, but the swings were not particularly large, and the incidence generally remained between 20 and 25 per cent of the labour force, meaning that between one in four or one in five individual experienced a bout of unemployment in any given year (Chart 26).

Chart 26: Index of Unemployment Duration and Unemployment Incidence (1981=100), 1981-2008



Source : Table 25

The average duration of unemployment was 13.7 weeks in 2008, two and half weeks lower than the average duration experienced in 1981 (15.2 weeks), a roughly 10 per cent decline. In other words, the change in the unemployment rate between 1981 (7.1 per cent) and 2008 (6.1 per cent) was

the result of both a lower incidence and a lower duration, with each variable accounting for half the decline.

Yet, within the period, most of the fluctuations in the unemployment rate was related to changes in duration, not incidence. Indeed, while the incidence of unemployment was relatively stable within the period, this was not the case for the duration of unemployment. Within the 1981-2008 period, the average duration experienced large swings (Chart 26). For example, between 1981 and 1983, the average duration increased by 6.7 weeks, from 15.2 weeks to 21.9 weeks (Table 25). Similarly, during the economic downturn of the 1990s, the average duration increased from 16.9 weeks in 1990 to 25.2 weeks in 1993.

The relative stability of the incidence of unemployment coupled with the swings in unemployment duration within the period suggest that recessions primarily affect people who are at risk of being unemployed, such as the young, and those who were unemployed at the beginning of the recession. Those vulnerable groups, who often already experience spells of unemployment during periods of economic growth, see their unemployment spells lengthen during recessions.

4) Supplementary Measures of Unemployment

Alternative measures of unemployment provide insights into the overall under-utilization of labour. The official measure of unemployment is restricted to people who are actively looking for a job. However, this measure can be misleading, because in some areas, employment opportunities are so scarce that numerous individuals decide to stop searching for work. They are called discouraged workers, and despite their desire to work, they are not included in the unemployment rate statistics. Another form of under-utilization of labour is part-time workers who want full-time employment. Those workers, called involuntary part-time workers, are not included in the official measure of unemployment. Supplementary measures of unemployment, such as the unemployment rate plus discouraged searchers and the unemployment rate plus involuntary part-timers are only available on a consistent basis since 1997 for Canada and the provinces. Tracking those measures provides a more complete understanding of labour under-utilization.

By adding discouraged workers, we obtain a measure called unemployment rate plus discouraged searchers.⁵⁶ These estimates differ little from the official unemployment rate figures (Table 22B). For the 1997-2008 period, the difference between the two measures oscillated between 0.6 percentage points in 1997 and 0.1 percentage points in 2005, 2006 and 2007. In 2008, the difference was 0.2 percentage points. This implies that in 2007, for example, there were only about 26,000 discouraged searchers in Canada. In general, the percentage of discouraged workers increased in line with the unemployment rate. However, their addition did not change significantly the degree or the trend in labour under-utilization. Moreover, they did not affect the trend of unemployment. Similarly to the official rate, the unemployment plus discouraged workers reached a trough in 2000, at 7.1 per cent, and then stabilized around 7.5 per cent in the following years until reaching a new low of 6.1 per cent in 2007 before returning to 6.3 per cent in 2008.

⁵⁶ Discouraged searchers are people who wanted and were available to take work in the reference period but who did not look for a job because they believed none were available. The unemployment rate plus discouraged searchers is calculated by adding discouraged searchers to the nominator and the denominator of the unemployment rate formula.

The unemployment rate plus involuntary part-time workers (but excluding discouraged workers) is a more complicated measure.⁵⁷ However, it is an essential measure of under-utilization of the labour force. It represents the potential workforce which is not employed as fully as it wants to be. The difference between the official unemployment rate and the measure including involuntary part-time workers is significant. It ranged from 3.2 percentage points in 1997 to 1.8 percentage points in 2007 (1.9 percentage points in 2008) (Table 22B). As with discouraged workers, the percentage of involuntary part-time workers (in full-time equivalent) is smaller in a tight labour market and grows in line with the unemployment rate. The measure shows that the effect of a downturn is not only to create unemployment, but also to create underemployment, i.e. situations where people cannot work the number of hours they desire.

The two alternative measures of unemployment gauge the slack in the labour market. They both show a vibrant labour market in the years following the turn of the millennium. Canadians' employment opportunities improved significantly to 2007. However, by using broader measures of unemployment, we realize that the Canadian labour market still under-utilizes almost 8 per cent of its labour. This still has to be a concern. Work is not only a source of income: it can also be a source of pride and stability for individuals and families.

5) Long-Term Unemployment

Long-term unemployment is very different than short-term unemployment, both in term of its causes and its consequences for individuals and society. Long-term unemployment can result in social exclusion for the most vulnerable and tends to increase inequalities in income. Moreover, it increases significantly the burden on the social assistance system and may contribute to unemployment hysteresis, i.e. the unemployed suffer loss of skills as their unemployment spell lengthens gradually becoming chronically unemployed. The negative relationship between the duration of unemployment and the probability of returning to work is well known.

The incidence of long-term unemployment is generally defined as the number of persons unemployed for 52 weeks or more over the number of persons unemployed. In Canada, the incidence of long-term unemployment was 18 per cent higher in 2008 than it was in 1981 (Chart 27 and Table 25A). However, it is still three to six times lower than in some European countries.⁵⁸

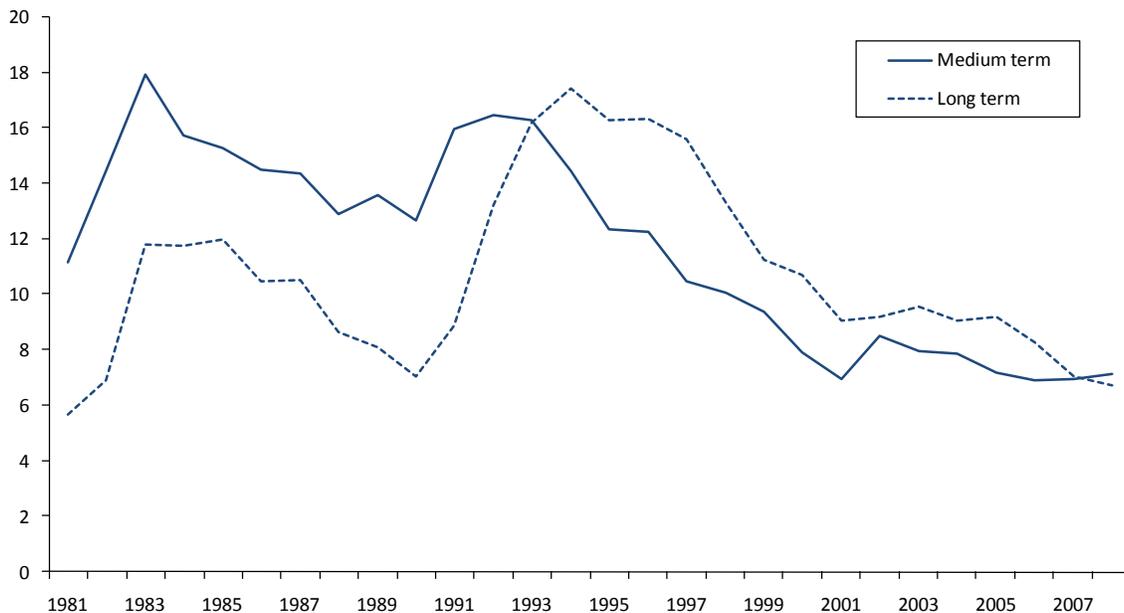
In 1981, the incidence of long-term unemployment was 5.7 per cent (53,000 persons). After the 1981 recession, this proportion jumped, reaching 11.8 per cent in 1983. During the recovery and expansion, long-term unemployment edged down, but never returned to its pre-recession level. In 1990, it was still at 7.1 per cent. The recession of the 1990s pushed the incidence of long-term unemployment to levels never seen before in Canada. In 1994, 17.4 per cent of the unemployed were in that situation for a year or more. This high incidence of long-term unemployment might have made some people chronically unemployed, either because of a loss of skills over time or because they

⁵⁷ Involuntary part-time workers are people who work part-time but would prefer to work full-time hours. They are calculated as full-time equivalent. In other words, if a part-time worker is only working half the average number of hours of full-time workers at his main job, only 0.5 unemployed are added to the nominator and the denominator.

⁵⁸ According to OECD (2004) statistics, Canada's incidence of long-term unemployment was 9.7 per cent in 2002, compared to 8.5 per cent in the United States, 23.1 per cent in the United Kingdom, 33.8 in France, 47.9 in Germany, 59.2 in Italy and 30.8 in Japan.

became discouraged. The recovery in the late 1990s had a positive effect on long-term unemployment, but, again, the incidence of long-term unemployment never returned to its pre-recession level. The incidence of long-term unemployment did not fall below 9.0 per cent between 1992 and 2005, but in 2006 the rate dropped to 8.3 per cent and dropped further, to 7.1 per cent in 2007 and 6.7 per cent in 2008. The reductions in the incidence of long-term unemployment have brought the rate down to levels not seen since the early 1980s, with only 1981 having lower incidence over the entire 1981-2008 period. While the high levels of long-term unemployment of the 1990s may have scarred an entire generation, the return to lower levels of long-term unemployment is encouraging.

Chart 27: Medium (26-51 weeks) and Long Term (52 weeks and over) Unemployment as a Proportion of Unemployment, 1981-2008, in Per Cent



Source : Table 25

This suggests that recessions have a lasting effect on long-term unemployment as the incidence of long-term unemployment remains high well after the end of recessions. The deflationary policy of the central bank in the early 1990s may have had long-term consequences for some workers, making them chronically unemployed. Structural changes in the labour market such as the aging labour force (older workers have, on average, much longer spells of unemployment than younger workers) could also contribute to this problem. Nonetheless, since long-term unemployment tends to touch the most vulnerable of society, the impact on wellbeing needs to be taken into account.

6) Job Quality

Labour market analysts welcome lower unemployment statistics as lower unemployment contribute to economic security. However, the unemployment rate is not the only labour market indicator that affects economic security. The characteristics and stability of jobs are also important. Job quality indicators include the flexibility of schedules, work-life balance, pay and benefits, the

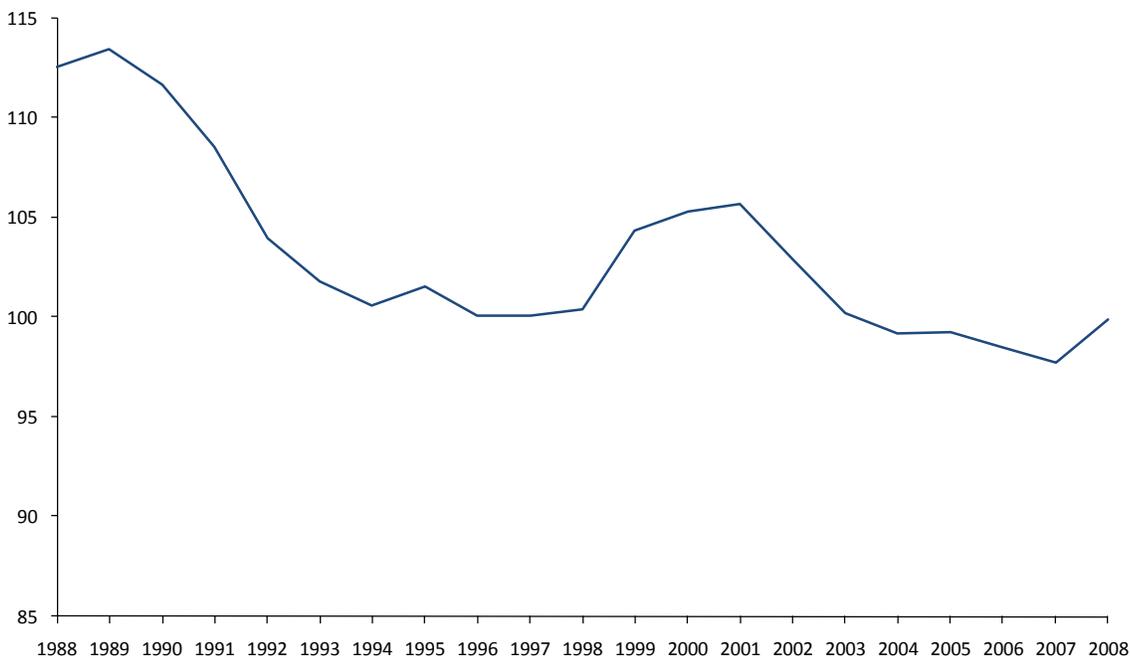
amount of training available and the quality of the work environment. However, many of those indicators are hard to track and data are not easily gathered.⁵⁹

One indicator of job quality is the Canadian Employment Quality Index (EQI) produced by CIBC. It focuses on three quality measures: the part-time/full-time distribution, the relative compensation of a given job and its relative stability. All three indicators are objective measures and use sectoral employment to define relative compensation and stability. For example, full-time jobs in the public sector are considered to have high compensation and high stability. Therefore, a higher share of public sector jobs would raise the EQI. Even if employment rises, if the increase is due completely to the creation of low stability and low compensation part-time jobs, the EQI will fall. The EQI was released monthly from 1988 to 1994 and has been released quarterly since 1994 at the national level.

Job quality is important because it helps to better understand the trends behind the employment numbers. For example, if employment rises and job quality falls, one could suppose that even though employment numbers are good, they might not translate into higher income because of falling job quality.

Since 1988 the CIBC EQI has been on a more or less steady downward course, falling 11.3 per cent by 2008 (Chart 28). This suggests that job quality, or at least this definition of job quality, has fallen significantly.

Chart 28: CIBC Employment Quality Index (January 1994=100), 1988-2008



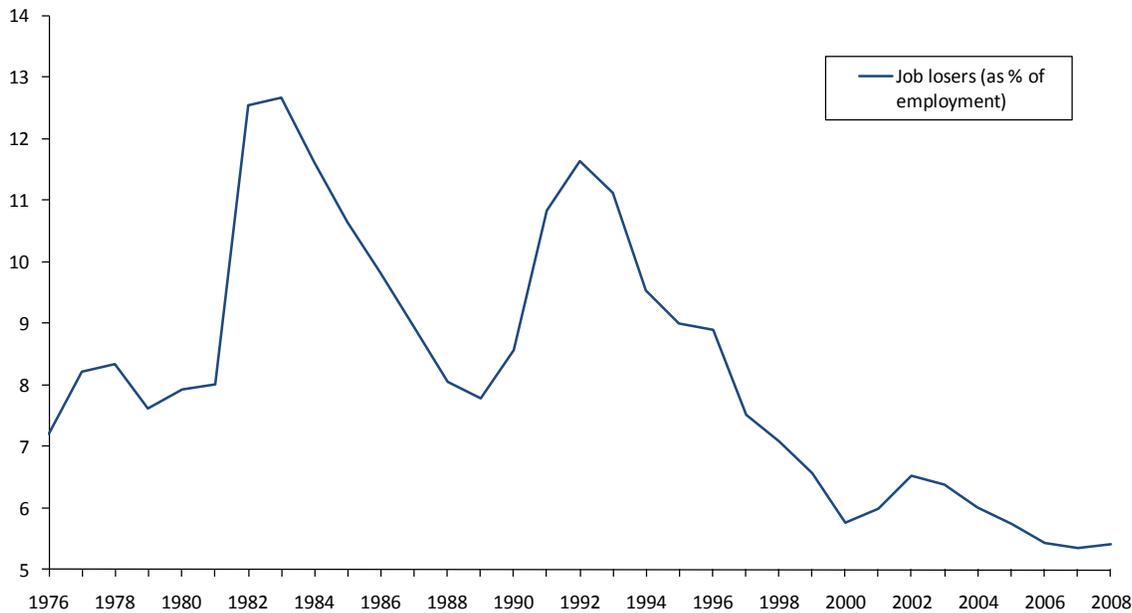
Source : Table 40

⁵⁹ See www.jobquality.ca for a comprehensive review of job quality indicators for Canada.

7) Job Stability

If a person leaves a job for voluntary reasons, it is not a negative development, so any measure of job stability based on overall employment trends can be misleading. Thus, to monitor trends in job stability it is more appropriate to track persons who suffer an involuntary job loss, that is job losers. To examine trends in job stability, we have used Statistics Canada data on job losers, more particularly data on individuals who were laid-off (Table 39).⁶⁰ We find that if we account for both permanent and temporary job losers, the proportion of job losers in employment fell 2.6 percentage points between 1981 and 2008. In 2008, only 5.4 per cent of employed people were laid-off, among the lowest levels (5.3 per cent in 2007) ever recorded in the history of the current version of the LFS, which runs from 1976 to 2008 (Chart 29). Of course, the proportion of job losers was cyclical, and in 2008 stood at less than half the level observed during or shortly after recessionary periods in 1982 (12.6 per cent), 1983 (12.7 per cent) and 1992 (11.7 per cent). Nonetheless, there seems to be a long-term downward trend in the proportion of job losers in Canada. As the likelihood of job loss decreases, one can expect job anxiety to follow.

Chart 29: Job Losers as a Proportion of Employment, 1981-2008
percent



Source : Table 39

8) Job Anxiety

Job anxiety can be devastating for an individual and his or her family. It can lead to stress, health problems and poorer productivity. While subjective indicators are generally considered less reliable or less precise than objective indicators, for the purpose of measuring wellbeing they often go

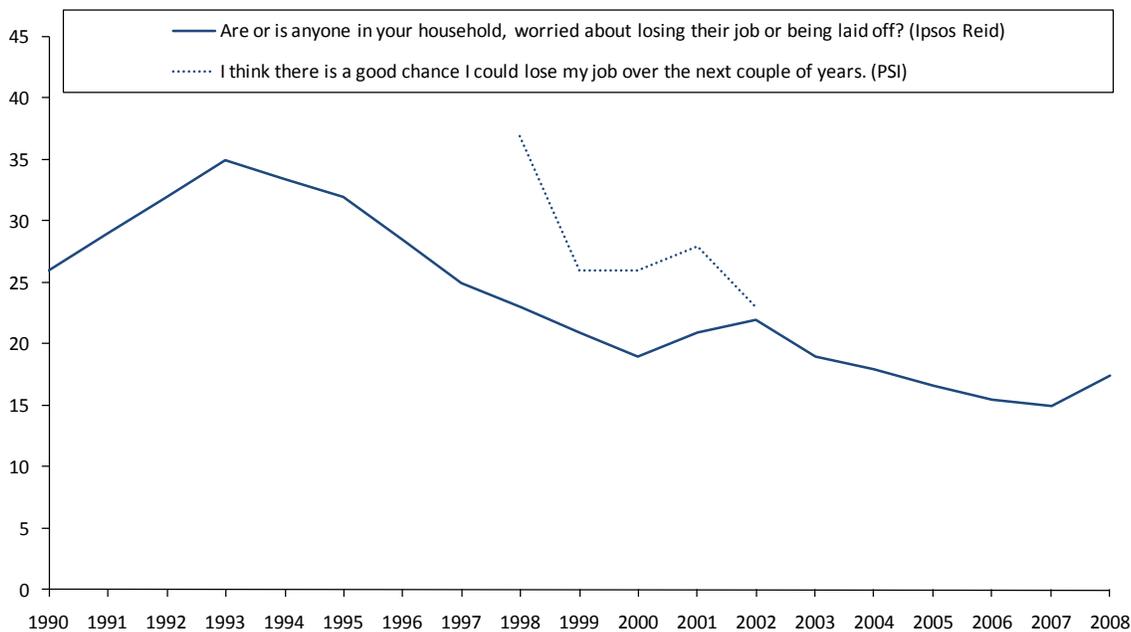
⁶⁰ A job loser in a given month is defined as someone who is currently not working because they were laid-off, either temporarily or permanently, in the last 12 months.

directly to the core of the question: “How do you feel about ...?” In the quarterly Ipsos Reid survey discussed earlier in the context of individuals’ general economic outlook, one question relates to job anxiety:

- *Are or is anyone in your household, worried about losing their job or being laid off?*

The results have been relatively constant in the last few years and closely followed trends in the proportion of job losers. Since 1999, the proportion of Canadians that are worried that they or someone in their household will lose their job has stabilized around 20 per cent, and has remained below that level since 2003 (Chart 30a). However, between 1990 and 1997, the story was quite different. In 1990, the proportion of Canadians anxious about their job was at 26 per cent. This proportion reached a peak in 1993, at 35 per cent. This means that a third of Canadians believed they or someone in their household was at risk of losing their job. In the following years, the proportion slowly edged back, to 32 per cent in 1995 and 25 per cent in 1997. However, even after the growth of the late 1990s, the proportion of job anxiety barely fell below 20 per cent. In 2000, the peak of the economic cycle, 19 per cent of Canadians were worried about losing their job. This is probably caused by uncertainties associated with the business and the product market conditions or to individual preferences, which means that about a fifth of Canadians to experience job anxiety on a relatively permanent basis.

Chart 30a: Is There Anyone in Your Household Worried about Losing Their Job or Being Laid Off?
1990-2008, per cent



No data for 1991, 1992, 1994, 1996 and 1998 from Ipsos Reid. Data interpolated for these years.

Source : Table 28C and Table 41 Data for PSI covers the 1998-2002 period

The Canadian Council on Social Development has developed the Personal Security Index which includes both objective and subjective indicators. It was first published in 1998 and released on a yearly basis, but has been discontinued in 2003 (Tsoukalas and Mackenzie, 2004). Detailed data are

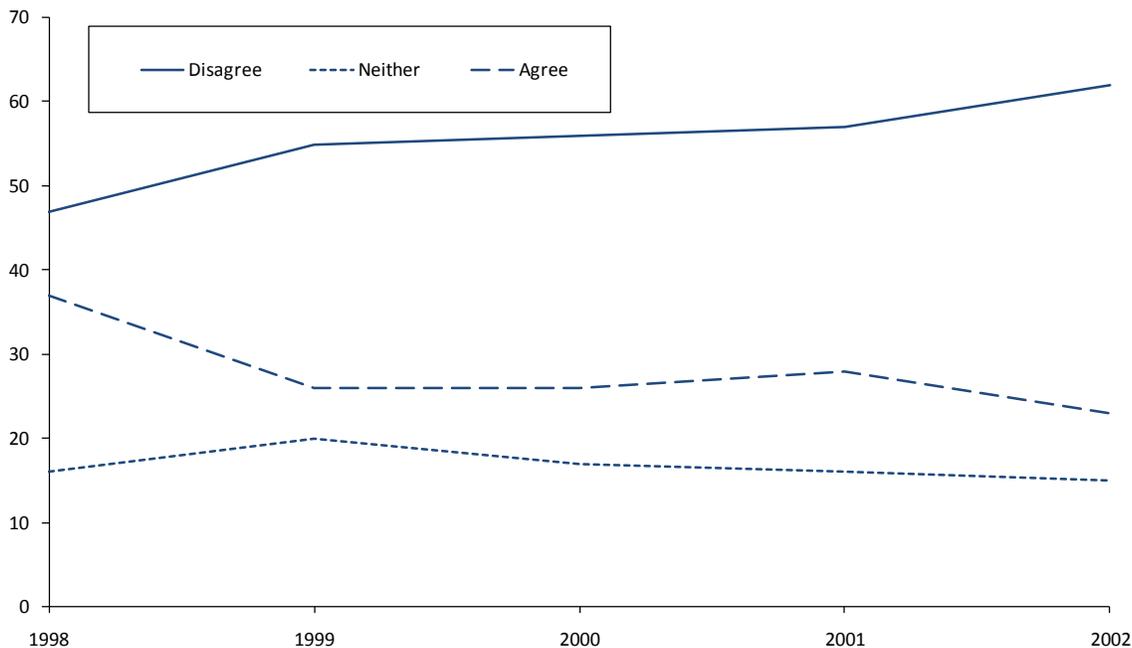
released for Canada, but data for provinces are not publicly available. For the purpose of this report, we will strictly look at the subjective part of the PSI at the national level. The PSI includes one question relating to job anxiety is:

- *I think there is a good chance I could lose my job over the next couple of years.*

The perception indicator concerning the job market is broadly consistent with the available objective data. Between 1998 and 2002, the unemployment rate fell from 8.3 per cent to 7.7 per cent. Moreover, 1998 was preceded by numerous years of high unemployment. This translated into stronger confidence in the job market in 2002 than in 1998. The proportion of people not concerned about losing their job increased from 47 per cent in 1998 to 62 per cent in 2002 (Chart 30b). Similarly, the proportion who considered there was a good chance they would lose their job in the next couple years fell from 37 per cent in 1998 to 23 per cent in 2002. In 2002, the PSI estimate (23 per cent) was almost identical to the Ipsos Reid estimate (22 per cent).

Chart 30b: Fear of Job Loss as Reported by the Personal Security Indicator, 1998-2002

per cent

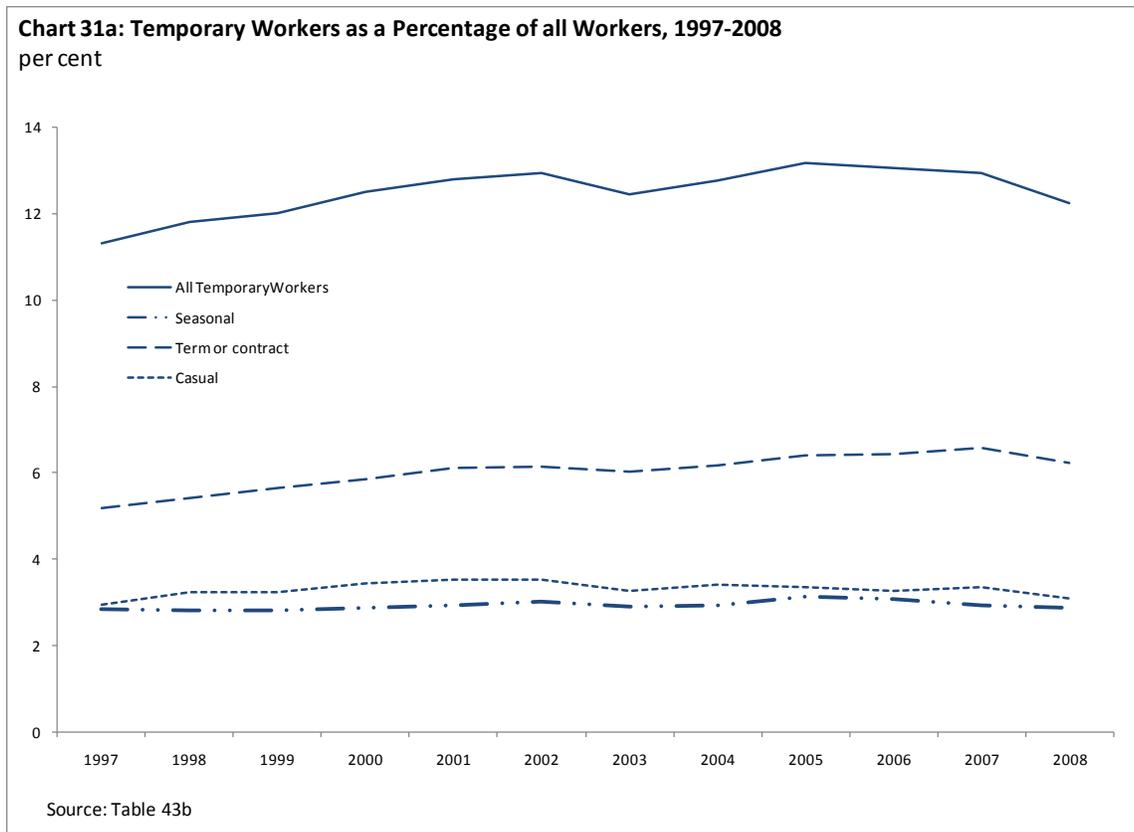


Source : Table 41

9) Temporary Jobs

Temporary jobs do not provide job security and are generally associated with poor working conditions. Thus, an increasing proportion of temporary jobs are usually a negative development for worker wellbeing. Trends in the proportion of employees in temporary jobs between 1989 and 2004 show a definite increase. Data on temporary workers is available from the Labour Force Survey (LFS) for the 1997-2008 period and from the General Social Survey (GSS) in 1989, 1994, 1998 and 2004. While the former provides a consistent time series for the 1997-2008 period, the latter provides data disaggregated by the length of time workers have been in the labour force.

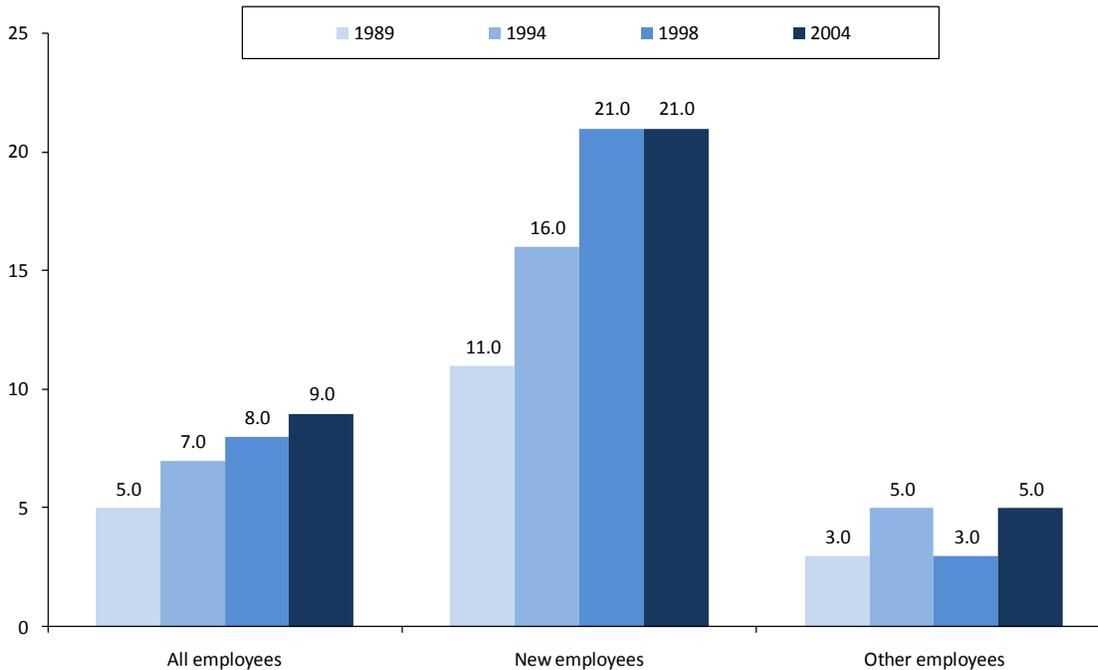
Data from the LFS suggest that the proportion of employees in temporary positions increased slightly between 1997 and 2008 (Chart 31a and Table 43b).⁶¹ In 2008, 12.2 per cent of employees were in temporary jobs, up from 11.3 per cent in 1997. Almost all the increase was in term or contract jobs, which went from 5.2 per cent in 1997 to 6.2 per cent in 2008. The proportion of employees in casual jobs (3.1 per cent in 2008), seasonal jobs (2.9 per cent in 2008) and other types of temporary jobs (0.1 per cent in 2008) remained roughly unchanged over the period.



Data from the GSS shows a much lower rate of temporary workers, but the overall trend remains similar. In 1989, the percentage of employees in temporary jobs was 5 per cent. It increased to 7 per cent in 1994 and then leveled off at 9 per cent in 1998 and 2004 (Chart 31b and Table 43). Of course, new employees, i.e. employees with two years of seniority or less, were more likely to have a temporary job. In 2004, 22 per cent of new employees were holding a temporary job compared to only 5 per cent of other employees. Moreover, while the incidence of temporary jobs between 1989 and 2004 increased 10 percentage points among new employees, it only increased 2 per cent for other employees.

⁶¹ A temporary job has a predetermined end date, or will end as soon as a specified project is completed. It includes seasonal jobs; temporary, term or contract jobs including work done through a temporary help agency; casual jobs; and other temporary work.

Chart 31b: Percentage of Employees in Temporary Jobs, 1989, 1994, 1998 and 2004
per cent



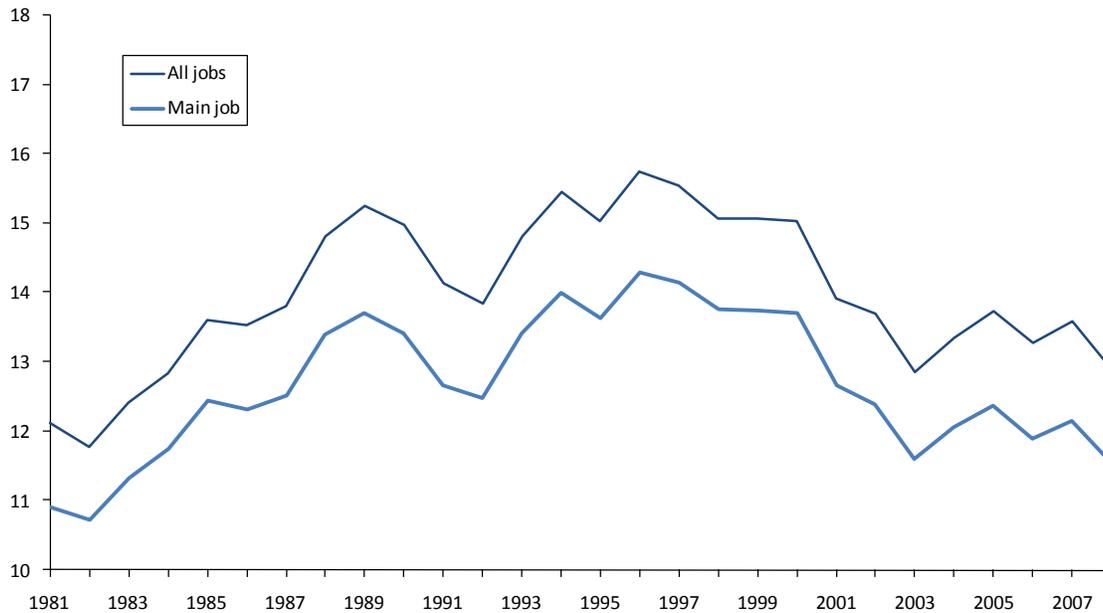
Source : Table 43

This increased reliance on temporary jobs definitely has negative effects on worker job security and anxiety, and thus on their wellbeing. The upward trend is noticeable among all groups, such as full-time jobs, unionized and non-unionized, men, women, university graduates and non-university graduates. Morissette and Johnson (2005) suggest that this phenomenon might be the result of increased international competition. Moreover, since firms seem to be adjusting at the margin (new employees), this trend might continue in the near future.

10) Persons Working 50 Hours or Over

One could argue that longer hours of work in North America compared to Europe are not only the result of workers' choices, but are also influenced by social conventions and policies (lower marginal tax rate for example). To examine trends in this phenomenon, we will look at trends in the percentage of workers working 50 hours or more per week.

Using estimates for all jobs over the 1981-2008 period, the percentage of workers working 50 hours or more increased 0.8 percentage points, from 12.1 per cent in 1981 to 12.9 per cent in 2008 (Table 44A and Chart 31c). The biggest increase was for workers aged 55 to 64, from 10.5 per cent in 1981 to 11.8 per cent in 2008, or a 1.4-percentage-point change. The youngest age group (15-24 years old) reported a decrease in the percentage of workers working 50 hours or more. The percentage of workers from the prime-age groups, i.e. workers aged 25 to 54 years old, working 50 hours or more increased 0.1 percentage points, from 14.1 per cent in 1981 to 14.2 per cent in 2008. However, for all groups, these percentages were well down from the peak in 1996, where 15.7 per cent of workers worked 50 hours or more per week.

Chart 31c: Percentage of Employees Working 50 Hours or More per Week, Ages 15 and Over, 1981-2008

Source : Table 44D

It is interesting to know whether the proportion of workers working 50 hours or more is driven by an increased workload in their current job, or whether it is related to an increase in multiple job holders (that is moonlighting). Data on hours worked at the main job allow us to draw some conclusions. Between 1981 and 2008, the proportion of workers working 50 hours or more in their main job increased from 10.9 per cent to 11.5 per cent, accounting for more than 80 per cent of the increase in the total number of workers working 50 hours or more over the same period (Tables 44A). This result is very sensitive to the time period, as if we had used the 1980-2008 period instead, we would have concluded that half of the increase was related to multiple job holders, even though that group account for only roughly 10 per cent of workers with 50 or more hours worked per week.

Overall, the incidence of workers working 50 hours or more does not seem to have dramatically increased or decreased in the last 20 years. Despite increasing in the 1980s, the percentage of workers working 50 hours and over has not changed enough to reach a conclusion about either its positive or negative impact on labour market conditions and, consequently, workers.

11) Incidence of Low Wages

We generally assume that full-time employment is sufficient to provide decent living standards. However, in 2000, about 16.3 per cent of Canadians working full-time were in low paid jobs, i.e. earning less than \$375 per week or \$10 (\$2000) per hour for 37.5 hours per week (Table 29B).⁶² Worryingly, the incidence of low-pay jobs has not diminished since 1980. Data based on

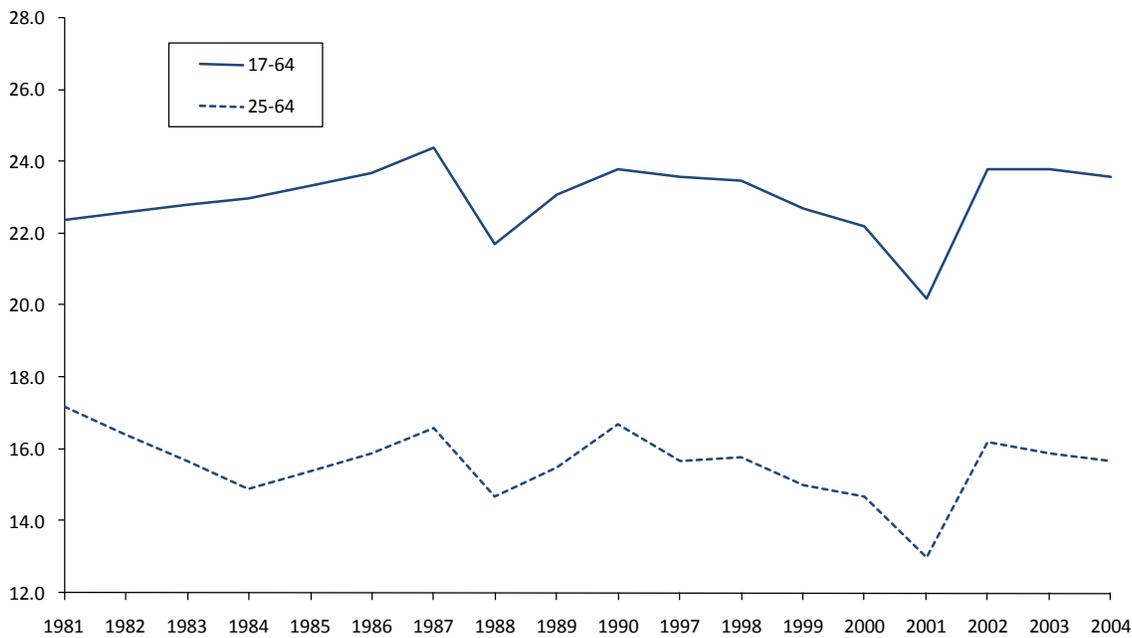
⁶² The sample consists of individuals aged 15-64, who are not full-time students, worked mainly full-time, and received a wage or salary but no income from self-employment in the year prior to the census.

censuses show that among Canadians working full-time, the proportion in low paid jobs actually increased. In 1980, the proportion was 15.4 per cent, 0.9 percentage points lower than in 2000. Yet, compared to 1990, the incidence of low-paid had retreated slightly, from 16.9 per cent to 16.3 per cent. Of course, the incidence of low-pay was greater for individuals with less education and younger workers. Those with less than a high school degree saw their incidence of low-paid jobs increase steadily, going from 21.4 per cent in 1980 to 26.3 per cent in 2000. For workers aged 15-24, the results were even more striking. While 31.2 per cent of them were in low-paid jobs in 1980, the proportion was 45.0 per cent in 2000.

This high incidence of low-paid jobs can come as a surprise since both human capital (in the form of education) and productivity increased in Canada between 1980 and 2004. Yet, these results match the absence of significant growth in real median hourly wages in Canada since 1980. This stagnation of median wages hides considerable adjustments at the margin for firms. In effect, according to Morissette and Johnson (2005), median real wages among male workers with two years of seniority or less fell 13 per cent between 1981 and 2004. Similarly, real median wages fell 2 per cent among newly hired females. In light of the large debts with which many students graduate, the high incidence of low-paid jobs among the young is particularly troubling in postponing the chance for greater economic security.

Data on the distribution of hourly wages covering the 1981-2004 period confirm that good economic conditions did not lower significantly the prevalence of low-paid jobs in Canada (Saunders (2009) and Chart 32). Still, between 1981 and 2004, the proportion of employees aged 25-64 earning under \$10.00 per hour went from 17.2 per cent in 1981 to 15.7 per cent in 2004, a slight improvement.

Chart 32: Employees Aged 17-64 and 25-64 Paid Less Than \$10 per Hour (\$2001), 1981-2004
percent



Source : Table 29A

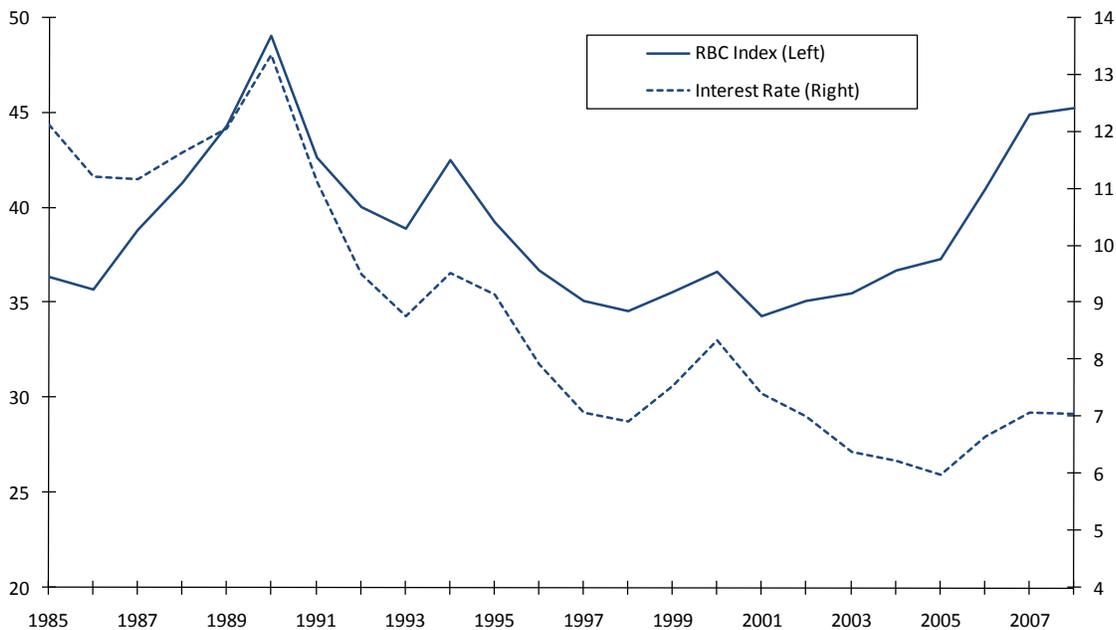
Data for 1982-1983 and 1985 was interpolated

B. Housing Security

1) RBC Housing Affordability Index

In general, we can define basic needs as shelter, food and clothing. At the same time, for many Canadians, being a homeowner is an integral part of being a member of society. Thus, housing affordability plays an important role in the wellbeing of Canadians. Not only does it provide a shelter, but home ownership is a way into becoming part of a community. The Royal Bank of Canada (RBC) Housing Affordability Index is a means to evaluate the capacity of Canadians to access this vital good. It shows the proportion of median pre-tax household income required to service the cost of mortgage payments, property taxes and utilities on a detached bungalow.⁶³ This means that a decline in the proportion represents an increase in affordability and a rise in the proportion a decrease in affordability. It is estimated on a quarterly basis for each province and for the Montreal, Toronto, Ottawa and Vancouver metropolitan areas.⁶⁴

Chart 33: RBC Housing Affordability Index and 5-year Mortgage Interest Rates (per cent), 1985-2008



Source : Table 27 and Cansim series V122521

Every year from 1996 to 2005 had an index value below the 1985-2008 average index value. However, in 2006 the RBC Housing Affordability Index increased past the average of the 1985-2005, and increased further to 2008. In 2008, the index reached 45.2 per cent, higher than the 36.3 per cent from 1985, but lower than the peak of 49.0 per cent reached in 1990. The salient characteristic of trends in housing affordability is the strong relation between interest rates and housing affordability

⁶³ It is based on a 25 per cent down payment and a 25-year mortgage loan at a five-year fixed rate.

⁶⁴ However, since the affordability index is based on pre-tax median income, it does not take into account provincial property tax credits or government programs which provide support for Canadians to buy a house.

(Chart 33). Of course, since mortgage payments depend heavily on interest rates, this relation is to be expected. However, in 1985, despite 5-year mortgage interest rates averaging 12.13 per cent, only 36.3 per cent of pre-tax median household income was used for housing purposes. This ratio shot up dramatically in the following years, reaching a peak of 49.0 per cent in 1990. This corresponded to the interest rate peak, which reached an average of 13.4 per cent during the same year. These high interest rates were mainly caused by the Bank of Canada's new resolution to fight inflation and reach a low and stable inflation target of 2 per cent. Up to 2001, housing affordability by and large followed interest rates. However, as the economy slowed down and stock markets fell, investors started to look more and more at the housing market, creating considerable house price inflation. Between 2001 and 2005, the Housing Affordability Index increased despite lower interest rates. The relationship resumed after 2005, with both interest rates and the RBC index increasing in 2006 and 2007, and then leveling off in 2008. However, with RBC affordability index at 45.2 per cent in 2008, houses are still much more affordable than at their peak during the 1990 recession.⁶⁵

2) Housing Affordability, Adequacy and Suitability – CMHC

While affordability is the most widely used indicator of housing availability, it does not take into account other factors such as the adequacy and the suitability of Canadian houses. In this case, an adequate dwelling is defined as a house which does not require any major repairs, as reported by their residents. Suitability is defined using the National Occupancy Standard requirements which identify the suitable number of bedrooms according to the number and type of residents in the household.⁶⁶ Finally, a dwelling is considered affordable if it costs less than 30 per cent of before-tax household income.⁶⁷

The comparison between the 1991, 1996, 2001, and 2006 census data for these three criteria reveals an amazing stability in the Canadian housing market (Chart 34). For example, the percentage of Canadian households meeting the adequacy criteria was 92.2 per cent in 1991, 92.1 per cent in 1996, 92.2 per cent in 2001, and 92.9 per cent in 2006. We can observe the same stability for the suitability indicator, which only varied between 93.1 per cent and 94.0 per cent for all four censuses. If we disaggregate between owners and renters, we observe the same steadiness in the result. However, renters systematically under-perform owners for all three indicators.

Interestingly, the affordability indicator tells a different story than the RBC Index in terms of trends. According to census data, only 77.8 per cent of households met the affordability criteria in 1996, less than both 1991 (80.0 per cent) and 2006 (78.6 per cent). This seems at odds with the RBC Index, which shows an increase in affordability between 1991 and 1996. Moreover, the housing affordability indicator between 1991 and 2001 remained stable (only a 0.2 percentage point difference). Given that household income rose between 1991 and 2001 and that interest rates were

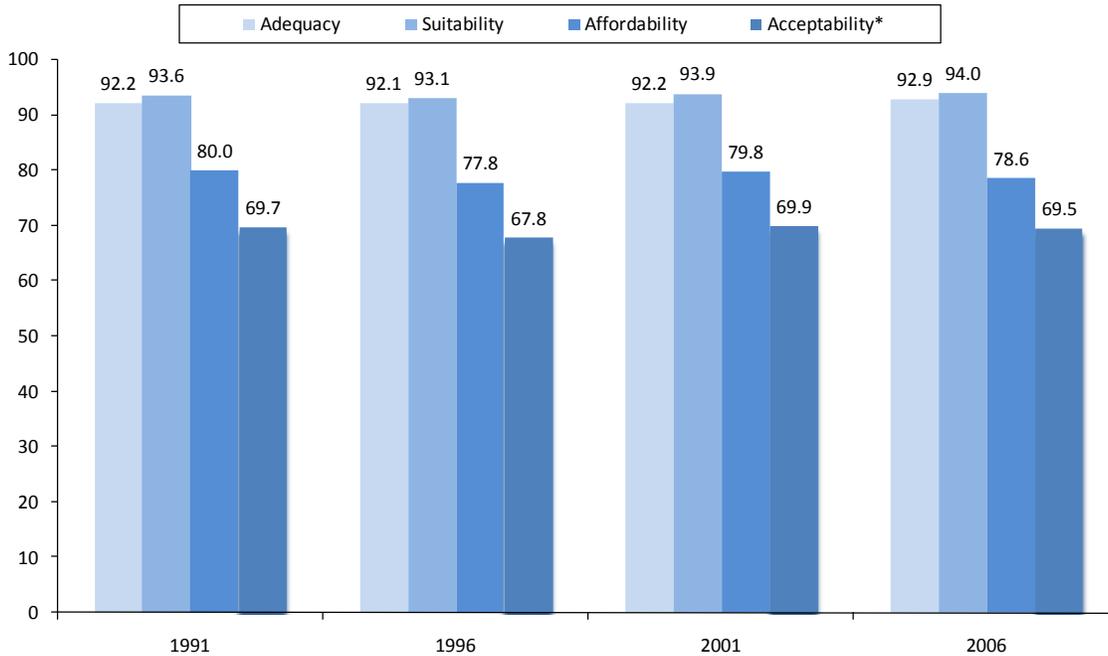
⁶⁵ The index fell 12.9 per cent from 2008 to the first quarter of 2009, from 45.2 per cent to 39.4 per cent, a level not seen since 2006.

⁶⁶ Each cohabitating adult couple, each unattached household member 18 years of age and over, each same-sex pair of children under age 18 and additional boy or girl in the family are considered to need a bedroom. If there are two opposite sex siblings under 5 years of age, it is considered suitable for them to share a bedroom. Moreover, bachelor units, which have no bedroom, are considered suitable for a household of one individual.

⁶⁷ For renters, shelter costs include rent and any payment for electricity, fuel, water and other municipal services. For owners, they include mortgage payments (principal and interest), property taxes, condominium fees and payments for electricity, fuel, water and other municipal services.

significantly lower in 2001 than in 1991, a stable affordability index points towards a substantive surge in real house or utilities prices between 1991 and 2001. As for the differences in trends between the RBC Index and the Census data, it may stem from the restricted definition of the former, which only takes into account prices for a detached bungalow.

Chart 34: Percentage of Households Whose Dwelling is Adequate, Suitable and Affordable, per Census Year



Source : Table 26b to Table 26e

*A dwelling is acceptable if it meets all three criteria

C. Food security

Many factors can hamper food security. The most important is low income, but a lack of information and remote location can also contribute to food insecurity. The monitoring of food security, or rather the measurement of food *insecurity*, generally relies on data gathered from surveys. In Canada, three key surveys have gathered data on food insecurity: the National Longitudinal Survey of Children and Youth (NLSCY) which has produced data on child hunger since 1994; the National Population Health Survey (NPHS) through a supplement in the 1998-1999 survey; and the Canadian Community Health Survey (CCHS), the successor to the NPHS, which has asked questions about food insecurity starting in the 2000-2001 survey. In this section, we focus on the results from the NPHS and CCHS for which results have been published, that is for 1998-1999, 2000-2001, 2003 and 2004.⁶⁸

The NPHS and CCHS contained three questions specifically concerning food security:

⁶⁸ In recent CCHS cycle (i.e. after the 2004 survey), questions concerning food security have been asked, but no data on food security have yet been published.

In the past 12 months, how often did you or anyone else in your household:

- *...worry that there would not be enough to eat because of a lack of money?*
- *...not have enough food to eat because of a lack of money?*
- *...not eat the quality or variety of foods that you wanted to eat because of a lack of money?*

For each of the questions, respondents were required to answer often, sometimes or never. Respondents who answered “often” or “sometimes” to one or more questions were considered to have experienced food insecurity while those who answered “never” to all three questions did not experience food insecurity.⁶⁹

The 1998/99 NHPS found that over 10 per cent of Canadians were living with some level of food insecurity. Almost 35 per cent of people in low-income households reported some form of food insecurity while 14 per cent in middle income households, and just over 3 per cent in upper-middle and high income households reported any level of food insecurity.

These results were corroborated in the 2000-2001 CCHS. Overall, in 2000/01, 14.7 per cent of the population reported some level of food insecurity during the year. Among low income households, 44 per cent reported some level of food insecurity.⁷⁰ Similarly, 42 percent of lower-middle income households reported at least one aspect of food insecurity. Even in middle income households, 24 per cent reported some level of food insecurity. Food insecurity also exists at the higher income levels with 11 per cent of upper-middle class households and 4 per cent of high income households reporting food insecurity. The presence of food insecurity at higher income levels could be linked to sudden economic collapses that lead to temporary episodes of food insecurity.

Among the different aspects of food insecurity, compromised quality was the most widespread, with 12 per cent of the population reporting they did not eat the quality or variety of food they wanted because of a lack of money. Food anxiety, or worrying about not having enough to eat, ranked close second with 11 per cent. During the 2000/01 CCHS, 7 per cent of the population reported that they or someone in their family did not have enough to eat because of a lack of money at some point during the last year. Hunger was closely related to income, as 28 per cent of low and lower-middle income households reported that they had enough to each due to a lack of money at some point in the year. Still, 5 per cent of the middle to high income families said they did not have enough to eat (Chart 35).

Aggregate results from CCHS cycle 2.1 (Statistics Canada, 2004) suggest that only 6.8 per cent of respondents experienced some level of food insecurity in 2004, a much lower proportion than

⁶⁹ Statistics Canada (2001). *Food Insecurity in Canadian Households*. Health Reports. 12(4), 11-22.

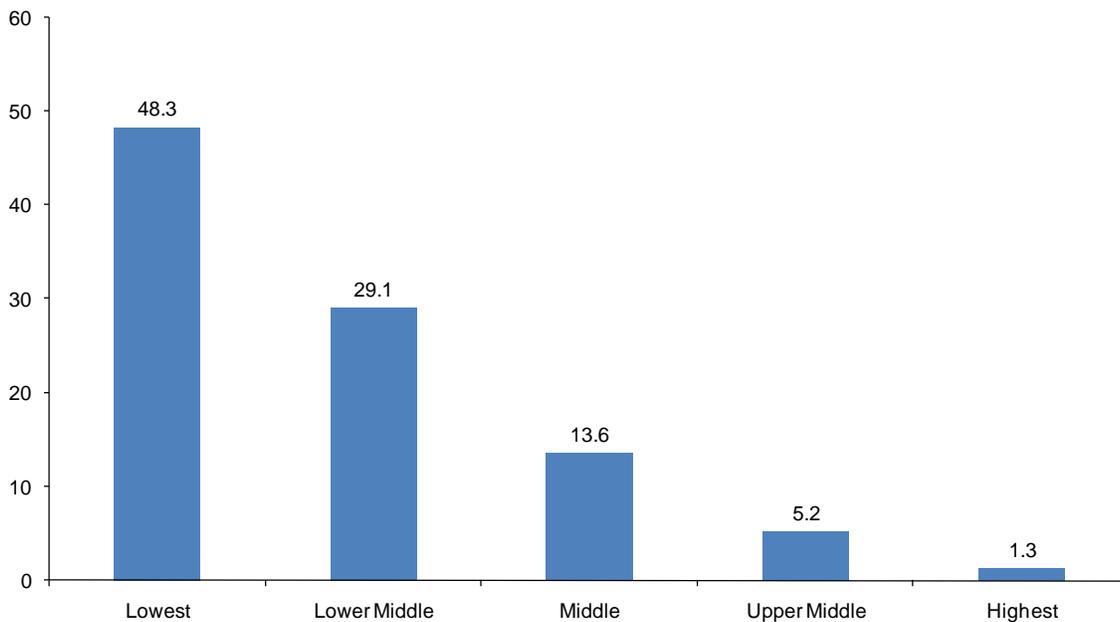
⁷⁰ Income Adequacy categories are defined as follows: Lowest: <\$10,000 if 1 to 4 people, <\$15,000 if ≥5 people; Lower Middle: \$10,000 to \$14,999 if 1 or 2 people, \$10,000 to \$19,999 if 3 or 4 people, \$15,000 to \$29,999 if ≥5 people; Middle: \$15,000 to \$29,999 if 1 or 2 people, \$20,000 to \$39,999 if 3 or 4 people, \$30,000 to \$59,999 if ≥5 people; Upper Middle: \$30,000 to \$59,999 if 1 or 2 people, \$40,000 to \$79,999 if 3 or 4 people, \$60,000 to \$79,999 if ≥5 people; Highest: ≥\$60,000 if 1 or 2 people, ≥\$80,000 if ≥3 people

in earlier surveys. The results from cycle 2.2 of the Canadian Community Health Survey, conducted in 2004 and released in 2007, offer further insight into the prevalence of food insecurity in Canada. In 2004, 9.2 per cent of Canadian households suffer from food insecurity. While high, this is down from the 2000/01 survey which found that 15 per cent of households suffered from food insecurity.

In addition to confirming that food insecurity remains a real issue for Canadian policymakers, the 2004 findings adds further support to the previous assertion that food insecurity and income are highly correlated. Food insecurity had a very large impact on households in the lowest income adequacy category (Table 36b, Chart 35). A very large proportion of households in the lowest income adequacy grouping (48.3 per cent) were food insecure. The lower middle (29.1) and the middle (13.6) income adequacy groupings also showed high levels of food insecurity. The high income groupings showed far less susceptibility to food insecurity: the upper middle income adequacy group had a food insecurity prevalence of 5.2 per cent and the highest group had a prevalence of food insecurity of only 1.3 per cent. The existence of food insecurity at the higher income levels may be due to financial mismanagement more than an actual inability to pay for food.

Estimates of food insecurity from the most recent CCHS, which were conducted during 2007 and 2008, are yet to be released.

Chart 35: Prevalence of Food Insecurity by Income Adequacy Grouping, per cent, 2004



Source : Table 36b

D. Income Security

1) Personal Security Index

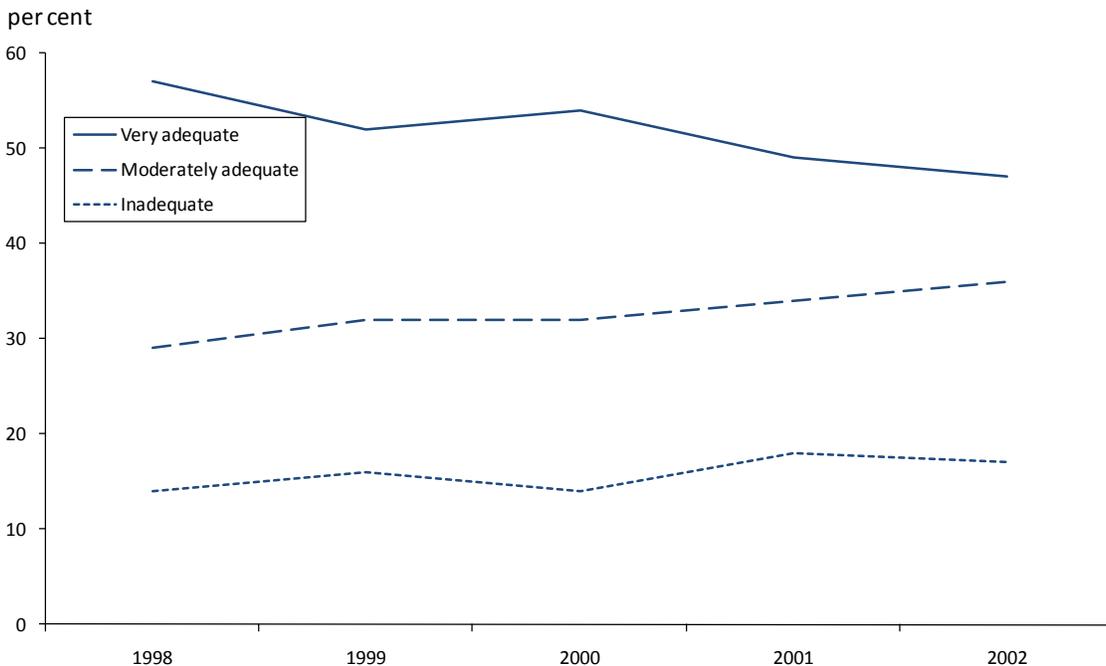
The Personal Security Index published by the Canadian Council on Social Development includes subjective indicators that shed light on personal perceptions of wellbeing. Three questions relate to income security:

- *How adequate would you say your income is in meeting your family's basic needs? Please use a 7-point scale where 1 is "not adequate at all" and 7 is "extremely adequate" and the mid-point 4 is "moderately adequate".*

Please rate the degree to which you agree with the following statements, using a 7-point scale where 1 means you "strongly disagree" and 7 means you "strongly agree", and the mid-point 4 means you "neither agree nor disagree".

- *If I lose my job, I am confident I could count on government support programs to support me and my family adequately while I look for a new job.*
- *If you and your spouse lost your jobs, how many months could you sustain yourself on your current savings (bank counts and RRSPs)?*

Chart 36a: Subjective Perception of Income Adequacy as Reported by the Personal Security Indicator, 1998-2002



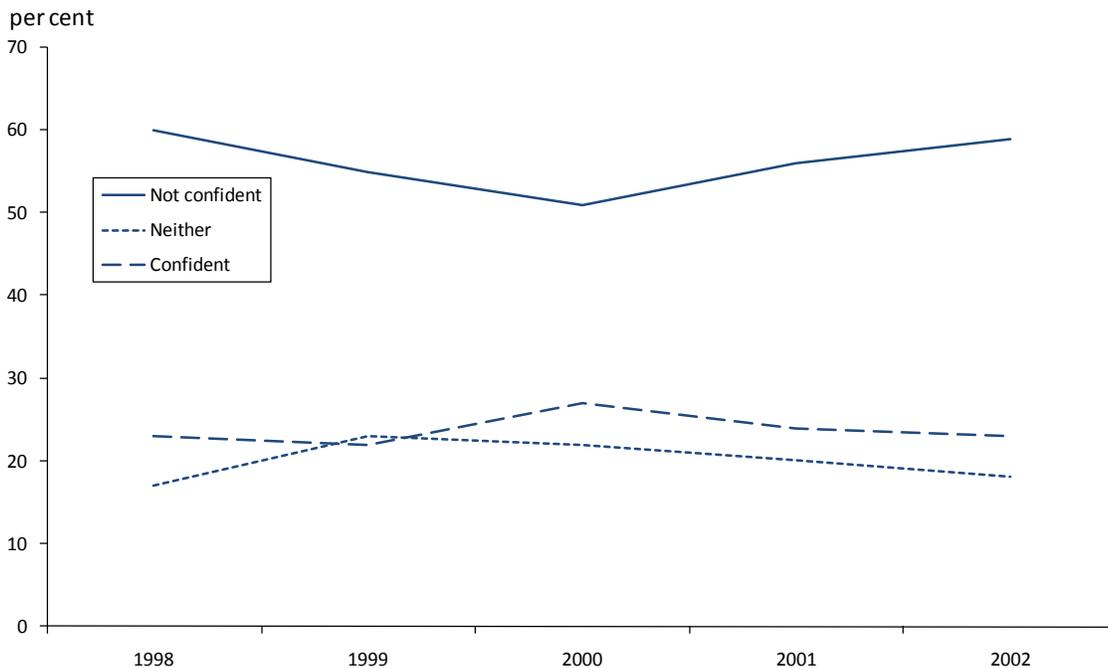
Source: Table 41

Between 1998 and 2002, median after-tax income in Canada rose by \$3,300 (\$2003). However, between 1998 and 2002, Canadians feeling that their income was very adequate to meet

their basic needs fell from 57 per cent to 47 per cent and the percentage feeling that their income was inadequate rose from 14 per cent to 17 per cent (Chart 36a). This is an interesting result because the perception does not seem to match the actual income statistics. It could mean that Canadians changed their perception of what constitutes an adequate income or that a larger number of goods and services are now considered basic needs. In all cases, Canadians seem to be less satisfied with their level of income in 2002 than they were in 1998, even though their income in 2002 is higher.

Results for the question concerning the ability of income support programs to support Canadians temporarily in case of a job loss were almost identical in 1998 and 2002. In 1998, 60 per cent felt the programs were insufficient to help them. In 2002, the proportion stood at 59 per cent (Chart 36b). With no major change in the percentage of Canadians covered by Employment Insurance and the proportion of the coverage compared to average weekly earnings over this period, it is not surprising that Canadians' confidence in those programs has not changed. However, such a low degree of confidence in the social safety net should be a matter of concern.

Chart 36b: Confidence in Income Support Programs as Reported by the Personal Security Indicator, 1998-2002



Source: Table 41

Finally, the financial security of Canadians seems to have improved dramatically between 1998 and 2002. The percentage of Canadians who indicate that they are unable to sustain themselves for more than one month on their current savings fell from 22 per cent in 1998 to 12 per cent in 2002. Improvements in economic conditions probably explain most of that improvement.

Subjective indicators have the advantage of capturing non-measurable elements such as the social environment and cultural differences which can affect individual wellbeing and which are related to the economic concept of individual preferences. In a society dominated by stress and

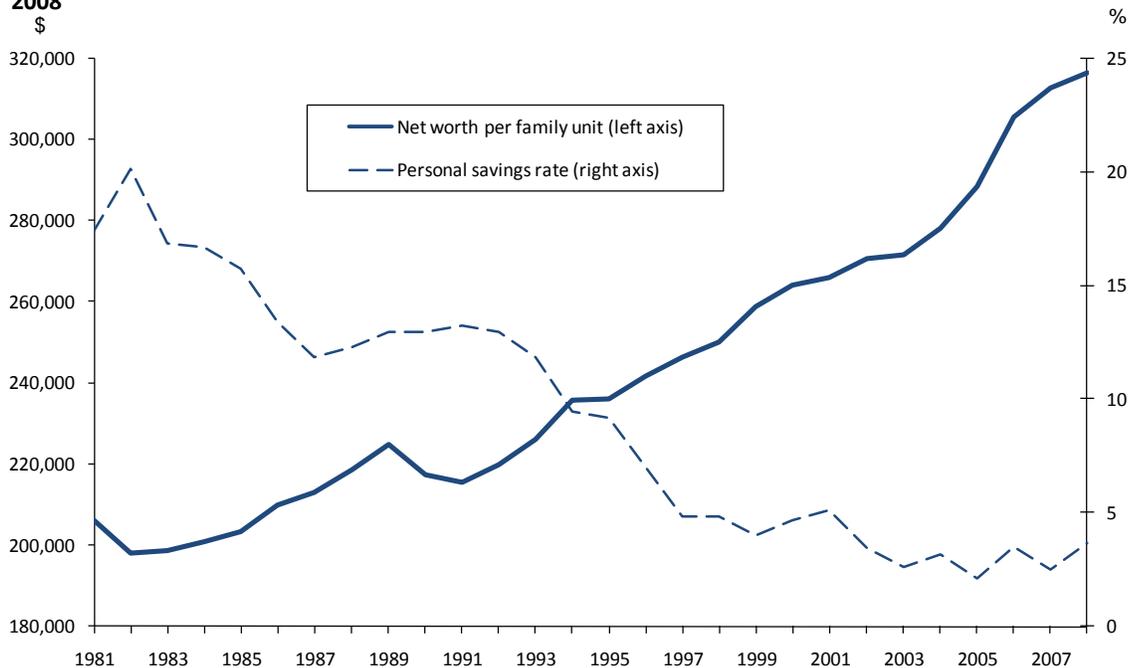
competition, some people may feel their job is threatened even though market conditions seem good. The resulting anxiety affects their wellbeing and needs to be taken into account.

2) Debt Levels and Savings Rate

A falling savings rate and an accumulation of debt are often perceived as the result and the cause of increasing income insecurity. It is widely assumed that the 1981-2008 economic growth, and in particular the post-2000 recovery and expansion, were fuelled by consumer spending, though increases in investment were actually much larger proportionately and consumption actually grew less quickly than GDP. Nonetheless, growth in consumer expenditures outpaced disposable income growth over these periods, leading to an increase in the gross debt-to-income ratio or, more generally, in the liabilities-to-income ratio. In fact, growth in household spending and the dramatic fall in the savings rate appear to have stemmed from the considerable increase in the value of household assets over the period. Relatively strong spending thus seems to be the result of a wealth effect, not of a consumer squeeze aimed at sustaining economic expansion.

In Canada, the savings rate, which represents the proportion of personal disposable income (PDI) that Canadians save, has followed a downward trend since 1982, although there are signs that the rate is increasing since 2005 (Table 46 and Chart 37a). From 20.2 per cent in 1982, it fell to 3.7 per cent in 2008, a 16.5 percentage point decrease over the period.

Chart 37a: Net Worth per Household (\$2001, CPI adjusted) and Personal Savings Rate (per cent), 1981-2008

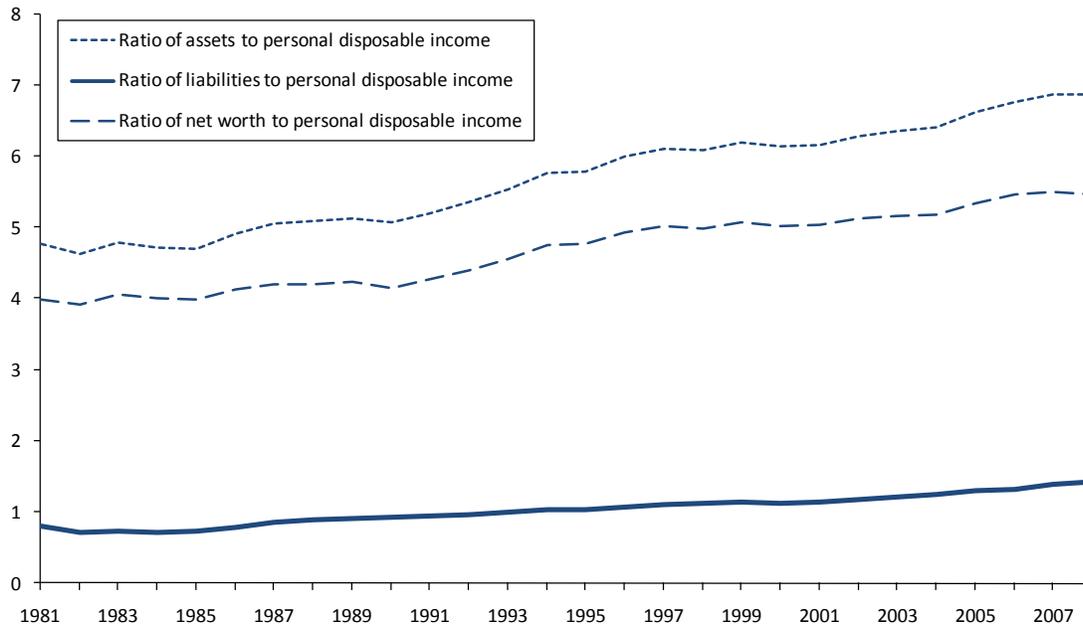


Source: Table 47b and Table 47d

Strong spending was reflected in the amount of liabilities held by households. In 2008, the average household had \$82,286 in liabilities (\$2001), up \$41,326 from \$40,960 in 1981 (Table 47B). However, the increase in assets per household was much greater, up \$151,597 from \$247,126 in 1981

to \$398,723 in 2008. Greater increases in assets translated into an increase in average net worth per household (asset minus liabilities) over the 1981-2008 period, from \$206,166 in 1981 to \$316,437 in 2008.

Chart 37b: Ratio of Assets, Liabilities and Net Worth to Personal Disposable Income, on a per Household Basis, 1981-2008



Source: Table 9a and Table 47B

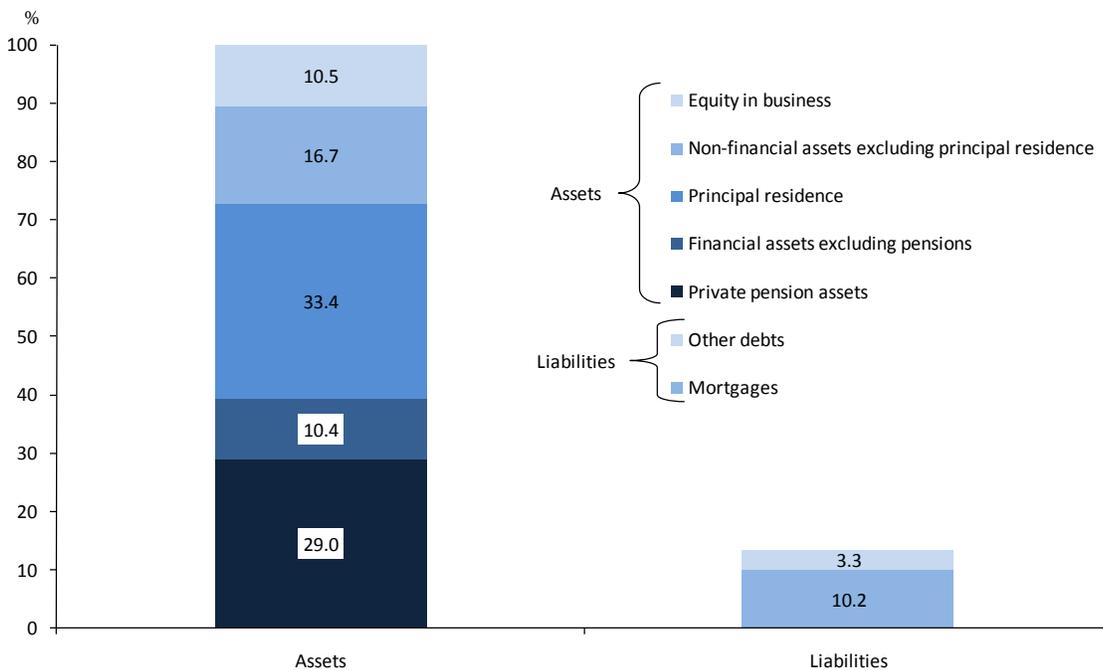
The increase in household assets in the 2000-2008 period came mainly from the boom in house prices. In fact, residential structures (average household value up \$24,479) and land (up \$32,264) were the fastest growing components.⁷¹ Consumers spent more, but were they less well-off as a result? Looking only at the liabilities/income ratio, using personal disposable income (PDI) from the national accounts as the measure of income, we obtain the impression that the financial situation of the average household is worsening. While liabilities represented only 79 per cent of PDI in 1981, they represented 142 per cent of PDI in 2008 (Table 47D and Chart 37b). The upward trend started in 1984. However, the assets- and net-worth-to-income ratios have been increasing at a faster absolute rate over the same time, which means that the average financial security of households has actually improved. Indeed, in 2008, the average household had net worth equivalent to 5.44 times personal disposable income, up from 3.99 times in 1981, a 36.3 per cent rise. Households could afford to spend a larger share of their income (thus the falling savings rate) because the value of their assets kept increasing. In other words, households appeared to substitute asset growth for savings. Thus, as their net worth increased, the savings rate decreased (Chart 37a). Of course, a fall in asset value as

⁷¹ The average household value of consumer durables increased by \$388 from 2000 to 2008, shares increased by \$10,480, currency and bank deposits increased \$5,410 and life insurance and pensions increased by \$6,214. The only asset category that experienced a decline was “other assets” (-\$3,883), which includes: “Non-residential structures, Machinery and equipment, Inventories, Deposits in other institutions, Foreign currency deposits, Canada short-term paper, Other short-term paper, Canada bonds, Provincial bonds, Municipal bonds and Other”.

occurred in late 2008 puts this behaviour at risk – i.e. the increase in spending based on increasing asset value is not necessarily sustainable.⁷²

In 2005, Statistics Canada conducted the Survey of Financial Security (SFS) and produced detailed estimates of Canadians' assets and debts. In 2005, Canadians' aggregate debts represented only 13.5 per cent of their assets (Table 48). Moreover, 10.2 percentage points of this 13.5 per cent were accounted by mortgages, which are generally backed by a real estate asset. Therefore, other debts, such as credit card debts, lines of credit, vehicle loans or student loans, accounted for only 3.3 per cent of total Canadians' assets. The value of assets was divided among non-financial assets (50.1 per cent), private pensions (29.0 per cent), financial assets excluding pensions (10.4 per cent) and equity in business (10.5 per cent) (Chart 37c).

Chart 37c: Composition of Assets and Debt in Canada, as a Percentage of Total Assets, 2005



Source: Table 48

Thus, the recent upward trend in consumer debt and the falling savings rate may not have been caused by a worsening of financial situation of households, but rather by an expansion in their financial security due to the increasing value of their assets, mainly their house and their stock market holdings. Moreover, since consumer debt does not represent a large portion of households' liabilities, one can hardly maintain that consumers are being squeezed, at least not at the aggregate level. The most likely scenario is that low interest rates spurred both mortgage debt and real estate values, the two factors offsetting each other. However, studies concentrating on micro-level data could present a different picture. The impact might be different for homeowner, renters, and aspiring home-owners.⁷³

⁷² For a good overview of Canadian family finances, see Sauvé (2009).

⁷³ For more on patterns of spending and their socio-economic aspects, see Chawla and Wannell (2005) who study the spending habits of Canadians using micro-level data for the 1982-2001 period.

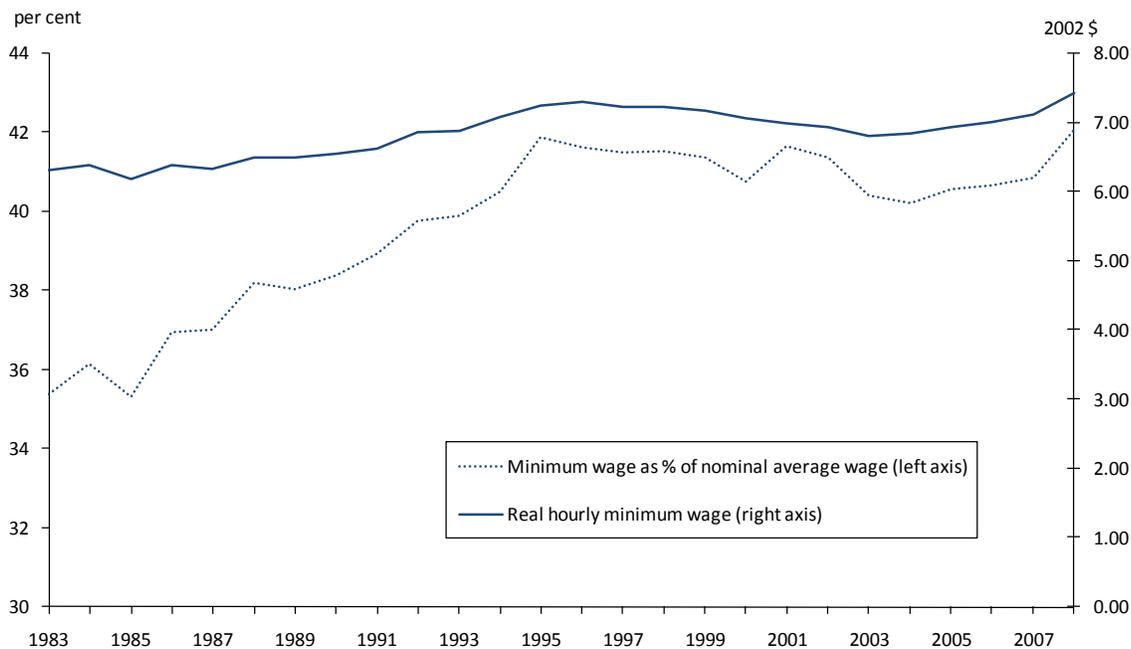
E. Social Safety Net

This section of the report examines developments in three social programs or policies that are very important for the living standards of Canadians, particularly low-to-moderate income Canadians. They are the minimum wage legislation, welfare or social assistance benefits, and Employment Insurance (EI) (known as Unemployment Insurance until 1996). The first two are under provincial jurisdiction and the third under federal jurisdiction. The impacts of these programs already manifest themselves in the income trends examined earlier in the report, but it is nevertheless useful to look at trends in the generosity of the programs.

1) Minimum Wages

Minimum wages raise the wages of workers at the bottom of the wage distribution, (although potentially at the cost of employment, a highly disputed issue among economists), boosting the incomes of many low-income households (Battle, 2003). The minimum wage in Canada, an employment-weighted average of provincial minimum wages, was \$8.49 in nominal terms in 2008 (Table 35C). This was up from \$3.67 in 1983, the first year for which data were gathered.

Chart 38: Trends in Nominal Minimum Wage as a Proportion of Average Wage, and Real Hourly Minimum Wage (CPI Adjusted), 1983-2008



Source : Table 35B and Table 35C.

Over the 1983-2008 period, nominal minimum wages in this country increased at a 3.41 per cent average annual rate, above the 2.69 per cent rate for the average wage in the industrial aggregate. This faster growth meant that minimum wages rose from 35.4 per cent of the average wage in 1983 to

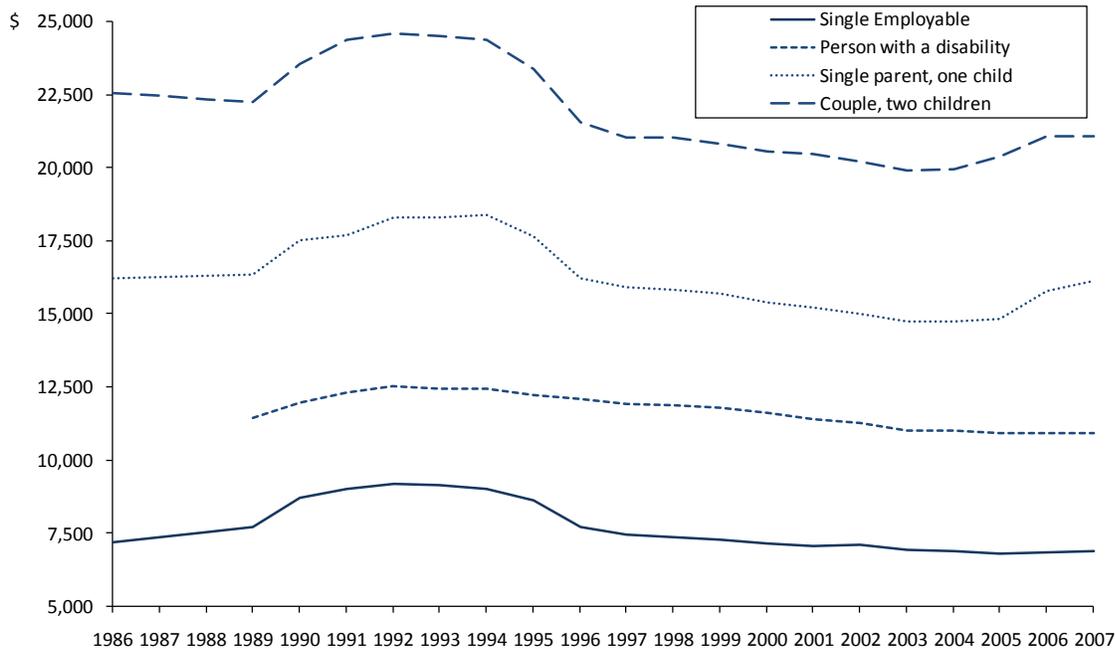
42.1 per cent in 2008 (Chart 38).⁷⁴ The relative improvement took place in the 1983-1995 period as the minimum/average wage ratio peaked at 41.9 per cent in 1995, and declined to 40.2 per cent in 2004 before increasing in 2005-2008 to reach the current level. Chart 38 also shows that in the same 1983-2008 period, the CPI adjusted real hourly minimum wage only increased at a 0.66 per cent average annual rate.

2) Social Assistance Benefits

Social assistance or welfare benefits go to the most disadvantaged in society. Chart 39 and Table 34A, based on data compiled by the National Welfare Council (2006) and National Welfare Council (2008), show trends in real average welfare benefits at the national level for four categories of welfare recipients based on the population-weighted provincial benefits from 1986 (the earliest year for which data are available) to 2007.

Chart 39: Trend in Welfare Income in Canada (population weighted), 1986-2007

\$2007



Source: Table 34A, 1987 and 1988 data are interpolated

In 1986, a single employable person received an average of \$7,230 in welfare benefits (\$2007). Between 1986 and 1992, welfare benefits increased 27.1 per cent for a single employable person, reaching \$9,189. However, benefits started to edge down in 1993 and fell 10.2 per cent for single employable persons in the single year of 1996 due to deep cuts in welfare benefits in Ontario. The amount of welfare benefits for a single employable person has continued a downward trend with

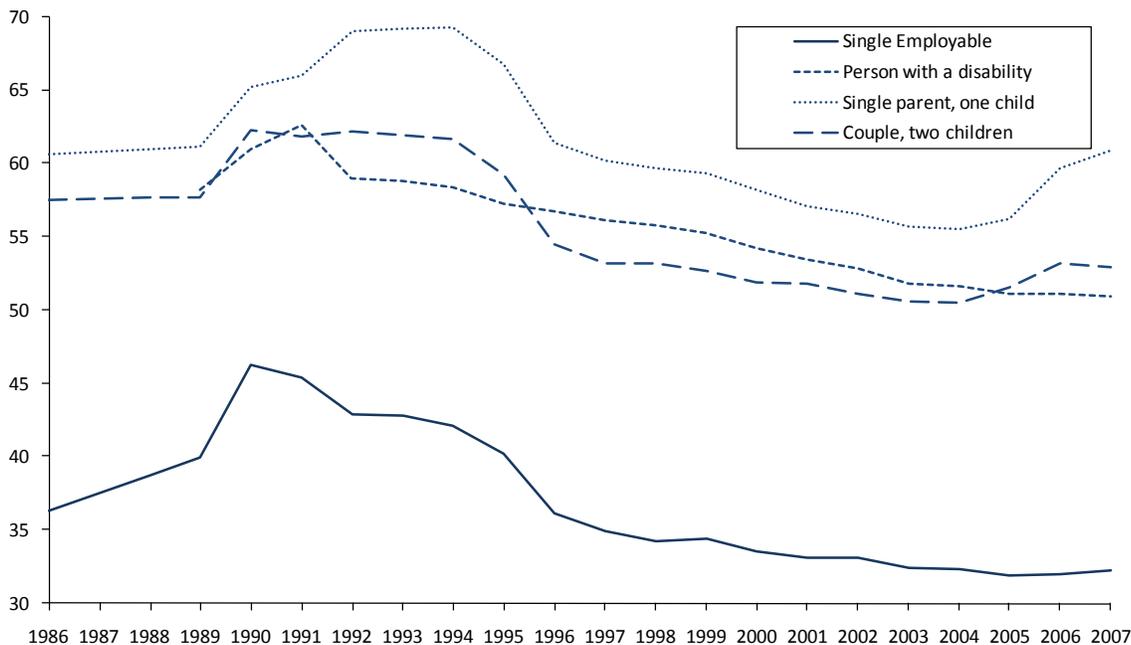
⁷⁴ These measures are sensitive to the choice of wage series. For example, while the industrial aggregate wage series used in this section decreased in real terms (only slightly), if we had used total hourly compensation (which includes supplementary labour income) growth would have been positive for the period, and the relative gains in terms of the minimum wage would have thus been smaller.

the average amount received at \$6,902 in 2007; since 1993, only 2002, 2006, and 2007 saw increases in welfare benefits and in each year the increase was less than \$40.

Trends in other groups were similar (Chart 39). The least affected by the fall in welfare benefits were single parents with one child, which saw their benefits fall only 0.45 per cent from \$16,244 in 1986 to \$16,172 in 2007. The drop in benefits had been more pronounced for this group, but since 2005 benefits have grown by 8.7 per cent in real terms. On the other hand, couples with two children suffered a 6.6 per cent fall in benefits, from \$22,564 in 1986 to \$21,074 in 2007. Similarly, persons with disabilities saw their welfare benefits decline 4.7 per cent over the period, reaching only \$10,929 in 2007.

One measure of the adequacy of welfare benefits is the proportion of the poverty line such benefits provide. By this criterion, welfare benefits have generally become less adequate over the 1986-2007 period (Chart 40). Single employable beneficiaries saw their welfare benefits fall from 36 per cent of the poverty line in 1986 to 32 per cent in 2007. If we compared to the 1990 peak of 46 per cent, it represents a 14-percentage-point fall in benefits as a proportion of the poverty line. Single parents with one child, who received 61 per cent of the poverty line in welfare benefit in 1986 were still at that level in 2007, but were well down from the 1994 peak of 69 per cent. The trend was similar for couples with two children, who saw the proportion of their welfare benefits fall 5 percentage points between 1986 and 2007, from 58 per cent to 53 per cent, but fell 9 percentage points from a peak of 62 per cent in 1994. Finally, persons with a disability also experienced a fall in the adequacy of their welfare coverage, from 58 per cent of the poverty line in 1989 to 51 per cent in 2007.

Chart 40: Trend in Welfare Income as a Proportion of the Poverty Line in Canada (population weighted), 1986-2007



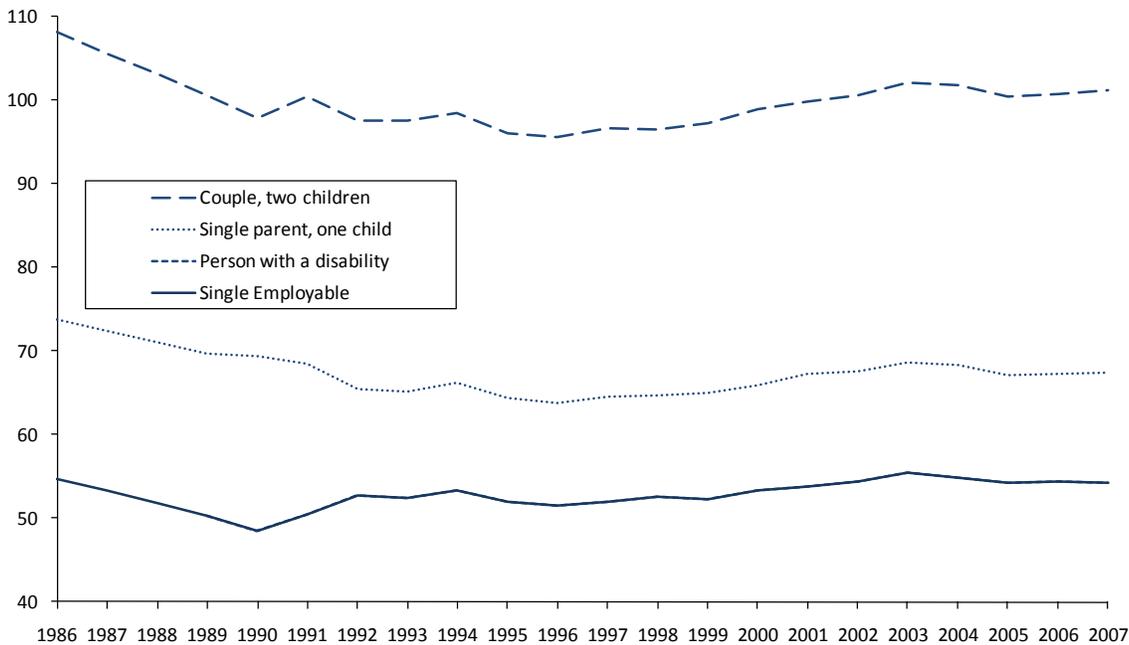
Source : Table 34b, 1987 and 1988 data are interpolated

3) Minimum Wage Relative to Welfare Benefits and the Poverty Line

Using data published by the National Council of Welfare Reports covering 1986 and the 1989-2007 period, and minimum wage data from Human Resources and Skills Development Canada, we approximated the number of hours of work at minimum wage needed to earn enough money to reach the poverty line. All the estimates in this section do not take into account income received from sources other than work. For example, the number of hours needed to earn the equivalent of the poverty line does not take into account that households may still receive the Canada Child Tax Benefits. If we were to take these programs into account, the number of hours would likely fall even faster over the 1989-2007 period.

In Canada, the number of hours of work at minimum wage needed to earn the equivalent of welfare benefits decreased considerably, mainly because of increasing minimum wages (Table 45B). However, the decrease in real welfare benefits between 1986 and 2007 did also contribute to this fall in hours. Single employable had to work 17.5 hours at minimum wage to earn as much as on welfare, compared to 19.9 hours in 1986. For persons with a disability, the number of hours was 27.8 in 2007 compared to 31.1 in 1989. The number of hours for single parents with one child was 41.1 in 2007 (from 44.8 hours in 1986) and for a couple with two children it was down to 53.5 hours, from 62.2 hours in 1986. This trend is positive in two ways. First, it points to a higher minimum wage. Second, it suggests a reduction in the welfare wall, i.e. the incentive to join the workforce, even at the minimum wage, have improved through time.

Chart 41: Trend in the Number of Hours of Work per Week at Minimum Wage Needed to Reach the Poverty Line, 1986-2007



Source : Table 45c, 1987 and 1988 data are interpolated. Data for single employable and person with a disability are identical.

Interestingly, the number of hours of work at minimum wage to reach the poverty line has diminished between 1986 and 2007 for only three of the four categories (Chart 41 and Table 45C). In

2007, persons with a disability had to work 54.5 hours to reach the poverty line, 2.7 hours more than 1989's 51.8 hours, and the only category of workers which experienced an increase. Single employable needed to work 0.5 hours less, from 54.8 hours in 1986 to 54.3 hours in 2007. The number of hours needed is still much higher than the average weekly hours of work. Of course, if employment subsidies, earned income tax credit and the GST credit were taken into account, the number of hours needed may be realistically achieved by a single worker.

Single parents with one child improved their situation considerably, from 73.8 hours of work needed in 1986 to 67.5 hours of work in 2007. Again, this improvement, however significant, is far off from a situation where a minimum wage single parent worker could plausibly reach the poverty line. Finally, the number of hours of work at minimum wage to reach the poverty line decreased 7.0 hours for couples with two children, from 108.2 hours to 101.2 hours. Assuming both parents are employed at minimum wage, they would have to work about 50.5 hours per week each to reach the poverty line (once again, without taking into account government transfers and tax credits).

What these statistics demonstrate is the inadequacy of the minimum wage, despite increases over time, to lift families out of poverty on its own, even when two family members work full-time. More specifically, they point to the essential role played by earning supplements program, which can bridge the gap between minimum wage earnings and the poverty line.

4) Employment Insurance

Employment Insurance is a very important income support program for temporary and seasonal workers as well as for workers in cyclical sectors. It is a complex program and its generosity is affected by a number of program parameters, including the replacement rate and the qualification period. Finance Canada produces an index of EI disincentives to work or conversely EI generosity for the 1970-2008 period at both the national and provincial level. Finance Canada provided these data to the Centre for the Study of Living Standards.⁷⁵

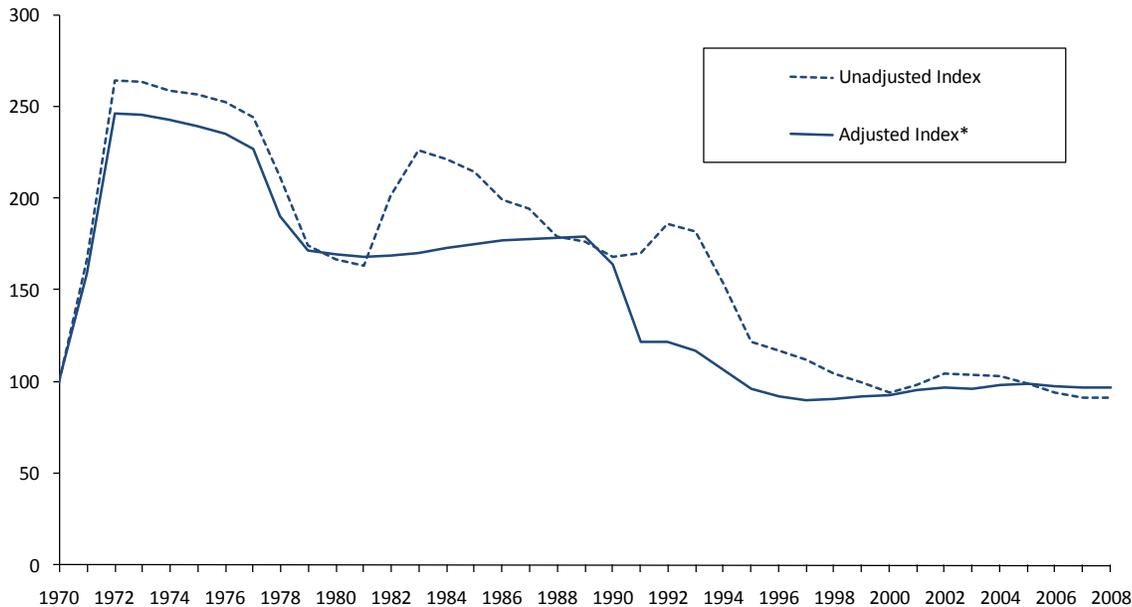
Between 1981 and 2008 at the national level, the unadjusted EI Index decreased 71.4 percentage points, from 163.5 per cent in 1981 to 92.1 in 2008 (Chart 42). In 2008, the EI index was lower than in any other year for the 1981-2008 period except for 2007. In other words, the EI/UI program in Canada was much less generous in 2008 than in earlier years. This reflected the sharp drop in the financial support provided by EI to out-of-work workers, both because of a shorter duration of benefits and more restrictive qualifying periods. The EI Index reached a peak in 1983 at 226.4 per cent and a trough in 2000 at 94.2 per cent. The sharpest fall during the period occurred between 1993 and 1995, with the index falling 60 percentage points, from 182.6 per cent to 122.6 per cent reflecting large cuts in EI generosity during this period.

It is important to note that since qualification period and duration of benefits are related to the unemployment rate, trends in the EI generosity index are somewhat endogenous to the trend in the

⁷⁵ Sargent (1995) developed an economic model in which individuals are assumed to optimize the duration of their employment and unemployment spells based on EI/UI parameters. The Sargent EI Disincentives Index, which represents the utility-maximizing point in the model, is based on the replacement rate, the minimum EI/UI entrance requirements and the maximum EI/UI benefit duration corresponding to entrance requirements.

unemployment rate. When the unemployment rate rises, fewer weeks are needed to qualify for benefits and the duration of benefits increases, raising the overall EI generosity index. A constant unemployment rate EI generosity index can however be calculated and changes in this index therefore reflect only changes in the parameters of the program.

Chart 42: Sargent EI Disincentives Index, 1970-2008 (1970=100)



* The adjusted index is independent of the business cycle and represents only changes in the program parameters that are policy driven. It is calculated using a constant unemployment rate of 7.5 per cent.

Source : Table 50

The overall trend of the constant unemployment rate EI Index is similar to the unadjusted EI Index. Assuming an employment rate of 7.5 per cent, the EI Index shows a decrease of 72.7 percentage points over the period, from 168.4 per cent in 1981 to 96.7 per cent in 2008. However, trends within the period are slightly different. The sharpest fall in the EI Index occurred between 1989 and 1991, with a 57.9-percentage-point decrease. The EI Index decreased further in the following six years, reaching a trough of 89.9 per cent in 1997. Since then, the EI Index increased slightly, reaching 96.7 per cent in 2008. However, the same conclusion has to be drawn: the EI/UI program was much less generous in 2008 than it was during the 1980s and the early 1990s.

5) Child Benefits

The most important new social program in recent years in Canada has been the expansion of child benefits through the Canada Child Tax Benefit (CCTB) and, more importantly, through the National Child Benefit Supplement (NCBS). The current-dollar amount of funds allocated by the federal government to the CCTB base benefit has increased from \$2.6 billion in 1995-96 to \$3.6 billion in 2006-2007, while funds allocated to the NCB supplement soared from \$0.3 billion in 1995-96 to \$3.5 billion in 2006-2007, and reached \$3.7 billion in 2007-2008 (Government of Canada, 2008). The maximum level of federal child benefits for two-child families has more than doubled in

current dollars from \$2,540 in 1995-96 to \$6,175 in 2006-07 (Government of Canada, 2008), and has increased further reaching \$6,593 in 2009-2010 (see www.cra-arc.gc.ca for complete details).

The NCBS has been targeted to low-income families, with full benefits in 2006-2007 received by families with income up to \$20,435 and some benefits up to \$36,378.⁷⁶ Consequently, this program has been somewhat successful in reducing both the incidence and depth of poverty. For example, a 2002 CSLS simulation study of the poverty effects of the NCBS based on the Statistics Canada's Social Policy Simulation Development Model (SPSD/M) found that in 2004 the after-tax poverty rate for families with children would be 1.4 percentage points lower than it would have been in the absence of NCBS enrichment (CSLS, 2002).

6) CSLS Economic Security Index

The Centre for the Study of Living Standards (CSLS) has developed the Index of Economic Well-being (IEWB) to capture trends in economic wellbeing through four dimensions – consumption flows, stocks of wealth, income equality, and economic security (Osberg and Sharpe, 2002, 2005, 2009c).

The economic security domain, the most complex and developed domain of the IEWB, consists of four components, called financial risks to economic wellbeing facing the population, namely the risk imposed by unemployment, the risk from illness, the risk from single parent poverty, and the risk of poverty in old age. Three of these components are in turn composed of more than one variable.

a. Risk from Unemployment

Risk imposed by unemployment is determined by three variables: the unemployment rate, the proportion of the unemployed receiving EI benefits, and the proportion of earnings that are replaced by EI benefits.

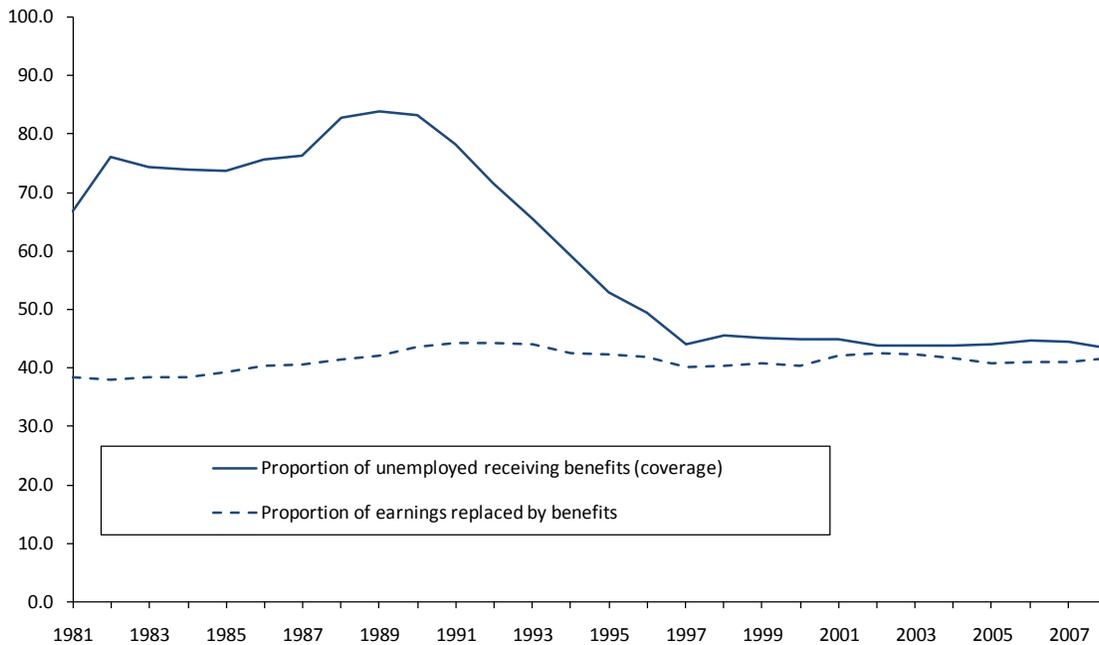
As noted earlier in the report, the unemployment rate was 6.1 per cent in Canada in 2008, the lowest rate attained during the 1981-2008 period, excluding 6.0 per cent in 2007 (Table 51 and Chart 26). The unemployment rate rose in the early 1980s, peaking at 12.0 per cent in 1983 because of the recession, then fell during the recovery and economic expansion during the rest of the decade. This pattern repeated itself in the 1990s, with the unemployment rate rising to 11.4 per cent in 1993 and then slowly unwinding to 6.8 per cent in 2000. Unlike the early 1980s and 1990s, the early 2000s did not experience a significant economic downturn, so the unemployment rate has been relatively stable since 2000, peaking at 7.7 per cent in 2002 before falling to a low of 6.0 per cent in 2007. The unemployment rate increased slightly to 6.1 per cent in 2008.

⁷⁶ In a number of provinces, families on welfare see their welfare benefits reduced by the increase in the NCBS, a situation that has been criticized by welfare advocates. An objective of the NCBS has been to decrease the disincentive for welfare families to enter the labour market or reduce the welfare wall by providing benefits for low income families with children whether the parents are on welfare or working.

In 2008, proportion of the unemployed receiving EI benefits was 43.3 per cent,⁷⁷ down from 66.6 per cent in 1981 and 83.8 per cent in 1989 (Table 51 and Chart 43). It appears that the EI system became more generous in terms of coverage in the 1980s, but that this generosity fell significantly from 1989 to 1997, and has since stabilized.

In contrast to the falling coverage ratio, EI benefits as a proportion of average earnings have exhibited a high degree of stability (Chart 43). In 2008, EI benefits replaced 41.6 per cent of earnings, up 8.1 per cent from 38.4 per cent in 1981. The EI benefits rate peaked at 44.2 per cent in 1991.

Chart 43: Trends in the EI Financial Assistance in Canada, 1981-2008



Source: Table 51

The aggregation procedure for the variables that make up the risk of unemployment component of the economic security domain is complex. The procedure can be summarized in two key steps. First, the indicators on the EI coverage ratio and on the percentage of earnings replaced by benefits are multiplied to obtain an index of the financial protection from unemployment provided by the EI system. Second, the unemployment rate and the financial protection indexes are weighted to produce the overall index of security from the risk imposed by unemployment. Since low unemployment levels are an unambiguously better way to ensure employment security, the unemployment rate is considered much more important than the EI system as a source of economic security for the working population. Consequently, in the aggregation of the overall index it is given a weight of four-fifths, compared to a weight of one-fifth for the financial protection index.

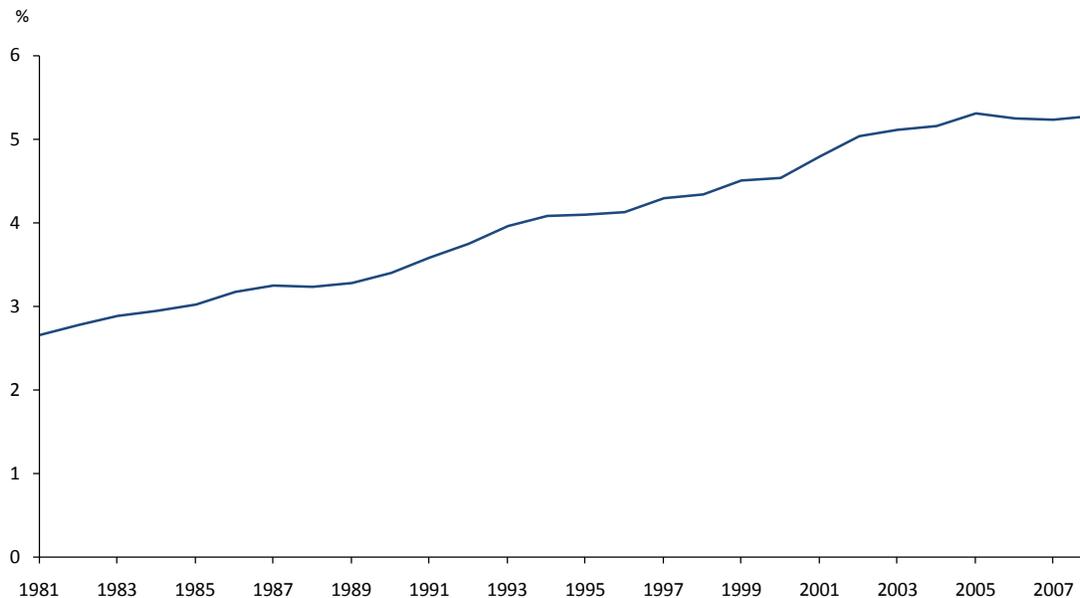
⁷⁷ Strictly speaking the 43 per cent is the ratio of the number of persons receiving EI benefits to the number of unemployed. It is unlikely that all EI beneficiaries are classified as unemployed by the Labour Force Survey, especially in a region where there are few job prospects. And of course new labour market entrants may be unemployed but not eligible for EI benefits.

b. Financial Risk from Illness

The second component of the economic security domain is the financial risk imposed by illness. In Canada, health care deemed medically necessary provided by hospitals and doctors' offices is free of charge to all citizens through public medicare programs. In this sense the financial risk imposed by illness is much less than in countries without such universal coverage like the United States. But there is still significant private expenditure on health care in Canada and these expenditures have been rising rapidly. Included are spending for dental care, drugs taken outside hospitals, unlisted medical services such as acupuncture, and delisted medical services (physiotherapy and vision care are examples of medical services that have been recently delisted in Ontario). Also included are procedures considered socially desirable even though medically unnecessary, such as plastic surgery.

Unreimbursed private expenditure on health care rose from \$6.3 billion current dollars in 1981 to \$50.0 billion in 2008. This represented nearly a doubling of private health spending as a share of disposable income, from 2.66 per cent to 5.29 per cent (Table 52 and Chart 44). Such a development can be considered a deterioration in the economy security of Canadians. Increased private health expenditure imposed by poor health thus represents a growing financial burden for low income Canadians.

Chart 44: Trends in the Proportion of Unreimbursed Private Expenditure on Healthcare in Personal Disposable Income in Canada, 1981-2008



Source : Table 52.

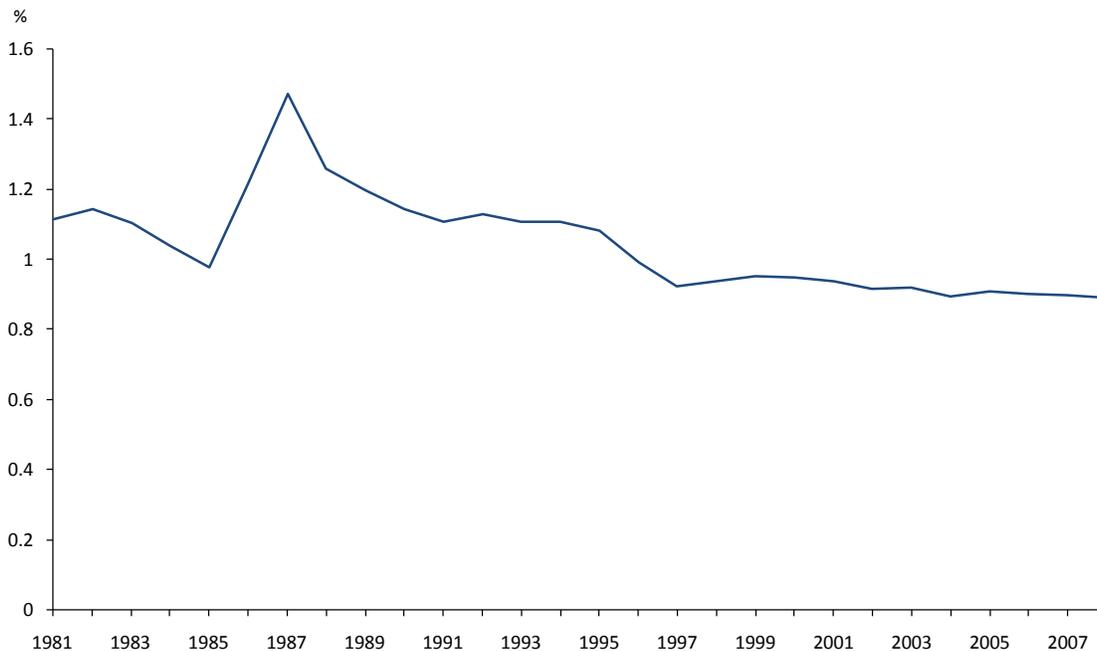
c. Risk from Single-Parent Poverty

The third component of the economic security domain is the risk of single parent poverty. This component consists of three variables – the divorce rate as divorce throws many women into poverty,

the poverty rate for lone female-headed families, and the poverty gap for these families. These latter two variables when combined give the poverty intensity. Poverty is defined in relative terms as the proportion of households below one-half median income (equivalent to the LIM discussed in an earlier section of this report).

The divorce rate for married couples, defined as the number of divorce divided by the number of married couples in a given year, was 0.89 per cent in Canada in 2008, the lowest rate in a quarter century (Table 53). The divorce rate rose from 1.12 per cent in 1981 to a peak of 1.47 per cent in 1987 and has since been on a downward trend (Chart 45), reflecting possibly the aging of the population (the incidence of divorce declines after a certain number of years of marriage).

Chart 45: Trends in the Divorce Rate in Canada, 1981-2008



Source: Table 53 Note: The divorce rate is defined as the number of divorce divided by the number of married couples.

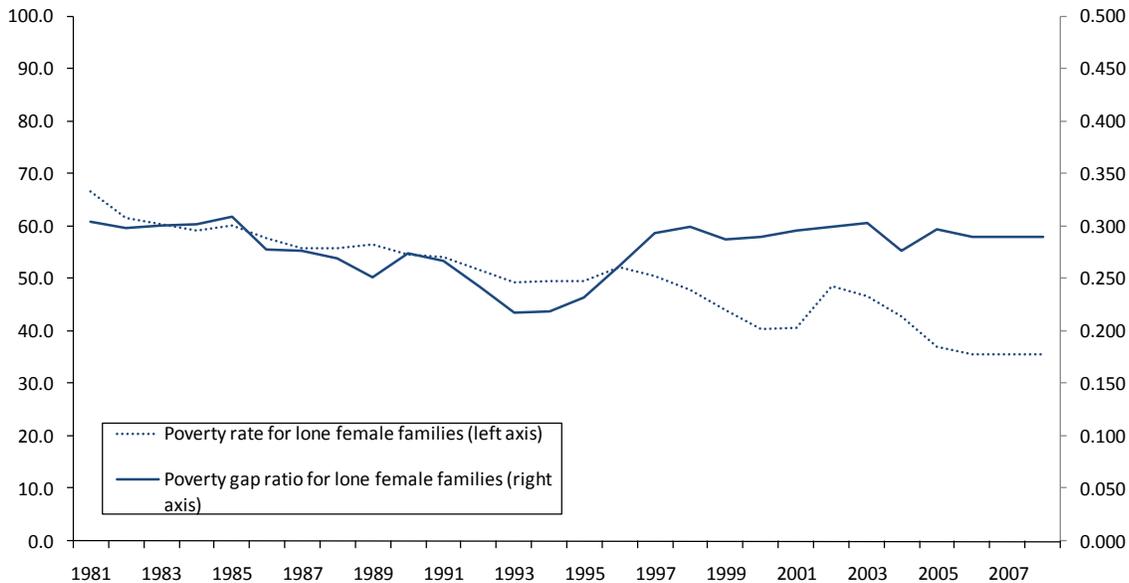
It is well known that the poverty rate is particularly high for female lone parent families. In 2008, this rate was 35.5 per cent (Table 53). But it fell considerably more or less continuously over the 1981-2001 period. Despite a large increase in 2002, subsequent years saw poverty resume its decline such that the current level is 46.8 per cent below the 1981 level of 66.7 per cent (Chart 46).

In contrast to the decline in the single parent poverty rate, the poverty gap in 2008 was virtually identical to that in 1981 (29.0 versus 30.4 per cent). But the poverty gap did fall significantly from 1981 to a trough of 21.7 per cent in 1993 before giving up the gains in the 1994-2003 period (Table 53 and Chart 46). There has been a moderate decline from the 2003 level of 30.3 per cent.

The overall component for the risk of single parent poverty is calculated as the product of the divorce rate, the poverty rate for single parents and the poverty gap for single parents. The index declined by 59.2 per cent from 1981 to 2008. It is interesting to note that this improvement was

greater than the individual improvements for the divorce rate (-19.5 per cent) and female single parent poverty rate (-46.8 per cent) because the variables are combined in a multiplicative rather than an additive manner.

Chart 46: Trends in the Poverty Rate and Poverty Gap Ratio for Lone Female Families in Canada, 1981-2008



Source : Table 53

d. Risk of Poverty in Old Age

The fourth component of the economic security domain is the risk to poverty in old age. This component is proxied by the poverty intensity experienced by the households headed by a person 65 and over.

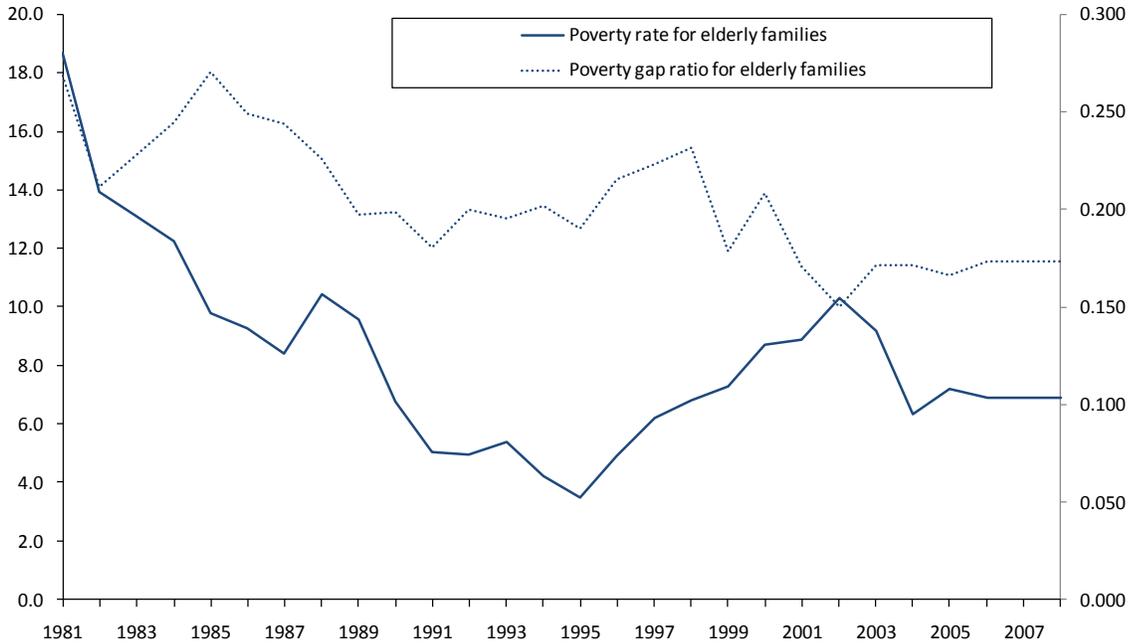
The poverty rate for the elderly in Canada has been cut in half over the last quarter century, falling from 18.7 per cent in 1981 to 6.9 per cent in 2008 (Table 54 and Chart 47). The downward trend has been uneven as the poverty rate was even lower in the mid-1990s at between 3 and 4 per cent.

The poverty gap of seniors has also fallen significantly over the past quarter century, from 26.9 per cent in 1981 to 17.4 per cent in 2008, a 35.4-per cent decline. Unlike the rather haphazard path of elderly poverty rate, the poverty gap has been on a more or less steady downward trajectory.

The overall component of the risk of poverty in old age, poverty intensity, is the product of the poverty rate and gap. The index of poverty intensity stood at 0.095 in 1981 and 0.023 in 2008 (Table

54), representing a fall of 76.2 per cent. Again, this was larger than the falls of the poverty rate (63.1 per cent) and the poverty gap (35.4 per cent) taken separately because of the multiplicative effect.

Chart 47: Trends in the Poverty Rate and Poverty Gap Ratio for Elderly Families in Canada, 1981-2008

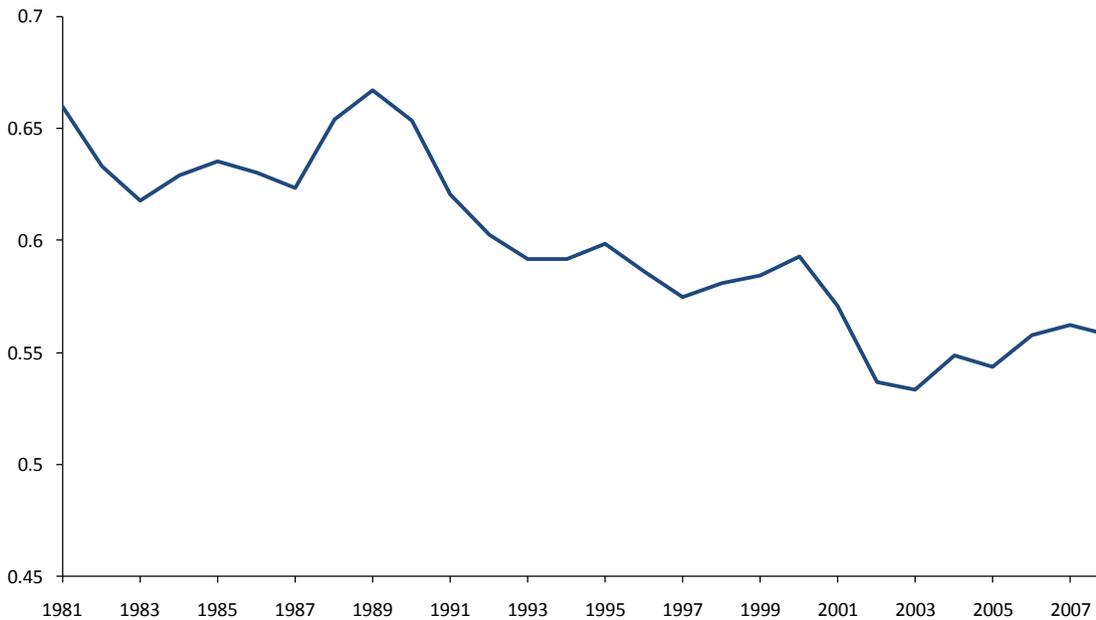


Source : Table 54

e. Aggregation of the Components of Economic Security into Overall Economic Security Domain Index

The scaled values of the four components of the economic security domain are aggregated to obtain an overall scaled index for the domain. The weights used for this aggregation procedure are constructed from the relative sizes of the populations subject to each risk.

In terms of the risk of unemployment, it is assumed that the entire population aged 15 to 64 years is subject to this risk. In 2008, this was equivalent to 69.5 per cent of the total population (Table 68). In terms of the financial risk associated with illness, it is assumed that 100 per cent of the population is at risk. In terms of the risk of single-parent poverty, it is assumed that all married women and their children who are under 18 are at risk. In 2008, this group represented 35.1 per cent of the population. In terms of the risk to poverty in old age, it is assumed that the population aged 45-64 is most at risk. This group represented 27.3 per cent of the population in 2008. The component specific weights are generated by adding up all the proportions of the population subject to the four risks (232) and then standardizing to unity by dividing each proportion of the population affected by the risk by 232. The resulting weights are found in Table 69.

Chart 48a: Overall Index of Economic Security for Canada, 1981-2008

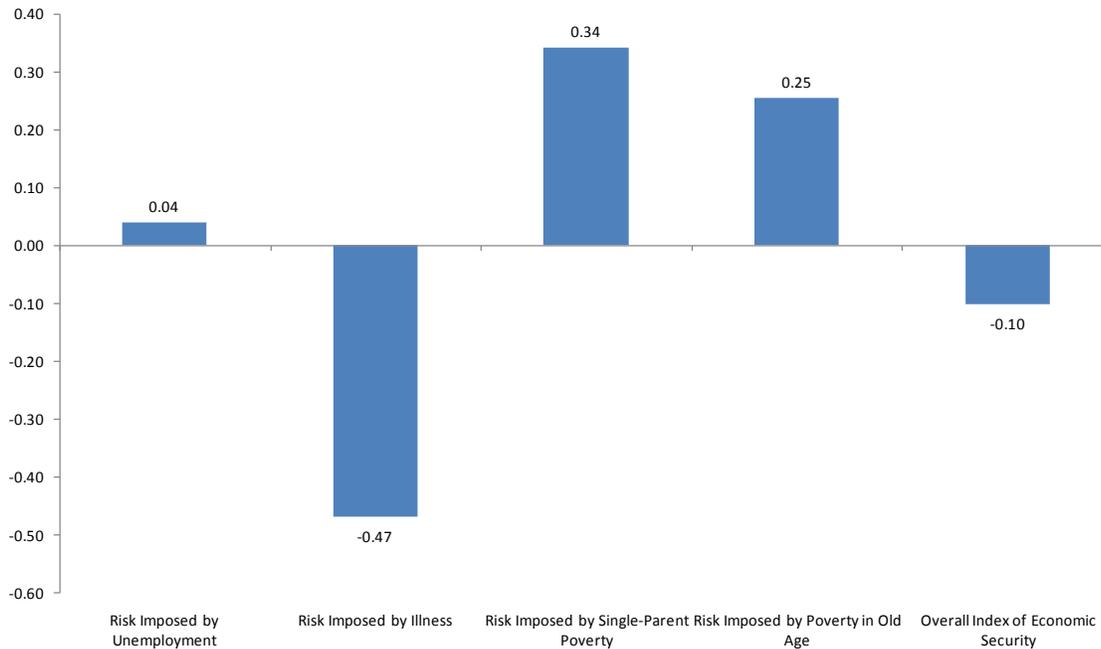
Source: Table 55

Because of demographic shifts, the proportion of the population affected by the different risks, and hence the weights, varies over time. With the aging of the population, the proportion of the population in the 15-64 age group has increased from 68.1 per cent in 1981 to 69.5 per cent in 2008, the proportion of the population aged 45-64 rose from 18.9 per cent to 27.3 per cent, and the proportion of married women with children under 18 fell from 45.3 per cent to 35.1 per cent.

The contribution of each component is the product of its scaled value and weight. For example, in 2008 the contribution of the risk of unemployment was 0.191 (0.637×0.300), financial risk from illness 0.143 (0.332×0.432), the risk of single parent poverty 0.115 (0.766×0.150), and the risk of poverty in old age 0.100 (0.853×0.118). Aggregating the contributions gives 0.558, which is the value of the overall economic security domain in 2008.

The overall index of economic security fell 0.10 points (or 15.5 per cent) from 0.660 in 1981 to 0.558 in 2008 (Chart 48a). The weighted contribution of three of the components to economic security increased between 1981 and 2008 – the financial security from unemployment (0.3 per cent per year), the security from by single-parent poverty (1.21 per cent per year) and the security from poverty in old age (2.72 per cent per year) (Chart 48b). This means that the entire decline in the overall economic security in Canada over the 1981-2008 was driven by the rapid decline in the security from illness, with its contribution falling 3.2 per cent per year over the 1981-2008 period. The large weight given to this component (about 43 per cent of the security index) also contributed to its preponderant role in determining the evolution of the overall economic security domain.

Chart 48b: Change in the Components of Economic Security
1981-2008, point



Source: Table 55

7) Vulnerable Social Groups

In the Canadian context, particular attention must be given to certain groups which tend to reap less of the benefits stemming from economic growth. In this section, we briefly review the recent performance of immigrants and Aboriginal Canadians in terms of income and labour market outcomes to assess whether or not they have followed overall Canadian trends or not.

In terms of unemployment rate, recent immigrants (those who entered the country 6 to 10 years ago) and very recent immigrants (those who entered the country in the last five years) to Canada have seen their fortunes improve in both the 2001 and 2006 censuses. In 1996, the unemployment rate among very recent immigrants stood at 18.0 per cent (Table 71a). It decreased to 12.7 per cent in 2001 and fell further in 2006, reaching 12.3 per cent. Yet, if compared to unemployment among non-immigrants, very recent immigrants lost ground between 1996 and 2006: in 2006 their unemployment rate was 92 per cent higher than that of non-immigrants, compared to 82 per cent in 1996. In other words, very recent immigrants did benefit from the overall trend towards better labour market outcomes, but less so than non-immigrants.

The unemployment rate for recent immigrants followed a similar trend, from 13.4 per cent in 1996 to 8.4 per cent in 2006. They also gained ground in relative terms, with their unemployment rate decreasing from 35 per cent above that of non-immigrants in 1996 to 31 per cent above that of non-immigrants in 2006.

Income data paints a much worse picture. Between 2000 and 2005, economic families headed by a very recent immigrant experienced a decline in real average total income, from \$55,615 to \$53,556 (Table 71b). The ratio of very recent immigrant income to non-immigrant income fell from 72.7 per cent in 2000 to 64.1 per cent in 2006. These patterns were replicated for real median total income, with very recent immigrants and immigrants as a whole losing ground both in absolute and relative terms between 2000 and 2005 (Table 71c).

The Aboriginal population fared slightly better than immigrants, experiencing relative improvements in addition to absolute improvement in labour market outcomes between 2001 and 2006 (Sharpe, Arseneault, Lapointe and Cowan, 2009). The unemployment rate of Aboriginal Canadians fell from 19.1 per cent in 2001 to 14.8 per cent in 2006, or from 169 per cent higher than that of non-Aboriginal in 2001 to 135 per cent in 2006 (Table 72a). Their employment rate also increased, from 49.7 per cent in 2001 (80.4 per cent the non-Aboriginal level) to 53.7 per cent in 2006 (85.6 per cent the non-Aboriginal level) (Table 72b). These improvements, however, should not obscure the fact that Aboriginal Canadians remain grossly under-employed when compared to other Canadians.

VI. Overall Trends in the Living Standards Domain

This report has discussed trends in a large number of indicators of living standards covering average and median income and wealth, the distribution of income and wealth, income volatility, and economic security. This section attempts to summarize and synthesize these trends to develop a coherent story about the evolution of living standards in Canada over the last quarter century.

A. Overall Trends

1) Canadians Are on Average Better Off in Terms of Income and Wealth

The first message from the data is that Canadians have on average higher income in 2007 and 2008 than in 1981. But the magnitude of the real income gains is very sensitive to both the choice of unit of analysis (persons versus households) and the choice of income measure (total or pre-tax versus after-tax income).

The number of households grew almost 60 per cent faster than the number of persons over the 1981-2007 period (51.5 per cent versus 32.7 per cent) so real income trends on a household basis show much less progress than on an individual basis. As the average tax rate also increased over the period, after-tax income measures show less growth than pre-tax measures.

National account income measures show that between 1981 and 2007 real personal income per capita rose 34.8 per cent, and real personal disposable income per capita 25.9 per cent (and 36.5 per cent and 28.8 per cent respectively for the 1981-2008 period). In contrast, income estimates from household surveys (SCF/SLID), which are currently only available to 2007, show that total real income per household increased 17.2 per cent and after-tax real income per household rose 15.5 per cent. Greater growth in the number of households than persons account for these differences. Part of

the increase in real income of course reflected an increase in hours worked, with the average weekly hours worked per person of working age up 3.2 per cent over the 1981-2008 period.

The average wealth of Canadians also increased substantially over the 1981-2008 period. National accounts balance sheet estimates show that average real net worth was up 73.3 per cent on a per capita basis and 51.7 per cent on a household basis.

2) Income and Wealth Inequality Has Increased

The second message is that income growth has been unevenly shared among Canadians, with the rich garnering a disproportionately large portion of the gains. For economic families, the after-tax income of the top quintile, or fifth, of households, adjusted for family size, rose 39 per cent between 1981 and 2007, while the increases for the other quintiles were in the 20-25 per cent range. An even more unequal pattern was observed for total and market income. This led to a significant rise in the income share of the top quintile, offset by declines in the income shares of the other four quintiles. These developments resulted in the Gini coefficient, a measure of overall income inequality, increasing significantly, with most of the increase in the 1990s. The Gini coefficient for market income increased by 16.8 per cent between 1981 and 2007. The increase in inequality was greatest for market income and least for after-tax income, implying that increases in both government transfers and taxes offset somewhat the rise in market income inequalities, at least in the 1980s.

The rising inequality also meant that median income measures performed much worse than average income measures. Indeed, over the 1981-2007 period, median market income per household actually declined 4.8 per cent, while median total income rose 2.9 per cent and after-tax income rose 4.2 per cent.

The picture of living standard trends provided by median income is inconsistent with the widespread impression Canadians have of a steady progression in living standards based on average income per capita measures. Median after-tax income of all family units only surpassed 1981 levels in 2006. Not only does it imply a decrease in living standards for the median Canadian household between 1981 and 2005, but it also means that government redistribution, through transfers and taxes, did not totally offset the reduction in median market income per family unit until 2006.

Wealth distribution also became much more unequal between 1984, 1999 and 2005. This trend was particularly obvious between 1999 and 2005, the two years for which data on the distribution of wealth include pensions. Indeed, median real net worth per household increased only 23.2 per cent between 1999 and 2005 compared to 29.6 per cent for average net worth. Median real net worth for the bottom quintile fell 9.1 per cent, compared to a 28.5 per cent rise for the uppermost quintile.

3) Some Progress Has Been Made in Reducing Poverty

The third message is that the rising income inequality has meant that while the increased real average income has translated into some improvement in the poverty rate, these improvements would likely have been greater if income gains had been more evenly shared. Nonetheless, poverty has fallen to a record low, with the after-tax Low Income Cut-off (LICO) rate for all persons 2.4 percentage

points lower in 2007 than in 1981 (9.2 per cent versus 11.6 per cent). Poverty in 2007 reached its lowest level since Statistics Canada began tracking it in 1976, and was down 1.3 percentage points from its previous low of 10.5 per cent in 2006. The poverty gap, that is the amount of money by which the average poor family unit falls short of the poverty line, was the same in 2007 and in 1981 – \$6,700 (2007 dollars).

4) Overall Improvement in Labour Market Conditions

The fourth message is that there has been improvement in overall labour market conditions, a key determinant of living standards, over the 1981-2008 period. Within the period, there were two sub-periods of very poor labour market conditions, namely the early 1980s and first half of the 1990s. The unemployment rate in 2008 was 6.1 per cent, down from 7.6 per cent in 1981. Despite the lower unemployment rate, the proportion of long-term unemployed, that is those who had been unemployed 52 weeks or more, was greater in 2008 than in 1981 – 6.7 per cent versus 5.7 per cent.

The most important development has been the increased employment rate, that is, the ratio of the employed to the working age population. This rate reached 63.6 per cent in 2008, up from 60.1 per cent in 1981 due to the rise in the aggregate participation rate (67.8 per cent versus 65.0 per cent), which itself was driven completely by the increased labour force participation of women. Another positive development has been the decline in the incidence of job loss from 8.0 per cent in 1981 to 5.4 per cent in 2008.

5) Frayed Social Safety Net Provides Less Support for the Disadvantaged

Certain key social programs for working age people now provide less income support to the disadvantaged than they did in the past. Welfare benefits, expressed in constant dollars, were significantly lower for all four types of welfare recipients in 2007 than in 1986. Employment insurance in 2008 was less generous, in terms of required qualification period and duration of benefits, than in 1981. These developments have likely contributed to the increase in income inequality.

On the other hand, the introduction of the child tax credit and the National Child Benefits Supplement in the mid-1990s, the only major new social program established since the 1970s, has provided additional income to poor working families and lowered the poverty rate for this group somewhat. Equally, the national minimum wage in 2008 represented 42 per cent of the average industrial wage, up from 35 per cent in 1983.

B. Sustainability of Living Standards

Canadians enjoy one of the highest standards of living in the world. An important issue is whether this level of living standards can be sustained for future generations. Leaving aside environmental sustainability issues, which are beyond the scope of this report and will be addressed in the report on the CIW environmental domain (but have obvious effects on the sustainability of the overall economy and society) the prospects for the long-term sustainability of the current level of living standards of Canadians are good. Indeed, it is likely that average living standards will continue to rise in the future although not all Canadians may benefit if inequality continues to grow.

The high probability of a rosy scenario for living standards is based on a number of features of the Canadian economy:

- a highly educated population, with Canada having the highest proportion of its population with a post-secondary education of any OECD country;
- a rich natural resource base, especially the oil sands, in a world hungry for resources;
- easy access to the world pool of technological innovations through trade and investment flows, and through our proximity to the United States, the world leader in technology;
- low government and international debt; and
- a rising population largely through immigration adding dynamism to the economy, in contrast to stagnant or falling population in many other developed countries.

This scenario faces some significant risks for example. The most prominent risk to a rosy scenario of recovery in Canada is a protracted recovery, or even further significant declines in economic activity, south of the border. If the United States does not get out of recession rapidly, Canada may not be able to weather the storm as efficiently as it would otherwise do. Moreover, in the short-term, however, the recession in Canada and the United States will undoubtedly reduce the pace of growth of incomes in Canada and significantly increase labour market insecurity.⁷⁸ Yet, the recession may also translate lead to a decline in house prices which will translate into more affordable housing. Nonetheless, it is clear that a recession will translate into a falling composite index for the living standards domain. Indeed, in the wake of both the early 1990s and the 2001 slowdowns, the composite index of the living standards domain decreased (Chart 49).

The effect of the developing recession on the composite index, however, will not be felt before the 2009 reference year. The current crisis only began affecting the labour market in the last quarter of 2008, and will likely not have a significant impact on annual estimates for that year. Given the significant lag between the reference and release year for some data, particularly income data, we should not expect to see the effect of current developments on the composite indicator before 2010 or 2011 when 2009 data become available.

VII. Living Standards Measurement Issues

In its examination of trends in living standards, this report has encountered many technical/definitional and conceptual issues where choices had to be made. Some of these issues are highlighted below.

⁷⁸ Some impacts can already be seen in current data. See Arsenault and Sharpe (2009) for more details.

A. Technical and Definitional Issues

- Which is the more appropriate price index for deflating nominal income to obtain real or constant price estimates – the Consumer Price Index, which has been used in this report, or the Implicit Personal Consumption Expenditure deflator? The CPI grew 0.6 percentage points per year more quickly than the PCE over the 2000-2008 period.
- Is the most appropriate unit of analysis for income statistics the person or the household? This is a very important issue as the number of households grew 19 percentage points faster than the number of persons (51.5 per cent versus 32.7 per cent) over the 1981-2007 period because of falling household size. Both have been used in the report, but gives more emphasis to after-tax data.
- Is the most appropriate unit of analysis for household income statistics the economic family (two or more related persons) or the family unit or household, which includes unattached individuals? Again both have been used in the report depending on data availability from Statistics Canada. Unfortunately, income distribution data are not available for all households.
- Should an equivalence scale be used to adjust economic family income estimates for family size and if so what is the most appropriate equivalence scale? As we have used Statistics Canada data, there is no inconsistency in the use of an equivalence scale.
- Should the term poverty rate be used to refer to the LICO measure, as is done in this report? Since the Government of Canada has provided no official definition of poverty in this country, Statistics Canada does not call LICOs poverty rates. On the other hand, many social groups refer to the LICOs as poverty rates. The report uses LICO rate in preference to poverty rate, a choice reflected in the choice of the headline indicator for poverty.

B. Conceptual Issues

- Would value be added to the analysis of living standards by the construction of a composite index of living standards indicators that captures and summarizes overall trends or would such a measure be potentially misleading given the need for weights to aggregate the different indicators into one index? Do the advantages of aggregation outweigh the disadvantages? A brief section in this report has been added on composite indicators and another paper addresses in more detail this issue (Michalos *et al.*, 2009).
- Which is the most appropriate income measure for tracking trends in real income – after-tax measures, which are closely linked to private consumption and saving possibilities and have largely been used in this report, or total (before-tax) income measures which are closely linked to public consumption possibilities through taxes as well as private consumption and saving possibilities? The report reports both total and after-tax income measures as both have uses.
- Which is the most appropriate low income measure? Is it a purely relative measure such as the Low Income Measure (LIM) which is insensitive to income growth that equally affects all

income groups? Or is it an absolute poverty measure such as the Market Basket Measure (MBM) or to a somewhat lesser extent the Low Income Cut-off (LICO) where income growth that equally affects all income groups can reduce poverty? The report reports results for all three measures of low income, but prefers the LICO as it is available for a long period and is familiar to Canadians.

- A second issue related to poverty is the relative emphasis that should be given low income or poverty rates versus gaps. Both low income rates and gaps are reported, but more attention is given to the rate as it is better understood by the public.
- In the analysis of trends in living standards, what is the relative weight that should be attached to objective measures of living standards and to subjective measures, particularly in situations where the two concepts are out of alignment? The report gives priority to objective measures.
- What is the relative weight that should be given short-term or frictional unemployment, compared to long-term or structural unemployment in the assessment of the wellbeing effects associated with unemployment? More emphasis is put on long-term unemployment as involves greater hardship.

VIII. Headline Indicators for the Living Standard Component of the CIW

At the meeting of the CIW National Working Group June 27-28, 2006 in Ottawa, eleven indicators were selected for the living standards domain of the Canadian Index of Wellbeing.

Income

- Income distribution (ratio of top to bottom quintile)
- After-tax median income
- Incidence of low income (LICO)
- Economic Security (CSLS Economic Security Index)
- Wealth distribution
- Persistence of low income

Work

- Long-term unemployment
- Employment rate

- Job quality (CIBC Employment Quality Index)

Basic Necessities

- Housing suitability and affordability
- Food security

The absolute values of the latest estimates for all headline indicators are provided in Summary Table 13. Unfortunately, annual time series data are available for only nine of the eleven indicators. There were no consistent time series estimates for the persistence of low income (estimate for 2000 only) and the prevalence of food insecurity (estimate only for a few selected years). Moreover, data on wealth distribution were available only for 1984, 1999 and 2005.

Only six of the eight headline indicators with time series data have estimates for the entire 1981-2008 period. Estimates for the CIBC employment quality index are only available from 1988 and for the RBC housing affordability index since 1985. Because of these data limitations, and because of data limitations in other domains, headline indicators for the living standards domain are reported only starting in 1988. As a result, the key trends discussed in this section differ slightly from those observed for the 1981-2008 period highlighted throughout the report.

It is important to know if an increased value for a headline indicator represents an improvement or deterioration in living standards. We assume that increases in the values for median income, the CSLS economic security index, the employment rate and the CIBC Employment Quality Index represent improvements in living standards. Alternatively, increases in the value of the ratio of the top to bottom income quintile, the incidence of low income, the incidence of long-term unemployment, and the RBC housing affordability index represent a deterioration in living standards.

Of the eight headline indicators, four experienced increases and four deteriorations between 1988 and 2008 (Executive Summary Table 2). The largest improvement was in the incidence of long term unemployment which witnessed a 22.5 per cent decrease (1.9 percentage points). The second largest improvement was in the incidence of low income for economic families (down 27.5 per cent per cent or 2.2 percentage points). There are also notable increases in after-tax real median family income, up 14.4 per cent, and the employment rate which is up 3.2 per cent (1.9 percentage points).

The headline indicator that suffered the largest deterioration over the 1988-2008 period was the ratio of the after-tax incomes of the top to bottom quintile (up 16.6 per cent), followed by economic security (down 14.7 per cent) and employment quality (down 11.3 per cent). The RBC Housing Affordability Index saw the smallest change among the indicators that experienced downward movement; the index was up 9.5 per cent, indicating a fall in housing affordability.

Summary Table 13: Composite Index of the Canadian Index of Wellbeing, Headline Indicators for the Living Standards Domain

Year	Ratio of top to bottom quintile of economic families (after tax)	After tax median income of economic families (2007\$)	Incidence of economic families in poverty (%)	Scaled value of economic security	Incidence of long-term unemployment (%)	Employment rate (%)	CIBC index of employment quality (1994 Q1=100)	RBC housing affordability index
1988	4.16	54,000	8.0	0.654	8.7	61.7	112.6	41.3
1989	4.23	54,800	7.5	0.667	8.1	62.2	113.5	44.3
1990	4.38	52,700	9.1	0.654	7.1	61.7	111.7	49.0
1991	4.48	50,700	9.9	0.621	8.9	59.7	108.6	42.6
1992	4.59	51,100	9.9	0.603	13.2	58.3	104.0	40.0
1993	4.44	49,500	11.0	0.592	16.2	57.9	101.8	38.9
1994	4.46	50,400	10.8	0.592	17.4	58.4	100.6	42.5
1995	4.53	49,900	10.9	0.599	16.3	58.7	101.6	39.2
1996	4.74	49,800	11.7	0.586	16.4	58.4	100.1	36.7
1997	4.86	50,100	11.6	0.575	15.6	58.9	100.1	35.1
1998	4.99	52,000	10.1	0.581	13.3	59.7	100.4	34.5
1999	4.86	53,700	9.5	0.584	11.2	60.6	104.4	35.6
2000	5.11	54,600	9.0	0.593	10.7	61.3	105.3	36.6
2001	4.99	56,800	7.9	0.571	9.0	61.1	105.7	34.3
2002	5.09	56,700	8.6	0.537	9.2	61.7	102.9	35.1
2003	4.98	56,700	8.5	0.534	9.6	62.4	100.2	35.5
2004	5.15	57,400	8.0	0.549	9.1	62.7	99.2	36.7
2005	4.97	58,400	7.4	0.544	9.2	62.7	99.3	37.3
2006	4.88	59,600	7.0	0.558	8.3	63.0	98.5	41.0
2007	4.86	61,800	5.8	0.563	7.1	63.5	97.7	44.9
2008	4.86	61,800	5.8	0.558	6.7	63.6	99.9	45.2
Change, 1988-2008								
Absolute change	0.7	7,800	-2.2	-0.096	-1.9	1.9	-12.7	3.9
Per cent change	16.6	14.4	-27.5	-14.7	-22.5	3.2	-11.3	9.5

Note: Data were interpolated linearly for missing data point. If data points were missing for 2008, they were assumed to be the same as in 2007

A Composite Index for the Living Standards Domain

This section constructs a composite indicator for the 1988-2008 period based on the indexes for the eight headline indicators (see Michalos *et al.* (2009) for details). Each of the eight raw indicator scores of Summary Table 13 is converted into an index of change in Summary Table 14 by dividing every raw score in each column by the first score in the column for the base year of 1988, e.g., the first score for the ratio of top to bottom quintile gives $4.16/4.16 = 100.0$, $4.23/4.16 = 101.68$, etc. It should be noticed that the replacement of raw data scores by change scores in the interest of

obtaining comparability across the set of indicators was made at the expense of a loss of important information for each indicator, e.g., the final change score for economic families' after tax median incomes across the decade indicates that some progress was made but it fails to indicate anything concerning the size or adequacy of those incomes. Clearly, the information contained in Summary Table 13 is at least as important as the information in Summary Table 14.

Summary Table 14: Composite Index of the Canadian Index of Wellbeing, Headline Indicators for the Living Standards Domain

Year	Ratio of top to bottom quintile of economic families (after tax)	After tax median income of economic families (2007\$)	Incidence of economic families in poverty (%)	Scaled value of economic security	Incidence of long-term unemployment (%)	Employment rate (%)	CIBC index of employment quality (1994 Q1=100)	RBC housing affordability index	Composite Index – Living Standards Domain
1988	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1989	98.3	101.5	106.7	102.0	107.4	100.8	100.8	93.2	101.3
1990	95.0	97.6	87.9	100.0	122.5	100.0	99.2	84.3	98.3
1991	92.9	93.9	80.8	95.0	97.8	96.8	96.4	96.9	93.8
1992	90.6	94.6	80.8	92.2	65.9	94.5	92.4	103.3	89.3
1993	93.7	91.7	72.7	90.5	53.7	93.8	90.4	106.2	86.6
1994	93.3	93.3	74.1	90.5	50.0	94.7	89.3	97.2	85.3
1995	91.8	92.4	73.4	91.6	53.4	95.1	90.2	105.4	86.7
1996	87.8	92.2	68.4	89.6	53.0	94.7	88.9	112.5	85.9
1997	85.6	92.8	69.0	87.9	55.8	95.5	88.9	117.7	86.6
1998	83.4	96.3	79.2	88.8	65.4	96.8	89.2	119.7	89.8
1999	85.6	99.4	84.2	89.3	77.7	98.2	92.7	116.0	92.9
2000	81.4	101.1	88.9	90.7	81.3	99.4	93.5	112.8	93.6
2001	83.4	105.2	101.3	87.3	96.7	99.0	93.9	120.4	98.4
2002	81.7	105.0	93.0	82.1	94.6	100.0	91.4	117.7	95.7
2003	83.5	105.0	94.1	81.7	90.6	101.1	89.0	116.3	95.2
2004	80.8	106.3	100.0	83.9	95.6	101.6	88.1	112.5	96.1
2005	83.7	108.1	108.1	83.2	94.6	101.6	88.2	110.7	97.3
2006	85.2	110.4	114.3	85.3	104.8	102.1	87.5	100.7	98.8
2007	85.6	114.4	137.9	86.1	122.5	102.9	86.8	92.0	103.5
2008	85.6	114.4	137.9	85.3	129.9	103.1	88.7	91.4	104.5
	Change, 1988-2008								
Per cent change	-14.4	14.4	37.9	-14.7	29.9	3.1	-11.3	-8.6	4.5

Note: Data were interpolated linearly for missing data point. If data points were missing for 2008, they were assumed to be the same as in 2007

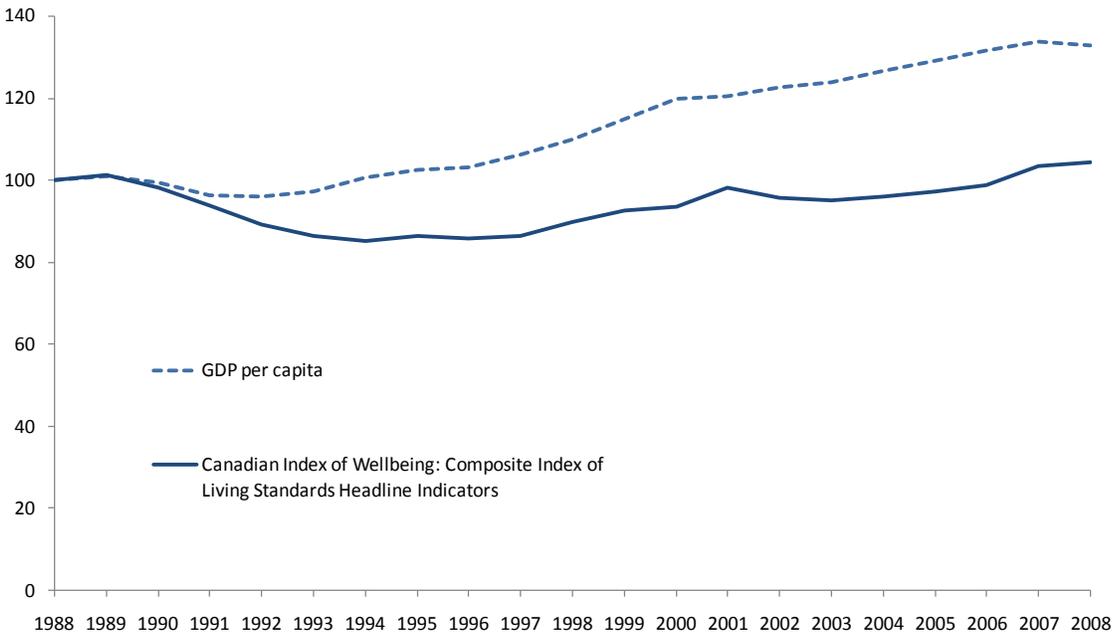
In order to standardize the index values so that increases and decreases in figures uniformly represent improvement and deterioration, respectively, in living standards, the values of indicators where an increase represented a deterioration in living standards have been transformed by their reciprocals e.g., the index values for the RBC housing affordability index become $100.0/100.0 =$

100.0, $100.0/107.3 = 93.23$, etc. This transformation is non-linear and may distort some trends, but it seemed to be the most transparent option.

The aggregation function for the index values of the eight indicators is a simple average, or a mean score, with equal weights for all indicators. The simple average of any set of numbers is a familiar measure of the central tendency of the set, with familiar problems. Most notably, a mean (or average) score can provide a very misleading picture if one or a few figures in the set are wildly different from most others.

The composite index increased 4.5 per cent over the 1988-2008 period (Chart 49). This composite indexes suggest that Canadians have seen virtually no increase in their living standards over the 20-year period from 1988 to 2008. In sharp contrast, GDP per capita rose 32.8 per cent over the period.

Chart 49: Trends in GDP per Capita and Composite Index of Headline Living Standards Indicators for Canada, 1988-2008



This conclusion of course depends on the period selected (as 1988 was a peak year, use of an earlier year would likely show greater improvements), and the choice of headline indicators. Had averages for income been used instead of median values, living standards improvements would have been greater. Increased inequality in income and wealth do not necessarily mean that persons at the bottom of the distribution are worse off in any absolute sense, only that they are worse off in relative terms. This means that the weights given distribution issues in the assessment of living standards (in this case through the number of distributional indicators) reflect the values of the constructors of the composite index.

X. Conclusion

This report has provided a comprehensive examination of a large number of indicators of living standards in Canada over the last quarter century and has identified a number of these indicators as headline indicators for the new Canadian Index of Wellbeing. The bottom line from this report is that Canada is becoming a much richer country, but that it has been the top quintile that has received the lion's share of rising income and wealth.

Looking at the nine headline indicators for which time series are available, one sees that many dimensions of the living standards of Canadians have not improved between 1981 and 2008. Indeed, Canadians experienced a widening of income and wealth inequalities. There have been notable poverty reductions over the period. On the other hand, wealth inequality have both increased significantly. The unemployment rate is near to a record low for the 1981-2008 period, and yet the incidence of long-term unemployment was higher in 2008 than in 1981. Economic security has also fallen; despite rising security in many dimensions, the decrease in economic security caused by additional personal financial costs associated with healthcare represents a major policy area that must be addressed. Thus, many dimensions of living standards in Canada have not improved since 1981, and that in spite of a 52.6 per cent surge in real gross domestic product per capita. Looking forward, the challenges for Canada's policymakers are significant, but need to be tackled if Canada is to become a fairer and richer country.

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