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Living Standards Domain of the Canadian Index of Wellbeing

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Abstract

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This paper, which represents 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 1981-2010 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.

The report provides 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 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 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 2010. Indeed, Canadians experienced a widening of income and wealth inequalities. There have been poverty reductions, but the reductions were not nearly as large as the increase in wealth inequality. The recent recession pushed both the unemployment rate and the incidence of long-term unemployment above the 1981 level, though the 2008 levels were below the 1981 levels. Economic security measured by the CSLS index has also fallen dramatically, 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 49.0 per cent surge in gross domestic product per capita.

Benefits of growth have been shared very unevenly, and the recent recession has eroded many of the gains that had been made in the last 30 years. Looking forward, the challenges for Canada's policymakers are significant, but need to be tackled if Canada is to become a fairer, healthier and richer country.

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 Canadian Index of Wellbeing, provides a comprehensive overview of trends in a number of indicators of living standards over the 1981-2010 period in Canada.

Living Standards: What is Covered and Why?

A given level of national income may be obtained at 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 current and future income streams for Canadians.

To decide on 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 aspects may be more or less covered by other domains.

Executive Summary Table 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 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 2010 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 over 50 per cent more than the number of persons over the 1981-2009 period (56.6 per cent versus 35.9 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 2010 real personal income per capita rose 36.1 per cent, and real personal disposable income per capita rose 31.4 per cent. In contrast, income estimates from household surveys (SCF/SLID), which are currently only available to 2009, show that total real income per household increased 17.4 per cent and after-tax real income per household rose 17.1 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 aged 15 through 64 up 1.5 per cent over the 1981-2009 period.

The average wealth of Canadians also increased substantially over the 1981-2010 period. National accounts balance sheet estimates show that average real net worth was up 80.0 per cent on a per capita basis and 56.4 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 38.9 per cent between 1981 and 2009, while the increases for the other quintiles were less than 26 per cent. 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 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 1981-2009 period, median market income per household declined 7.6 per cent, while median total income saw a moderate increase of 1.7 per cent and after-tax income also saw a moderate increase of 5.0 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 measures, and on persons, not households. 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 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 1999 and 2005, the only years for which information on the distribution of wealth is available on a consistent basis. Indeed, median net worth per household increased only 23.2 per cent between 1999 and 2005 compared to 29.6 per cent for average net worth per household. Median 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 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. The after-tax Low Income Cut-off (LICO) rate for all persons was 2.0 percentage points lower in 2009 than in 1981 (9.6 per cent versus 11.6 per cent) after peaking at 15.2 per cent in 1996. The poverty gap ratio, that is the amount of money by which the average poor family unit falls short of the poverty line as a proportion of the line, was almost the same in 2009 (33.6 per cent) and in 1981 (32.8 per cent).

Recent decline 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 1981-2010 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 2010 was 8.0 per cent, up from 7.6 per cent in 1981, though unemployment was at a historic low before the recent recession. Along with a higher unemployment rate, the proportion of long-term unemployed, that is those who had been unemployed 52 weeks or more, was greater in 2010 than in 1981- 11.5 per cent of unemployment versus 5.7 per cent.

The most important positive development has been the increased employment rate, that is, the ratio of the employed to the working age population. This rate reached 61.6 per cent in 2010, up from 60.1 per cent in 1981 due to the rise in the aggregate participation rate (67.3 per cent versus 65.0 per cent), which itself was driven completely by the increased labour force participation of women. The gains were even larger previous to the recession, having reached a historical high of 63.5 per cent in 2008. Another positive development has been the decline in the incidence of job loss from 8.0 per cent in 1981 to 6.8 per cent in 2010, another metric that was even better before the recession (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, are lower for three out of four types of welfare recipients in 2009 (single parent, one child households are the exception) than in 1986. Employment insurance is now less generous, in terms of required qualification period, coverage, and duration of benefits, than in 1981.

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 2010 represented 45.3 per cent of the average industrial wage, up from 35.4 per cent in 1983, about half this increase having happened in the last three years.

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, eleven indicators were selected for the living standards domain of the Canadian Index of Wellbeing by the CIW National Working Group:

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

Unfortunately, annual time series data are available for only eight of the eleven indicators. There were no consistent annual time series estimates for the persistence of low income (estimate for 2000 only), wealth distribution, and the prevalence of food insecurity (estimate for 2001 and 2007 only). Of the eight headline indicators for which time series estimates are available for the 1988-2010 period, three experienced increases, four deteriorations, and one was virtually unchanged (Table 62, Executive Summary Table 2). The largest improvement was in the after-tax median income of economic families (up 15.2 per cent, or $8,000). The second largest improvement was in the incidence of persons in low income (down 11.1 per cent, or 1.2 percentage points).

The headline indicator that suffered the largest deterioration over the 1988-2010 period was the incidence of long term unemployment (down 24.9 per cent). This was followed by the scaled value of CSLS economic security (down 21.7 per cent), the ratio of top to bottom quintile income (increased 23.9 per cent) and CIBC employment quality fell 13.1 per cent.

Executive Summary Table 2: Index of living standards indicators for Canada

	Income Distribution : Ratio of top to bottom quintile	After tax median income of economic families, 2009 constant dollars	Incidence of persons in low income, percent	Scaled value of CSLS economic security	Incidence of Long Term Unemployment	Employment Rate	CIBC Index of Employment Quality (Q1 1994=100)	RBC Housing Affordability Index
1988	4.55	55,400	10.8	0.619	8.7	61.7	112.6	41.5
1989	4.57	56,200	10.2	0.637	8.1	62.2	113.5	44.1
1990	4.77	54,100	11.8	0.621	7.1	61.7	111.7	49.2
1991	4.89	52,100	13.2	0.595	8.9	59.7	108.6	43.1
1992	4.98	52,400	13.3	0.580	13.2	58.3	104.0	40.1
1993	4.79	50,800	14.1	0.566	16.2	57.9	101.8	39.3
1994	4.83	51,700	14.0	0.571	17.4	58.4	100.6	41.5
1995	4.92	51,200	14.5	0.576	16.3	58.7	101.6	39.6
1996	5.18	51,100	15.2	0.564	16.3	58.5	100.1	36.7
1997	5.31	51,400	15.0	0.563	15.6	59.0	100.2	35.2
1998	5.52	53,300	13.7	0.566	13.3	59.7	100.4	34.7
1999	5.44	55,100	13.0	0.570	11.3	60.6	104.3	35.5
2000	5.69	56,000	12.5	0.579	10.8	61.3	105.3	36.9
2001	5.56	58,300	11.2	0.551	9.0	61.1	105.6	34.7
2002	5.63	58,200	11.6	0.512	9.2	61.7	102.8	35.2
2003	5.53	58,100	11.6	0.508	9.6	62.4	100.2	35.6
2004	5.72	58,900	11.4	0.516	9.1	62.6	99.0	36.8
2005	5.62	59,900	10.8	0.518	9.2	62.5	99.1	37.4
2006	5.54	61,100	10.5	0.522	8.3	62.8	98.3	41.1
2007	5.50	63,400	9.2	0.530	7.1	63.4	97.6	44.3
2008	5.61	64,100	9.4	0.521	6.7	63.5	99.8	45.0
2009	5.64	63,800	9.6	0.486	7.5	61.6	97.4	39.9
2010	*5.64*	*63,800*	*9.6*	0.485	11.5	61.6	97.9	41.2
Average annual growth rate, %								
1988-2000	1.87	0.09	1.23	-0.56	1.82	-0.05	-0.56	-0.97
1988-2009	1.03	0.67	-0.56	-1.15	-0.68	-0.01	-0.69	-0.19
2000-2010	-0.08	1.31	-2.61	-1.76	0.70	0.06	-0.73	1.10
2000-2009	-0.09	1.46	-2.89	-1.93	-3.92	0.06	-0.86	0.87
1988-2010	0.98	0.64	-0.53	-1.11	1.31	0.00	-0.64	-0.03
Total growth, %								
1988-2009	23.88	15.16	-11.11	-21.56	-13.39	-0.11	-13.49	-3.88
1988-2010	23.88	15.16	-11.11	-21.73	33.17	-0.08	-13.11	-0.74

Note: 2010 values are assumed to be the same as they were in 2009 for the first three columns.
Sources: 12I, 15C, 16b, 19C, 25, 27, 36, 36a, 37, 40 and 55; CSLS Database for Living Standards 2011.

The composite index decreased 0.9 per cent over the 1988-2009 period (Appendix Figure 1). This composite index suggests that Canadians have seen a decrease in their living standards over the 21-year period from 1988 to 2009. In sharp contrast, GDP per capita rose 27.1 per cent over the period. It should be noted that the average index value was above 100 as recently as 2008 and the median as recently as 2009, but that the recent recession has had strong negative impacts on poverty, income and labour market indicators.

Appendix Figure 1: Trends in GDP per Capita and Composite Index of Headline Living Standards Indicators for Canada, (2002=100) 1988-2009

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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 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 ambiguously improved between 1981 and 2010. Indeed, Canadians experienced a widening of income and wealth inequalities. There have been poverty reductions, but the reductions were not nearly as large as the increase in wealth inequality. In 2009, the unemployment rate was 8.0 per cent, 0.4 percentage points higher than it was in 1981. In addition, the incidence of long-term unemployment is 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 49.0 per cent surge in 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, healthier and richer country.

Living Standards Domain of the Canadian Index of Wellbeing[1]

I. Introduction

Have the living standards of Canadians improved or deteriorated in recent years? 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 1981-2010 period in Canada.

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 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 Well-being		
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 and territorial levels for almost all indicators discussed are provided in the extensive

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[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 Roussell, 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 (www.csls.ca).

set of tables that accompany this document.[2] 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 30 years. 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 2009 or 2010, providing as up-to-date a picture as available data allow on current living standards in Canada. Within the 1981-2009 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 post-2000 period is marred by a recession in the closing years of the decade, but the period is nonetheless analyzed to note recent trends.

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 well-being 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 to psychologists, it should not be a prominent part of an analysis of trends in living standards, which should be measured by objective indicators.[3]

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[2] 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.

[3] 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.

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 1981-2009 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.[4] 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 Reports* 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 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.

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

[4] Welfare rates are from the National Welfare Council, minimum wage rates from Labour Canada, 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).

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). 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.[5]

This section of the report looks at trends in the average and median income and wealth of Canadians from 1981 to the last year for which data is 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.

For a country as a whole, income is synonymous with gross domestic product. However, personal income per capita tends to be closer to the public's definition of income and bears a

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[5] 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 Well-being.

closer resemblance to the reality of daily life.[6] Unfortunately, national accounts data 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 1980-2009 period. For SLID, the time between the end of the reference period and the release of estimates, also called release lag, is currently around 15 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 1961-2010 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 1981-2010, 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.

Summary Table 1: National Accounts-Based Measures of Real Aggregate Income in Canada, Average Annual Change (per cent), 1981-2010

	Real GDP per capita	Real Personal Income per capita	Real Personal Disposable Income per capita
1981-2010	1.38	1.07	0.95
1981-1989	1.86	1.55	1.11

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[6] 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 are available for 1926-2010, and available from 1926-2009 for the provinces. 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 1981-2009 period. For example, if we compare nominal income-based GDP for Quebec in 1981 using the terminated series V123698 which covers the 1961-1991 period with the current series V687239 which covers the 1981-2009 period, we obtain $79,834 million and $80,494 million respectively. The difference is about 0.8 per cent. Given these data limitations, and more importantly because we are focusing our analysis on developments during the last three decades, we will use data covering the 1981-2010 period.

1989-2000	1.57	0.63	0.27
2000-2010	0.80	1.16	1.56
Total Growth			
1981-2010	49.00	36.09	31.36
Sources: Tables 7A, 8B and 9B			

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 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 1981-2010 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.[7]

Chart 1: National accounts-based measures of real aggregate income in Canada, compound average annual growth rates, 1981-2010, per cent
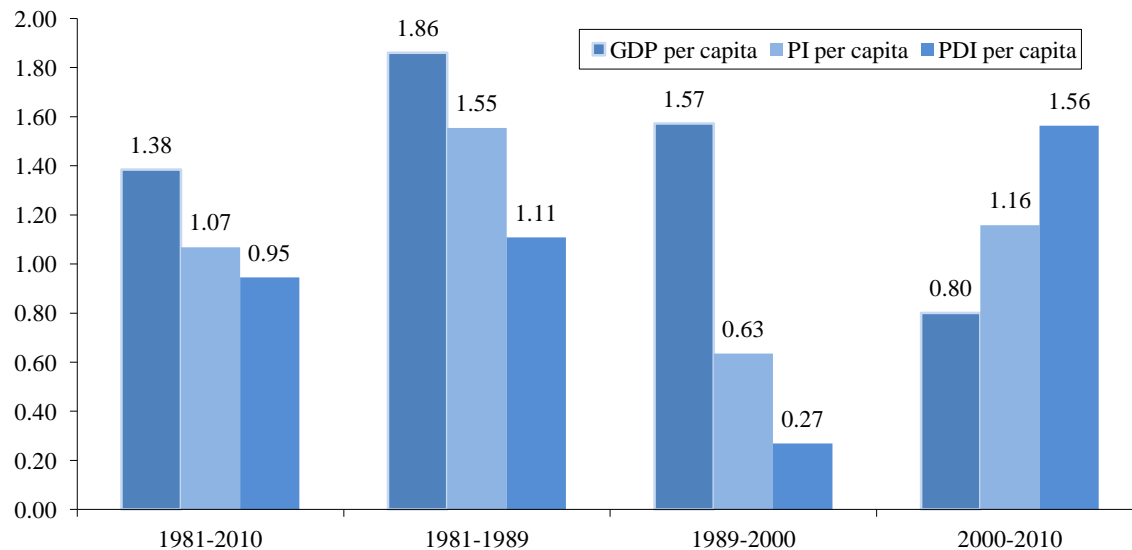
Source: Table 7a, Table 8b and

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[7] 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.

Between 1981 and 2010, real GDP per capita in Canada has increased at an annual compound rate of 1.38 per cent, a 49.0 per cent total increase for the period, from $26,074 to $38,850 chained 2002 dollars (Summary Table 1 and Chart 1). Real GDP per capita has grown every year since 1981, with the exceptions of 1982, the 1990-1992 period, and the recent recession of 2008 and 2009. 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 38.6 per cent over the period. In 2008, real GDP per capita declined 0.5 per cent, the first annual decline since 1992. The recession continued through 2009, when GDP per capita decreased by 4.0 per cent, which was the largest decrease over the entire period.

GDP is not the only measure of aggregate performance. 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-residents has been negative in Canada, which explains why GNP has been lower than GDP over the entire 1981-2010 period (Chart 1.1). Nonetheless, over the 1981-2010 period, GNP grew slightly faster than GDP.

The difference between GDP and GDI 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 oil prices, the price of Canada's exports grew much more rapidly than the price of imports and GDI significantly outperformed GDP (Chart 1.1). 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.

Chart 2: A Comparison of Real Gross Domestic Product (GDP), Real Gross Domestic Income (GDI) and Real Gross National Product (GNP) on a per Capita Basis, 2002 chained dollars, 1981-20010
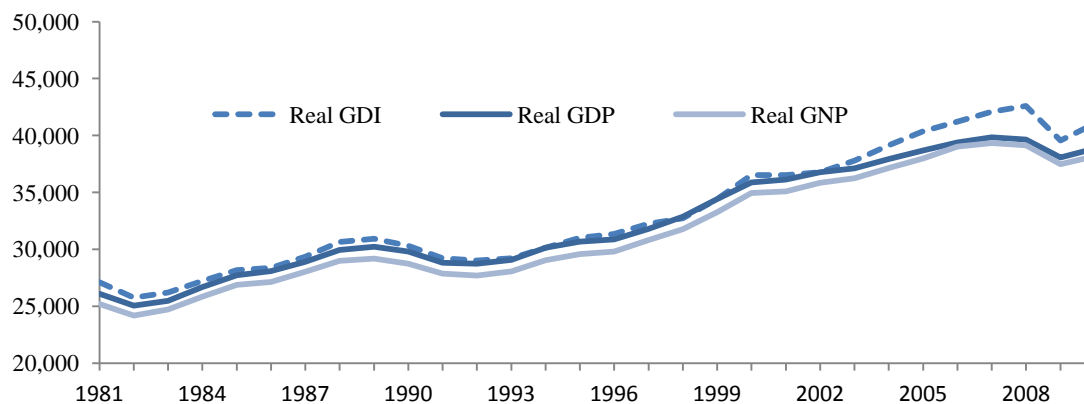
Source : Table 6b, Table 6d, Table 6e and Cansim Series v647785.

Real GDP per capita growth varied by province over the 1981-2009 period. The four low income Atlantic provinces enjoyed above average GDP per capita growth while all three provinces with above average income, Ontario and British Columbia and Alberta, experienced below average growth. Alberta grew only slightly slower than the national average. This resulted in a significant decline in disparities in GDP per capita levels between the provinces.[8]

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 49 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 slower growth than 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.[9] 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 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.[10]

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[8] As shown in Table 7B, GDP per capita as a proportion of the national average rose in Newfoundland and Labrador from 62.5 per cent in 1981 to 93.7 per cent in 2009, in Prince Edward Island from 65.6 per cent to 77.5 per cent, in Nova Scotia from 71.7 per cent to 80.9 per cent, and in New Brunswick from 65.8 per cent to 81.8 per cent. Equally, in all three of the provinces with above average GDP per capita in 1981, GDP per capita as a proportion of the national level fell over the 1981-2009 period, from 109.5 per cent of the national average to 102.4 per cent in Ontario, and most importantly, from 114.7 per cent to 95.3 per cent in British Columbia. Alberta grew only slightly slower than the national rate, and its GDP per capita decreased from 137.3 per cent to 127.5 per cent of the national level over the period.

[9] 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.

[10] Over the 1981-2010 period, the CPI for Canada grew at a compound annual rate of 3.00 per cent, compared to 2.77 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 1981-2010 period, the compound annual growth rate obtained is 0.22 percentage points higher, accumulating to a difference of 8.5 per cent, which is not trivial. Thus, personal income would have shown greater growth if we had used the PEPI instead of the CPI. The

The difference between the CPI and the PEPI is particularly important for the period from 2000 to 2010, when the PEPI grew significantly more slowly than the CPI (Chart 3). 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.

Real personal income per capita grew 36.1 per cent over the 1981-2010 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 1). This is partly due to the faster growth of the CPI compared to the GDP deflator used to deflate nominal GDP, which accounts for 71 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.[11]

Chart 3: Consumer Price Index (CPI) and Personal Expenditure Price Index (PEPI), Index (1981=100), 1981-2010

Source : Table 4 and Table 5
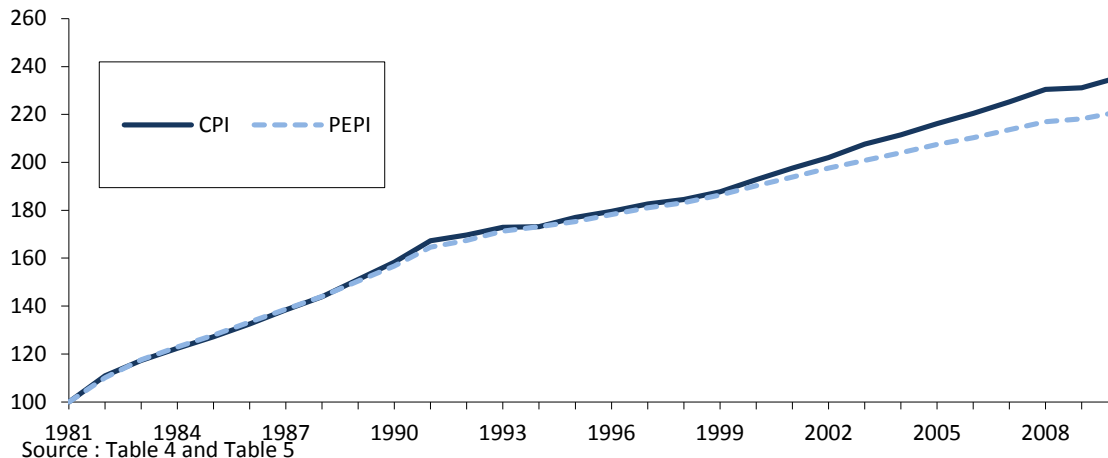
CPI is used to deflate all income and wage measures in this report. If we had used the PEPI, growth in median and average income and wealth would have been 8.5 per cent higher over the period, or 0.22 percentage points annually.
[11] Real personal income per person average annual growth for 1981-2010 was 1.07 per cent, compared to 1.38 per cent for real GDP per capita, a difference of 0.32 percentage points. Many elements contributed to this difference. The most important factor was the difference between the CPI and the GDP deflator. Between 1981 and 2010, the average annual growth of the CPI was 3.00 per cent, compared to 2.77 per cent for the GDP deflator, a difference of 0.23 percentage points, which accounts for about 71 per cent of the gap. A decomposition of nominal GDP sheds more light on the remaining 0.9 percentage point discrepancy (Table 32 and Table 33). Detailed decompositions on the sources of personal income are only available through 2009, but certainly shed light on the income trends. During the 1981-2009period, nominal wages, salaries and supplementary income annual growth averaged 5.28 per cent, slightly lower than nominal GDP growth of 5.33 per cent. Moreover, corporate profits, which represented approximately 12.1 per cent of GDP in 2010, grew on average 5.57 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.

Within the 1981-2010 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 4). 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 $32,314. The recent recession caused a drop in real personal incomes in 2009, followed by growth in 2010, but at $32,210, incomes have yet to fully recover from the downturn.

Chart 4: Gross Domestic Product, Personal Income and Personal Disposable Income on a per Capita Basis ($2002), 1981-2010

Source : Table 7, Table 8B and Table 9B
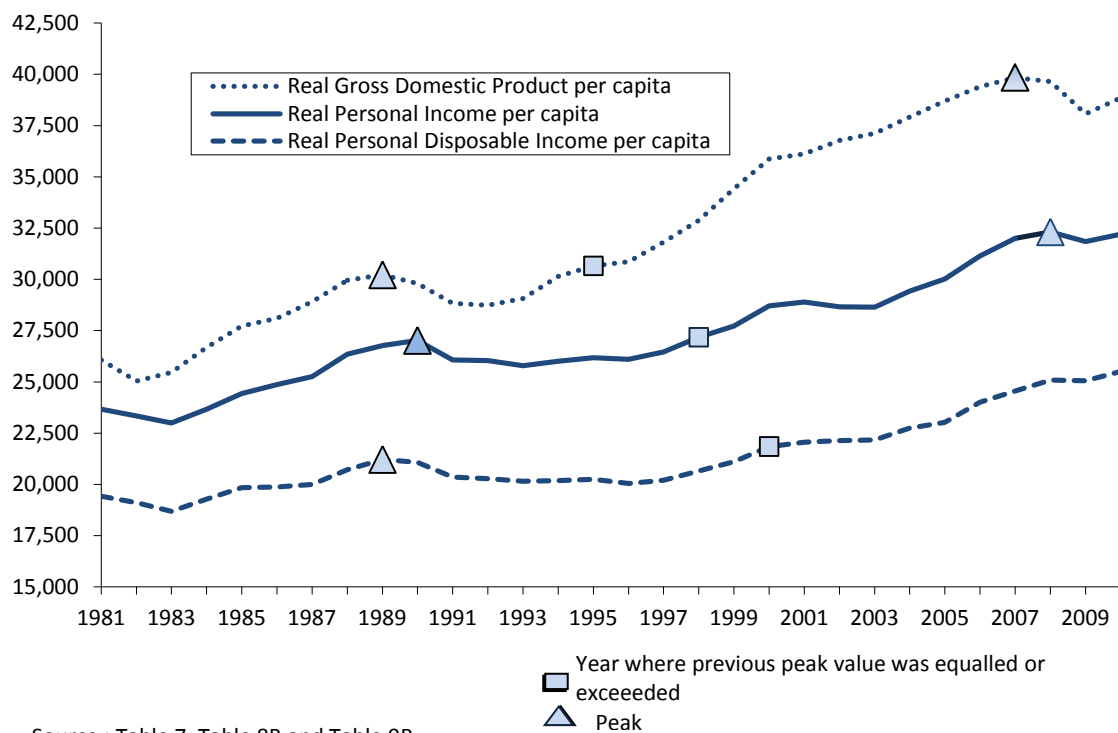
As was the case for GDP per capita, the four below-average income Atlantic provinces enjoyed above average growth in real personal income per capita over the 1981-2010 period, while one of the two provinces with above average income, Ontario, experienced below average growth. This again resulted in a significant decline in provincial disparities in personal income per capita.[12]

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[12] As shown in Table 8D, personal income per capita as a proportion of the national average rose in Newfoundland and Labrador from 62.5 per cent in 1981 to 88.4 per cent in 2009, in Prince Edward Island from 67.4 per cent to 79.7 per cent, in Nova Scotia from 79.0 per cent to 88.5 per cent, and in New Brunswick from 72.9 per cent to 89.7 per cent. Equally, in two of the provinces that had above average personal income per capita in 1981, relative personal income per capita fell over the 1981-2009 period, from 108.5 per cent of the national average to 100.9 per cent in Ontario and from 107.4 per cent to 98.4 per cent in British Columbia.

3) Personal disposable income per capita

Personal disposable income is defined as personal income less current transfers (basically direct taxes, like personal income taxes) to governments. To ascertain trends in the actual spending power of Canadians, real personal disposable income per capita may be 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 and up to 2010 nationally and 2009 provincially.

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 advanced steadily at a 1.68 per cent average annual rate and in 2008 was $24,969. Intriguingly, real personal disposable income hardly declined during the recent recession, having fallen by $36 in 2009. By 2010, growth more than reclaimed recession losses, and the PDI level reached $25,512. The one-year recovery is significantly faster than previous recessions. Over the entire 1981-2010 period, PDI increased at a compound average annual rate of 0.95 per cent, which amounts to a 31.4 per cent increase over the 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 20.79 per cent in 2009 (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.[13] Nonetheless, there is no agreement on whether higher taxes and the 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.

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[13] 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 lower work incentives.

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 1.22 per cent over the 1981-2010 period. Consequently, one might expect real wages to have increased at a comparable rate. However, this has not been the case (Chart 5). Real hourly compensation, which includes wages and in-kind benefits, grew much more slowly, at an average rate of only 0.85 per cent per year, a little over two-thirds the rate of productivity growth. This represents a difference of 0.37 percentage points per year (Summary Table 2).[14] If wages are narrowly defined, the gap is even more substantial. Over the 1997-2010 period, real median hourly wages of employees (instead of real hourly compensation) increased only 0.80 per cent per year. Real average hourly wages increased 0.89 per cent per year between 1997 and 2010 (Table 73b), much slower than real hourly compensation which increased 1.52 per cent per year.

Chart 5: Real Hourly Compensation and Productivity Indexes (1981=100), 1981-2010
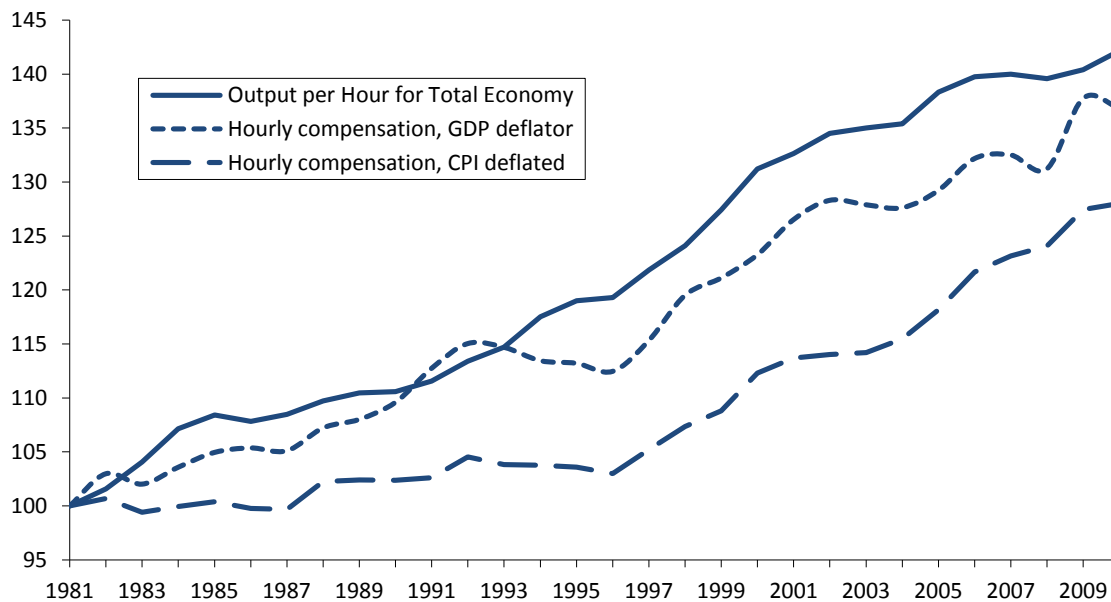
Source : Table 23

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[14] 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 1997-2010 period, according to data from the Labour Force Survey (Table 60). The average female hourly wage has risen from 81.6 per cent of that of males in 1997 to 85.2 per cent in 2010. Equally, the median hourly wage for females has risen from 78.8 per cent to 83.2 per cent that of males over the same period.

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 0.24 percentage points per year faster than the GDP deflator over the 1981-2010 period, (3.00 per cent versus 2.76 per cent),[15] the differential deflator growth explains 65 per cent of the productivity/wage growth gap.

The remaining 35 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 1981-2010 period, average annual growth of nominal wages, salaries and supplementary income was 5.17 per cent, lower than nominal GDP growth of 5.33 per cent per year (Table 32). It should be noted that nominal wages, salaries and supplementary income decreased by 0.47 per cent in 2009, while nominal GDP decreased 4.64 per cent, and nominal GDP excluding wages and inventory declined 10.03 per cent the same year. The recent changes in the trends are most likely outcomes of the recession, which began in the fall of 2008. All non-wage components of income-based GDP except interest and miscellaneous investment income contributed to the faster growth of GDP relative to wages. Net income of unincorporated business, in particular, growing at a robust 6.37 per cent per year, made the most important contribution. In 1981, profits represented only 4.86 per cent of GDP. By 2010, the share had risen to 6.46 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 unincorporated business income, which are not part of worker compensation.[16]

Summary Table 2: 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
1981-2010	0.85	1.07	0.95
1981-1989	0.30	1.55	1.11
1989-2000	0.84	0.63	0.27
2000-2010	1.32	1.16	1.56
Total Growth			
1981-2010	28.00	36.09	31.36
Sources: Table 23			

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[15] 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.

[16] 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.

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 has risen 37.4 per cent. The stagnation in 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 3, about one-fifth 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 3: Factors Explaining the Difference Between Median Real Earnings and Labour Productivity Growth in Canada, 1980-2005

	Absolute (points)	Relative (per cent)
Median Real Earnings and Productivity Gap, of which:	1.26	100.0
Measurement Issues	0.25	19.8
Inequality	0.35	27.6
Labour's Terms of Trade	0.42	33.3
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 4). 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.[17] Adopting a more appropriate measure of labour input, hours worked, thus increases the gap by 0.10 percentage points (7.9 per cent).

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[17] 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.

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.[18]

Summary Table 4: 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	27.3
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 in 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.[19]

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[18] 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 13 per cent in 2007. 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).

[19] 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

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 the 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 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. Factors explaining the change in the labour's terms of trade are explored in Sharpe, Arsenault and Harrison (2008).

The remaining 0.25 percentage points (19.8 per cent) median earnings/labour productivity gap was due to the falling labour share, 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. In an accounting sense, faster growth in the non-wage components of GDP explains the falling labour share. During the 1980-2005 period, average annual growth of nominal wages, salaries and supplementary income was 5.77 per cent, slightly slower than nominal GDP growth of 6.08 per cent per year, and significantly slower than the 6.42 per cent per year rate of increase of nominal GDP excluding wages. Of the six largest non-wage components of income-based GDP (accounting for 97.4 per cent of GDP excluding wages), five grew faster than wages and thus contributed to the faster growth of GDP relative to wages. Profits, growing at a robust 6.59 per cent per year, made the most important contribution. Factors driving the fall in the labour share are explored in more detail in Sharpe, Arsenault and Harrison (2008).

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.[20] 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

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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.

[20] 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.

SLID estimates have been traditionally released with a lag of 18-24 months from the reference year, compared to a two month lag for national accounts-based income estimates. However, estimates are now generally released earlier, with a current average lag of about 15 months. 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.[21]

Household survey-based income estimates are available at the national and provincial level from 1980 to 2009 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.

Chart 6: Growth in Population, Number of Households, Unattached Individuals and Economic Families, Index (1981=100), 1981-2009
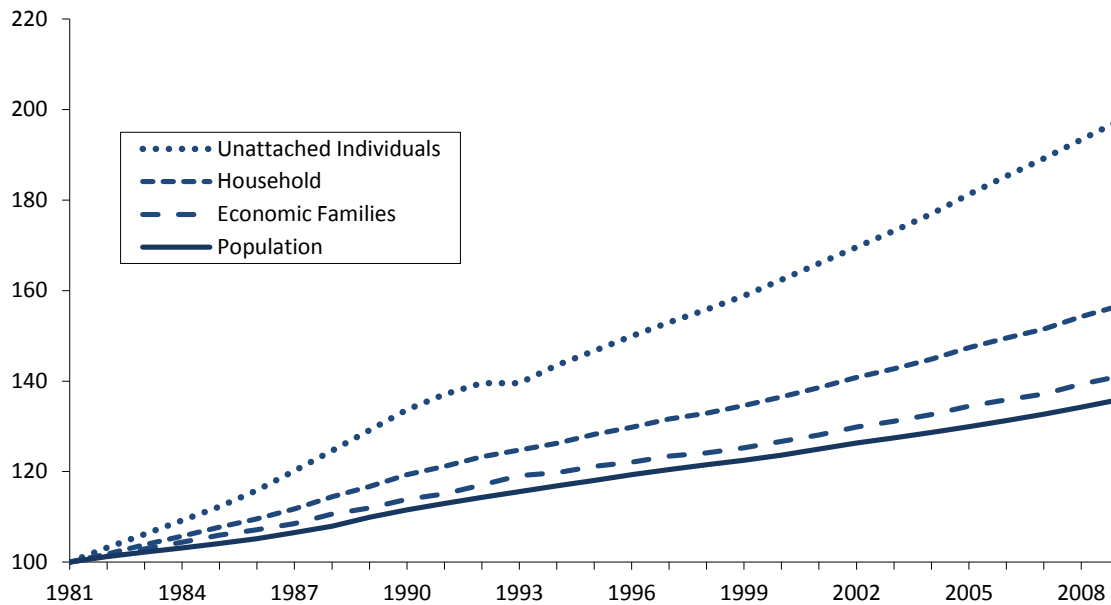
Source : Table1, Table 2A, Table 2B and

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.[22] 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 Appendix Tables 1 and 2A). For the 1981-2009 period, the number of family units increased at an annual compound rate of 1.61 per cent, while population

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[21] 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).

[22] 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.

grew only 1.10 per cent annually. In other words, the number of households increased 56.6 per cent compared to a 35.9 per cent increase for population. Consequently, the average number of persons per family unit fell from 2.72 in 1981 to 2.36 in 2009, down 13.2 per cent (Summary Table 5).

This can be explained by the rapid growth in the number of unattached individuals, up 97.4 per cent between 1981 and 2009. Their share of the total population increased from 10.3 per cent to 15.1 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 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.[23]

As just pointed out, growth in the number of households during the 1981-2009 period was 56.6 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 (208.1 per cent), married couples (69.6 per cent) and lone-parent families (61.8 per cent),[24] the groups that are likely to have a smaller household size (Summary Table 5 and Table 2D).

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[23] 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 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, 1993). The OECD also uses an equivalence scale, but their factor of adjustment for family size is 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 small family, there is almost no difference between the two equivalence scales. 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 get 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. One can notice that while adjusted income per household will be lower than unadjusted income, the effect will be reverse for income per capita. For example, let us suppose a couple with both individuals earning $35,000. In this case, their income per household is $70,000. If they divorce, their income per household drops to $35,000 because the number of household doubled but total income was unchanged. This is the effect captured by household income measure and which are not captured by per capita income measures. On the other hand, per capita income measures underestimate the impact of increasing number of household by not adjusting for family size. If we apply an equivalence scale to approximate our previous family living standards, we can say that their living standards on a per capita basis are equivalent to those of a single person with an income of $50,000 ($70,000/1.4). Therefore, when they divorced, their living standards did not fall by half, but by 30 per cent measured on a household basis. In other words, while income per household captures the negative effects on living standards of a growing number of households, it overestimates its effect by not adjusting for family size. If we adjust for family size, growth in average after-tax income per household is 28.1 per cent compared to 21.6 for unadjusted, a difference of 6.5 percentage points for the 1981-2009 period (Table 11G). Therefore, we need to interpret household income measures with caution if they are not adjusted.

[24] 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 17.4 per cent in 2009. In fact, the

Summary Table 5: Trends in the Number of Family Units, by Family Type, 1981 and 2009, in Thousands

	1981	2009	Total Growth 1981-2009
All family units	9,132	14,300	56.6
Economic families, two persons or more	6,611	9,323	41.0
Elderly families	806	1,507	87.0
Non-elderly families	5,805	7,816	34.6
Married couples	1,354	2,296	69.6
Two-parent families with children	3,081	2,946	-4.4
Married couples with other relatives	643	962	49.6
Lone-parent families	429	694	61.8
Other non-elderly families	298	918	208.1
Unattached individuals	2,521	4,977	97.4
Elderly males	191	379	98.4
Elderly females	529	922	74.3
Non-elderly males	965	2,170	124.9
Non-elderly females	837	1,506	79.9
Source: Table 2D			

On the other hand, the number of non-elderly two-parent families fell 4.4 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 (97.4 per cent) was strong, with non-elderly males driving the increase (up 124.9 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.

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.[25] As with personal disposable income, the income measure most

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number of male lone-parent families grew one-and-a-half times as fast as female lone-parent families, with growth reaching 86.2 per cent and 57.4 per cent respectively.

[25] 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. It may also be called income after 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

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 measures published by Statistics Canada were already deflated using the CPI. As noted earlier, if the PEPI had been used, annual growth for all income measures would have been about 0.21 percentage points higher on average over the 1981-2009 period.

Summary Table 6: 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
1981-2009	0.43	1.87	0.58	0.64	0.56
1981-1989	0.27	3.35	0.57	3.38	0.00
1989-2000	0.18	0.76	0.24	0.52	0.18
2000-2009	0.88	1.92	0.99	-1.58	1.55
Total Growth, %					
1981-2009	12.75	67.92	17.44	19.57	17.06
Source: Table 10B, Table 10E, Table 11A, Table 11B and Table 11C					

Average market income expressed in constant 2009 dollars for all family units in Canada grew from $54,900 in 1981 to $61,900 in 2009, an average annual growth of 0.43 per cent or a total of 12.8 per cent, below the 29.0 per cent growth of real disposable income per capita over the same period (Summary Table 6 and Chart 6). Of course, the much greater growth in the number of households relative to population accounts for this difference.

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 7). This is reflected in an increase in average market income during the 1984-1989 expansion, followed by four years of receding 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 15.7 per cent, significantly more than in any other five-year period for which data are available. This represents a compound annual growth rate of 2.96 per cent per year, much higher than the second-best period at 1.94 per cent (1984-1989).[26]

(CSNA) recently revised its definition of taxes on production to include these payroll taxes, in accordance with international recommendations on national accounting.

[26] If we use SLID income aggregate to calculate the growth of income per person for the 1981-2006 period, we obtain an average annual growth for average market income per person of 0.95 per cent, for average total income per person of 1.07 per cent and for average after-tax income per person of 0.99 per cent.

Summary Table 7: Implicit Income Tax and Government Transfers Rate (per cent)

	Implicit tax rate on personal income	Implicit income tax rate	Implicit rate of government transfers
1981	17.9	15.3	8.8
1989	20.8	19.0	11.0
1995	22.7	19.3	14.3
2000	23.9	19.6	11.5
2007	23.2	16.7	11.4
2008	22.4	16.6	11.4
2009	21.4	15.6	12.5
2010	20.8	n.a.	n.a.
Source: Table 10A, 10C and 10F			

Average total income of all family units followed similar trends, increasing 17.4 per cent between 1981 and 2009 or 0.58 per cent per year, outpacing average market income by 4.7 percentage points (Summary Table 6). Government transfers, which increased 67.9 per cent between 1981 and 2009, explain the difference.[27] In relative terms, the importance of government transfers increased between 1981 and 2009, from 8.8 per cent of total income to 12.5 per cent (Summary Table 7). Over the 1981-1989 period, average total income increased 4.7 per cent, reaching $63,000 in 1989 ($2009). Then, between the peak of 1989 and the trough in 1993, average total income fell 9.4 per cent. Only in 2000 was the 1989 level reached again (Chart 5). Between 2000 and 2009, average total income increased 9.3 per cent.

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 total income, growing slightly slower over the 1981-2009 period at 17.1 per cent or 0.56 per cent per year (Table 11C). In absolute terms, after-tax household income increased from $51,000 in 1981 (2009 dollars) to $59,700 in 2009. 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. Indeed, the implicit income tax rate increased from 17.95 per cent in 1981 to 20.79 per cent in 2010 (Summary Table 7). 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 7). 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, and

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[27] In fact, the difference seems to lie in the reaction of government transfers during downturn. While growth in average total income closely followed growth in average market income during the boom period of 1983-1989 (9.7 per cent compared to 10.1 per cent) and 1996-2001 (12.7 per cent compared to 15.7 per cent), it diminished considerably less during the recessions of the early 1980s and 1990s. During downturns, transfers increase and offset some of the decrease in market income.

continued to grow through 2008. There was a slight divergence in trends among the income types during the recent recession; after-tax income remained constant while market income fell by 2.52 per cent and total income declined 1.26 per cent.

Chart 7: Average Market, Total and After-Tax Income per Family Unit, $2009, 1981-2009

Source : Table 11A, Table 11B and Table 11C
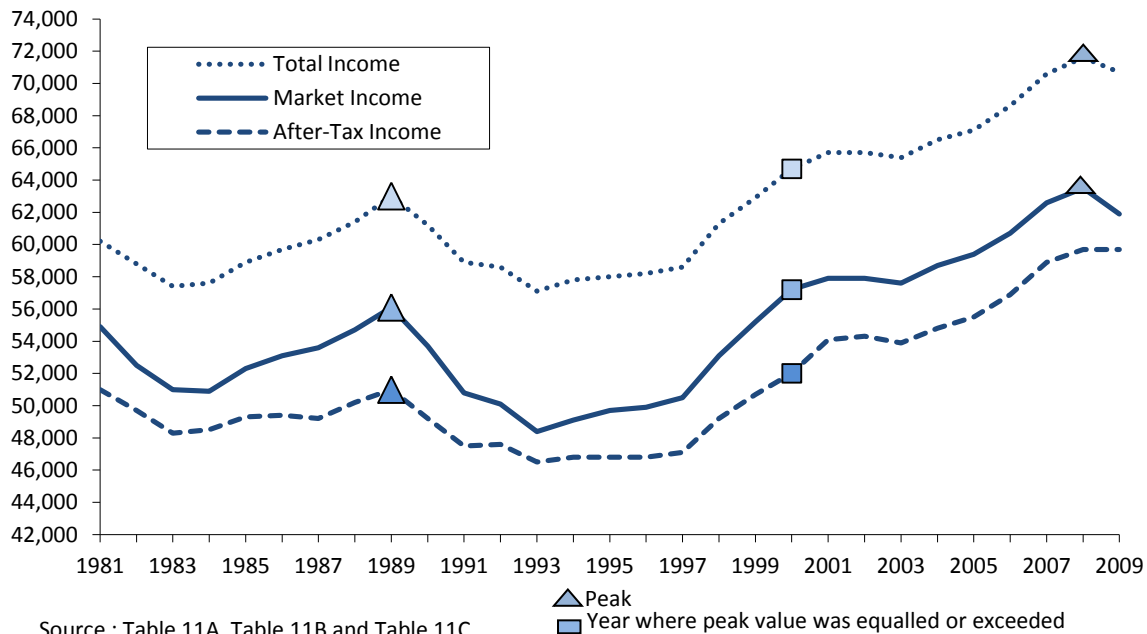
3) Average income by family type

Average market income growth between 1981 and 2009 was shared unequally among different types of families. Average market income for economic families ($78,500 in 2009) grew 19.8 per cent during the period, with lone parent families experiencing the largest proportional increase experienced by lone parent families, but this was partly due to a compositional shift.[28]. Lone-parent families experienced market income growth of 32.5 per cent to $40,400 in 2009 (Table 11H). Two-parent families with children also experienced strong growth, with incomes having risen 28.8 per cent to reach $93,900 in 2009. Finally, average market income for unattached individuals grew only 13.7 per cent between 1981 and 2009, reaching $30,700.

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[28] The share of male lone-parent families, who have a much higher average market income than their female counterparts ($58,100 compared to $36,700 in 2009), was higher in 2009 than in 1981, going from 15.2 per cent to 17.4 per cent. 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.

Chart 8: Measures of Real Income on a per Capita and per Household Basis, Total Growth, per cent, 1981-2009
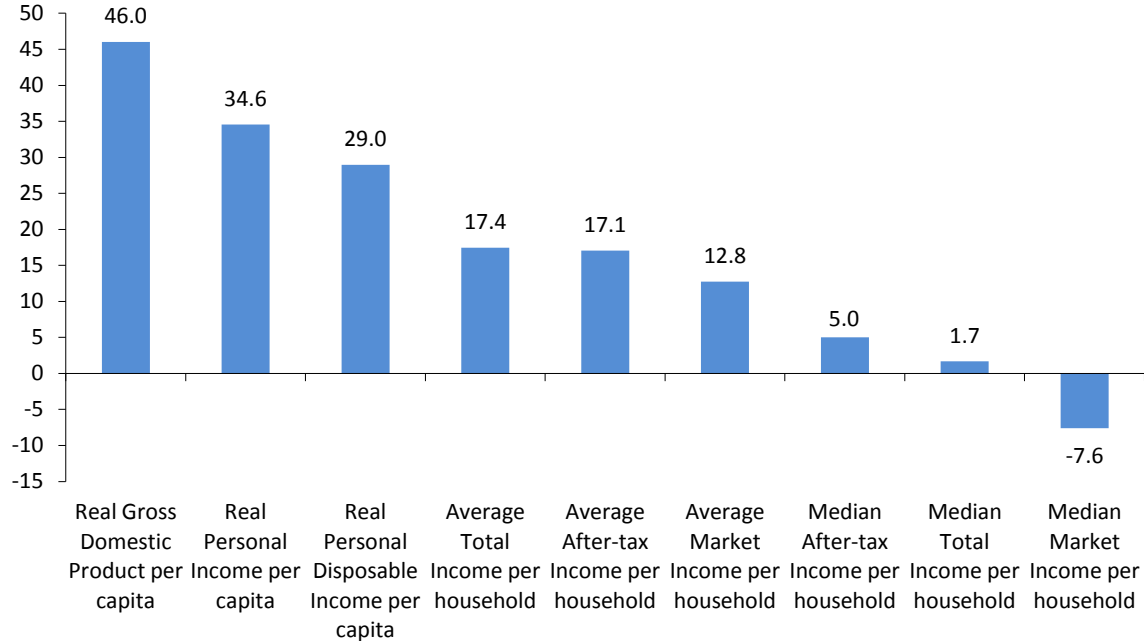
Source : Tables 7a, 8b, 9b, 11a, 11b, 11c, 12a, 12b

Trends in average total income by family type show widespread growth between 1981 and 2009, 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 28.7 per cent, while that of elderly male unattached individuals was up 22.0 per cent and that of elderly female unattached individuals 51.0 per cent. Both income of economic families (24.4 per cent) and income of unattached individuals (18.5 per cent) grew healthily.

Average after-tax income by family type followed similar trends (Summary Table 8 and Table 11J). Between 1981 and 2009, income for economic families (24.1 per cent) grew faster than income for unattached individuals (17.5 per cent). Among non-elderly economic families, the income for two-parent families with children increased 31.3 per cent, from $64,600 in 1981 to $84,800 in 2009, recording strong growth. Elderly unattached males' income grew 37.4 per cent during the 1981-2009 period, with males' average after-tax income reaching $32,300 and females' income reaching $28,400 in 2009. However, average after-tax income for non-elderly unattached males increased only 2.4 per cent compared to the 20.2 per cent increase for non-elderly unattached females. The trend for lone-parent families was encouraging, with lone-parent families experienced total growth of 34.7 per cent, from $33,700 in 1981 to $45,400 in 2009.

Summary Table 8: Trends in Average After-tax Income Per Family Unit, by Family Type, 1981, 2000, 2009 in $2009

	1981	2000	2009	Total Growth Rate, %
All family units	51,000	52,000	59,700	17.1
Economic families, two persons or more	60,200	64,600	74,700	24.1
Elderly families	43,300	46,500	55,200	27.5
Non-elderly families	62,500	67,600	78,500	25.6
Married couples	58,900	61,400	72,300	22.8
Two-parent families with children	64,600	73,000	84,800	31.3
Married couples with other relatives	84,400	93,700	110,500	30.9
Lone-parent families	33,700	36,100	45,400	34.7
Other non-elderly families	52,000	58,600	65,100	25.2
Unattached individuals	26,800	26,300	31,500	17.5
Elderly males	23,500	25,800	32,300	37.4
Elderly females	19,600	23,100	28,400	44.9
Non-elderly males	32,700	29,500	33,500	2.4
Non-elderly females	25,300	24,000	30,400	20.2
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 2009, the average government transfer was $8,900 per household ($2009) and the average income tax paid was $11,000 (Table 10D and Table 10G). Therefore, the net effect was that average after-tax income per family unit was $2,100 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 $11,400 and paying an average income tax amount of only $2,400, which translated into an average $9,000 increase in after-tax income compared to market income. The first or lowest quintile received $8,000 more in government transfers ($8,500) than it paid in income tax ($500). At the other end of the spectrum, households in the highest quintile received only an average of $6,100 in government transfers while paying an average of $34,300 in income tax, a net effect of $28,200 decrease on their after-tax income. Overall, the bottom quintile received about 19.1 per cent of all government transfers and paid 0.9 per cent of all income tax while the top quintile received 13.7 per cent of government transfers and paid 62.1 per cent of the country's income tax. Government transfers were thus more equally distributed among quintiles than income tax. Over 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.

Summary Table 9: 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
1981-2009	-0.28	0.06	0.17
1981-1989	-0.31	0.09	-0.30
1989-2000	-0.92	-0.61	-0.48
2000-2009	0.53	0.86	1.41
Total Growth, %			
1981-2009	-7.60	1.69	5.00
Source: Tables 12A, 12B and 12C			

In Canada, trends in median income tell a 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 1981-2009 period (Chart 8 and Summary Table 9).

The difference between median and average income is striking. In 1981, median market income per family unit was $6,200 ($2009) below average income per family unit. This gap more than doubled to $16,900 in 2009 (Chart 9). 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.

In addition, while median market income was falling considerably in absolute terms during recessions and periods of slow growth, it was not increasing as much during the corresponding periods of recovery and expansion. For example, median market income per household fell $9,000 between 1989 and 1993, from $47,500 to $38,500, but regained only $8,300 in the following recovery and expansion, reaching a recent peak of $46,800 in 2008. In 1997, median market income was 20.7 per cent lower than its 1981 peak. Thus, despite a rebound of over 21.2 per cent between 1997 and 2008, median market income was still 3.9 per cent lower in 2008 than in 1981. The most recent recession caused median incomes to decline by 3.8 per cent to $45,000 in 2009, a level 7.6 per cent lower than the 1981 level.

Chart 9: Median and Average Market Income per Family Unit, $2009, 1981-2009

Source : Table 11A and Table 12A
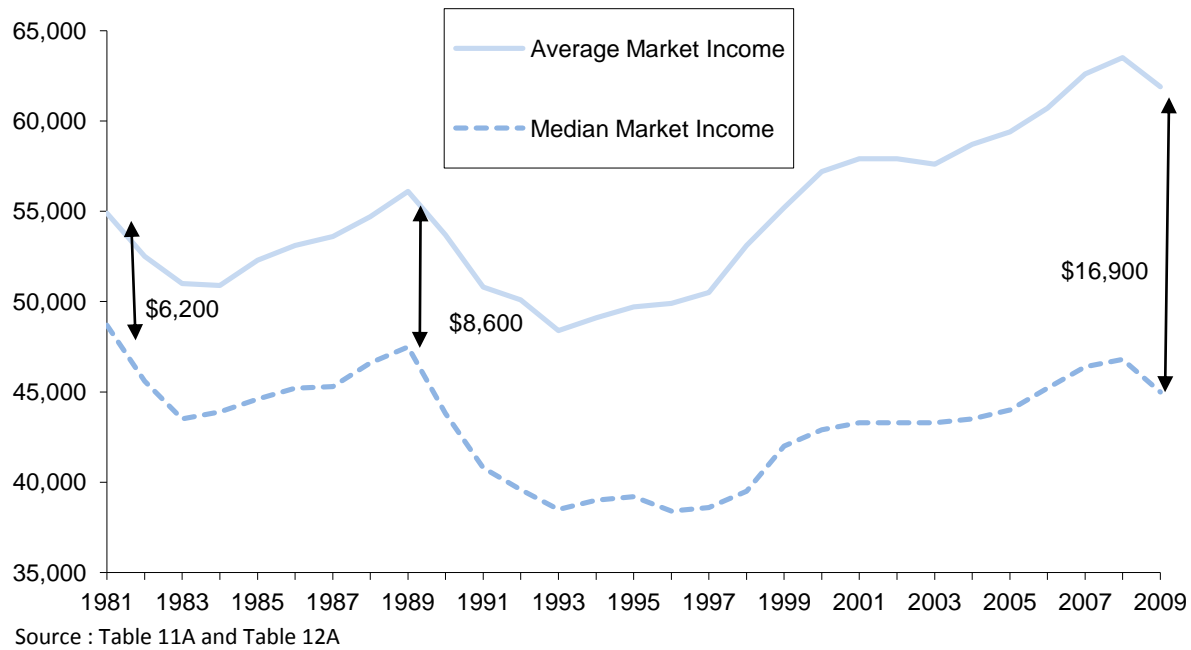
Median household total income saw a small increase of 1.7 per cent during the same period, 1981-2009 (Table 12B). The difference between market and total median income, attributable to government transfers, is larger than the one observed between average market and total income. Naturally, this suggests, in line with intuition, that government transfers are aimed towards the low end of the distribution. Nonetheless, the 1.7 per cent increase in median total income per household is in marked contrast to the 46.0 per cent increase in GDP per capita.

Finally, after-tax median income per family unit increased $2,300 or 5.0 per cent between 1981 and 2009 (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 10). Since then, it has marched forward, but only passed the 1981 level in 2006. This measure of income peaked at $48,500 in 2008, before being modestly reduced to $48,300 in 2009.

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 rather than households. Not only does it imply an only moderate change of ambiguous direction for the living standards of the median Canadian between 1981 and 2009, 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.

Chart 10: Median Market, Total and After-Tax Income per Family Unit, $2009, 1981-2009

Source : Table 12A, Table 12B and Table 12C △ Peak ■ Year where peak value was equalled or exceeded
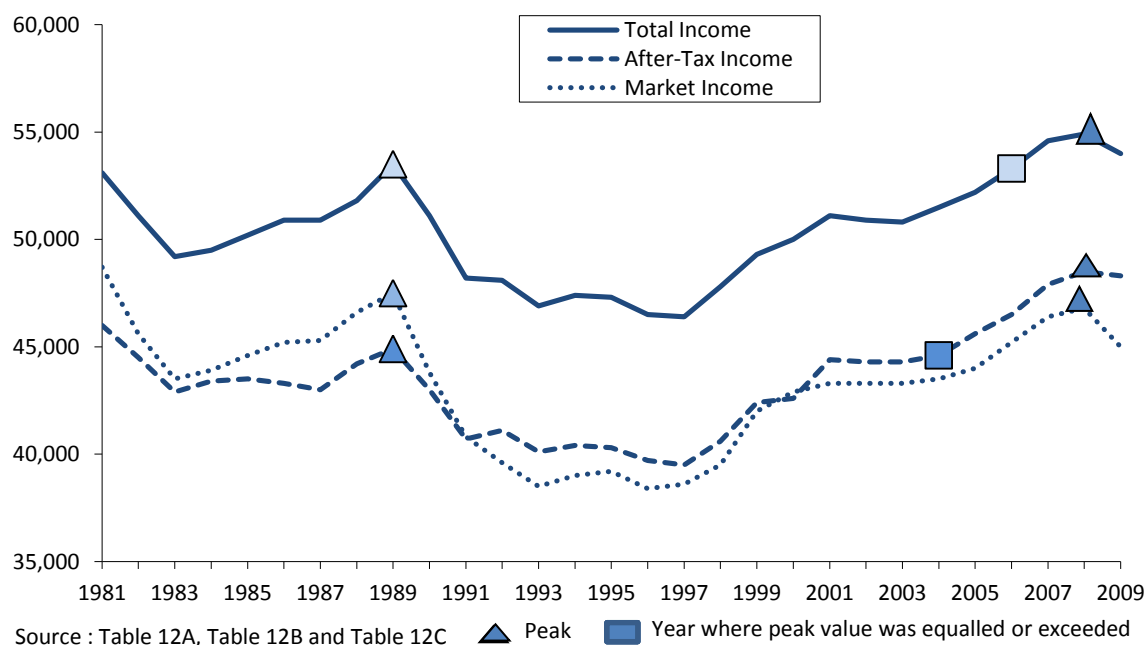
6) Median income by family type

The fall of 7.6 per cent in median market income for all family units over the 1981-2010 period did not affect every family type. For example, median market income for elderly families increased 36.6 per cent over the period, from $18,300 to $25,000, due mainly to a very robust 85.1 per cent increase in elderly married couples' median market income (Table 12G). Similarly, median market income for non-elderly families increased 9.8 per cent over the period, led by a 19.3 per cent increase in two-parent families with children. However, the recent recession and 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 2009 (3.4 per cent). Also, while median market income for unattached individuals was the same in 2009 as in 1981, elderly males and elderly females recorded strong income growth (155.1 per cent and 133.3 per cent respectively).

The main factor behind the low growth of 1.7 per cent in median total income per family unit over the 1981-2009 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 10.9 per cent over the period, from $65,200 in 1981 to $72,300 in 2009 (Table 12H), but its share of the number of family units fell from 72.4 per cent to 65.2 per cent. Meanwhile, the median total income for unattached individuals increased 14.3 per cent from $24,500 in 1981 to $28,000 in 2009, and its share of the number of family units grew from 27.6 per cent to 34.8 per cent. Thus, the stronger growth in the number of low-income family types (unattached individuals) led to an overall decrease in median total income. Similarly, stronger growth in the number of elderly families dragged down growth in median total income for economic families, despite 41.8 per cent income growth for elderly families and 14.5 per cent growth for non-elderly families.

Summary Table 10: Trends in Median After-Tax Income per Family Unit, by Family Type, 1981 and 2009, in $2009

	1981	2009	Total Growth 1981-2009
All family units	46,000	48,300	5.0
Economic families, two persons or more	55,800	63,800	14.3
Elderly families	33,800	46,800	38.5
Non-elderly families	58,300	68,100	16.8
Married couples	56,600	63,800	12.7
Two-parent families with children	60,000	75,600	26.0
Married couples with other relatives	79,400	97,300	22.5
Lone-parent families	29,100	39,700	36.4
Other non-elderly families	47,600	58,500	22.9
Unattached individuals	22,300	25,500	14.3
Elderly males	16,900	26,700	58.0
Elderly females	14,900	22,400	50.3
Non-elderly males	30,500	28,200	-7.5
Non-elderly females	23,600	25,300	7.2
Source: Table 12I			

Trends in median after-tax income are similar to median total income trends. Between 1981 and 2009, median after-tax income for economic families increased 14.3 per cent and unattached individual's median after-tax income increased 14.3 per cent, leading to only a 5.0 per cent increase in all family units' median after-tax income due to the compositional change whereby there were more unattached individuals in 2009 than in 1981 (Summary Table 10 and Table 12I) The main group reporting the largest decline in median after-tax income was non-elderly unattached males (-7.5 per cent). Elderly females were the group with the lowest median after-tax income ($22,400 ($2009)), while non-elderly married couples with other relatives, at $97,300 in 2009, were the group with the highest median after-tax income.

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.

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
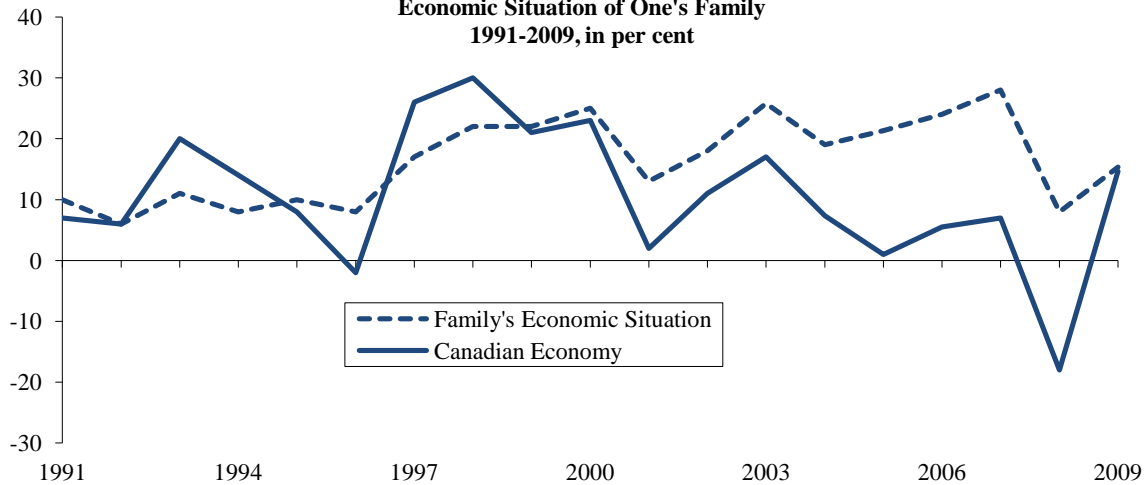
Source : Table 28A and Table 28B.
Note: For the family economic situation, data for 2003 -2009 are based on an average of all surveys in the year.
For the canadian economy, there are no data for 1994. Data is thus interpolated for
that year. Moreover, data for 2002-2009 are based on an average
of all surveys in the year.

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.

In general, Canadians have positive expectations for the future of the economy. In fact, between 1991 and 2004, the only year in which the balance of opinion was negative was in 1996, at -2 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. Since then, the balance of opinion

has become increasingly positive, reaching 25 per cent in April 2003.[29] These trends reflect more or less the evolution of the business cycle.

When asked about their own economic situation, Canadians were definitely more optimistic than pessimistic over the 1991-2004 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. In September 2004, the balance of opinion still stood high, at 20 per cent.[30] Again, these trends broadly follow the business cycle.

More recent data (2004-2009) are available from the Harris/Decima Group Consumer Confidence Index (Table 28d). These data show strong and stable consumer confidence (around 88.0), from the beginning of 2004 to the end of 2007. Consumer confidence deteriorated in 2008, to 81.0 in February, stabilizing in the low 70s in May and Aug, then falling to the low 60s by December. This decline in consumer confidence clearly reflects the escalating economic crisis in the fall of 2008. By February 2009, the index showed improvement, with confidence rising into the high 60s. In June 2009, consumer confidence returned to the high 70s, levels not seen since the spring of 2008.

C. Wealth per capita

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. However, wealth surveys are conducted infrequently in Canada. The most recent estimate available is the Survey of Financial Security (SFS) conducted in 2005, the first since 1999. This survey not only gives estimates on average and median wealth, but also allows disaggregation of wealth holdings by socio-economic characteristics.

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[29] This question may be a bit misleading for some people because an "improvement" is not 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, it might be worsening.

[30] The dichotomy between Canadians expectations for the economy and their personal economic situation might stem from the fact that they don't see their personal economic situation in terms of growth *rate,* but simply in terms of growth.

The national balance sheet accounts also publish estimates of different types of financial and non-financial wealth holdings from which average net worth[31] per person or per family unit can be calculated. The estimates seem to match very closely estimates from the SFS, but no disaggregation of national accounts estimates is possible. Estimates for net worth from the national balance sheet accounts are available from 1961 to 2010 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 real time series.

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 wealth (Table 13A). In 2010, the total wealth of this sector stood at $5.5 trillion, 87.3 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.[32]

Chart 11: Average Net Worth of Persons and Unincorporated Business, per Capita and Family Unit, (thousands of $2009), 1981-2010
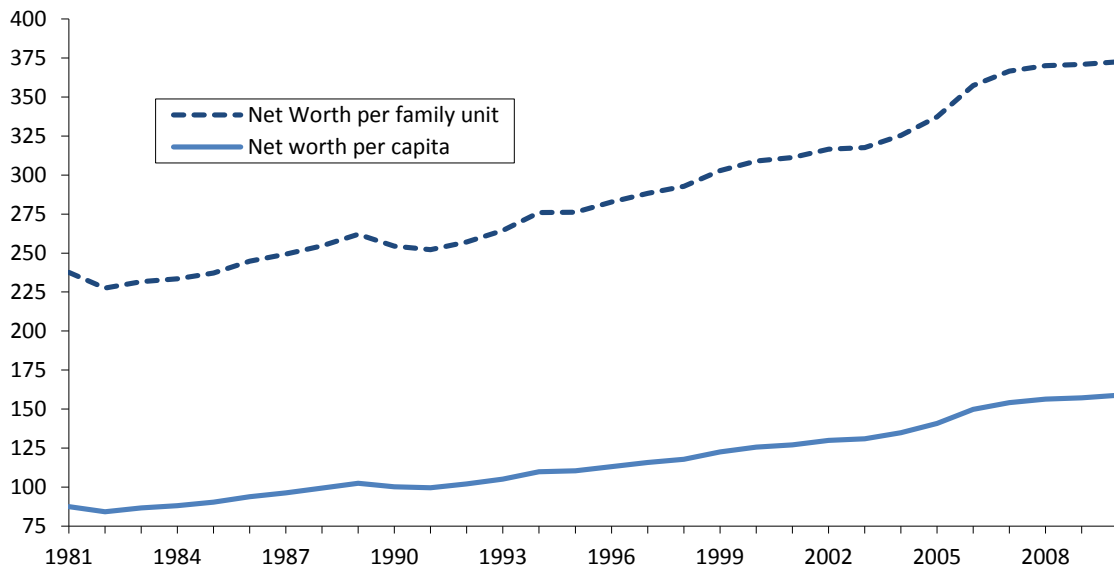
Source : Table 13B and Table 4

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[31] 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.

[32] Also, one cannot miss the steady decline of the government's net worth between 1981 and 1996 resulting from continuous deficits, which seemed to be related to the steady increase of non-residents' net worth during the same period. Yet, 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 2010 (down from $80 billion in 2008, due to deficits during the recent downturn) compared to a net worth of -$395 billion in 1996.

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 1981-2010 period, wealth per capita increased an average of 2.08 per cent every year, while wealth per family unit increased 1.57 per cent annually over the period 1981-2009 (Summary Table 11). Real net worth fell only in 1982 and during the 1990-1991 downturn (Chart 11).

One factor explaining this growth could be an aging population. As people get older, 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 1981-2009 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.

Summary Table 11: Real Net Worth of Persons and Unincorporated Business, Annual Change (per cent)

	Net worth per capita	Net worth per family unit
1981-2010	2.08	1.60*
1981-1989	2.00	1.24
1989-2000	1.87	1.51
2000-2010	2.38	2.05*
Total Growth Rate, %		
1981-2010	81.66	56.13*
Source: Table 13B		
***to 2009**		

Another element affecting Canadians' wealth, natural resources, is not taken into account when calculating the national net worth. 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, we can see that the value of resources such as land (506 per cent), energy (260), minerals (119.4 per cent) and timber (116.4 per cent) increased significantly between 1981 and 2009. Of course, these estimates are in current dollars, and the progression in real terms is considerably smaller. Nonetheless, in 2009, energy resources were valued at $730.7 billion, just less than 10 per cent of the national balance sheet wealth. Metallic and non-metallic minerals together represented about $325.8 billion and timber alone represented $183.5 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 Survey of Financial Security conducted in 2005 gives an in-depth picture of the wealth distribution. However, it is less useful in showing the evolution of wealth over time. 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.[33] 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 is $294,767[34] ($2005). The similarity in the estimates adds credibility to both sources.

The definition of wealth has changed over the years for the Survey of Financial Security. The 1984 survey did not include the contents of the home, collectibles and valuables and annuities and registered retirement income funds. To compare the 1999 results to those of previous wealth surveys in Canada, data for 1999 were adjusted using the earlier surveys' definition.

If one looks at earlier wealth surveys, such as those conducted in 1970 and 1977, a definite upward trend in average wealth per family unit emerges (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 (+1.1 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 2005 survey used the new wealth definition. The definition change makes comparison between 2005 data and data using previous definitions impossible (no estimates using previous definitions are published), though the 2005 report does make comparison to 1999 using the new definition. Between 1999 and 2005, the average family unit net worth grew 29.6 per cent to $364,300 (constant 2005 dollars) from $281,000 (Table 49).

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 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.

The 2005 survey found growth of median net worth to be over 20 per cent for almost every family type over the 1999-2005 period. The one exception was unattached individuals; this

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[33] Using the number of households from SLID.
[34] Table 47B lists this value in $2001. For comparison within the paper, this value was converted to $2005.

demographic saw only 3.9 per cent growth, from $33,400 (2005$) in 1999 to $34,700 and also suffered having the lowest median net worth. Other non-elderly families had the highest growth in median net worth through having grown 46.1 per cent 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 29.1 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 that explores the impact of asset prices changes on the economic security of Canadian over the period from 2005 to 2009.[35] While Davies notes that significant declines in asset values have occurred since May 2008, 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 to the level seen 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 mainly from the SLID/SCF household surveys available for the 1980-2009 period. We will first look at trends in the quintile distribution of income and at income inequality using quintile income ratios (e.g.

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[35] See Davies (2009), a paper presented at the Annual Meeting of the Canadian Economic Association in the session "Measures of Economic Security in Uncertain Times," organized by the Centre for the Study of Living Standards.

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/low income cut off ratios). 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 relatively extensively both by socio-economic characteristics and by geographic unit. Finally, we will examine data from the Market Basket Measure of low income (MBM), an absolute measure of low income. However, estimates for this measure are available only since 2000.

Constraints on the availability of data on wealth distribution will make it difficult to have as clear a picture as for trends in income distribution. We will use data provided in the Surveys of Financial Security (SFS) of 1999 and 2005 to give an overall portrait of wealth distribution in Canada, especially using median wealth and disaggregating by socio-economic characteristics.[36]

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 can also affect the wellbeing of others through social dislocation, crime and, more generally, widespread discontent. 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 quintile[37] 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 2009, the adjusted market income of the first quintile of economic families was $7,200 ($2009) compared to $102,800 for the top quintile, a difference of $95,600 (Chart 11). The difference for total income was slightly smaller, at $90,900. Finally, the gap between the bottom and the top quintile was smallest for adjusted after-tax income, with the bottom quintile adjusted

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[36] At a later date, it would be possible to use micro-data from these surveys to obtain explicit measure of wealth distribution.

[37] 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.

income at $14,700 and the top quintile well over five times as high at $82,900, a difference of $68,200.

Chart 12: Adjusted Market, Total and After-Tax Income by Quintile, Economic Families, 2009, $2009
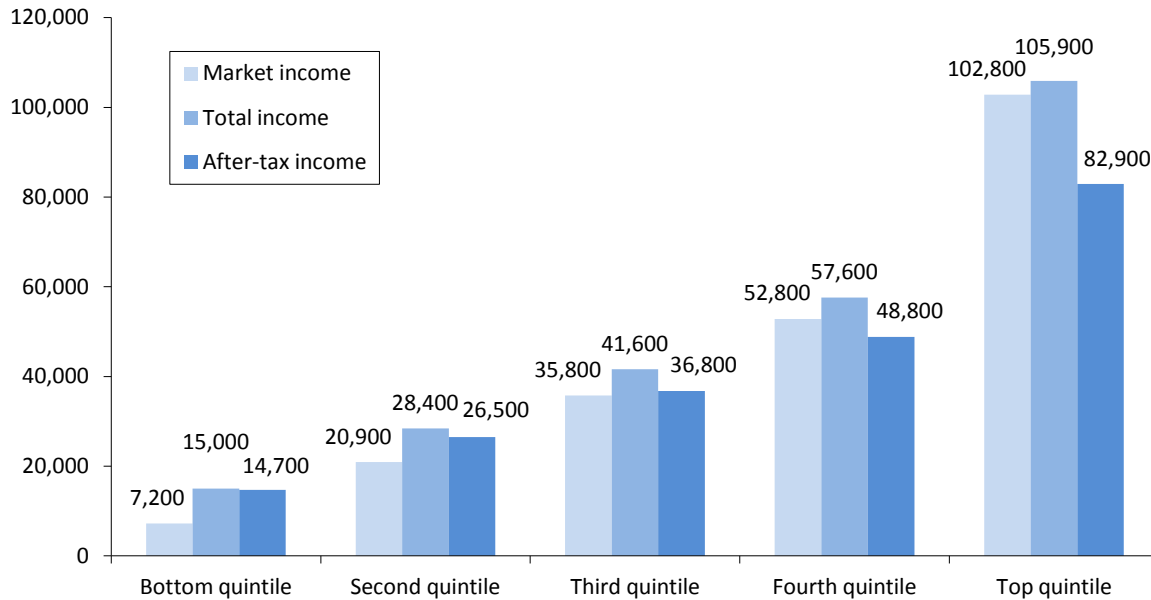
Source : Table 24A, Table 24B and Table 24C

An analysis of the income distribution by quintile reveals that the real adjusted[38] 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 income of the top quintile rose by 38.9 per cent during 1981-2009, while the increase for all four other quintiles were below 26 per cent (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.

The change in the quintile distribution of adjusted income between 1981 and 2009 indicates clearly that income generated during that period went predominantly to the top 20 per cent of the income distribution. Indeed, of the $9,240 average increase in adjusted after-tax income per economic family, 50.2 per cent can be accounted for by the increase in the income generated by the top quintile, which increased by an average of $23,200 between 1981 and 2009.[39] For total income, it was 58.4 per cent that went to persons in the top quintile and for market income it represented a stunning 73.3 per cent of the increase.

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[38] See an earlier footnote in Section IIB for a quick review of the methodology used to adjust income using an equivalence scale.
[39] For comparison, the bottom quintile accounted for 4.8 per cent, the second quintile for 8.7 per cent, the third quintile for 14.9 per cent and the fourth quintile for 21.4 per cent.

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 6.3 percentage points between 1981 and 2009, from 40.5 per cent to 46.8 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 1981-2009 period, the share of market income generated by the lowest quintile fell from 4.18 per cent to 3.28 per cent or 0.90 percentage points (Chart 13). The share of adjusted market income of the second quintile decreased 2.67 percentage points, the third quintile 1.81 percentage points and the fourth quintile 0.95 percentage points.

Chart 13: Adjusted Market, Total and After-Tax Income, Economic Families, Change by Quintile for the Total 1981-2009 Period, per cent
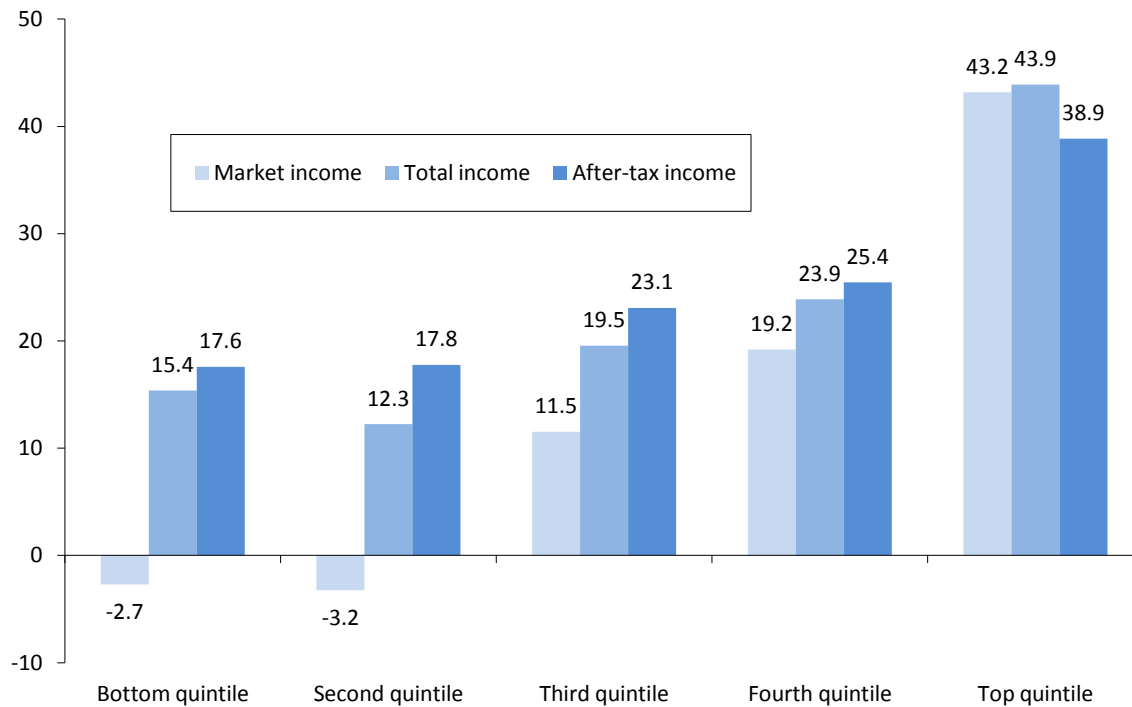
Source : Table 24A, Table 24B and Table 24C

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.[40]

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[40] One can see that easily if we assume a $1 income for the lowest quintile and a $4 income for the highest quintile. In this case, the ratio is 4. If they both increase their income by $1, the ratio becomes 5/2 or 2.5, quite lower than

The trends in the ratio of the top to bottom quintile for market income appear to follow the business cycle (Chart 14). The ratio is generally greater than 10, which means that the top 20 per cent of the population earns more than ten times more than the bottom 20 per cent (Summary Table 12 and Table 15A). Over the 1981-2009 period, this gap grew 47.2 per cent. It reached a low point in 1981, at 9.70. After reaching 13.75 in 1993, this ratio fluctuated between a peak of 15.09 in 1998 and a trough of 12.41 in 2007. The recent recession witnessed a widening disparity, with a ratio of 14.28 in 2009.

Chart 14: Quintile Shares of Adjusted Market, Total and After-Tax Income, Economic Families, Change Between 1981 and 2009, percentage points
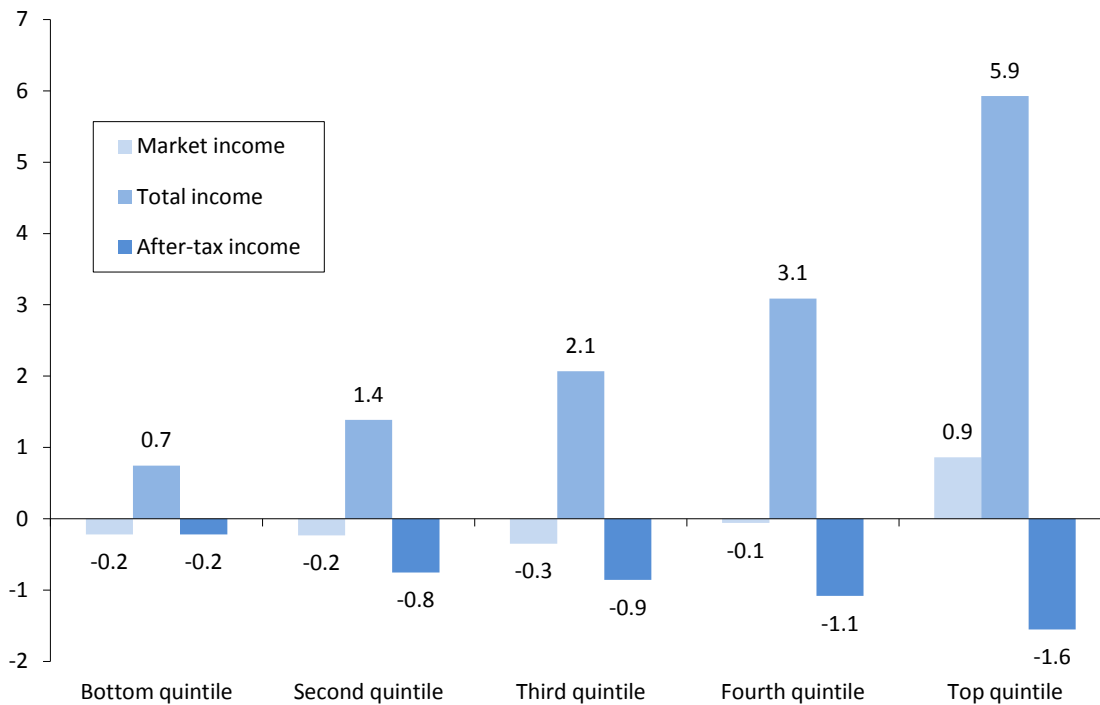
Source : Table 24B, Table 24C and Table 24D

If we look at the ratio for total income, we come to similar conclusions. Over the 1981-2009 period, the ratio of the top to bottom quintile of total income increased 24.7 per cent, from 5.66 in 1981 to 7.06 in 2009. The startling element is the impact of government transfers on the level of the ratio. While the ratio is more than 14 to one for market income, it is only about seven to one for total income (Summary Table 12). This is the result of the high government transfer rate for the lowest quintile (amounting to 52.0 per cent of adjusted total income) compared to the highest quintile (2.9 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

before. 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.

1990s. The lower quintile ratio of total income 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 12: **Ratio of Top to Bottom Quintile in Canada, Adjusted for Family Size**

	Market income	**Total income**	**After-tax income**
1981	9.70	5.66	4.78
1989	10.26	5.60	4.57
2000	13.13	6.95	5.69
2009	14.28	7.06	5.64
Point change			
1981-1989	0.6	-0.1	-0.2
1989-2000	2.9	1.3	1.1
1981-2009	4.6	1.4	0.9
2000-2009	1.1	0.1	0.0
Total growth, %			
1981-2009	47.2	24.7	18.1
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 2009, the ratio of the top to bottom quintile for after-tax income also increased, from 4.78 in 1981 to 5.64 in 2009, an 18.1 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).

Chart 15: Top to Bottom Quintile Ratio for Market, Total and After-Tax Income, Economic Families, 1981-2009
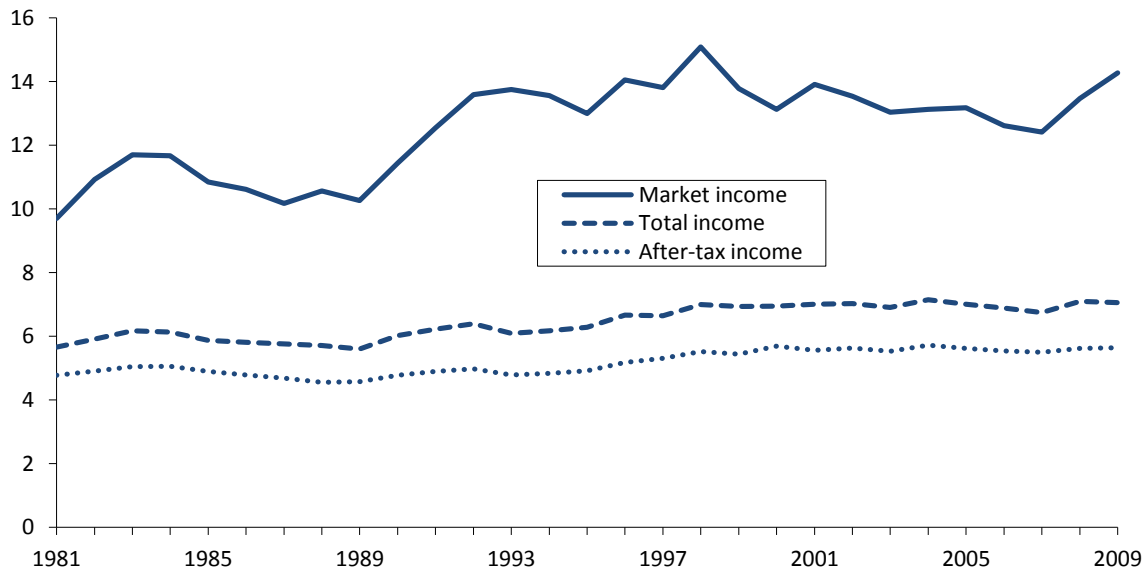
Source : Table 15A, Table 15B and Table 15C

In 1994, the after-tax ratio was virtually at the same level as it was in 1981. In comparison, the total income ratio was 9.1 per cent higher in 1994 than in 1981. However, as GDP growth accelerated in the latter part of the 1990s, after-tax ratios edged up, reaching 5.64 in 2009, 18.1 per cent higher than in 1981. Thus, it appears not only that the top 20 per cent of the population became richer faster than the bottom 20 per cent, but also that they became much richer in absolute terms. For every new dollar in the pockets of the bottom quintile, the income of the top quintile was increasing by approximately $10.5 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 13: Gini Coefficient in Canada for All Family Units, Absolute Value and Total Absolute and Percentage Change Over the Period

	Market income	Total income	After-tax income
1981	0.434	0.374	0.348
1989	0.460	0.385	0.351
2000	0.515	0.431	0.392
2009	0.515	0.430	0.394
Average Annual Growth Rate, %			
1981-1989	0.73	0.36	0.11
1989-2000	1.03	1.03	1.01
1981-2009	0.61	0.50	0.44
2000-2009	0.00	-0.03	0.06
Point Change			
1981-1989	0.026	0.011	0.003
1989-2000	0.055	0.046	0.041
1981-2009	0.081	0.056	0.046
2000-2009	0.000	-0.001	0.002
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 2009, the Gini coefficient for market income was 0.515, the one for total income was about 83 per cent of the market income Gini coefficient at 0.430 and the after-tax Gini coefficient was 77 per cent of the market income Gini coefficient at 0.394 (Summary Table 13). 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.[41] The Gini coefficient presented here is the one for all family units. Estimates for different types of unattached individuals and economic families of different sizes are also available.

Trends in the Gini coefficient of market income for all family units seem to be inversely related to the business cycle. Between 1981 and 2009, the Gini coefficient based on market income increased 18.7 per cent, from 0.434 to 0.515. We can observe that during recessions, such as in 1982 and 1990-1991, sharp increases in the Gini coefficient occurred, though the most recent recession witnessed a much smaller increase than the previous two (Chart 16). Conversely, during periods of economic growth, the Gini coefficient seems to stabilize and even edge down slightly. 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 1.0 per cent during the 1997-2008 period before increasing 0.8 per cent in 2009. 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.

Chart 16: Gini Coefficient for Market, Total and After-Tax Income, All Family Units, 1981-2009
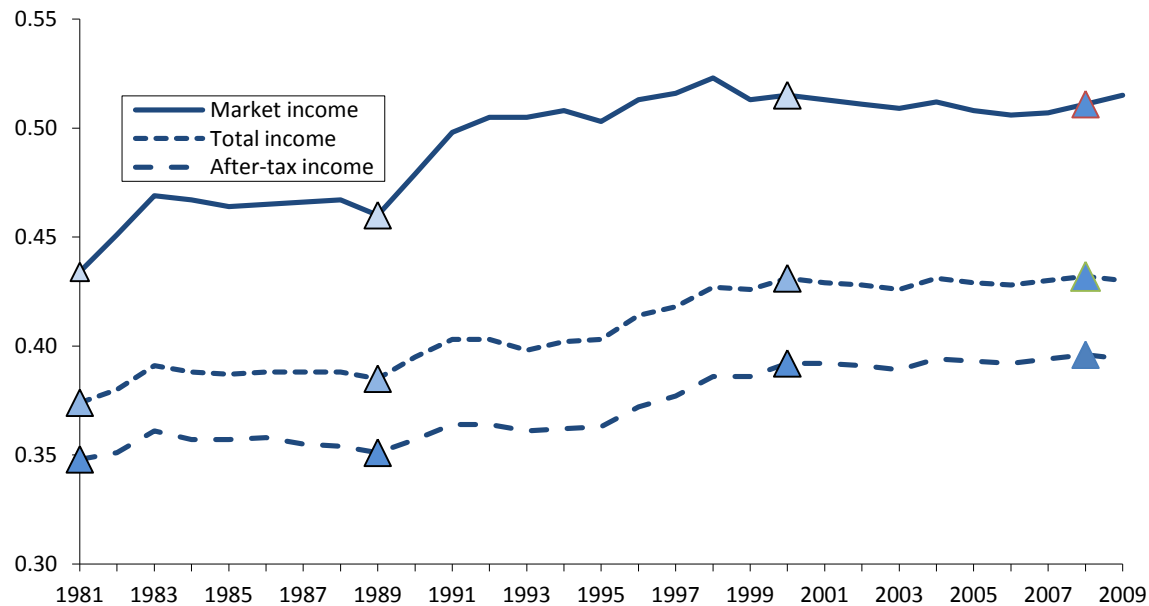
Source : Table 14A, 14B and 14C   ▲ Business Cycle Peak

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[41] 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 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.

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 significantly lower than the one for market income, with a value of 0.430 in 2009 compared to 0.515 for market income (Summary Table 13 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 2.4 per cent during the 1981-1983 period and 0.1 per cent between 1990 and 1997. Similarly, the Gini coefficient decreased only marginally during the 1983-1989 recovery (1.1 per cent) and actually grew slowly during the boom of 1997-2007, increasing 1.2 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 0.45 per cent per year and a total growth rate of 15.0 per cent, compared to annual growth rate of 0.61 per cent and total growth of 18.7 per cent for market income. However, it still does indicate a significant widening of the gap between have and have-not families.

Over the 1981-2009 period, the Gini coefficient of after-tax income increased 13.2 per cent, from 0.348 in 1981 to 0.394 in 2009 (Summary Table 13). 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 2009, it was 13.2 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 remain 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.[42] Statistics Canada calculates those values for both before-tax and after-

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[42] 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 sizes, from unattached individual to families 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 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

tax income. However, we have restricted our analysis to after-tax LICOs as they represent the actual income used to purchase necessities. Along with LICOs, we include data on the average low income gap ratios[43] to see if low income families have become increasingly far from the LICO or not. This is also calculated by Statistics Canada and it represents the average proportion of the low income cut off that those below it fall short by.

Chart 17: Percentage of All Persons (Including Children) Under the After-tax Low Income Cut-Offs (LICOs), 1981-2009
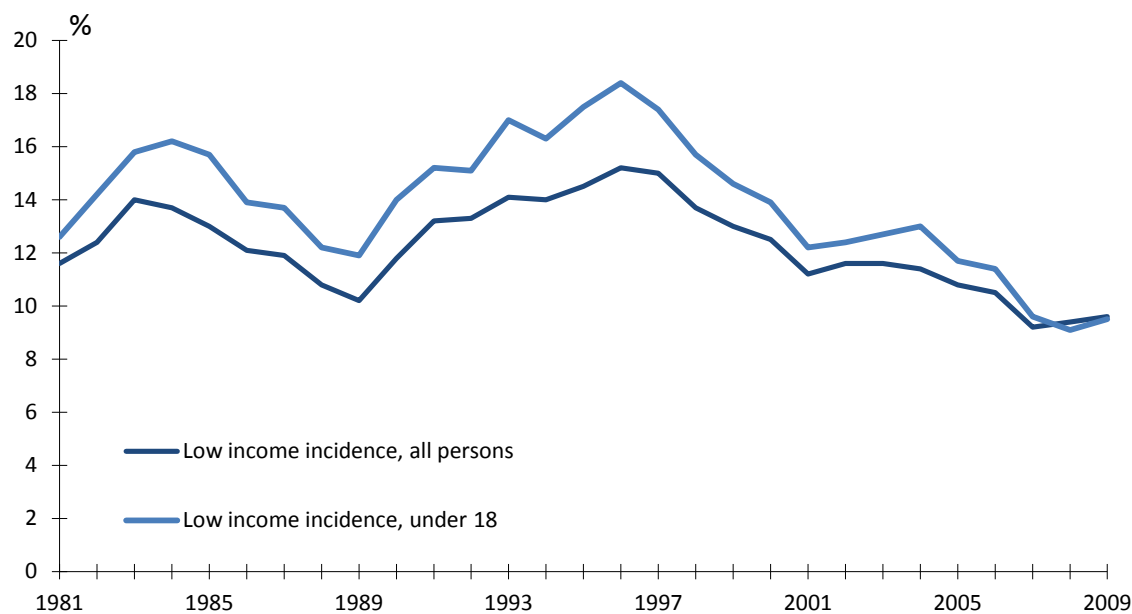
Source: Table 16B, Table 16D and Table 17A

The percentage of persons in low income declined just over 2.0 percentage points between 1981 and 2009 –11.6 per cent versus 9.6 per cent (Chart 17). 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 15.2 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 1981-2009 period, and increasing slightly in 2009 to 9.6 per cent.

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).

[43] 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%. 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.

The percentage of persons under 18 years old living in low income families followed roughly similar trends. The level was lower than in 1981; 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 2009. In 2009, there was an increase in child poverty due to the recession, the proportion of children living in poverty having experienced an increase over the lowest value on record of 9.1 per cent in 2008. Child poverty was exacerbated by recessions, reaching 16.2 per cent in 1984 and 18.4 per cent in 1996. These levels were respectively 2.5 and 3.2 percentage points higher than the levels observed in the overall population in the same years.

The low income gap ratio measures the average proportion of the cut-off needed by a low income family to reach the LICO. In 2009, it stood at 33.6 per cent, a slight increase from the 1981 level (Table 17D). Over the 1981-2009 period, the low income gap did not fluctuate greatly, ranging from 30.2 per cent in the trough of 1989 to 34.6 per cent in 2005. Thus, low income families remained at about the same distance from the LICO between 1981 and 2009.

One of the distinct characteristics 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 15.8 percentage points during the period, from 21.0 per cent in 1981 to a low of only 4.9 per cent in 2007 (Summary Table 14) before increasing slightly to 5.2 in 2009. This overall decline 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.[44]

By comparison, the percentage of persons 18 to 64 years old below the after-tax LICO increased 0.7 percentage points, from 9.8 per cent in 1981 to 10.5 per cent in 2009. The level of child poverty (under 18 years old) decreased 3.1 percentage points, from 12.6 per cent to 9.5 per cent.

Another apparent feature is the consistently higher percentage of persons below the after-tax LICO in the unattached individual group compared to economic families. Despite falling from 35.5 per cent in 1981 to 26.7 per cent in 2009, the share of unattached individuals below the after-tax LICO was still higher than that of economic families (6.5 per cent). Therefore, despite the fall in the share of persons living in economic families below the after-tax LICO, the increasing number 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 the decrease would have been much greater were it not for the changing structure of families in Canada.

With the introduction of the Canada Child Tax Benefit and the National Child Benefit Supplement, one could have expected a considerable fall in the child poverty rate for individuals living in families with children (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 (4.5 percentage points) or the elderly (4.5 percentage points) for the same

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[44] For example, CPP payments increased more than twelve-fold in nominal terms, from $2.3 billion in 1981 to $28.1 billion in 2008, the most recent year for which data were available (Table 64).

period. This turn of events finally brought child poverty below the 1981 level of 12.6 per cent. In this case again, a compositional effect was at play. The reduction in child poverty would have been greater if the composition of families had not been altered over time. The gains from poverty reduction for children in two-parent families from 8.4 per cent in 1981 to 7.3 per cent in 2009, 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 poverty rates despite a substantial decline from 48.7 in 1981 to 21.5 in 2009.

Summary Table 14: Trends in the percentage of persons under the after-tax LICO, by Age Group and Sex, 1981 and 2009, in per cent, Unless Otherwise Indicated

	1981	2009	Per cent change, 1981-2009
All persons	11.6	9.6	-17.2
Under 18 years	12.6	9.5	-24.6
18 to 64 years	9.8	10.5	7.1
65 years and over	21	5.2	-75.2
Males	9.9	9.5	-4.0
Females	13.3	9.6	-27.8
Persons in economic families	8.8	6.5	-26.1
Males	8.1	6.2	-23.5
Females	9.6	6.8	-29.2
Elderly persons	7.3	1.5	-79.5
Under 18 years	12.5	9.5	-24.0
18 to 64 years	7.2	6.3	-12.5
Unattached individuals	35.5	26.7	-24.8
Males	27.2	27.4	0.7
Females	42.5	25.9	-39.1
Elderly persons	49.7	14.3	-71.2
Under 65 years	29.8	31.1	4.4
Source: Table 16L			

The low income gap differs greatly among different family types (Table 17C). For example, elderly persons in economic families in 2009 had a low income gap ratio of 37.6 per cent compared to 25.8 per cent for persons under 18 in two-parent families. For the 1981-2009 period, female lone-parent families improved their position considerably, with their low income gap ratio falling 29.3 per cent, from 38.3 per cent in 1981 to 27.1 per cent in 2009. It was the greatest improvement in all major categories of economic families. Among unattached individuals, elderly females notably saw a substantial reduction, with the low income gap ratio increasing 107.5 per cent to 42.5 per cent in 2009 from 20.5 per cent in 1981.

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, we find the median income, 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.[45] 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 1997-2008 period.[46]

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 and family size, and it is not based on a basket of goods. These 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 15.1 per cent in 2008 and fluctuating in a range from 14.9 per cent to 16.1 per cent over the 1997 to 2008 period (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 19.7 per cent of children (0-17 years of age) living in low income families in 2008 (Table 18B). This was down from the 1997 value of 22.0 per cent, but is in sharp contrast with the 9.1 per cent estimates from the LICOs for 2008 (down from 17.4 per cent in 1997).

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 7.3 per cent in 2008, a 3.7 percentage point increase. However, the LICOs suggest that the percentage of elderly persons in low income families fell 3.2 percentage points between 1997 and 2008, from 9.0 per cent to 5.8 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

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[45] 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.

[46] However, historical data could be obtained for longer periods. The LIM presented here is the one from the T1 files. It is not consistent with the one used to compare the MBM and the LICO.

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.[47] 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.

Chart 18: Market Basket Measure (MBM), After-Tax LICO and After-Tax LIM, 2009
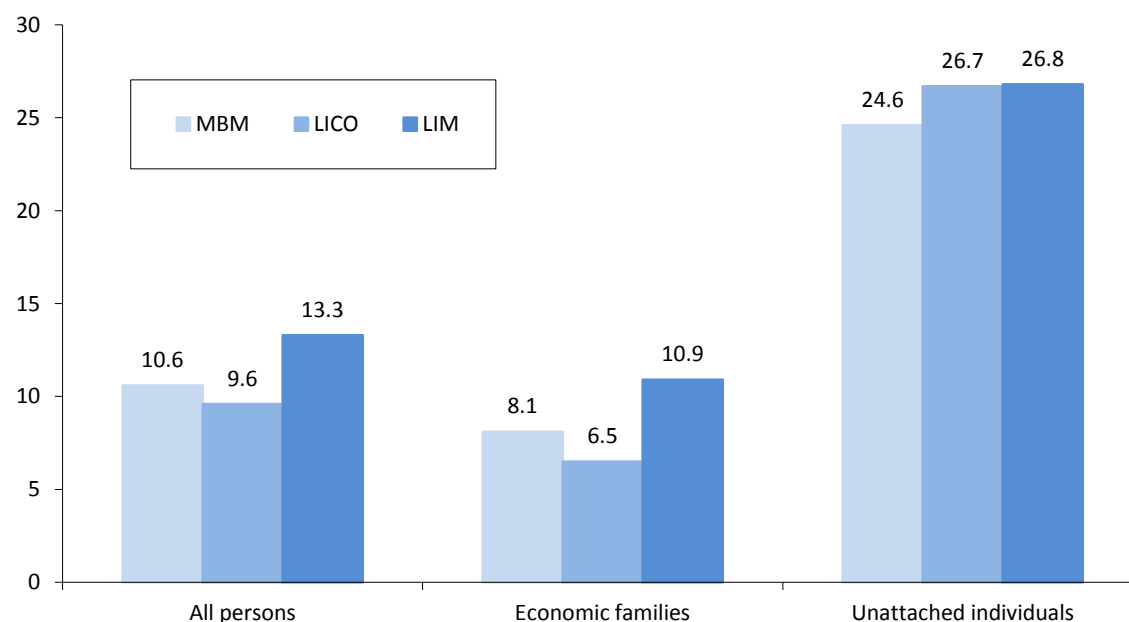
Source : Table 38c

The main difference between the LICOs and the MBM 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.

The MBM is available for the 2000-2009 period. In 2009, 10.6 per cent of all persons were below the cut-off, 1.0 percentage points more than the after-tax LICO measure would indicate. The MBM indicates a higher incidence of poverty than LICO for economic families (8.1 per cent vs. 6.5 per cent), but not for unattached individuals (10.6 per cent vs. 9.6 per cent). The trend in MBM has been downward, though the decline was far less pronounced than in the after-tax LICO. Over the 2000-2009 period, the incidence of MBM poverty decreased by 10.9 per cent (while the after-tax LICO declined 23.2 per cent).

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[47] 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.

Poverty depths, as indicated by the average gap ratios, have been fairly stable in all family types over the 2000-2009 period. Among all persons, there has been a slight increase in the depth of poverty for those afflicted, from 32.8 per cent below the cut-off in 2000 to 33.9 per cent in 2009. Persons in economic families experienced a moderate increase in the depth of poverty as well (from 28.7 per cent to 30.0 per cent), but unattached individuals experienced a decreased depth of poverty (from 42.4 per cent to 41.0 per cent).

d. Low income dynamics

Opportunities to improve one's destiny 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 long-run poor as 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.

Chart 19: 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
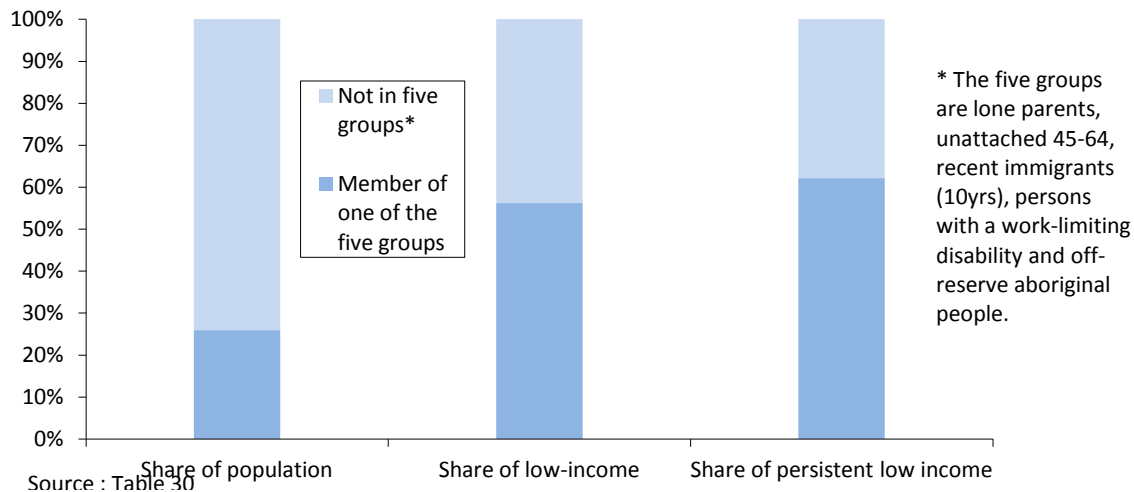
More recent work by Finnie and Sweetman (2003) using the same data and an entry and exit model of low income dynamics found that "family status is a strong determinant of movement into and out of low income". For example, they found that unattached individuals and lone parents had higher entry rates 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.

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.

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 19). Over 1996-2000, 25.6 per cent of lone parents were considered to be in a persistent state of low-income (Chart 20). 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.

Comparing the 2002/2007 period to the 1996/2001 period, it is clear that poverty has become both less prevalent and less persistent (Chart 21). Of those experiencing a bout of

poverty during the six year interval, 25.4 per cent were afflicted for 4 years or more during the 2002/2007 interval, while the like figure was 31.6 per cent over the 1996/2001 interval. Though the continued existence of long term poverty presents a serious challenge to society, the trend in society has been away from poverty and away from persistent poverty.

Chart 20: Incidence of Low-Income (2000) and Persistent Low Income (1996-2000)
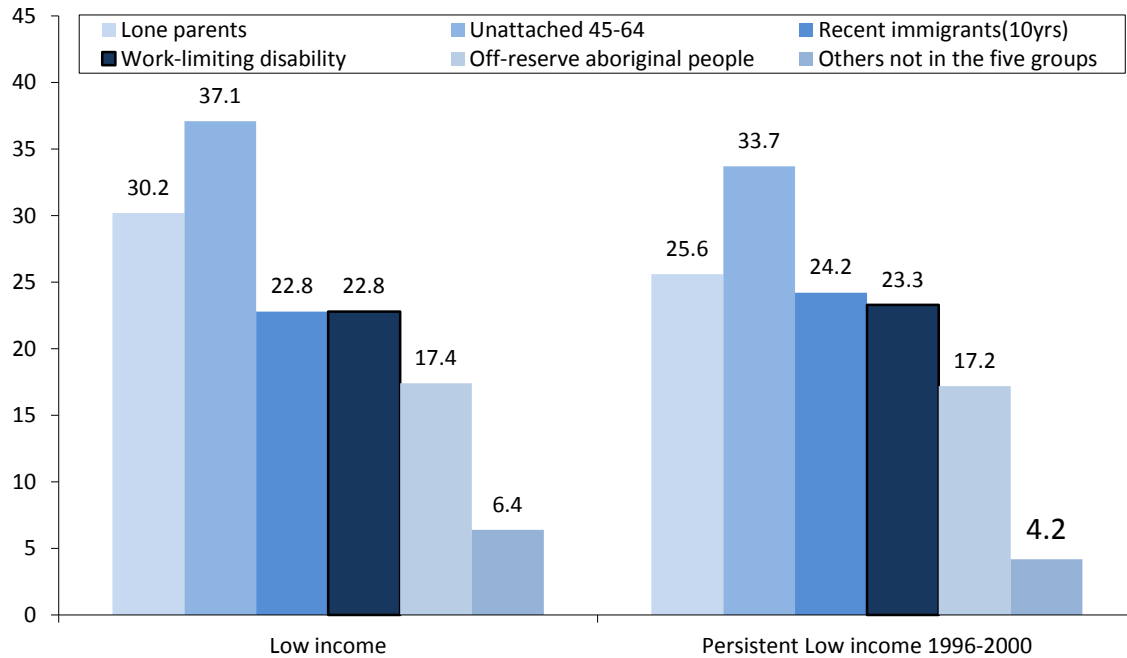
Source : Table 30

Chart 21: Persistence of Low Income, Based on After-Tax LICO, 1996/2001 and 2002/2007

Source: Table 30b

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.

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, fair 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.

Chart 22: Comparison of Quintile Median Net Worth in 1999 and 2005 ($2005), All Family Units
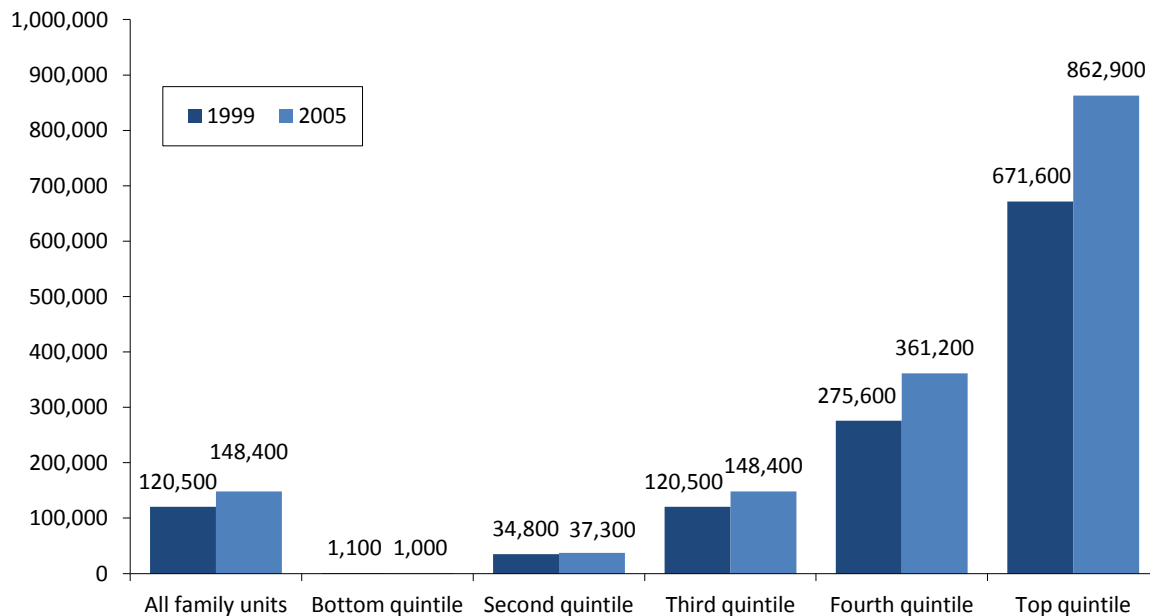
Source :Table 19B

In Canada, data on the wealth of households are released infrequently. 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, and they are not strictly comparable. They do provide a comprehensive picture of wealth distribution in Canada, but they cannot capture trends in wealth distribution in Canada within the

1999-2005 period. In this part, we will mainly look at the change that occurred in median wealth between 1999 and 2005 and then look at trends in the distribution of average wealth using the 1970, 1977, 1984 and 1999 and 2005 wealth surveys. [48]

To monitor the trends in net worth between 1984 and 1999, some adjustments need to be made to the 1999 data. These adjustments have been made to provide comparable data between the two surveys.[49] They allow us to compare the change in the net worth of Canadians between 1984 and 1999.

The evolution of median net worth is quite interesting (Table 19B). If we include all family units, median net worth increased 23 per cent between 1999 and 2005 (Chart 22). The 1999 wealth survey indicated an 11 per cent gain in net worth over the 1984-1999 period, using the old definition. However, if we look at the quintile distribution, we realize that wealthy families increased their median net worth much more than poor families, both in absolute and relative terms. 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 22). 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.

The ratio of the median net worth of the top and bottom quintiles was 862.9 in 2005, a 41.3 per cent increase since the 1999 ratio of 610.5. We can observe that the accumulation of wealth of the top quintile greatly outpaced that of other quintiles through comparison to the

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[48] Household net worth distribution in 1999 was 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. Unattached individuals had a lower average net worth than economic families, with respectively $123,600 and $308,800 (1999$) (Table 19A). This means that economic families had, on average accumulated two and a half more wealth than unattached individuals. 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 gap suggests that wealth is distributed much less equally among unattached individuals than among economic families. 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. Other obvious factors included age and income (Table 19B). Overall, both average and median net worth increased with age. Since the principal assets of Canadians generally are their house and their pensions, this is a natural observation. However, this trend was reversed 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, but still 9.6 per cent larger than the 35-44. Of course, this is not a surprise as when people retired and start living off their pension, their net worth decreases. 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 over four times greater than unattached individuals.

[49] 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.

middle quintile. In 1999, the top quintile had a median wealth 5.6 times larger than the median household.

Average wealth by quintile shows that wealth is distributed even less evenly than one would assume based on the quintile medians. This demonstrates that wealth is skewed within quintiles, not just in favour of the top quintile. 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. The lowest quintile actually had a negative net worth, the average net debt was $2,500. 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 (Chart 24). The top decile was responsible for 55 per cent of all new wealth created between 1999 and 2005 (Table 19D).

Chart 23: Comparison of Quintile Average Net Worth in 1999 and 2005 ($2005), All Family Units
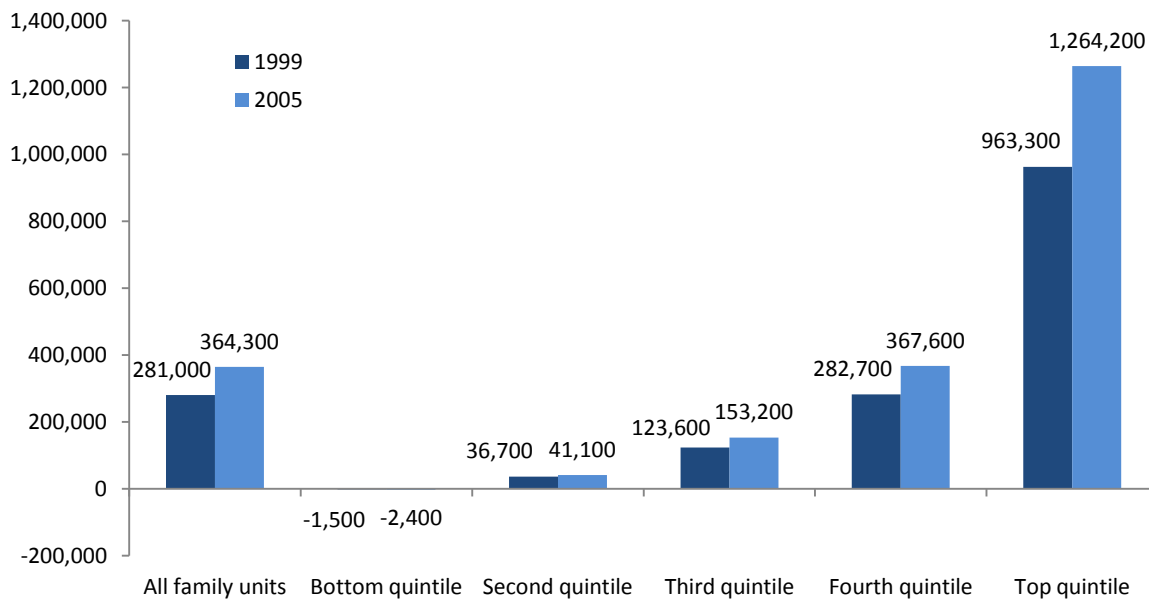
Source : Table 19I

In terms of shares of wealth, the top quintile had over 69 per cent of all wealth and the bottom quintile had negative 0.13 per cent of total wealth. The top decile had over half of the total net worth at 50.93 per cent of all wealth.

Using the 1984 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, this trend was reversed between 1984 and 1977, 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 57.9 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 8.3 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.

Chart 24: Comparison of Quintile Average Net Worth in 1999 and 2005 ($2005), All Family Units

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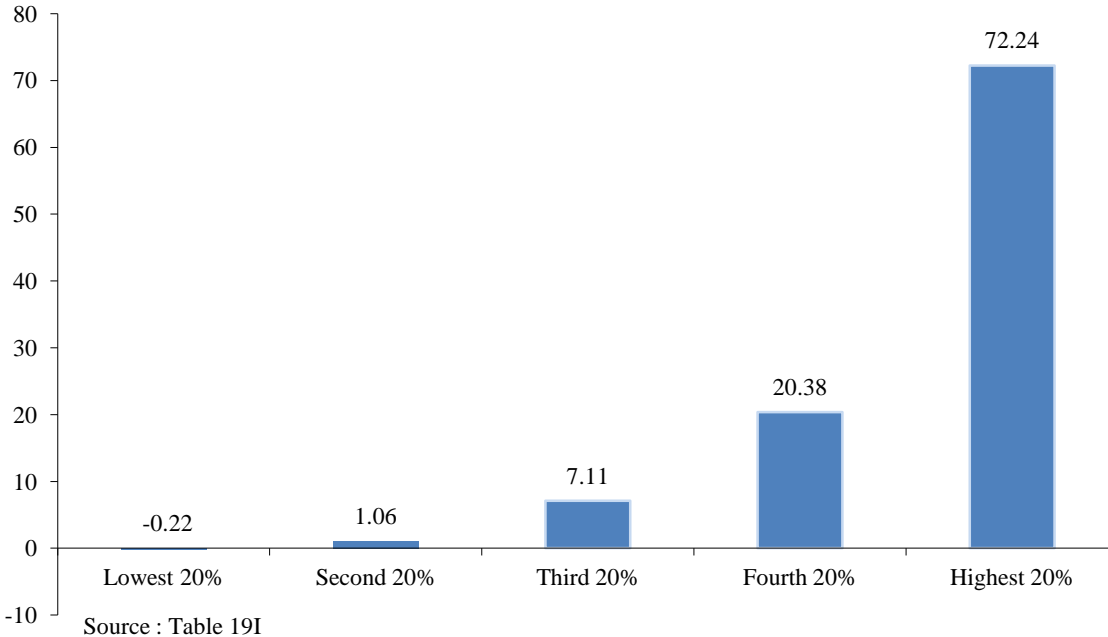
      The skewed distribution of new wealth amplified existing inequalities in the wealth distribution in Canada. Between 1984 and 1999, the richest 10 per cent increased its share of wealth by 3.9 percentage points, from 51.8 per cent to 55.7 per cent (Table 19C). All other deciles saw a fall in their shares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

      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).

IV. Income volatility

      Higher income volatility has directly heightened 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,[50] 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 found that fluctuations in transitory earnings were both large and widespread and the effects were more pronounced with low-wage workers.

This increased income volatility not only contributes to income inequality, but also 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 wonder if it was the case in Canada.

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, it is difficult to create a long-term income indicator from this source.

An alternative to SLID is tax data, although the sample is limited to persons who file a tax return. In a recent study using this data source Morissette and Ostriovsky (2006) examined earnings instability in Canada for different family types over the 1984-2004.[51] 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.

A. Trend of real personal disposable income per capita

To have a first look at aggregate income variability, we have used real personal disposable income data. We first calculated a trend using the method of least squares (Table 20A). We then computed for each year the percentage value of the difference between the actual real personal disposable income value and the trend-expected value (Table 20B). However, we need to emphasize the preliminary state of this analysis. Results do not represent individual

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[50] The Panel Study on Income Dynamics, or PSID, began interviewing in 1968 and has a sample of approximately 5,000 families. The PSID is underwritten by the National Science Foundation and run by the University of Michigan. For more information, see http://psidonline.isr.umich.edu .

[51] Beach et al. (2003) also looks at earnings instability and variability for Canada in the 1980s and 1990s.

income volatility and cannot even be used as a proxy. They more or less represent business-cycle effects. An index for income volatility has to be based on micro-data.

Our analysis gives the expected results, i.e. above- or below-average growth caused real PDI per capita to go off trend (Chart 25). For example, starting with the 1991 recession, real PDI per capita started to go significantly off trend. In 1996, it was 6.3 per cent below its long-term trend. Similarly, at the peak of the business cycle, in 1989, real PDI per capita was 5.5 per cent above its long-term trend. It is interesting to note that variability lessened in the 2000-2005 period as PDI advanced more in line with the trend than during previous cycles, but the 2006-2010 data appears to signal the return of greater variability as real personal disposable income was 5.3 per cent above trend on average in that period. Indeed 2010 data places current disposable income 6.3 per cent above trend, the highest level on record over the 1981-2010 period. Unfortunately, it is difficult to obtain useful information on income volatility from this trend analysis.

Chart 25: Real Personal Disposable Income per Capita, Trend and Actual, $2002, 1981-2010
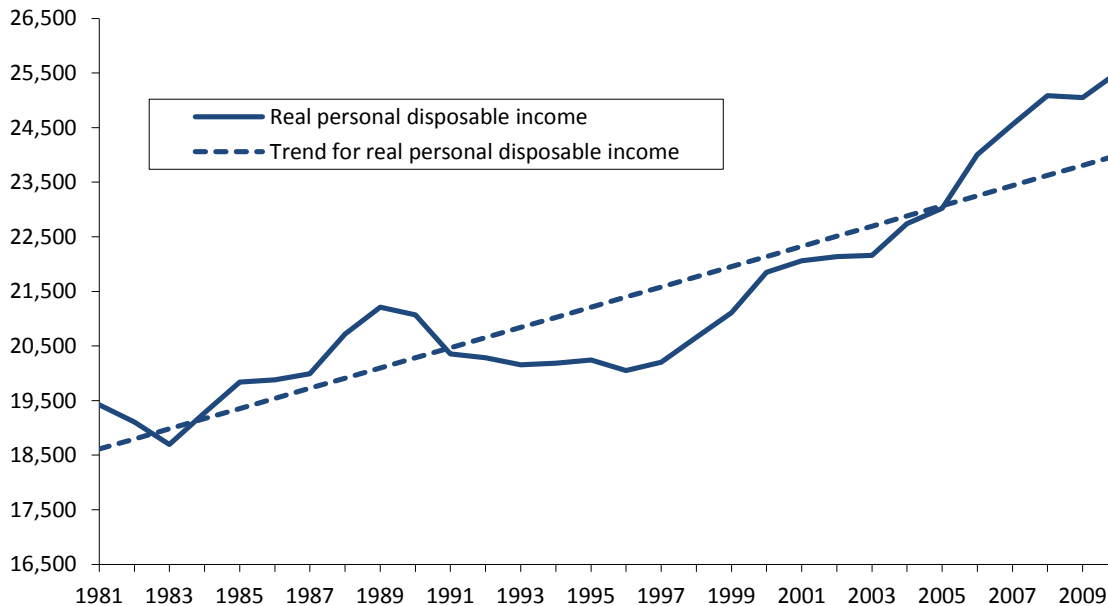
Source : Table 9B and Table 20A

B. Personal bankruptcies

A slightly better 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 1976-2009 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 26). 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.

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 2009, with the economy growing and the labour market conditions steadily improving, consumer bankruptcies per capita averaged 26.4, almost eight 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).

Chart 26: Consumer bankruptcies per 10,000 persons, 1976-2009
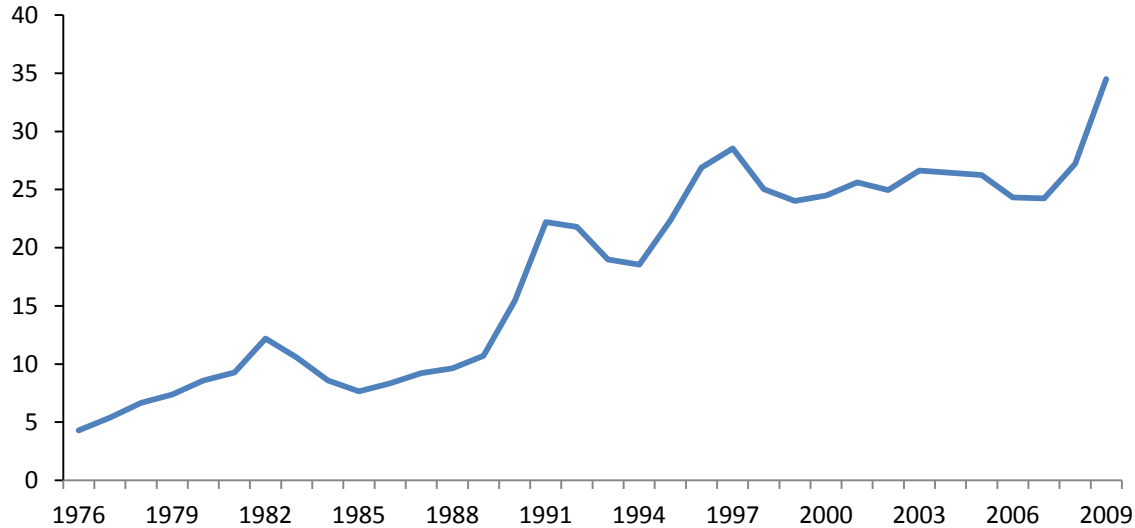
Source: Table 21

This rise in bankruptcies is in line with the conclusions of the *Los Angeles Times'* analysis of income volatility trends in the United States. Moreover, it is consistent with result obtained by Beach et al. (2003) who observed increased earnings variability in Canada using tax file data using the Gottschalk and Moffit (1994) methodology. Eventually, to obtain a better and clearer picture of this phenomenon, a similar exercise to the one performed to obtain the *Los Angeles Times'* series on income volatility in the United States will have to be performed for Canada using SLID micro-data.

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 effects 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 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 security will be discussed using subjective answers given to questions asked for the Personal Security Index 2003 (PSI).

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 how minority groups, particularly immigrants and Aboriginal Canadians, have fared in recent years.

A. Labour Market Security[52]

"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 a fair chance 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

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[52] For a comprehensive discussion of labour market trends over the 1976-2005 period, see Statistics Canada (2006a).

Over the 1981-2010 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 from 65.0 per cent in 1981 to 67.0 per cent in 2010. 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 slightly reaching 61.6 per cent in 2010. Overall, both the participation and the employment rate moved cyclically (Chart 27).

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 1976-2010 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.

Chart 27: Participation Rate and Employment Rate, 1981-2010, Per Cent

Source : Table 37
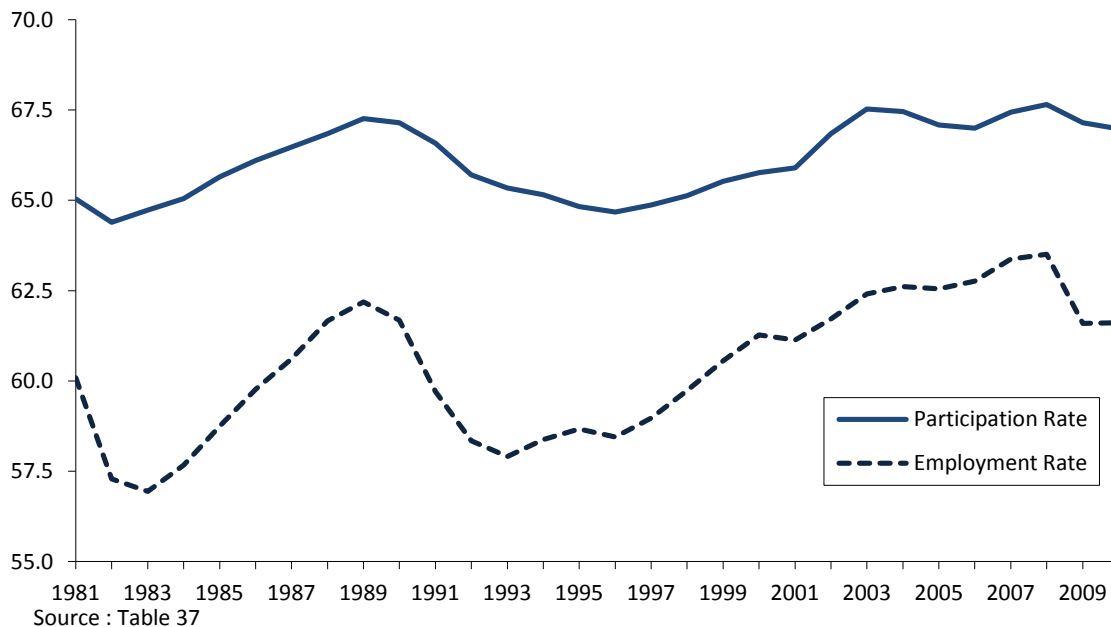
Unemployment is generally considered a lagging indicator, as opposed to a leading indicator, because it is generally the result of a slowdown in the economy, not the cause. During a recession, employment falls as businesses reduce production and lay off workers. In Canada, the official unemployment rate has closely followed the business cycle (Chart 27). 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 and then rose a dramatic 34.9 per cent to 8.3 per cent in 2009 before falling slightly to 8.0 per cent in 2010.

Today, compared to the situation in the first half of the 1980s and 1990s, the Canadian labour market offers much greater employment opportunities, as illustrated by frequent employer complaints of labour shortages, particularly in Western Canada. But unemployment remains high in certain regions, with Newfoundland and Labrador and Prince Edward Island both having unemployment rates of 11 per cent or above in 2010.

3) Incidence and duration of unemployment

The incidence of unemployment is the average number of persons experiencing unemployment in a given year over the number in the labour force. In Canada, the incidence of unemployment decreased 3.4 percentage points between 1981 and 2010, from 26.0 per cent in 1981 to 22.6 per cent in 2010, the 2009 recession notably caused the incidence to increase to a recent high of 27.6 per cent. Within the 1981-2010 period, the incidence of unemployment was fairly stable, which means that a more or less constant proportion of the labour force (generally around one in four or one in five) experienced a bout of unemployment in any given year (Chart 28).

Chart 28: Index of Unemployment Duration and Unemployment Incidence (1981=100), 1981-2010
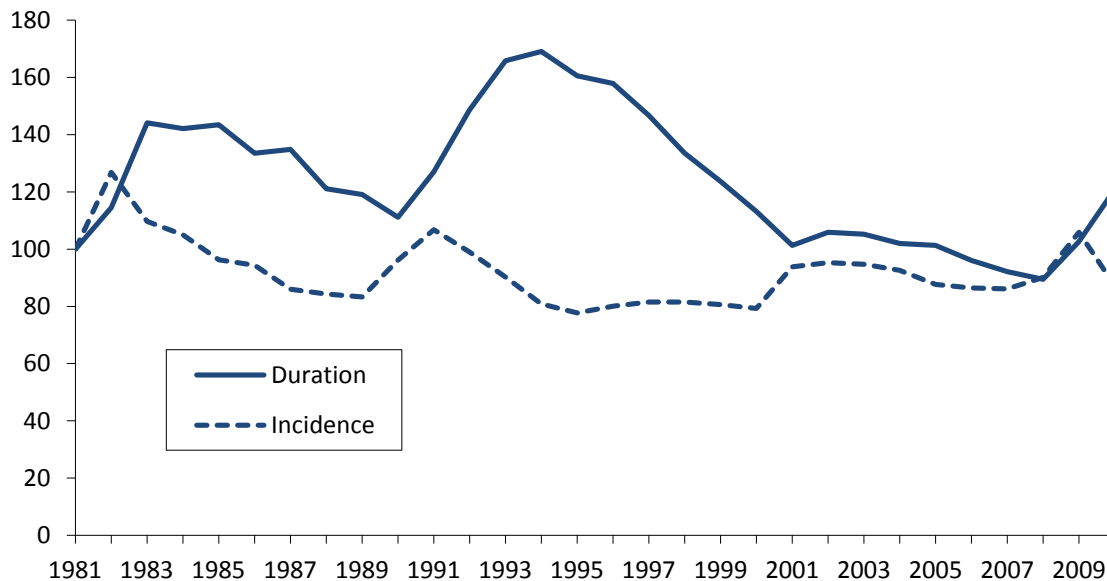
Source : Table 25

While the incidence of unemployment was relatively stable within the period, this was not the case for the duration of unemployment. The average duration of unemployment was 18.4 weeks in 2010, up 3.2 weeks from 1981. During the period, the average duration experienced large swings (Chart 25). In fact, during recessions, even though the incidence of unemployment remained relatively unchanged, the average duration increased significantly. 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. During the more recent recession, duration of unemployment increased from 13.6 weeks in 2008 to 18.4 weeks in 2010.

The relative stability of the incidence of unemployment coupled with the swings in unemployment duration 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. People at risk, who probably 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. Unfortunately, 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. They are available for Canada and the provinces. Tracking those measures provides a more complete understanding of labour under-utilization.

Chart 29: Official and Supplementary Measures of Unemployment Rate, 1981-2010

Source : Table 22A and Table 22B
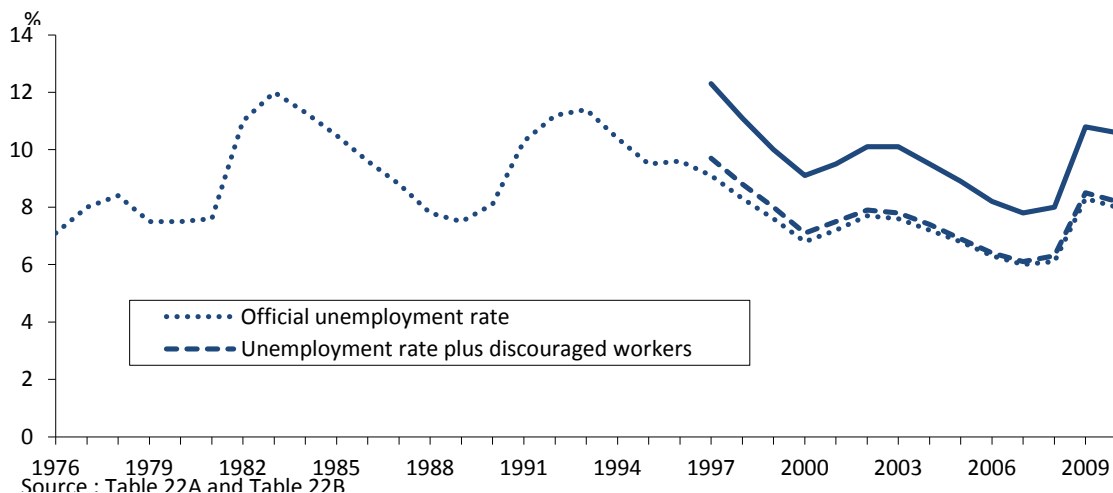
By adding discouraged workers, we obtain a measure called unemployment rate plus discouraged searchers.[53] These estimates do not differ much from the official unemployment rate figures (Table 22B). For the 1997-2008 period, the difference between the two measures oscillated between 0.6 percentage points in 1997 and 0.1 percentage points in 2005, 2006 and 2007. In 2008 through 2010, the difference was 0.2 percentage points. This implies that in 2010, for example, there were only about 37,000 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. The recent recession caused unemployment plus discouraged workers to climb to 8.5 per cent in 2009 before falling slightly to 8.2 per cent in 2010.

The unemployment rate plus involuntary part-time workers (but excluding discouraged workers) is a more complicated measure.[54] 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 ranges from 3.2 percentage points in 1997 to 1.8 percentage points in 2007, the measure increased during the recent recession and amounted to 2.6 percentage points in 2010 (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 through 2008, though the market experienced increased unemployment and underemployment in 2009 and 2010. Canadians' employment opportunities have certainly improved over the conditions of the eighties and nineties, though the recent recession has detracted from those gains. Nonetheless, broader measures of unemployment indicate that the Canadian labour market still under-utilizes about 10 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.

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[53] 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.

[54] 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.

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 defined as the number of persons unemployed for 52 weeks or more over the number of persons unemployed. In Canada, long-term unemployment has increased by 103.5 per cent since 1981 (Chart 30 and Table 25c). However, it is still three to six times lower than in some European countries.[55]

Chart 30: Medium (26-51 weeks) and Long Term (52 weeks and over) Unemployment as a Proportion of Unemployment, 1981-2010, in Per Cent
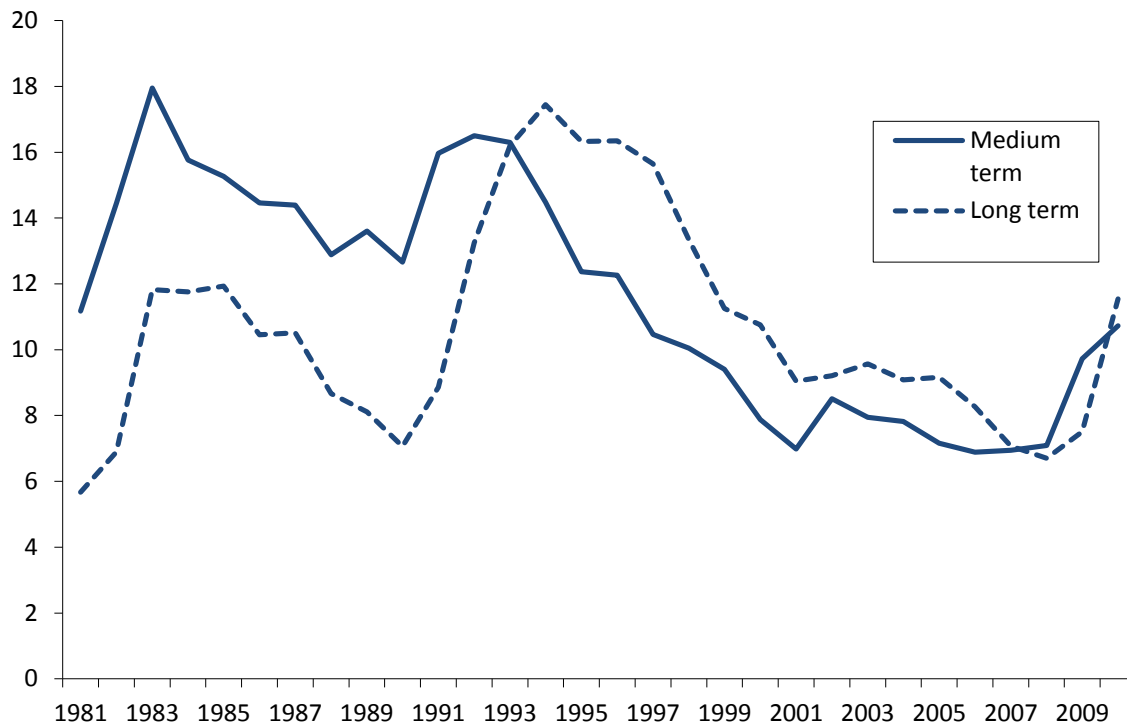
Source : Table 25c

Its growth over the years has some worrying implications. In 1981, the incidence of long-term unemployment was 5.7 per cent (53,000 persons). The proportion of long-term unemployed was marginal. After the 1981 recession, this proportion jumped, reaching 11.8 per cent in 1983.

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[55] According to OECD statistics, 42.7 per cent of the unemployed persons in the European Union 15 in 2010 were long term unemployed.

During the recovery and expansion, long-term unemployment edged down, but never came back 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 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, and increased to 7.5 per cent in 2009. The recent recession pushed long-term unemployment to a 12-year high of 11.5 per cent in 2010. Prior to the recent recession, the reductions in the incidence of long-term unemployment had brought the rate down to levels not seen since the early 1980s. Even with the recent increase in long-term unemployment, the rate remains well below rates experienced from 1992 to 1998.

This suggests that recessions have a lasting effect on long-term unemployment as the incidence of long-term unemployment remains above pre-recession levels to this day. The deflationary policy of the central bank in the early 1990s may have had permanent consequences for some workers, making them chronically unemployed. Structural changes in the labour market such as the aging labour force (older workers have much longer spells of unemployment than younger workers) could also contribute to this problem. 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 generally welcome lower unemployment statistics. However, the characteristics and stability of jobs are also regarded as 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.[56]

The CIBC does produce the Canadian Employment Quality Index (EQI). 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. In other words, it is a sectoral analysis of employment conditions. Therefore, 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 is released quarterly since 1994 at the national level.

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[56] See www.jobquality.ca for a comprehensive review of job quality indicators for Canada.

Chart 31: CIBC Employment Quality Index (January 1994=100), 1988-2010

Source : Table 40
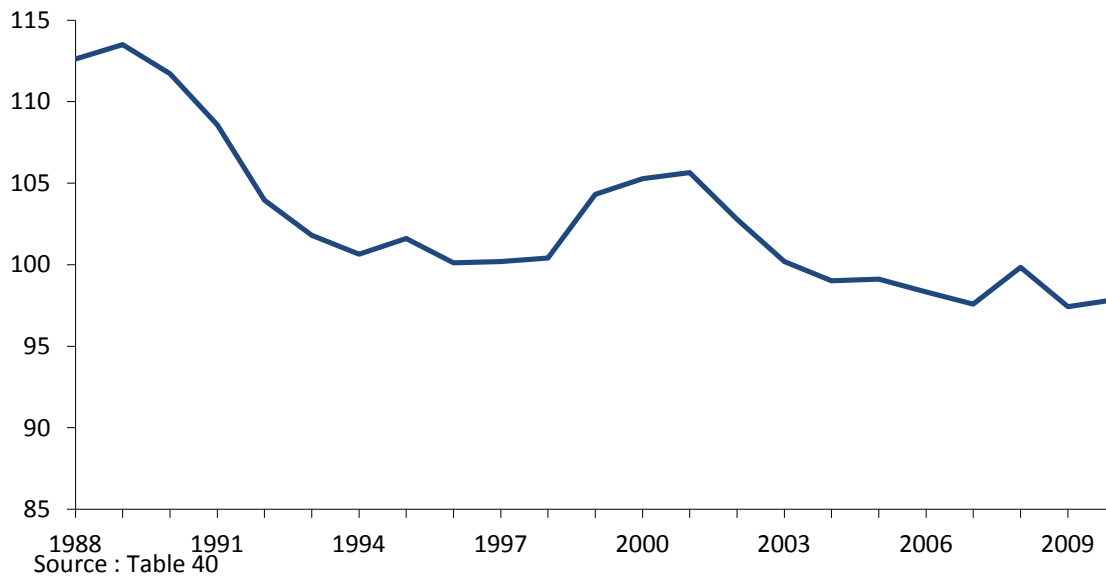
Job quality is important because it helps to better understand the trends behind the employment numbers. For example, if employment rises and job quality falls, one could suppose that even though employment numbers are good, they might not translate into higher income because of falling job quality.

Since 1988 the CIBC EQI has been on a more or less steady downward course, falling 13.1 per cent by 2009 (Chart 31). The only extended period on record for which employment quality increased was the 1997-2001 period, during which period the index increased by 5.5 per cent, after which the index resumed its decline. The index reached its lowest point during the recent recession, at 97.4 in 2009 and recovered slightly 97.9 in 2010.

7) Job stability and job anxiety

If a person leaves a job for voluntary reasons, it is not a negative development, so any measure based on overall employment trends can be misleading. Thus, it is more appropriate to track persons who suffer an involuntary job loss, job losers. To examine trends in job stability, we have used Statistics Canada data on job losers (Table 39). We find that if we account for both permanent and temporary job losers, the proportion of job losers in employment fell 0.2 percentage points between 1981 and 2010. In 2010, 6.8 per cent of employed people lost their job, the lowest level ever recorded in the history of the current version of the LFS, which runs from 1976 to 2010 (Chart 32). This was less than half the level observed in 1982 (12.6 per cent), 1983 (12.7 per cent) and 1992 (11.7 per cent). As the likelihood of job loss, one can expect job anxiety to follow.

Job anxiety can be devastating for an individual and his or her family. It can lead to stress, health problems and poorer productivity. Subjective indicators are used less often than objective indicators because they are generally considered more biased or less precise. However, for the purpose of measuring wellbeing, they often go 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?*

Chart 32: Job Losers as a Proportion of Employment, per cent, 1981-2010

Source : Table 39
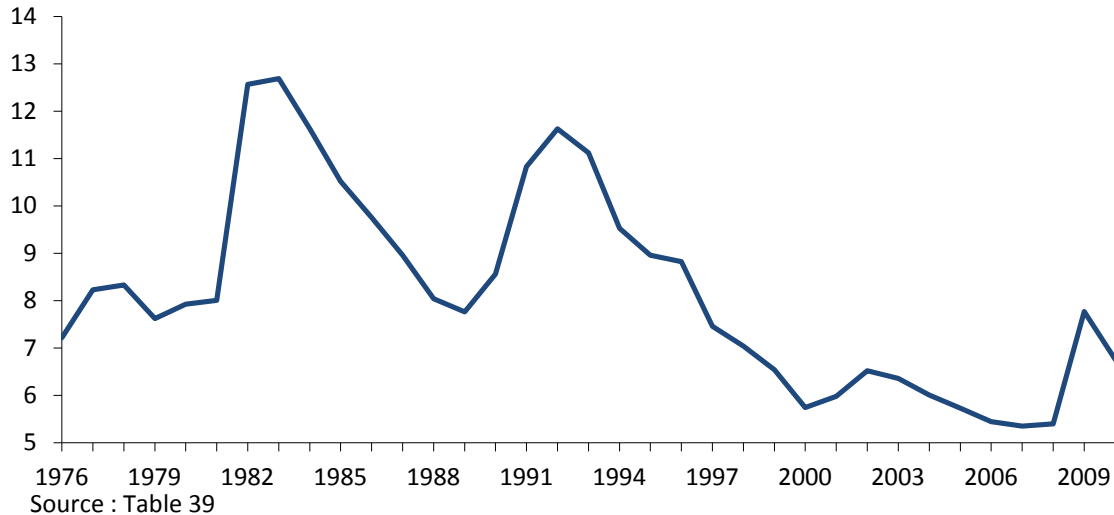
The results have been relatively constant in the last few years and closely followed trends in job stability. Since 1999, the proportion of Canadians that are worried that they or someone in their household will lose their job has stabilized around 20 per cent (Chart 33). It should be noted that this proportion increased to 25 per cent in 2009. 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 cycle, 19 per cent of Canadians were still worried about losing their job. This is probably caused by uncertainties associated with the business and the product market condition or to individual preferences, which cause a fifth of Canadians to experience job anxiety on a relatively permanent basis.

The Canadian Council on Social Development publishes 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. 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.*

Chart 33: Is There Anyone in Your Household Worried about Losing Their Job or Being Laid Off? 1990-2009

Source : Table 28C and Table

No data for 1991, 1992, 1994, 1996 and 1998 from Ipsos Reid. Data interpolated for these years.
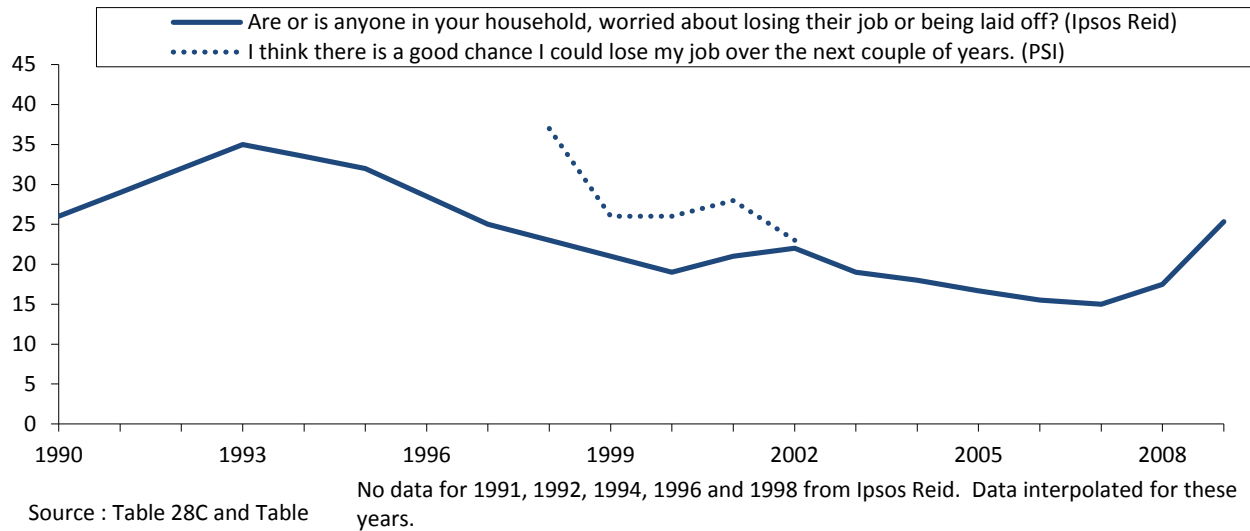
     The perception indicator concerning the job market is broadly consistent with the available objective data. Between 1998 and 2002, the unemployment rate fell from 8.3 per cent to 7.7 per cent. Moreover, 1998 was preceded by numerous years of high unemployment. This translated into stronger confidence 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 34). 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 34: Fear of Job Loss as Reported by the Personal Security Indicator, 1998-2002
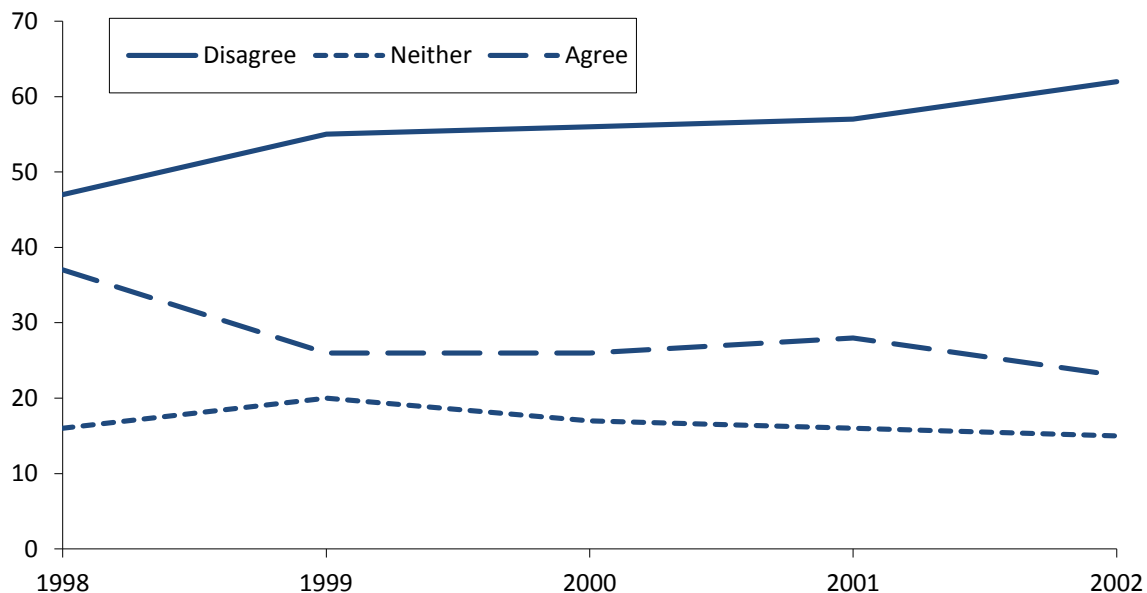
Source : Table 41

8) 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 workers wellbeing. Trends in the proportion of employees in temporary jobs between 1989 and 2004 show a definite increase, both for women and for men. Data, originally from the General Social Survey and the Labour Force Survey, are available for 1989, 1994, 1998 and 2004. In 1989, the percentage of employees in temporary jobs was 5 per cent. It increased to 7 per cent in 1994 and then leveled of at 9 per cent in 1998 and 2004 (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 percent 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.

Chart 35: Percentage of Employees in Temporary Jobs, per cent, 1989, 1994, 1998 and 2004
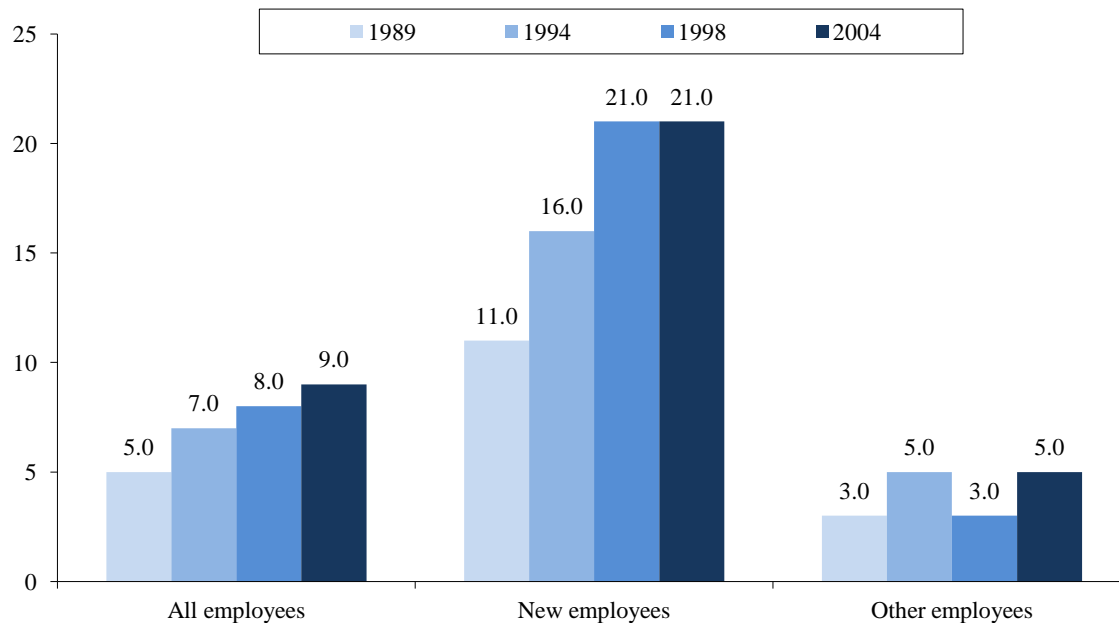
Source : Table 43

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.

9) 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 1981-2010 period, the percentage of workers working 50 hours or more was unchanged at 12.1 percentage points, though the 2010 level was down from the pre-recession level of 12.9 per cent in 2008 (Table 44A). The biggest increase was for workers aged 55 to 64, from 10.5 per cent in 1981 to 11.0 per cent in 2010, or a 0.5 percentage-point change. The youngest age group (15-24 years old) reported a decrease of 1.8 percentage points 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 0.8 percentage points, from 14.1 per cent in 1981 to 13.2 per cent in 2010, this was notably down from the pre-recession level of 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 36: Percentage of Employees Working 50 Hours or More per Week, Ages 15 and Over, 1981-2010
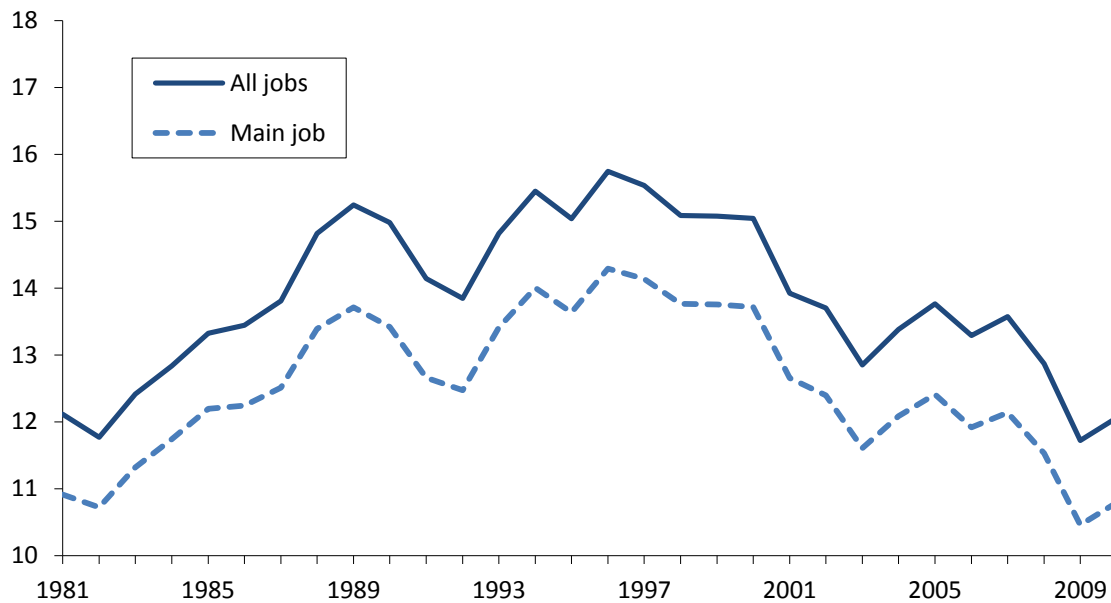
Source : Table 44D

Estimates by occupation using the main job only (that is excluding moonlighting) give a different picture because data are available only since 1987 (Tables 44B and 44C). Between 1987 and 2010, the percentage of workers working 50 hours or more decreased in eight of the ten main occupations categories.[57] At the aggregate level, main job estimates show a 1.7-percentage-point decrease in the proportion of workers working 50 or more hours per week, from 12.5 per cent in 1987 to 10.8 per cent in 2010.

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[57] Only trades, transport and equipment operators (2.1 percentage-point increase) and occupations unique to processing, manufacturing and utilities (2.2-percentage-point increase) experienced an increase in the percentage of workers working 50 hours or more.

Overall, the incidence of workers working 50 hours or more does not seem to have dramatically increased or decreased in the last 20 years.

10) 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).[58] Worryingly, the incidence of low-pay jobs has not diminished since 1980. Data based on 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 per cent 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 stronger 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.

Chart 37: Employees Aged 17-64 and 25-64 Paid Less Than $10 per Hour ($2001), per cent, 1981-2004
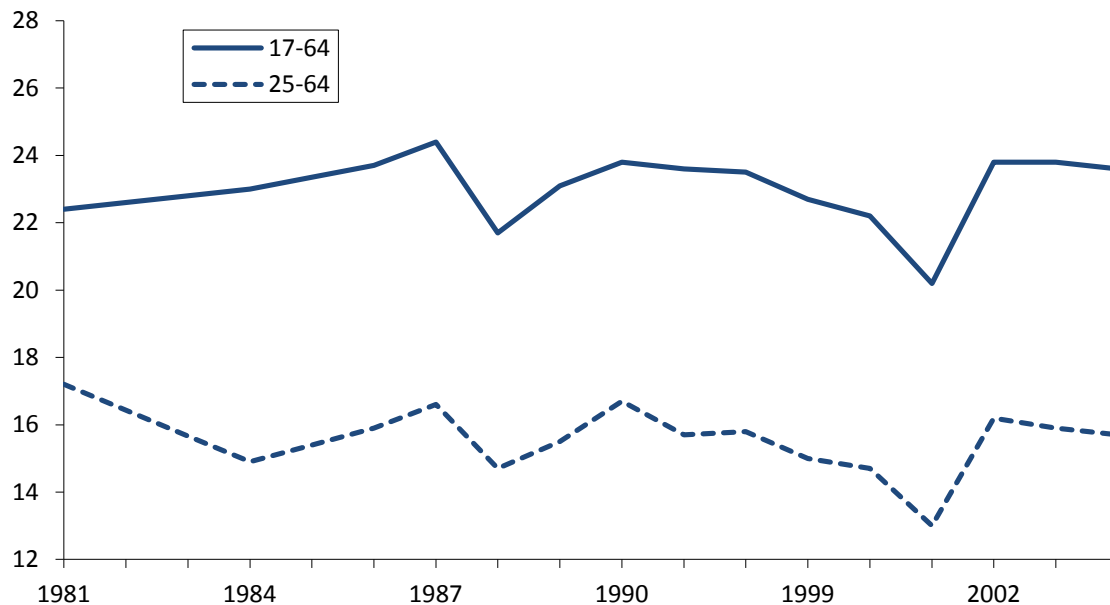
Source : Table   Data for 1982-1983 and 1985 was interpolated

This high incidence of low-paid jobs, particularly among the young, can come as a surprise since both human capital (in the form of education) and productivity increased in Canada between 1980 and 2004. These results match the absence of growth in real median hourly wages in Canada for 1980-2004. This stagnation of median wages hides considerable adjustments at the margin for firms. In effect, according to Morissette and Johnson (2005),

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[58] 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.

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 (Chart 37). 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. However, this was still far higher than the 13.0 per cent reached in 2001. Moreover, when compared to the steady increase in educational attainment, productivity and GDP, it is hard to understand how there can be only a 1.5 per cent improvement in the incidence of low-paid jobs in Canada as a whole and a 44 per cent increase in the incidence of low-paid jobs among young people.

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.[59] This means that a decline in the index represents an increase in affordability and a rise in the index a decrease in affordability. It is estimated on a quarterly basis for each province and for the Montreal, Toronto, Ottawa and Vancouver metropolitan areas. A higher value indicates that it is more difficult to afford a house.[60]

From 2001 to 2010, the RBC housing affordability index has steadily increased, implying housing became less affordable. In 2010, the index reached 41.2, 18.8 per cent higher than the low of 34.3 in 2001 over the 1985 to 2010 period. Yet the 2010 value is still lower than the peak value of 49.2 reached in 1990. One salient characteristic of trends in housing affordability, at least up until 2001, is the strong relation between interest rates and housing affordability (Chart 38). 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 36.5 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 49.2 per cent in 1990. This corresponded to the interest rate peak, which reached an average of 13.4 per cent during the same

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

[60] 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.

year. These stratospheric 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. From 2001 to 2008, the Housing Affordability Index continued to trend upwards despite lower interest rates. The recession caused the index to fall 11.3 per cent in 2009, from 45.0 to 39.9. The index increased somewhat to 41.2 per cent in 2010, a level 8.4 per cent below the pre-recession level of 2008 and 16.2 per cent below the index peak in 1990.

Chart 38: RBC Housing Affordability Index and 5-year Mortgage Interest Rates (per cent), 1985-2010
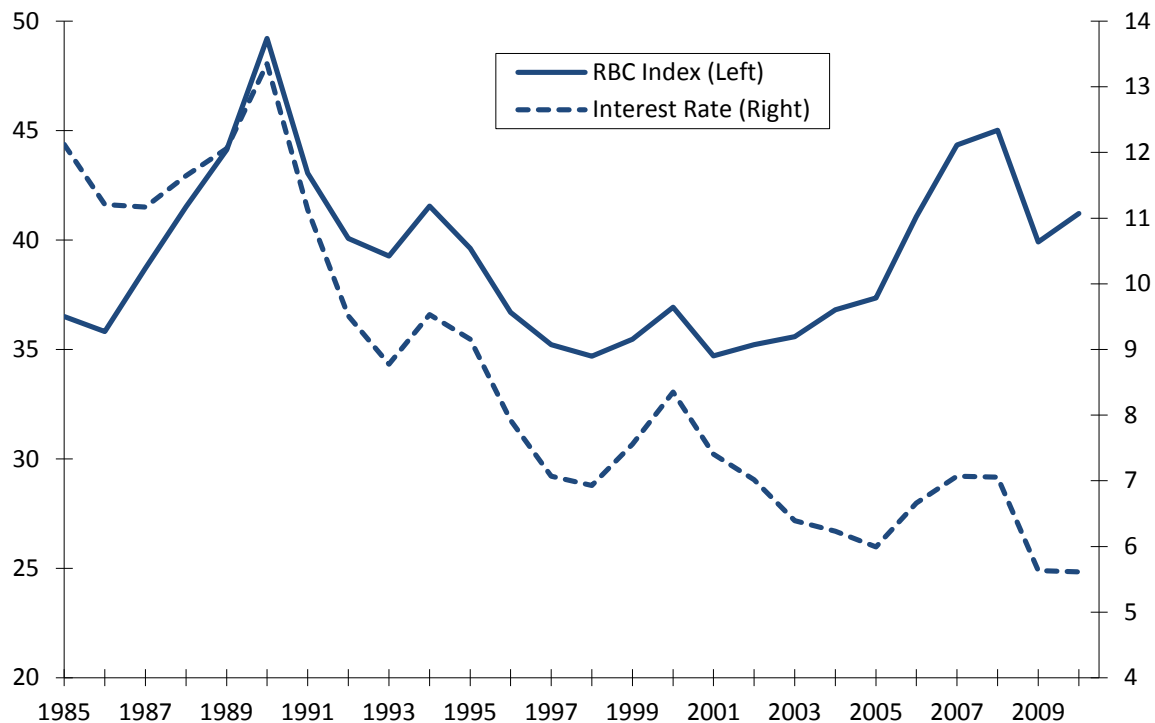
Source : Table 27 and Cansim series V122521

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.[61] Finally, a dwelling is considered affordable if it costs less than 30 per cent of before-tax household income.[62]

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[61] 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

Chart 39: Percentage of Households Whose Dwelling is Adequate, Suitable and Affordable, per Census Year
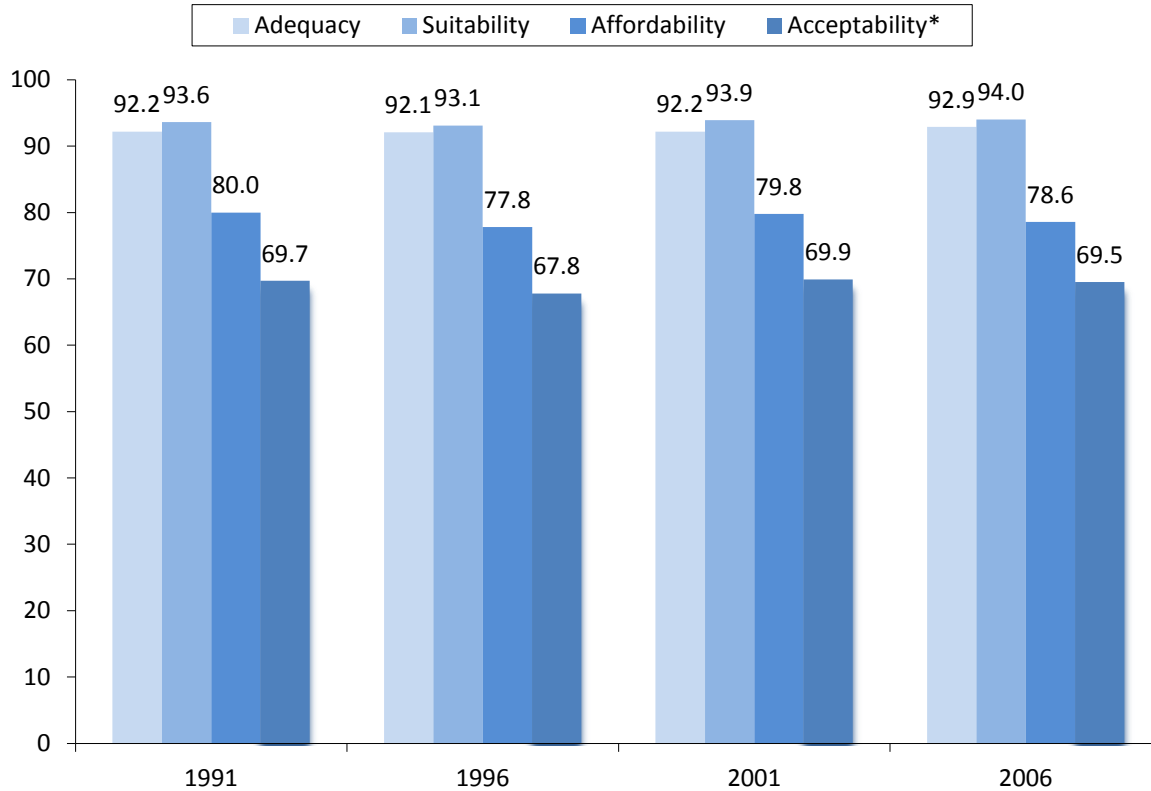
Source : Table 26b to   *A dwelling is acceptable if it meets all three criteria

The comparison between the 1991, 1996, 2001, and 2006 census data for these three criteria does not reveal many changes in the Canadian housing market (Chart 39). 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. 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 and a further increase between 1996 and 2001. Instead, Census data suggest that housing affordability fell in 1996. Moreover, the housing affordability indicator 1991 and 2001 is comparable, with only a 0.2 per

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opposite sex siblings under 5 years of age, they are expected to share a bedroom. Moreover, bachelor units, which have no bedroom, are considered suitable for a household of one individual.
[62] 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.

cent difference. Given that household income rose between 1991 and 2001 and that interest rates were 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 difference 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.

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, the National Longitudinal Survey of Children and Youth (NLSCY) has produced data on child hunger since 1994. More broadly, the subject of food security was part of a supplement in the 1998-1999 National Population Health Survey (NPHS). Three questions specifically concerning food security were asked:

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.[63]

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.

Aggregate results from CCHS cycle 2.1, which was conducted between January 2003 and November 2003 (Statistics Canada, 2004), show that 92.5 per cent of respondents experienced no food insecurity while 6.8 had some level of food insecurity. A total of 4.5 per cent of all respondents experienced food insecurity without hunger, 1.9 per cent with moderate hunger, and 0.4 per cent with severe hunger.

CCHS results underline one of the main aspects of food insecurity – it is closely linked to income. According to the CCHS cycle 1.1 conducted between September 2000 and October 2001, in low income households, 44 per cent reported some level of food insecurity. Similarly,

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

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. Overall, in 2000/01, 14.7 per cent of the population reported some level of food insecurity during the year.

Chart 40: Prevalence of Food Insecurity and Insufficient Food Consumption, 2000/01, per cent
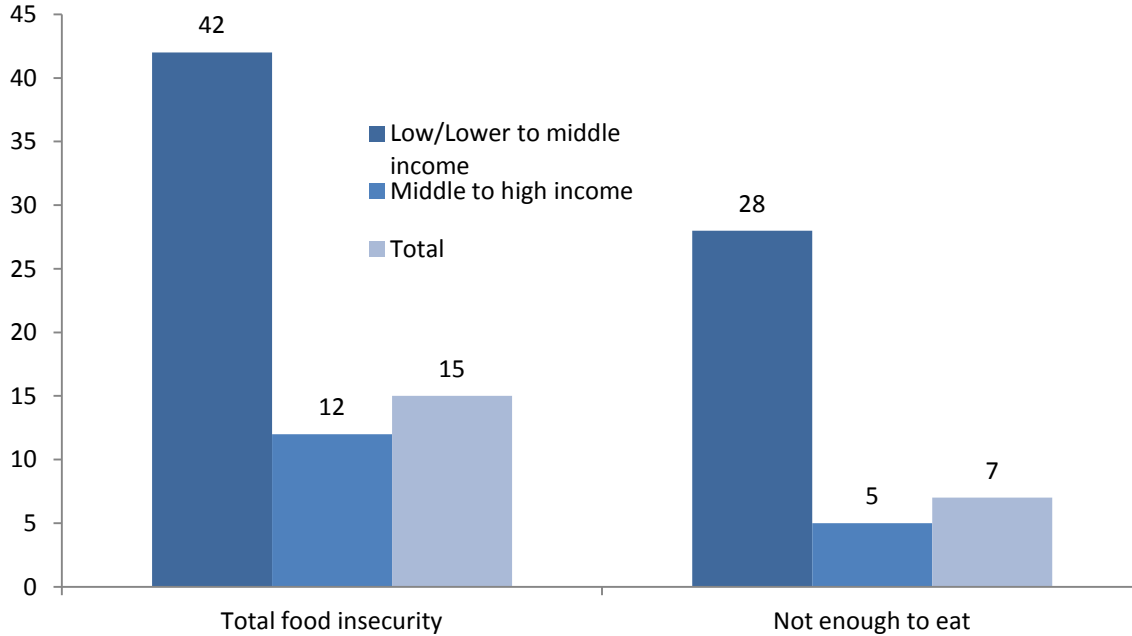
Source: Table 36

Among the different aspect 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. However, fully 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. Surprisingly, 5 per cent of the middle to high income families said they did not have enough to eat (Chart 40).

Cycle 2.2 of the Canadian Community Health Survey (2004) offers further insight into the prevalence of food insecurity in Canada. The most recent data available offers numbers that are easier to accept than the previous survey. It is suggested that 9.2 per cent of Canadian households suffer from food insecurity. While high, this is down from the previous survey's suggestion of 15 per cent. In addition to confirming that food insecurity remains a real issue for Canadian policymakers, the survey adds further support to the previous assertion that food insecurity and income are correlated.

Chart 41: Prevalence of Food Insecurity by Income Adequacy Grouping, per cent, 2004
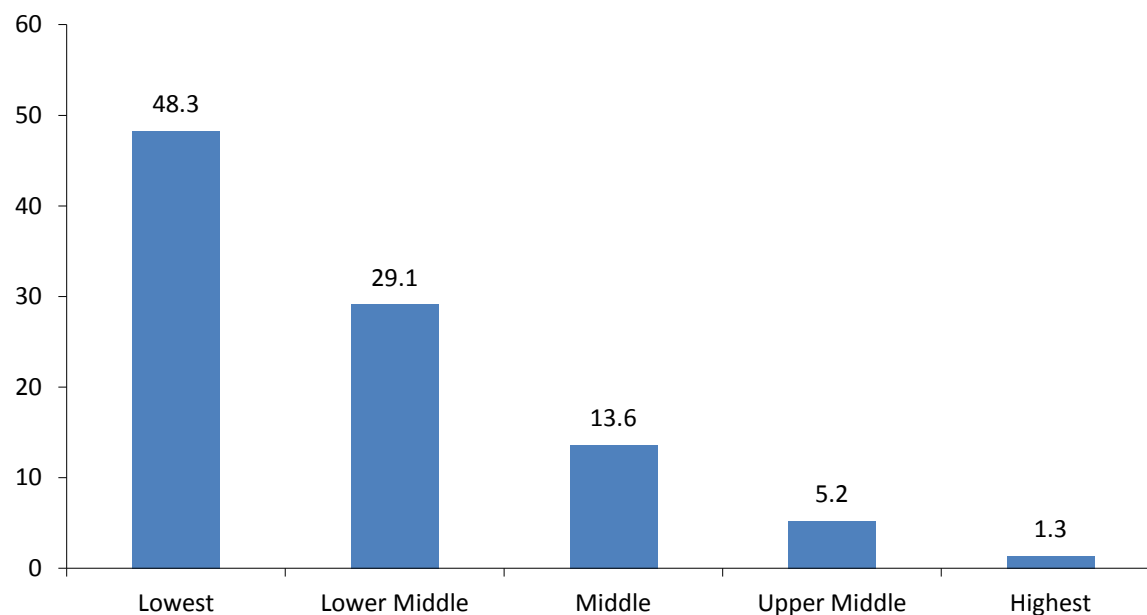
Source : Table 36b

Food insecurity had a very large impact on households in the lowest income adequacy category (Table 36b, Chart 41).[64] A very large proportion, 48.3 of households that had the lowest income adequacy were food insecure. The lower middle (29.1) and the middle (13.6) income adequacy groupings also showed high levels of food insecurity. The upper 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 mere existence of food insecurity at the higher income levels may suggest financial mismanagement more than an actual inability to pay for food.

Canadian Community Health Survey cycle 4.1 (2007/08) indicates that food insecurity continued to be a challenge facing Canadian households even in 2007, affecting 7.7 per cent of households (Chart 42). The burden was shared unequally in terms of both geography and living arrangement style. Geographically, Saskatchewan and Alberta had the lowest incidence of food insecurity at 6.4 per cent, while Prince Edward Island had the highest at 10.3 per cent. In terms of living arrangements, single parents had a much higher incidence of food insecurity (26.6 per cent) than any other living arrangement, followed by unattached individuals living alone (10.3 per cent). Couples with no children had the lowest incidence at only 3.3 per cent, followed by couples with children (5.4 per cent) and other living arrangements (8.5 per cent).

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[64] 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

Chart 42: Prevalence of Household Food Insecurity in Canada and Provinces, by Living Arrangement, 2007
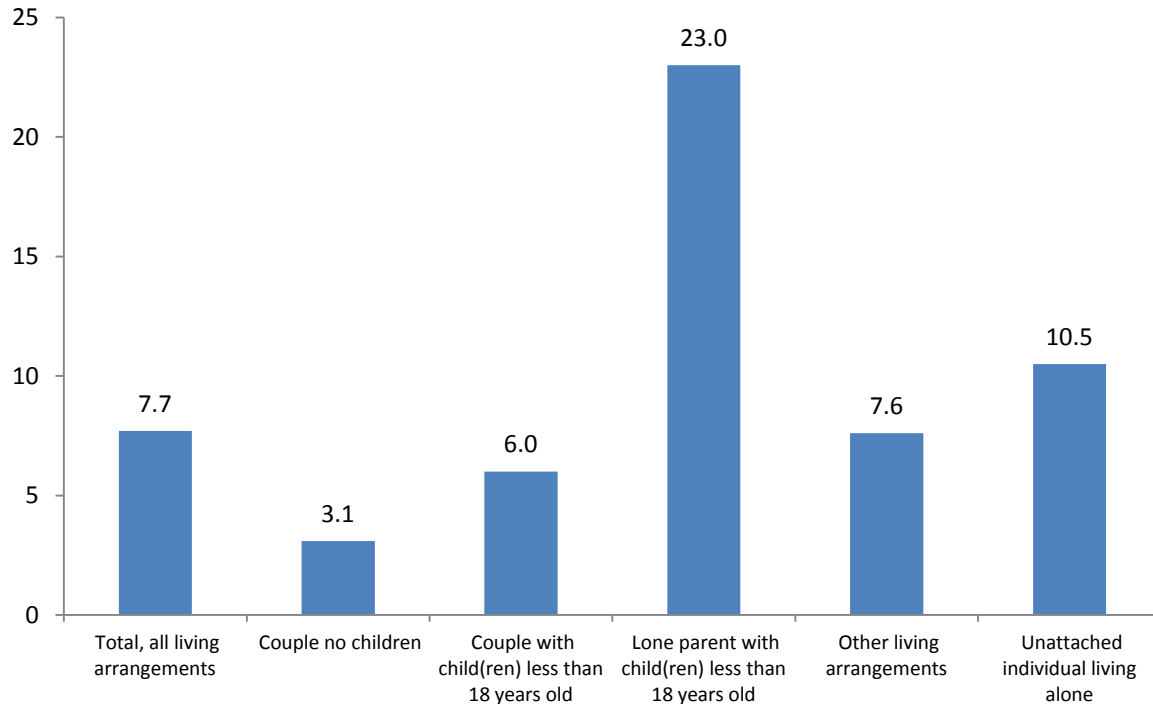
Table 36C

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)?*

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 43). 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 stands at 59 per cent (Chart 44). 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 43: Subjective Perception of Income Adequacy as Reported by the Personal Security Indicator, per cent, 1998-2002
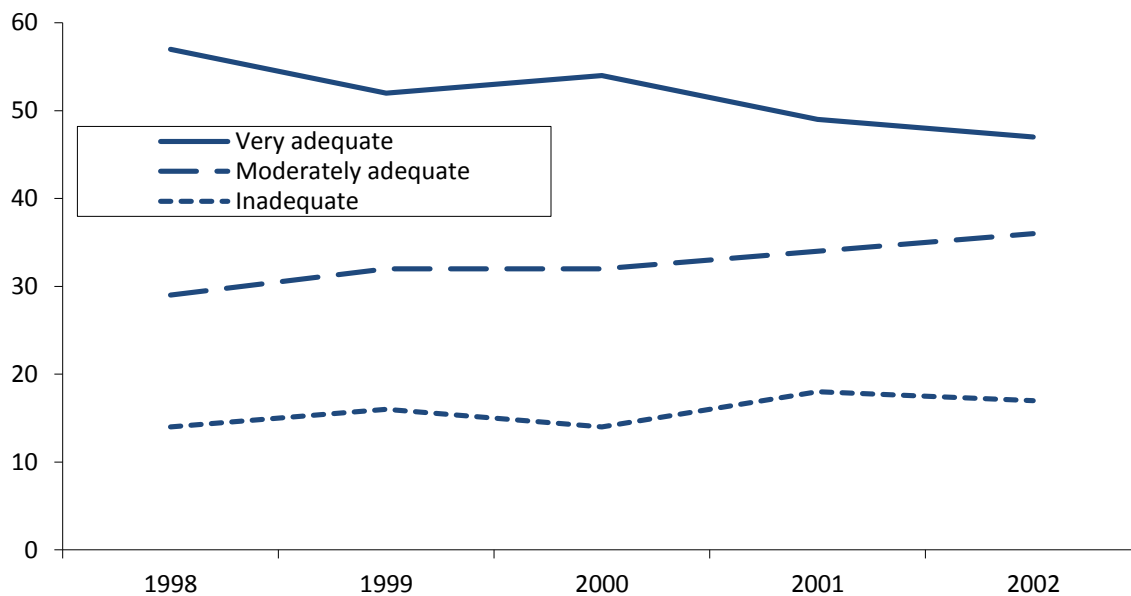
Source : Table 41

Chart 44: Confidence in Income Support Programs as Reported by the Personal Security Indicator, per cent, 1998-2002
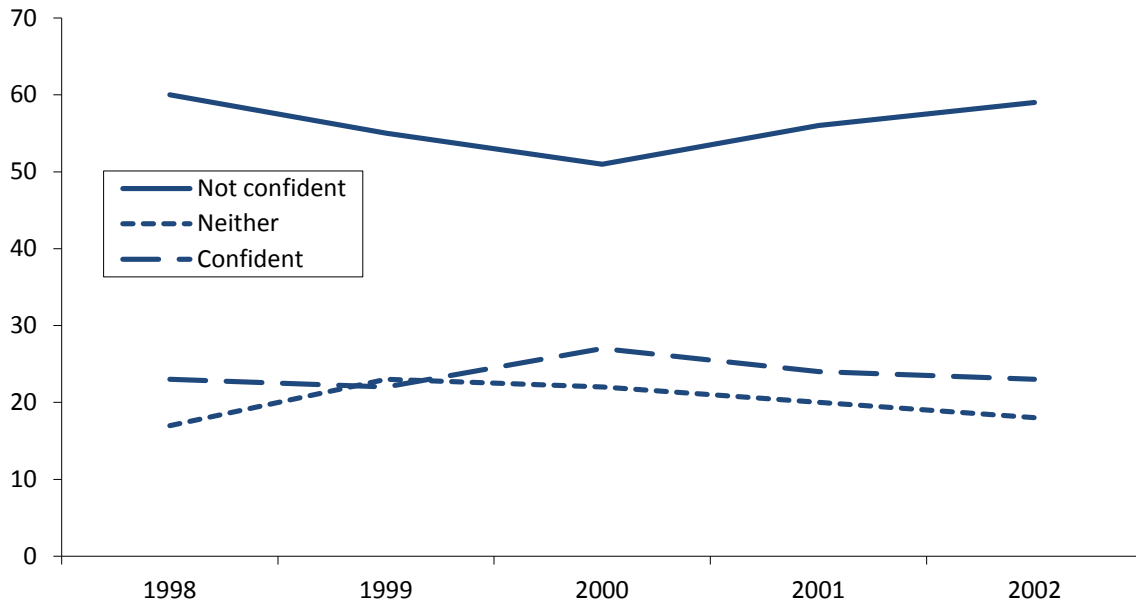
Source : Table 41

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. Good 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) Saving or spending?

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 recent economic expansion was mostly fuelled by consumer spending. Spending growth outpaced income growth, leading to an increase in the debt-to-income ratio or, more generally, in the liabilities-to-income ratio. However, this is different than saying that the latest economic expansion was made at the *expense* of households. In fact, growth in household spending and the dramatic fall in the savings rate appears to stem from the considerable increase in the value of household assets over the period. Strong spending thus seems to be the result of a wealth effect, not of a consumer squeeze aimed at sustaining economic expansion.

Chart 45: Assets, Liabilities and Net Worth per Household, 2002$, CPI Adjusted, 1981-2009

Source: Table 47b
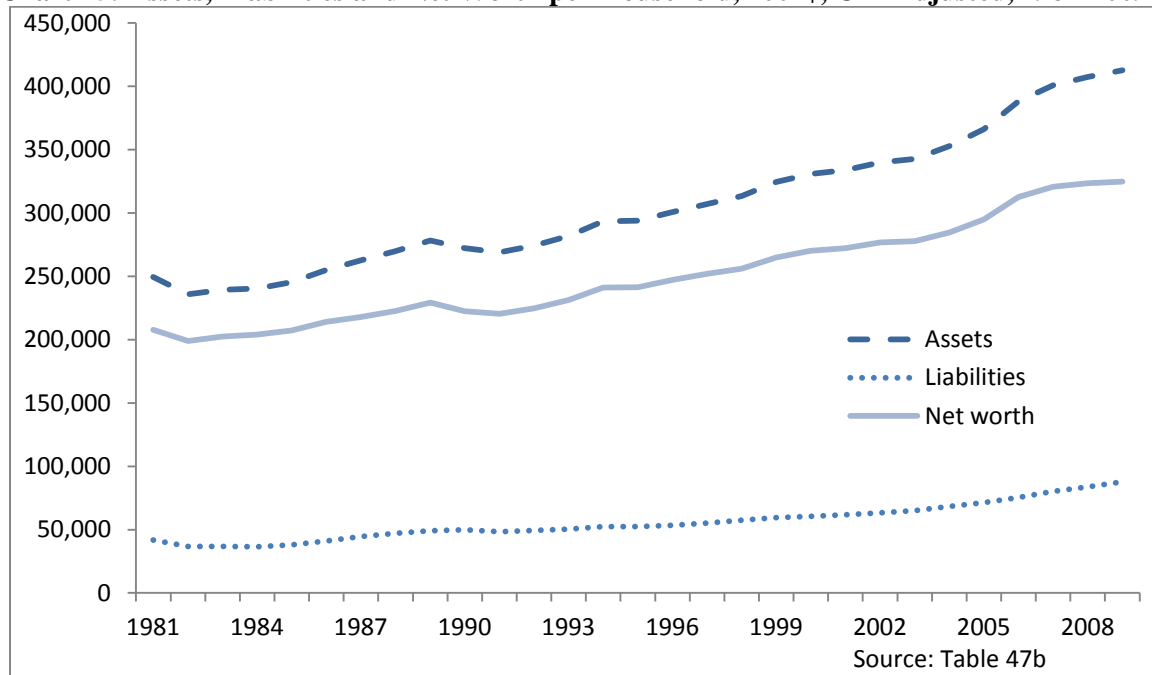
In Canada, the savings rate, which represents the proportion of personal disposable income (PDI) that Canadians save, has followed a general downward trend since 1982, although there are signs that the rate is increasing since 2005 (Table 46). From 20.2 per cent in 1982, it fell to 4.8 per cent in 2010, a 15.4 percentage point decrease over the period. There were three provinces that had negative net personal savings in 2009, PEI suffered the greatest personal savings deficit at -4.9 per cent savings growth, followed by British Columbia (-4.0 per cent), and Nova Scotia (-2.0 per cent). Alberta had the highest savings rate by far (16.0 per cent) and was the only province with a double-digit savings rate. No other province had a savings rate higher than the national savings rate.

Strong spending was reflected in the amount of liabilities held by households. In 2009, the average household had $87,759 in liabilities ($2002), up $45,878 from $41,881 in 1981 (Table 47B and Chart 45). However, the increase in assets per household was much greater, up $163,013 from $249,516 in 1981 to $412,529 in 2009. Greater increases in assets translated into an increase in average net worth per household (asset minus liabilities) over the 1981-2009 period, from $207,635 in 1981 to $324,769 in 2009.

The increase in household assets in the 2000-2009 period came mainly from the boom in house prices. In fact, the increases in the average household value of residential structures (up $36,411) and land (up $38,954) over the period more than offset the decreasing value of other assets (-$13,488). Consumers are spending more, but are 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 151 per cent of PDI in 2010 (Table 47D). 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 2010, the average household had net worth equivalent to 5.44 times personal disposable income, up from 3.93 times in 1981, a 38.3 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 46).

Chart 46: Net Worth per Household ($2002, CPI adjusted) and Personal Savings Rate (per cent), 1981-2009
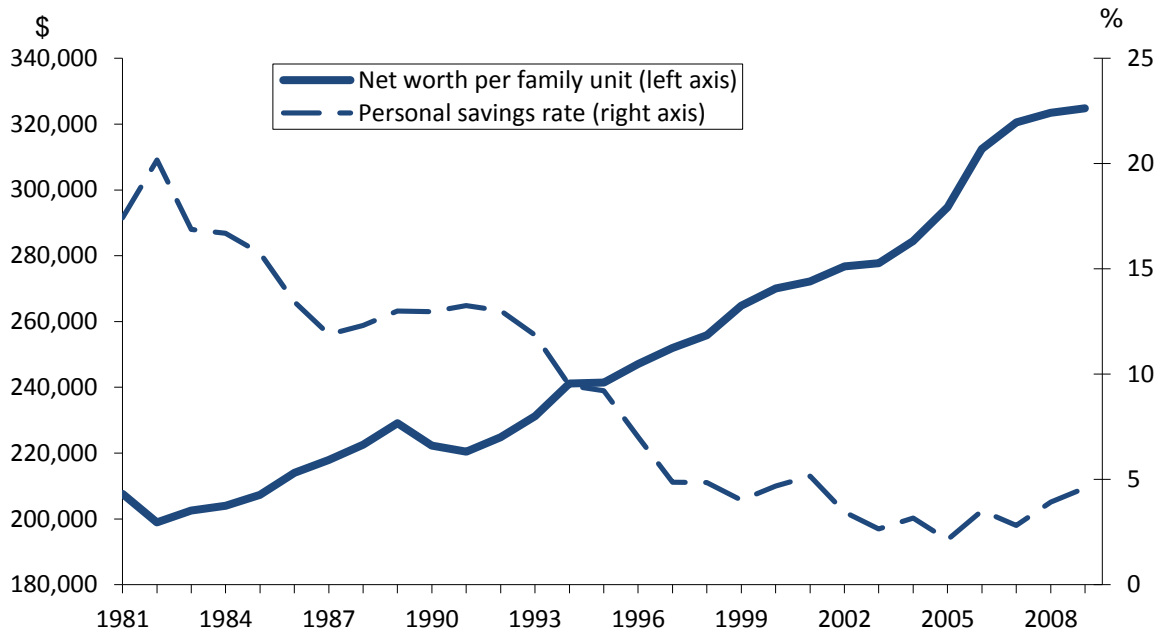
Source: Table 47b and Table 47d

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 47). This suggests that the emphasis put on the risks related to credit expansion in the last few years might be overblown, although a detailed analysis by quintile is needed before a definite conclusion can be reached given the different trends in liability and asset accumulation and saving behaviour by income group.

Chart 47: Composition of Assets and Debt in Canada, as a Percentage of Total Assets, 2005
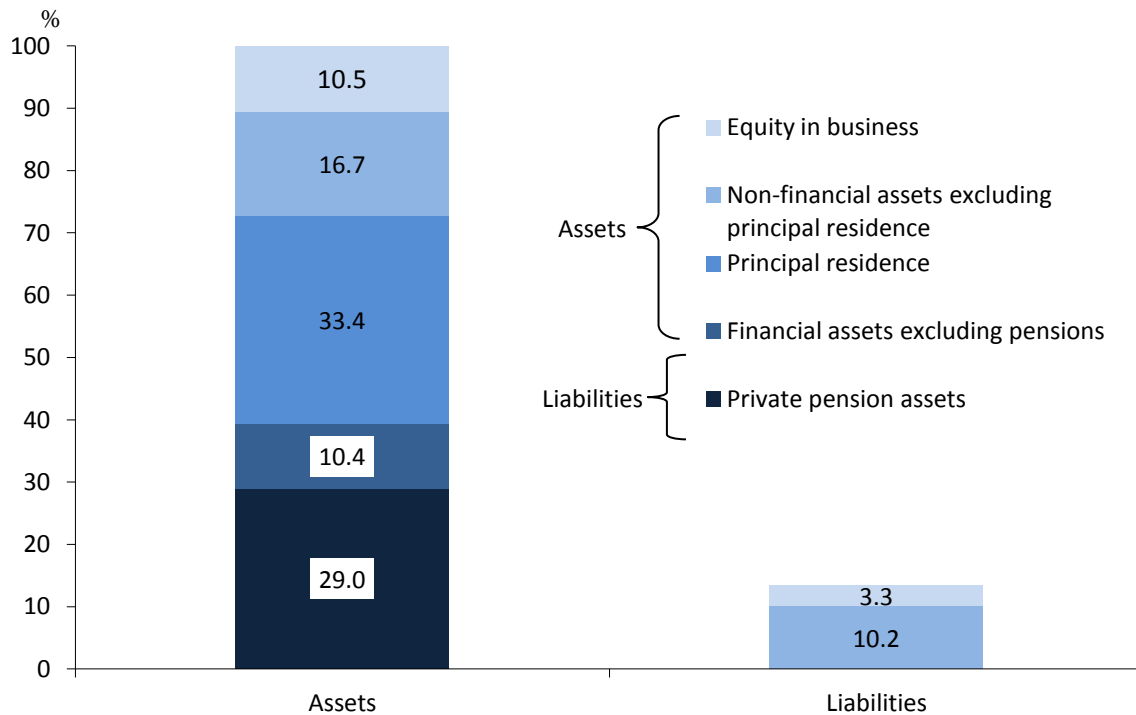
Source: Table 48

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. Moreover, since consumer debt does not represent a large portion of households' liabilities, one can hardly maintain that consumer 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. 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) (know 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 government programs aimed at reducing poverty.

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. The minimum wage in Canada, an employment-weighted average of provincial minimum wages, was $9.50 in nominal terms in 2010 (Table 35C). This was up from $3.67 in 1983, the first year for which data were gathered. Over the 1983-2010 period, nominal minimum wages in this country increased at a 3.59 per cent average annual rate, above the 2.64 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 45.3 per cent in 2010 (Chart 48). Much of 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 consistently declined to 40.2 per cent in 2004 before increasing in 2005-2010 to reach the current level. Chart 48 also shows that in the same 1983-2010 period, the CPI adjusted real hourly minimum wage only increased at a 0.95 per cent average annual rate.

Chart 48: Trends in Nominal Minimum Wage as a Proportion of Average Wage, and Real Hourly Minimum Wage (CPI Adjusted), 1983-2010
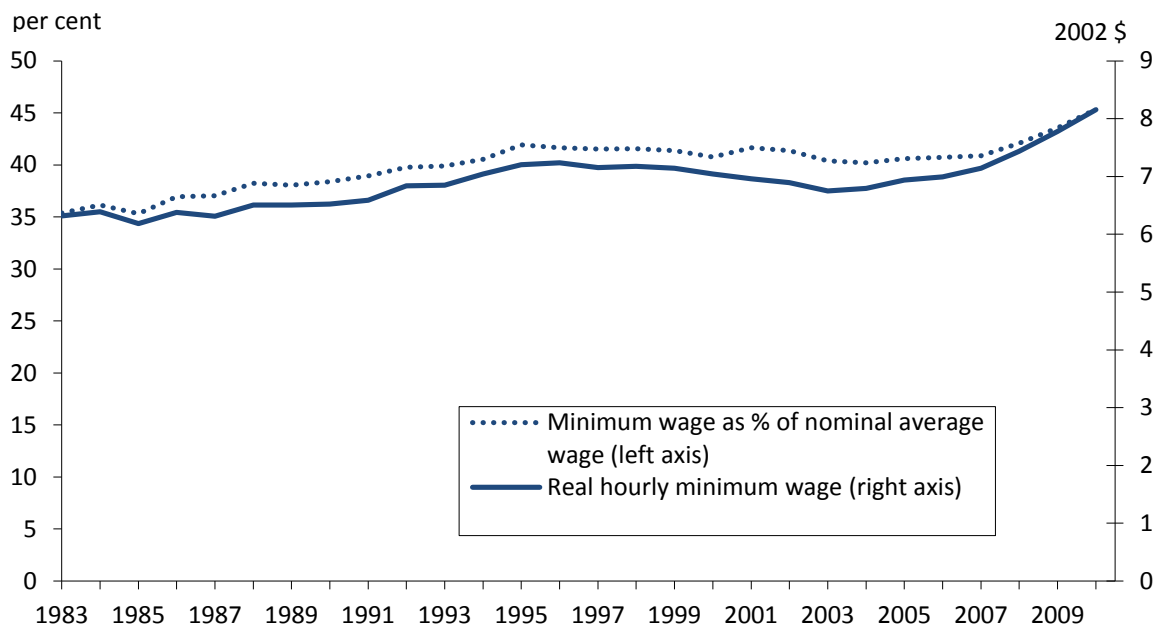
Source : Table 35B and Table 35C

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 (2010), 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 2009.

In 1986, a single employable person received an average of $7,421 in welfare benefits ($2009). Between 1986 and 1992, welfare benefits increased 27.1 per cent for a single employable person, reaching $9,431. However, benefits started to edge down in 1993 and fell 10.1 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 continued its downward trend from 1993 to 2005, inclusively, with only 2002 exhibiting an increase in welfare benefits ($15). Benefits increased $47 in 2008 then $310 the following year, attaining a level of $7,391 in 2009.

Trends in other groups were similar (Chart 49). The least affected by the fall in welfare benefits were single parents with one child, which saw their benefits increase 1.46 per cent from $16,673 in 1986 to $17,043 in 2009. The drop in benefits had been more pronounced for this group, but since 2005 benefits have grown by 11.7 per cent in real terms. On the other hand, couples with two children suffered a 2.4 per cent fall in benefits, from $23,161 in 1986 to $22,294 in 2009. Similarly, persons with disabilities saw their welfare benefits decline 2.8 per cent over the period, reaching only $11,429 in 2009.

Chart 49: Trend in Welfare Income in Canada (population weighted), 2009$, 1986-2009
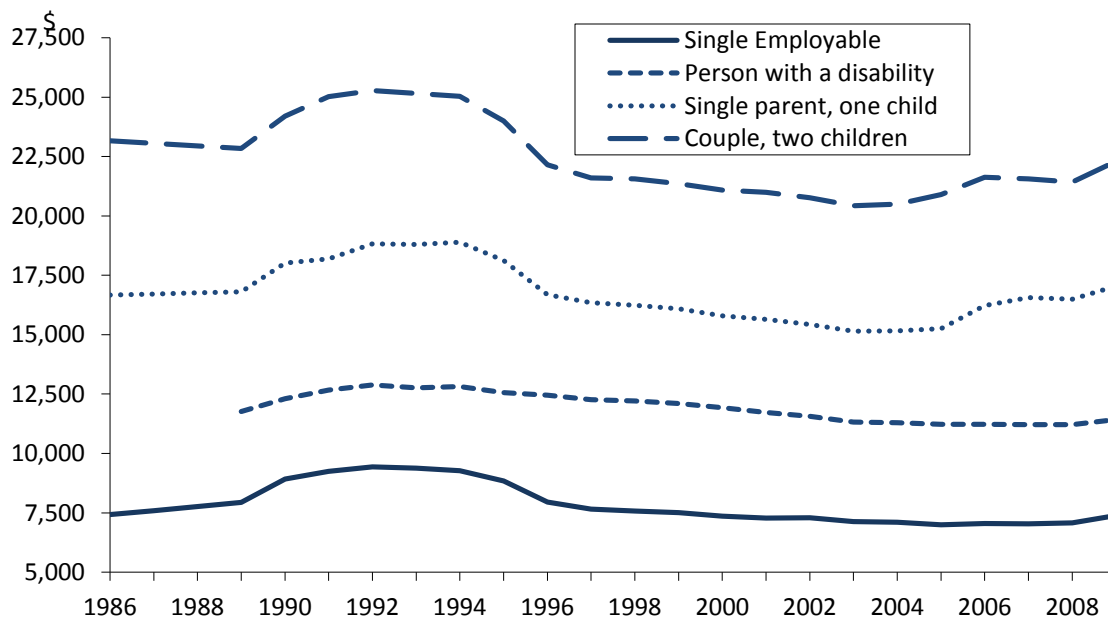
Source : Table 34A, 1987 and 1988 data are interpolated

Chart 50: Trend in Welfare Income as a Proportion of the Poverty Line in Canada (population weighted), 1986-2009
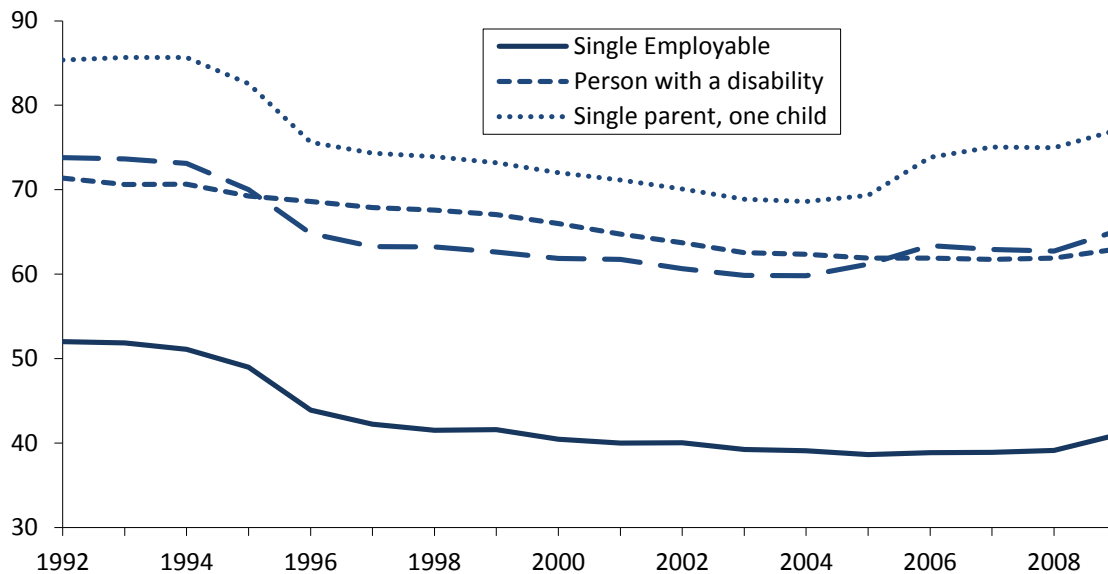
Source : Table 34b, 1987 and 1988 data are interpolated

One measure of the adequacy of welfare benefits is the proportion of the poverty line such benefits provide. By this criterion, welfare benefits have become less adequate over the 1992-2009 period, but have become more adequate from 2004 to 2009 (Chart 50). Single employable beneficiaries saw their welfare benefits fall from 52 per cent of the poverty line in 1992 to 41 per cent in 2009, an 11 percentage point drop. Single parents with one child, who received 85 per cent of the poverty line in welfare benefit in 1992, received 77 per cent in 2009. The trend was similar for couples with two children, who saw the proportion of their welfare benefits fall 9 percentage points between 1992 and 2009, from 74 per cent to 65 per cent. Finally, persons with a disability also experienced a fall in the adequacy of their welfare coverage, from 71 per cent of the poverty line in 1992 to 63 per cent in 2009.

3) Minimum wage relative to welfare benefits and the poverty line

Using data from published by the National Council of Welfare Reports covering 1986 and the 1989-2009 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.

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 2009 did also contribute to this fall in hours. Single employable presons had to work 15.7 hours at minimum wage to earn as much as on welfare, compared to 19.5 hours in 1986. For persons with a disability, the number of hours was 24.2 in 2009 compared to 30.5 in 1989. The number of hours for single parents with

one child was 36.1 in 2009 (from 43.8 hours in 1986) and for a couple with two children it was down to 47.3 hours, from 60.9 hours in 1986.

Chart 51: Trend in Welfare Income as a Proportion of the Poverty Line in Canada (population weighted), 1986-2009
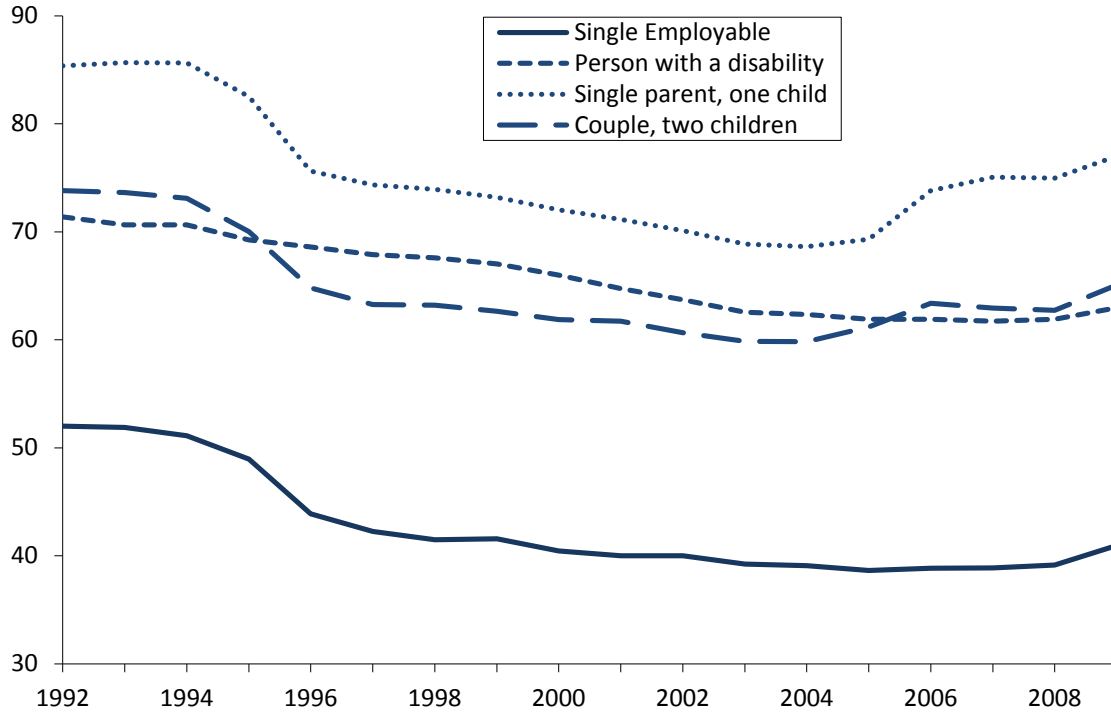
Source : Table 34b, 1987 and 1988 data are interpolated

Interestingly, the number of hours of work at minimum wage to reach the poverty line has diminished between 1992 and 2009 for all four categories (Table 45C). Single employable persons needed to work 6.4 hours less, from 46.6 hours in 1992 to 40.1 hours in 2009. The number of hours needed remains higher than the average weekly hours of work. In 2009, persons with a disability had to work 40.4 hours to reach the poverty line, 6.0 hours less than 1992's 46.4 hours. However, single parents with one child improved their situation considerably, from 56.6 hours of work needed in 1992 to 49.2 hours of work in 2009. Again, this improvement, however significant, is far off from a situation where a minimum wage single parent worker could easily reach the poverty line. Finally, the number of hours of work at minimum wage to reach the poverty line decreased 11.8 hours for couples with two children, from 87.9 hours to 76.2 hours. Assuming both parents are employed at minimum wage, they would have to work about 38.1 hours per week each to reach the poverty line.

What these statistics demonstrate is the inadequacy of the minimum wage, despite increases over time, to lift families out of poverty even when two family members work full-time. These statistics thus shed light on the dilemma of the working poor, who can work long hours without ending the cycle of low income and poverty.

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 (Sargent, 1995) for the 1970-2008 period at both the national and provincial level. Finance Canada has kindly agreed to provide these data to the Centre for the Study of Living Standards.

In 1995, Sargent 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.

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 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.

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.

Chart 52: Sargent EI Disincentives Index, 1970-2008 (1970=100)
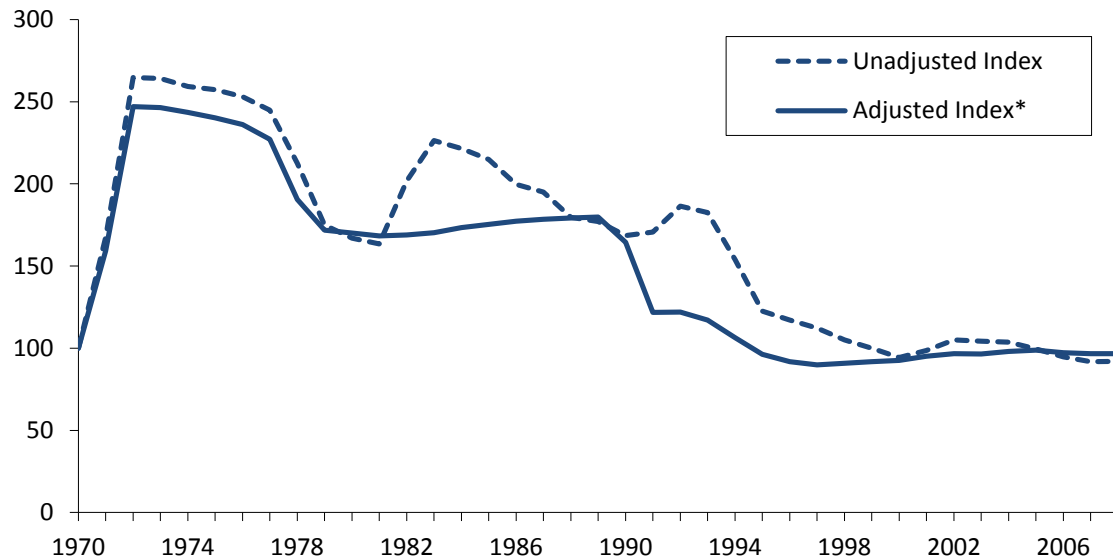
* The adjusted index is independent of the business cycle and represents only changes in the program

Source : Table 50

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.[65] 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).

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[65] 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.

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 8.0 per cent in Canada in 2010 (Table 51). The unemployment rate rose in the early 1980s, peaking at 12.0 per cent in 1983 because of 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 its current level. The unemployment rate increased between 2008 and 2009, from 6.1 per cent to 8.3 per cent before falling somewhat to 8.0 per cent in 2010.

Chart 53: Trends in the EI Financial Assistance in Canada: Coverage Ratio and Replacement Ratio
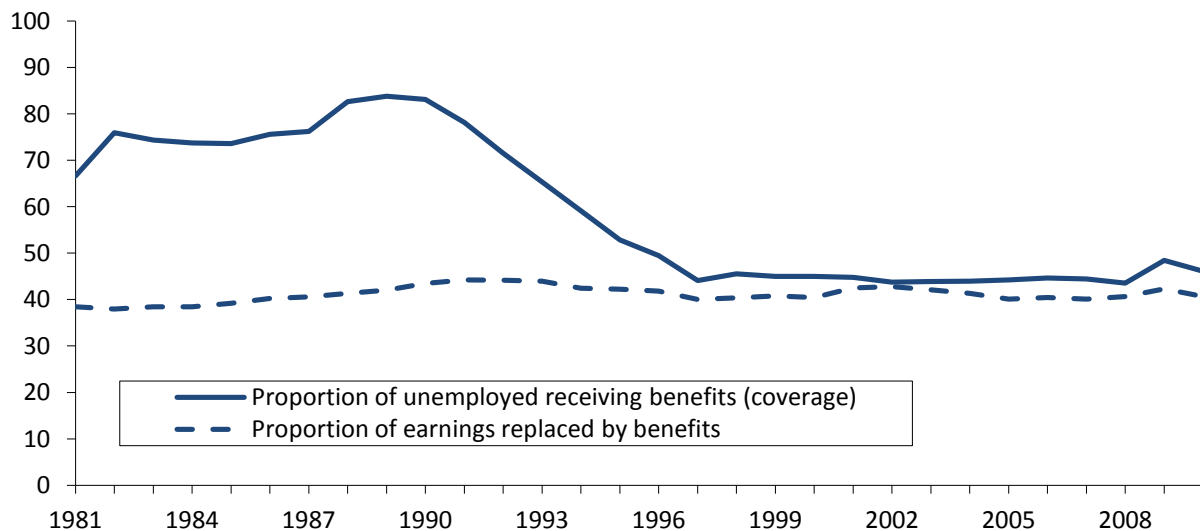
Source: Table 51

In 2010, proportion of the unemployed receiving EI benefits was 46.1 per cent,[66] down from 66.6 per cent in 1981 and 83.8 per cent in 1989. 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 the mid-40's range.

In contrast to the falling coverage ratio, EI benefits as a proportion of average earnings have exhibited a high degree of stability (Chart 53). In 2010, EI benefits replaced 40.7 per cent of earnings, up 2.2 per cent from 38.4 per cent in 1981. The EI benefits rate peaked at 44.2 per cent in 1991.

The aggregation procedure for the variables that make up the risk of unemployment component of the economic security domain is complicated. First, the EI coverage benefits rates are multiplied to obtain an index for the financial protection from unemployment. This index fell 26.8 per cent between 1981 and 2010. Second, both the unemployment rate and the financial protection index are scaled. Third, the scaled values of the two indexes are weighted to produce the overall index of security from the risk imposed by unemployment. Since low unemployment provides employment security by the relative ease of obtaining employment, the unemployment rate is considered considerably 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 variable. This methodology represents a significant change from the earlier methodologies where the unemployment rate and EI system were weighted equally.

The greater weight given to unemployment produces a scaled value of the economic security for risk from unemployment that is 0.034 points (or 5.4 per cent when the scaled value in indexed) less in 2010 than in 1981.

A sensitivity analysis shows that if the unemployment and financial protection variables were weighted equally, the scaled value the economic security for risk from unemployment component would be 0.055 points (or 11.0 per cent when the scaled value in indexed) less in 2010 than in 1981.

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

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[66] Strictly speaking the 46.1 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.

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.

Chart 54: Trends in the Proportion of Unreimbursed Private Expenditure on Healthcare in Personal Disposable Income in Canada, 1981-2010
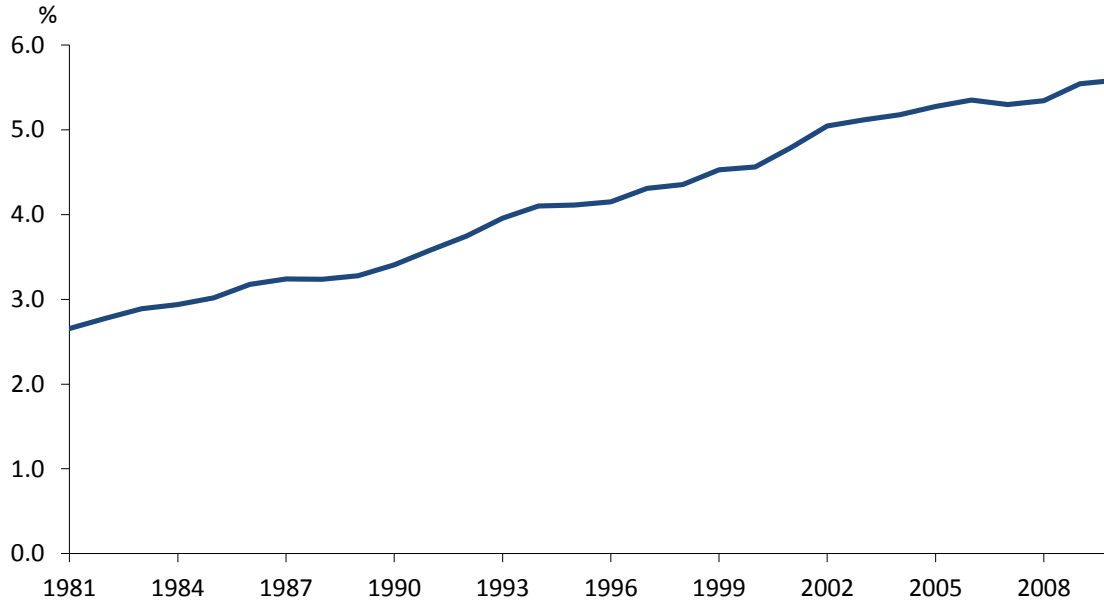
Source : Table 52.

Private expenditure on health care rose from $6.3 billion current dollars in 1981 to $56.6 billion in 2010. This represented nearly a doubling of private health spending as a share of disposable income, from 2.66 per cent to 5.59 per cent (Table 68 and Chart 54). Such a development can be considered deterioration in the economic security of Canadians. Increased private health expenditure imposed by poor health thus represents a growing financial burden for low income Canadians.

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 as it was for all households under the equality domain – in relative terms as the proportion of households below one-half median income.

Chart 55: Trends in Divorce Rate, per cent, 1981-2010
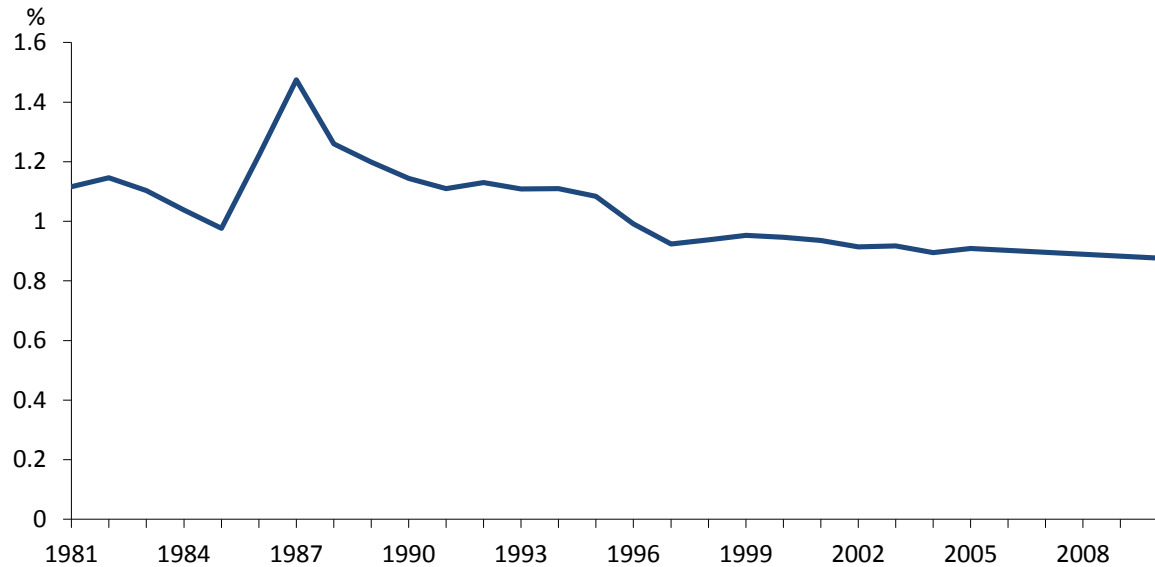
The divorce rate for married couples was 0.88 per cent in Canada in 2010, the lowest rate in over a quarter century (Table 53). The divorce rate rose from 1.12 per cent in 1981 to a peak of 1.47 per cent in 1987 and has since been on a downward trend (Chart 55), reflecting possibly the aging of the population (the incidence of divorce declines after a certain number of years of marriage).

It is well known that the poverty rate is particularly high for female lone parent families. In 2010, this rate was 33.9 per cent (Table 53). But fell considerably over the 1981-2001 period. Despite a large increase in 2002, subsequent years saw poverty resume its decline such that the current level is 24.8 per cent below the 1981 level of 45.1 per cent (Chart 56).

The poverty gap in 2010 was considerably lower than that in 1981 (38.2 versus 29.5 per cent). But the poverty gap did fall significantly from 1981 to a trough of 27.0 per cent in 1993 before giving up the gains in the 1994-2003 period (Table 53 and Chart 56). There has been a moderate decline from the 2003 level of 30.5 per cent.

The overall component for the risk of single parent poverty is calculated in a multiplicative manner as the product of the divorce rate, the poverty rate for single parents and poverty gap for single parents. This index had a value of 19.2 in 1981 and 8.8 in 2010, down 54.3 per cent. It is interesting to note that this improvement was greater than the individual improvements for the divorce rate (-21.4 per cent) and female single parent poverty rate (-24.8 per cent) because the variables are combined in a multiplicative rather than additive manner. The index is then scaled.

Chart 56: Trends in the Poverty Rate and Poverty Gap Ratio for Lone Female Families in Canada, 1981-2010
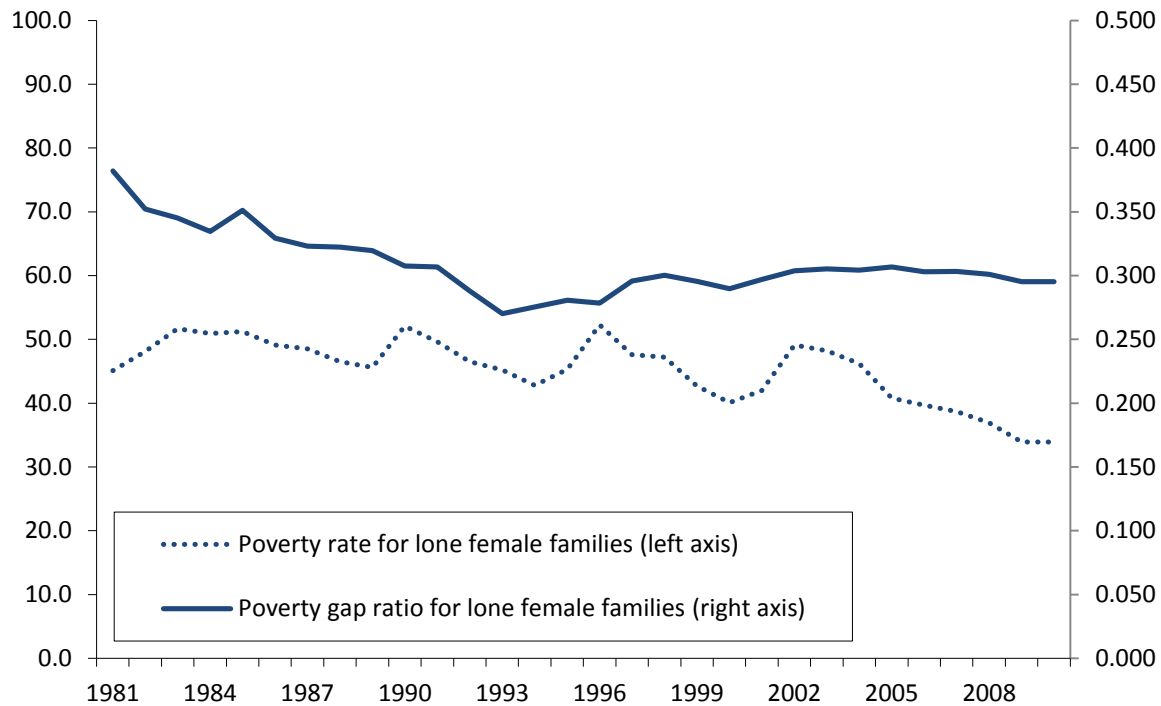
Source : Table 53

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 almost in half over the last three decades, falling from 20.4 per cent in 1981 to 11.5 per cent in 2010, a 43.6 per cent decline (Table 54 and Chart 57). The downward trend has been uneven as the poverty rate was even lower in the mid-1990s at less than 5 per cent.

The overall component of the risk of poverty in old age, poverty intensity, is the product of the poverty rate and gap. It stood at 0.073 in 1981 and 0.035 in 2010 (Table 54), representing a fall of 52.8 per cent. Again, this was larger than the falls of the poverty rate (43.6 per cent) and the poverty gap (16.2 per cent) taken separately because of the multiplicative effect. The poverty intensity index is then scaled.

Chart 57: Trends in the Poverty Rate and Poverty Gap Ratio for Elderly Families in Canada, 1981-2010
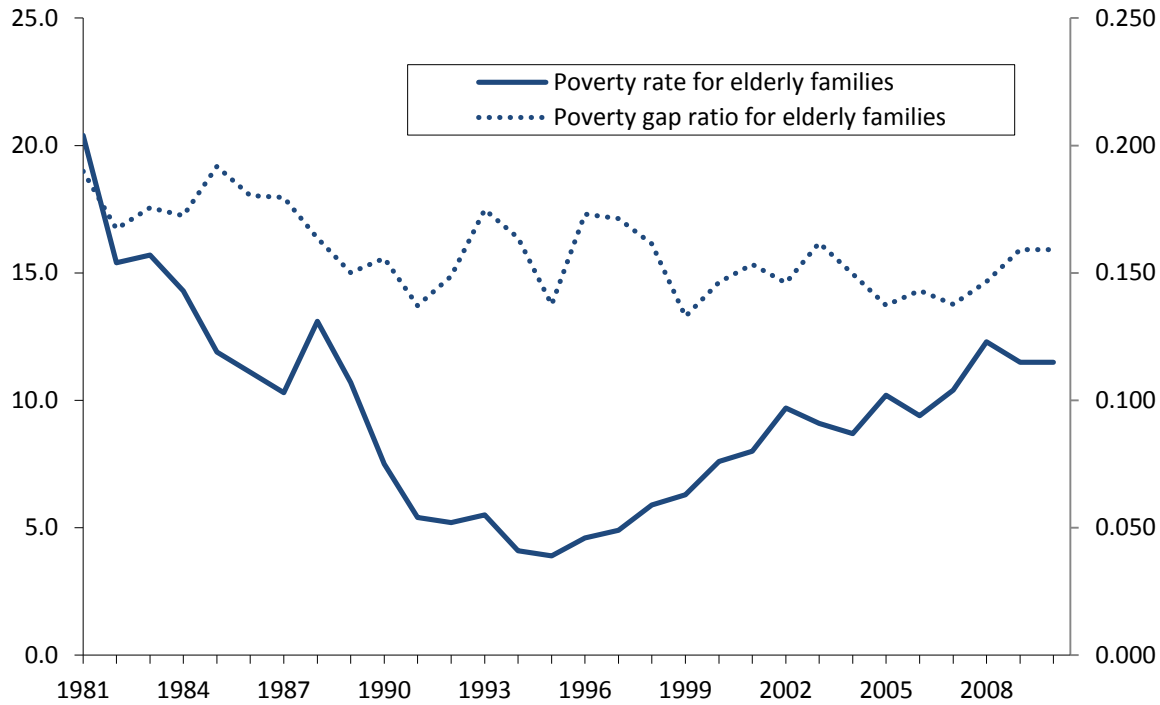
Source : Table 54

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 2010, this was equivalent to 69.4 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 2010, this group represented 32.9 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 28.3 per cent of the population in 2010. The component specific weights are generated by adding up all the proportions of the population subject to the four risks (231) and then standardizing to unity by dividing each proportion of the population affected by the risk by 231. The resulting weights are found in Table 69.

Chart 58: Overall Index of Economic Security for Canada, 1981-2010
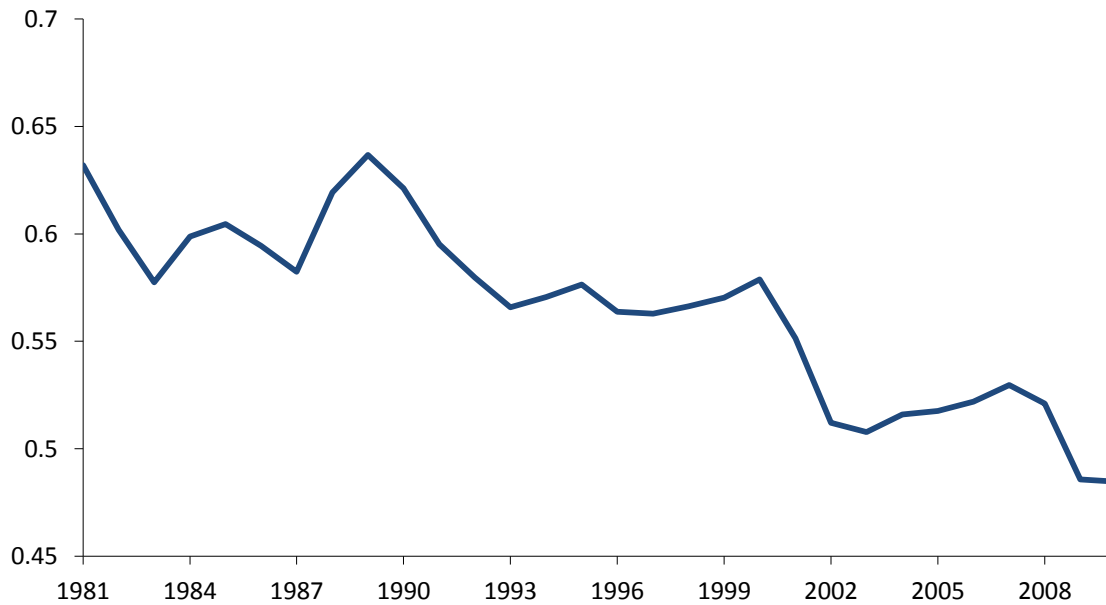
Source: Table 55

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 69.4 per cent in 2010, the proportion of the population aged 45-64 rose from 18.9 per cent to 28.3 per cent, and the proportion of married women with children under 18 fell from 45.3 per cent to 32.9 per cent.

The contribution of each component is the product of its scaled value and weight. For example, in 2010 the contribution of the risk of unemployment was 0.178 (0.593*0.301), financial risk from illness 0.118 (0.332*0.273), the risk of single parent poverty 0.106 (0.739*0.143), and the risk of poverty in old age 0.083 (0.672*0.123). Aggregating the contributions gives 0.485, which is the value of the overall economic security domain in 2010.

The overall index of economic security fell 0.15 points (or 23.3 per cent) from 0.632 in 1981 to 0.485 in 2010 (Chart 58). The scaled values of two of the components of economic security increased between 1981 and 2010 – the risk from poverty in old age by 0.05 points, the risk imposed by single-parent poverty by 0.03 points. This means that the decline in the overall economic security in Canada over the 1981-2010 was driven by the decline in the security from unemployment, which fell 0.006 points (or 3.0 per cent) and the decline in the security from illness, which fell 0.227 points (65.7 per cent). The large weights given these risks (30.1per cent for unemployment risk and 43.3 per cent for illness risk) also contributed to its preponderant role in determining the evolution of the overall economic security domain.

7) Fragile 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 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 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 in 2000 to $53,556 in 2005 (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. The ratio of income for all immigrants to non-immigrants also fell more than five percentage points over the same period. 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 both absolute and relative improvements in labour market outcomes between 2001 and 2006. The unemployment rate of Aboriginal Canadians fell from 19.1 per cent in 2001 to 14.8 per cent in 2006, or from 69 per cent higher that of non-Aboriginal in 2001 to 35 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.

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

The first message from the data is that Canadians have on average higher income in 2009 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 over 50 per cent faster than the number of persons over the 1981-2009 period (56.6 per cent versus 35.9 per cent) so real income trends on a household basis show much less progress than on an individual basis. Total income increased faster than market income, owing to increases in transfers to individuals; after-tax income also grew faster than market income owing to increased transfers, though slower than total income due to the increase in taxes.

National account income measures show that between 1981 and 2009 real personal income per capita rose 34.6 per cent, and real personal disposable income per capita 29.0 per cent. In contrast, income estimates from household surveys (SCF/SLID) show that total real income per household increased 17.4 per cent and after-tax real income per household rose 17.1 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 1.53 per cent over the 1981-2009 period.

The average wealth of Canadians also increased substantially over the 1981-2009 period. National accounts balance sheet estimates show that average real net worth was up 80.0 per cent on a per capita basis and 56.4 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 rose 38.9 per cent between 1981 and 2009, while the increases for the other quintiles were between 17 and 26 per cent. 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 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 1981-2009 period, median market income per household declined 7.6 per cent, while median total income saw a moderate increase of 1.7 per cent and after-tax income also saw a moderate increase of 5.0 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 measures, and on persons, not households. 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 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 1999 and 2005, the only years for which information on the distribution of wealth is available on a consistent basis. Indeed, median net worth per household increased only 23.2 per cent between 1999 and 2005 compared to 29.6 per cent for average net worth per household. Median net worth for the bottom quintile fell 9 per cent, compared to a 28 per cent rise for the uppermost quintile.

Some progress has been made in reducing poverty

The third message is that the rising inequality has meant that while the increased real average income has translated into some reduction in the poverty rate, these improvements would likely have been greater if income gains had been more evenly shared. The after-tax Low Income Cut-Off rate for all persons declined by 17.2 per cent from 11.6 per cent in 1981 to 9.6 per cent in 2009 (11.6), having declined dramatically from a peak of 15.2 per cent in 1996. The poverty gap ratio, that is the amount of money by which the average poor family falls short of the poverty line as a proportion of the cut-off, was almost the same in 2009 (26.6 per cent) as in 1981 (26.5 per cent).

Decline in labour market conditions

The fourth message is that there has been improvement decline in overall labour market conditions, a key determinant of living standards, over the 1981-2010 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 2010 was 8.0 per cent, up from 7.6 per cent in 1981. It is important to recognize, however, that unemployment rates were at historic lows immediately before the recent recession, and the recent high rate may be more a cyclical phenomenon than representative of the long term trend. Nonetheless, declining labour market conditions were also observed in the proportion of unemployed that were long term unemployed over the 1981-2010 period, the rate having increased from 5.7 per cent to 11.5 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 61.6 per cent in 2009, up from 60.1 per cent in 1981 due to the rise in the aggregate participation rate (67.0 per cent versus 65.0 per cent), which itself was driven completely by the increased labour force participation of women. Again, the recent recession masks some of the gains; in 2008 the employment rate reached a historic high of 63.5 per cent. Another positive development has been the decline in the incidence of job loss from 8.0 per cent in 1981 to 6.8 per cent in 2009.

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, are significantly lower for three of the four types of welfare recipients in 2009 than in 1986. Employment insurance in 2010 was less generous, in terms of required qualification period, coverage, 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 2010 represented 45.3 per cent of the average industrial wage, up from 35.4 per cent in 1983, although all the increase took place before 1995.

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.

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?

- 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 20.7 percentage points faster than the number of persons (56.6 per cent versus 35.9 per cent) over the 1981-2009 period because of falling household size. Both have been used in the report.

- 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.

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.

- 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 gives 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 gap ratios. Both low income rates and gaps are reported, but more attention is given to the rate as it is better understood by the public and indicates the incidence rather than depth of low income.

- 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 to 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 eight of the eleven indicators. There were no consistent time series estimates for the persistence of low income (estimate for 2000 only), the distribution of wealth, and the prevalence of food insecurity (estimate only for a few selected years).

Only six of the eight headline indicators with time series data have estimates for the entire 1981-2010 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 1981-2010 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, the CIBC Employment Quality Index, and the RBC Housing Affordability 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 ratio of the share of wealth belonging to the top and bottom halves of the population represent deteriorations in living standards.

Of the eight headline indicators for which time series estimates are available for the 1988-2010 period, three experienced increases, four deteriorations, and one was virtually unchanged (Table 62, Summary Table 15). The largest improvement was in the after-tax median income of economic families (up 15.2 per cent, or $8,000). The second largest improvement was in the incidence of persons in low income (down 11.1 per cent, or 1.2 percentage points).

The headline indicator that suffered the largest deterioration over the 1988-2010 period was the incidence of long term unemployment (down 24.9 per cent). This was followed by the scaled value of CSLS economic security (down 21.7 per cent), the ratio of top to bottom quintile income (increased 23.9 per cent) and CIBC employment quality fell 13.1 per cent.

A Composite Index for the Living Standards Domain?

This section constructs a composite indicator for the 1988-2009 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 15 is converted into an index of change in Summary Table 16 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 top to bottom quintile gives 4.55/4.55 = 100.0, 4.57/4.55 = 99.53, 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 15 is at least as important as the information in Summary Table 16.

Summary Table 15: Trends in Headline Indicators for the Living Standards Domain

	Income Distribution: Ratio of top to bottom quintile	After tax median income of economic families, 2009 constant dollars	Incidence of persons in low income, percent	Scaled value of CSLS economic security	Incidence of Long Term Unemployment	Employment Rate	CIBC Index of Employment Quality (Q1 1994=100)	RBC Housing Affordability Index
1988	4.55	55,400	10.8	0.619	8.7	61.7	112.6	41.5
1989	4.57	56,200	10.2	0.637	8.1	62.2	113.5	44.1
1990	4.77	54,100	11.8	0.621	7.1	61.7	111.7	49.2
1991	4.89	52,100	13.2	0.595	8.9	59.7	108.6	43.1
1992	4.98	52,400	13.3	0.580	13.2	58.3	104.0	40.1
1993	4.79	50,800	14.1	0.566	16.2	57.9	101.8	39.3
1994	4.83	51,700	14.0	0.571	17.4	58.4	100.6	41.5
1995	4.92	51,200	14.5	0.576	16.3	58.7	101.6	39.6
1996	5.18	51,100	15.2	0.564	16.3	58.5	100.1	36.7
1997	5.31	51,400	15.0	0.563	15.6	59.0	100.2	35.2
1998	5.52	53,300	13.7	0.566	13.3	59.7	100.4	34.7
1999	5.44	55,100	13.0	0.570	11.3	60.6	104.3	35.5
2000	5.69	56,000	12.5	0.579	10.8	61.3	105.3	36.9
2001	5.56	58,300	11.2	0.551	9.0	61.1	105.6	34.7
2002	5.63	58,200	11.6	0.512	9.2	61.7	102.8	35.2
2003	5.53	58,100	11.6	0.508	9.6	62.4	100.2	35.6
2004	5.72	58,900	11.4	0.516	9.1	62.6	99.0	36.8
2005	5.62	59,900	10.8	0.518	9.2	62.5	99.1	37.4
2006	5.54	61,100	10.5	0.522	8.3	62.8	98.3	41.1
2007	5.50	63,400	9.2	0.530	7.1	63.4	97.6	44.3
2008	5.61	64,100	9.4	0.521	6.7	63.5	99.8	45.0
2009	5.64	63,800	9.6	0.486	7.5	61.6	97.4	39.9
2010	*5.64*	*63,800*	*9.6*	0.485	11.5	61.6	97.9	41.2
Average annual growth rate, %								
1988-2000	1.87	0.09	1.23	-0.56	1.82	-0.05	-0.56	-0.97
1988-2009	1.03	0.67	-0.56	-1.15	-0.68	-0.01	-0.69	-0.19
2000-2010	-0.08	1.31	-2.61	-1.76	0.70	0.06	-0.73	1.10
2000-2009	-0.09	1.46	-2.89	-1.93	-3.92	0.06	-0.86	0.87
1988-2010	0.98	0.64	-0.53	-1.11	1.31	0.00	-0.64	-0.03
Total growth, %								
1988-2009	23.88	15.16	-11.11	-21.56	-13.39	-0.11	-13.49	-3.88
1988-2010	23.88	15.16	-11.11	-21.73	33.17	-0.08	-13.11	-0.74

Note: 2010 values are assumed to be the same as they were in 2009 for the first three columns.

Sources: 12I, 15C, 16b, 19C, 25, 27, 36, 36a, 37, 40 and 55; CSLS Database for Living Standards 2011.

Summary Table 16: Trends in Headline Indicators for the Living Standards Domain

	Income Distribution: Ratio of top to bottom quintile*	After tax median income of economic families, 2009 constant dollars	Incidence of persons in low income, percent*	Scaled value of CSLS economic security	Incidence of Long Term Unemployment*	Employment Rate	CIBC Index of Employment Quality	RBC Housing Affordability Index*	Average overall index of living standards	Median overall index of living standards
1988	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1989	99.5	101.4	105.9	102.8	106.9	100.9	100.8	94.1	101.5	101.1
1990	95.4	97.7	91.5	100.3	122.7	100.0	99.2	84.4	98.9	98.4
1991	93.0	94.0	81.8	96.1	97.9	96.8	96.4	96.4	94.1	96.3
1992	91.5	94.6	81.2	93.6	65.4	94.6	92.3	103.6	89.6	93.0
1993	95.1	91.7	76.6	91.4	53.5	93.9	90.4	105.7	87.3	91.5
1994	94.2	93.3	77.1	92.2	49.7	94.7	89.4	99.9	86.3	92.7
1995	92.6	92.4	74.5	93.1	53.1	95.2	90.2	104.8	87.0	92.5
1996	87.9	92.2	71.1	91.0	53.0	94.8	88.9	113.2	86.5	90.0
1997	85.7	92.8	72.0	90.9	55.4	95.6	89.0	117.9	87.4	89.9
1998	82.5	96.2	78.8	91.5	64.9	96.9	89.2	119.7	90.0	90.3
1999	83.7	99.5	83.1	92.1	77.0	98.2	92.6	117.1	92.9	92.4
2000	80.1	101.1	86.4	93.5	80.6	99.4	93.5	112.4	93.4	93.5
2001	81.9	105.2	96.4	89.0	95.8	99.1	93.8	119.7	97.6	96.1
2002	80.9	105.1	93.1	82.7	94.1	100.1	91.3	117.9	95.6	93.6
2003	82.3	104.9	93.1	82.0	90.6	101.2	89.0	116.7	95.0	91.8
2004	79.6	106.3	94.7	83.3	95.5	101.5	87.9	112.8	95.2	95.1
2005	81.0	108.1	100.0	83.6	94.6	101.4	88.0	111.2	96.0	97.3
2006	82.2	110.3	102.9	84.3	104.8	101.8	87.3	101.1	96.8	101.4
2007	82.7	114.4	117.4	85.5	122.5	102.8	86.7	93.6	100.7	98.2
2008	81.1	115.7	114.9	84.1	129.4	103.0	88.6	92.2	101.1	97.6
2009	80.7	115.2	112.5	78.4	115.5	99.9	86.5	104.0	99.1	102.0
2010	80.7	115.2	112.5	78.3	75.1	99.9	86.9	100.7	93.7	93.4
Average annual growth rate, %										
1988-2000	-1.84	0.09	-1.21	-0.56	-1.79	-0.05	-0.56	0.98	-0.57	-0.56
2000-2009	0.09	1.46	2.98	-1.93	4.08	0.06	-0.86	-0.86	0.09	1.46
2000-2010	0.08	1.31	2.67	-1.76	-0.70	0.06	-0.73	-1.09	0.03	-0.01
1988-2009	-1.01	0.67	0.56	-1.15	0.69	-0.01	-0.69	0.19	-1.01	0.67
1988-2010	-0.97	0.64	0.54	-1.11	-1.29	0.00	-0.64	0.03	-0.30	-0.31
Total growth, %										
1988-2009	-19.28	15.16	12.50	-21.56	15.47	-0.11	-13.49	4.04	-19.28	15.16
1988-2010	-19.28	15.16	12.50	-21.73	-24.91	-0.08	-13.11	0.74	-6.34	-6.59

Note: 2010 values are assumed to be the same as they were in 2009 for the first three columns.

Sources: Table 15C, Table 12I, Table 16J, Table 55, Table 25, Table 37, Table 40, Table 27, 19C and the CSLS Database for Living Standards 2011.

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, 100.0/106.3 = 94.1 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 decreased 0.9 per cent over the 1988-2009 period (Chart 59). This composite index suggest that Canadians have seen a decrease in their living standards over the 22-year period from 1988 to 2009. In sharp contrast, GDP per capita rose 27.1 per cent over the period.

Chart 59: Trends in GDP per Capita and Composite Index of Headline Living Standards Indicators for Canada, (2002=100) 1988-2009

Tables 7A and 63
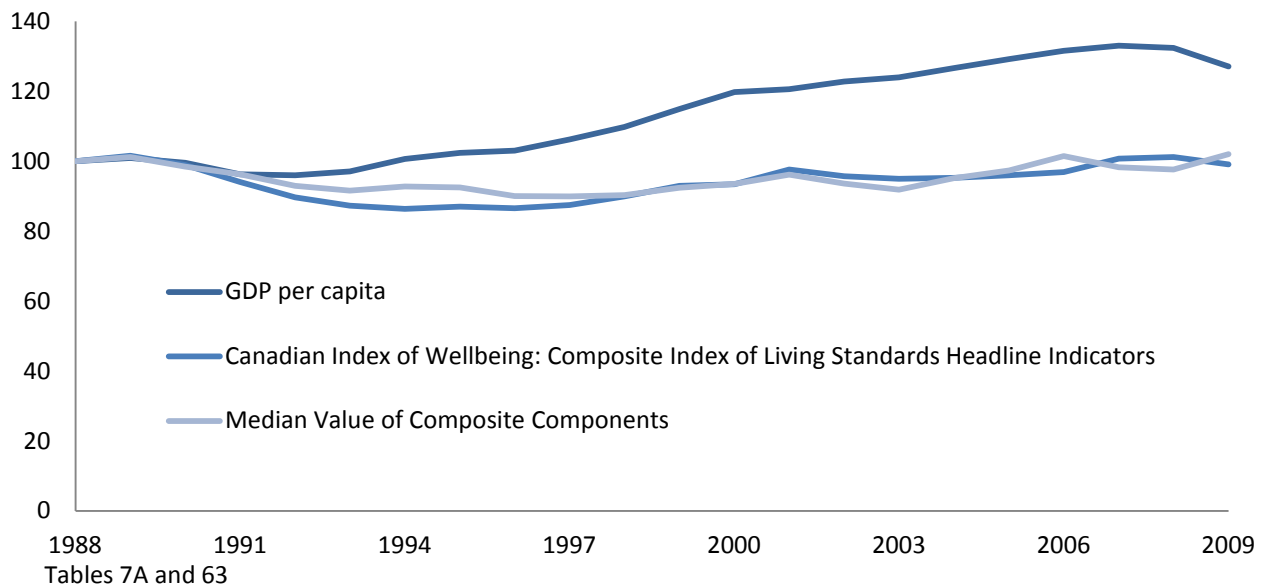
IX. Sustainability of Living Standards

Canadians enjoy one of the highest standards of living in the world. An important issue is whether this level of living standard can be sustained for future generations. Leaving aside environmental sustainability issues, which are beyond the scope of this report (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 excellent. 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.

In the short term, however, the effects of the recent recession have had a very detrimental impact on the composite index. Previous to the recent recession, trends in long term unemployment and incidence of low income had a positive rather than negative impact on the index. Similarly, the scaled value of CSLS economic security, the employment rate, and the CIBC index of employment quality all saw large negative contributions due to the 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 1988 and 2010. Indeed, Canadians experienced a widening of income and wealth inequalities. There have been notable poverty reductions over the period and increases in the median income of economic families while houses became marginally more affordable. On the other hand, economic security and the ratio of the top-to-bottom quintile income have worsened with time. Labour market indicators such as the employment rate and employment quality have also declined. Thus, many dimensions of living standards in Canada have not improved since 1988, and that in spite of a 29.7 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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