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Genuine Progress Index for Atlantic Canada / Indice de progrès véritable - Atlantique

MEASURING SUSTAINABLE DEVELOPMENT

APPLICATION OF THE GENUINE PROGRESS INDEX TO NOVA SCOTIA

INCOME DISTRIBUTION *in* NOVA SCOTIA

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EXECUTIVE SUMMARY

Economic growth statistics are the most widely used measure of wellbeing and progress. When the Gross Domestic Product (GDP) is growing, we are assumed to be "better off" as a society. But the GDP only reports the *total* income generated by all economic activity. It tells us nothing about how income is shared. The GDP can grow even while most people are getting poorer, while inequality grows, and while profits flow out of the region and country.

This report shows that only the incomes of the wealthy have been positively correlated with economic growth in the last decade. Although it has often been asserted that "growth is a tide that lifts all boats," most Nova Scotians' real income has fallen and inequality has increased even as the economy has grown, a clear indicator that GDP is an inadequate measure of societal wellbeing.

The Genuine Progress Index (GPI), by contrast, does measure income distribution as one of its 22 core social, economic and environmental components. Increases in poverty and inequality are seen in the GPI as a loss in "social capital." Because they are often highly correlated with illness, crime, poor educational attainment and low productivity, poverty and inequality can also be costly to the economy and society. By contrast, greater equity and livelihood security have been associated with improved economic performance and social stability.

(All figures in this report are in real 1998$ after adjustment for inflation)

1. Regional Income Gap Grows

The income gap between the richest provinces (Ontario and Alberta) and the rest of the country grew in the 1990s. In 1990, Nova Scotians had 82 cents for every $1 of disposable income in Ontario. In 1998 they had 73 cents. The average Nova Scotian disposable household income dropped $3,000 in the 1990s (down 8%), while Ontarians saw a $1,800 increase (up 4%) and Albertans a $2,100 increase (up 5%).

However, it is the gains of the richest 20% of Ontarians and Albertans that have raised "average" incomes in those provinces. Poor and middle income Ontarians actually lost real income in the 1990s, while the richest 20% gained an average of $9,400 per household (up 11%). In Alberta, the incomes of the poorest 20% fell, middle incomes stagnated, and the richest 20% gained an average of $9,800 (up 12%). Alberta now has the widest income gap between rich and poor in the country, and Ontario ranks as the most unequal province using the GINI measure of inequality.

2. Poor and Middle Income Nova Scotians Lose Most – NS Poor are Poorest in Canada

Since 1990, middle income Nova Scotians have lost the most income in absolute terms (average $3,600) and the poorest 20% have lost the most in percentage terms (29% of their

disposable income). The poorest 20% of Nova Scotian households are the poorest in the country, with an average disposable income (just $8,205) 12% lower than that of the poorest 20% in Newfoundland and 20% lower than that of the poorest households in PEI and New Brunswick.

The poorest 40% of Nova Scotian households have lost more income in *both* absolute *and* percentage terms since 1990 than the bottom 40% in any other province, and the bottom 60% of Nova Scotian households have an average income lower than that in any other province in Canada.

3. NS Income Gap Grows - Rich Increase their Share of Pie

Inequality has grown sharply. In 1990 the richest 20% of Nova Scotian households had an average disposable income 6.2 times greater than the poorest 20%. By 1998, the income of the rich was 8.5 times greater. This is the second widest income gap between rich and poor in the country after Alberta. The richest 20% of Nova Scotian households have 42% of the total annual disposable income in the province up from 39.2% in 1990. The poorest 20% have just 4.9% of the income, down from 6.4% in 1990. The richest 20% of Nova Scotian households average $70,000 a year in disposable income (*after* taxes), compared to $8,205 for the poorest 20%. The richest 20% of Ontarians average nearly $100,000 in disposable income.

4. Inequality Grows Across Canada

These are national trends. In the 1990s, the poorest 20% of households saw their income share fall in every province except Saskatchewan, and the next 40% saw their income share fall in every single province. In fact, middle income households in every province have less disposable income now than they did 20 years ago, while the richest 20% of households have increased their income share in every province. The income gap has grown across the country.

Prince Edward Island is a notable exception to the national trends. PEI is the most equitable province in the country with the smallest income gaps between rich and poor and between men and women, as well as the lowest poverty rates in Canada for both sexes, and the lowest rate of child poverty. It is also the only province in which the poorest households average higher incomes today than they did in 1980 and 1990.

5. Market Income Drops Most Sharply – Down 50% for Poor

The decline in disposable income in Nova Scotia is due primarily to a drop in market income (wages, salaries and income from self-employment and investment.) The poorest 20% of Nova Scotian households have seen their market income fall by more than 50% in real terms since 1990, the sharpest drop in the country. As a percentage of disposable income, market income for the poor is now just 31%, the lowest level ever recorded. Middle income Nova

Scotian households have seen their market income drop by 20% (or $6,000) since 1990, also the sharpest drop in the country.

6. Middle and Higher Income Nova Scotians Get More Cash Transfers than Poor

Government cash transfers (including EI, CPP, Old Age Security, social assistance, and child tax benefits) to middle income groups have increased by 73% since 1990, while transfer payments to the poorest households have fallen by 15%. Middle income Nova Scotian households actually receive an average of 45% more in government cash transfers than the poorest 20% of Nova Scotians. Even the second wealthiest 20% of Nova Scotian households receive an average of 8.5% more in transfers than the poorest 20%. Further investigation into the demographic and policy factors behind these changes is required.

7. Has An Increasingly Open and Unregulated Market Improved Wellbeing?

It is generally asserted that free trade and other elements of an increasingly open and unregulated market improve the wellbeing of Canadians. However, income analysis does not support this assertion. In the 1980s, before the Canada-US Free Trade Agreement and the North American Free Trade Agreement, market income and disposable income increased for Canadians and Nova Scotians in all income groups. The income gap between rich and poor also narrowed, and equality grew. In every province, including Nova Scotia, the poorest 20% of households increased their share of income in the 1980s.

Since the free trade agreements, incomes for poor and middle income households have fallen sharply in real terms, and inequality has grown. 80% of Nova Scotian households are worse off since free trade, with declines in both market income and disposable income. Only the wealthiest 20% have done better since free trade.

Income is affected by many factors, and these simple correlations do not prove that free trade *caused* incomes to fall and inequality to increase. However, the income statistics provide no evidence that free trade *has* improved the economic wellbeing of the vast majority of Canadians and Nova Scotians, as is generally asserted, and they indicate that the reverse may be true. The negative income and equality trends of the last decade demand further investigation into the impacts of an increasingly open and unregulated market on economic wellbeing.

8. The Gender Gap: More Women Live in Poverty

Despite relative educational parity, Nova Scotian women earn only 80% of the hourly wages of men. Even with identical education, field of study, employment status, work experience, job tenure, age, job duties, industry and occupation, female hourly wages are still 11% lower than equivalent male wages. Full-year full-time working women in Nova Scotia earn 70% of

male wages, with 21% of these women earning less than $15,000 a year ($8 per hour or less) and 38% earning less than $20,000 a year ($10 per hour or less).

One in six Nova Scotian women lives below Statistics Canada's low-income cut-off, a low income rate that is 50% higher than that for men (by far the widest low-income gender gap in the country) and 26% above the national average for women. The female poverty rate in Nova Scotia is the highest in Atlantic Canada and the second highest in the country after Quebec. Single mothers and unattached elderly women have the highest poverty rates, with 70% of Nova Scotian single mothers living below the low-income cut-off.

Nearly half the province's 40,000 poor children live in single parent families, and a child living with a single mother is nearly four times as likely to be poor as a child living with both parents. Overall, nearly one in five Nova Scotian children under 18 live in poverty, the fourth highest rate in the country after Newfoundland, Quebec and Manitoba, and an improvement over 1997 when Nova Scotia had the highest rate of child poverty in the country.

9. Poverty and Inequality Adversely Affect Health and Health Care

Poverty and income inequality are among the most reliable predictors of poor health. Low-income earners have poorer physical and mental health and higher rates of hospitalization and health service usage. Concerted public policy has dramatically lowered poverty rates among seniors. Similarly, improving social supports for single mothers, who have particularly high rates of poverty, is one of the most cost-effective strategic investments governments can make to reduce long-term health care costs.

Growing economic disparities may lead to a growing disparity in the quality of health care available to rich and poor Canadians in two different ways. With nearly 30% of Canada's health care spending now in the private sector and growing, low income Canadians are less able to afford certain health care costs. Secondly, only the rich provinces may be able to afford high quality *public* health care as federal transfers fail to compensate adequately for growing regional disparities. Recruiters from Alberta are now offering Nova Scotia health care workers $5 more per hour than they receive here.

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GPI*Atlantic* maintains a database of more than 200 tables, charts and detailed spreadsheets that support and underlie each of the results and conclusions in the following pages. For more information on the underlying database for this report and on membership in **GPI***Atlantic*, please visit the **GPI***Atlantic* web site at www.gpiatlantic.org.

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1. Introduction

GDP and GPI

Economic growth statistics are the most widely used measure of wellbeing and progress. When the Gross Domestic Product (GDP) is growing, we are assumed to be "better off" as a society.

Because they do not account for social and environmental realities, however, economic growth statistics send highly inaccurate and misleading signals to policy makers and the public when they are misused to assess societal wellbeing. For example, crime, pollution, sickness and accidents all make the economy grow simply because money is spent on prisons, clean-up costs, hospitals and drugs. And by valuing our forests, fisheries and other natural resources only when they are harvested and sent to market, we count the depletion of our natural wealth as economic gain and progress.

Even in strictly economic terms, the GDP measures *total* income, but tells us nothing about how income is shared. The GDP can grow even if most people are getting poorer and if inequality is growing. This report demonstrates that in the last decade only the incomes of the wealthy have been positively correlated with economic growth. Despite the assertion that "growth is a tide that lifts all boats," most Nova Scotians' real income has fallen and inequality has increased even while the economy has continued to grow.

By taking social and environmental realities into account, the Genuine Progress Index (GPI) can provide a far more accurate and comprehensive measure of wellbeing and progress than the economic growth statistics. For example, the GPI does examine how income is distributed; it includes the value of natural resources, unpaid work, and other social assets; and it counts crime, pollution, sickness and other liabilities as costs rather than gains to the economy.

Measures of Progress and Societal Values

Every measure of progress is based on normative values because it inevitably asks "progress towards what?" When the Gross Domestic Product is used as a measure of wellbeing and progress, it is also based on a value, namely that *more* production and consumption is "*better*."

The Genuine Progress Index is based primarily on three explicit sets of values or societal goals: security, equity and environmental quality. Security includes health, safety, livelihood and income security, and strong communities. Environmental quality includes the health of our natural resources, the quality of our air and water, and the sustainability of our consumption habits. Equity includes both income distribution and gender equity. Other core GPI indicators include educational attainment, community and voluntary service, and other quality of life issues. After extensive consultations, **GPI***Atlantic* is convinced that the GPI indicator set represents core societal values that transcend any ideological divide.

This component of the GPI addresses two core societal values directly - livelihood security and equity. A decrease in poverty and an increase in income security are core indicators of wellbeing and progress in the Genuine Progress Index. When there are fewer people living in poverty, for example, the GPI goes up. If the poor are getting poorer, by contrast, there will likely be greater desperation and higher rates of illness, crime, poor educational attainment and low productivity, all of which are highly correlated with poverty. Higher rates of poverty therefore signify a loss in "social capital" and can prove costly to the economy.

Equity is one of the core values and measures of wellbeing in the Genuine Progress Index. If we are becoming more equal as a society, the GPI goes up. If we are becoming more unequal, there will likely be greater social tension and alienation. More equitable societies have also been correlated with better population health outcomes and improved economic performance. For these reasons, greater inequality also signifies a loss in social capital.

What is Not Regularly Counted and Reported Doesn't Get Attention

What we count, measure and report not only signifies what we value but also literally determines what gets attention in the policy arena. **GPI***Atlantic* has long pointed out that the absence of social and environmental indicators in the conventional measures of progress distorts public policy. Here we note that the differential importance given to different types of economic indicators also determines policy priorities. The comparative lack of reporting on basic economic income distribution data, signifies the low policy priority currently given to indicators of basic livelihood security and equity.

The data in this analysis are strictly economic, reporting on income trends by quintile, and might therefore be expected to receive more attention than more complex social and environmental indicators. But this has not been the case. (Quintile simply means "one-fifth," and refers to five income groups ranked from the wealthiest 20% to the poorest 20%. To assess quintiles, all incomes in a given population are ranked from the lowest to the highest and then divided into five groups. Thus, the bottom one-fifth of incomes is referred as the "first quintile," the top one-fifth as the "fifth quintile," and the middle 20% of incomes as the "third quintile.")

Quintile data are crucial for assessing trends towards greater income equality or inequality, and for assessing how different economic policies, such as free trade, tax cuts, debt reduction, and cuts in government services, differentially affect different sectors of the population and impact their livelihood security. Even economic growth itself may have a different impact on the rich than on the poor, and the changing composition of the GDP impacts lower income groups differently than higher income groups.

Remarkably, even though this information falls in the realm of conventional economic analysis and is vital for basic policy making, it gets very little attention, and is reported very infrequently. Even though the economic growth statistics (GDP) are assiduously reported on a monthly basis and followed closely by political leaders, economic experts and journalists, the most recent Statistics Canada quintile data currently available are for 1998. Data for 1999 are expected to be released only in the fall of this year.

To comprehend to what extent the reported indicators shape the policy agenda, we need only reflect how economists, politicians, and the TSE would react if the latest available GDP figures were for 1998. Yet that is the priority currently given to income distribution statistics. Statistics Canada reports unpaid work statistics only once every six years.

When income trends *are* reported, they are generally reported as national and provincial averages. But these averages conceal vital information. An increase in income among the wealthy can skew the averages up, even if the poor are getting poorer. In Nova Scotia, for example, the "average" income for all households is about $5,000 per annum higher than the average income of the middle quintile. Indeed, GDP itself can grow rapidly even while most people are getting poorer. Without income data by income group, we can never test the assumption that a growing economy makes us "better off."

Although these income trends by quintile are a core and basic indicator of wellbeing, they have aroused little interest in either the research or policy arenas, and income distribution figures are rarely reported. Remarkable though it may seem, we believe that this is the first analysis of income trends for Nova Scotia that differentiates upper, middle and lower income groups and the first that assesses trends towards greater equality or inequality between rich and poor in the province. This basic information is not available, for example, in the annual Nova Scotia Statistical Review published by the Department of Finance.

Until 1999, data on income by quintile group were not even freely available to the general public, which helps explain the dearth of published information on the subject or of considered policy attention to the basic livelihood security and equity issues raised in this report. When **GPI***Atlantic* embarked on this research in 1998, all data were obtained from Statistics Canada through special custom tabulations. We are deeply grateful to Hans Messinger, Director of Industry Measures and Analysis, Statistics Canada, for his extraordinary assistance in making these data available, and to the Statistics Canada regional office in Halifax for its generous and invaluable technical support, advice and hospitality in this process.

Since that time, Statistics Canada has begun to make these data publicly available, with publications on *Income Trends in Canada 1980-1997* (catalogue no. 13F0022XCB) and *Income in Canada 1989-1998* (catalogue no. 75-202-XIE) released in 1999 and 2000. **GPI***Atlantic* welcomes the public availability of this important information and hopes that it will lead to much more concerted policy attention in these vital areas of concern. **GPI***Atlantic* recommends that these basic data on household income and livelihood security be given at least equal consideration to the economic growth statistics, and that they be released in a far more timely manner, so that data are not two years out of date as at present.

In light of this study's findings that economic growth is positively correlated only with the incomes of the wealthy, and that most Nova Scotians became worse off while the GDP grew, it is vital to examine income data by quintile alongside and as frequently as the standard economic growth statistics.

For example, because employment rates increased in the late 1990s, the 1999 quintile data, due for release in the fall of this year, may reveal more positive income outcomes for the bottom

three quintiles than the 1998 data presented in this report. But if they do not, then two important years of potentially corrective policy action will have been lost, and many actions may have been taken in the absence of these data that will have exacerbated rather than alleviated the distress of low income groups.

Definitions

In the following analysis, ***disposable income*** refers to market income plus government transfers, minus taxes, and therefore represents the money actually available for household expenditures. ***Market income*** refers to earned income and includes both wages and salaries and income from self-employment and investments. ***Government cash transfers*** may be federal, provincial or local, and include Canada Pension Plan payments, Old Age Security, Employment Insurance, Child Tax Benefit, Social Assistance, and other payments.

All values in this report are given in constant 1998 dollars to eliminate the effects of inflation and to translate disposable income into actual spending power.

Also, all values are for "households" rather than individuals and are therefore averages for each quintile of *all* family and household types sharing a place of residence (including dual and single earner families with and without children, single-parent families, and unattached individuals). Other GPI reports make finer distinctions among household types, focusing for example on income differentials between single and two-parent families, male and female earners, the young and the elderly, and so on.

It should also be noted that income is one key element of livelihood security, but not the only one. For example, the decline in real income in the 1990s observed in this report was accompanied by substantial cuts in government services in key areas, which exacerbated and accentuated declines in livelihood security that occurred through loss of real income. Household bills (for university tuition for example) are higher, as households pay for services once provided by governments. Thus, even the maintenance of real income can produce a decline in livelihood security if costs and expenditures increase.

Finally, it should be noted that there is no accepted definition of "poverty" in Canada. The "poor" are often referred to as those who live below Statistics Canada's "low-income cut-off" line, although Statistics Canada cautions that this is not a "poverty line." In this report, the term "poorest" households refers simply to those with the lowest 20% of incomes, and the "richest" households are those with the highest 20% of incomes. Thus "the gap between rich and poor" refers here to the difference between the top 20% and the bottom 20% of incomes.

Further Investigations are Necessary

This report focuses on an analysis of income groups by quintile because there has been very little exploration of this subject on a provincial and regional basis. However this is by no means the only approach to the subject of poverty and inequality. There has been substantial work on percentages of the population that fall below the official "low-income cut-off," and Statistics

Canada has just completed a new study on the dynamics of low income, using longitudinal data in the Survey of Labour and Income Dynamics.

That work, currently available only at the national level, examines the duration of low income spells, the extent to which particular groups of Canadians are exposed to low income, and which people are most likely to have low income for longer periods of time.[1] This builds on earlier work on the depth of poverty and is vitally important to provide a more detailed profile of the population at risk.

By contrast, this GPI study does not examine the demographic composition of the different income groups, nor the dynamics of movement in and out of those groups, nor the extent of exposure of particular groups to low income. However **GPI***Atlantic* strongly recommends that this present study be followed by regional and provincial analyses of Statistics Canada's data on low income and on the dynamics of poverty, some of which have so far been publicly presented only at the national level. It will also be helpful to use Census data to conduct further research by decile (one-tenth of households) or even smaller fractions of the population, particularly in order to provide information on the very rich and the very poor.

This report also focuses on the "what" rather than the "why" of income and equality trends, and should therefore be seen merely as a first step in provoking further investigation into the dynamics and causes of the trends described here. For example, further research is essential to determine:

- why national trends towards greater inequality are accentuated in Nova Scotia;
- why the poor in Nova Scotia are worse off than in any other province, and whether this can be explained by demographic differences among the provinces;
- whether a more detailed analysis of income *sources* and relative average amounts received by source can shed light on inter-provincial and quintile differences;
- why and how PEI has successfully reduced poverty and inequality to the lowest levels in the country, and resisted national trends towards greater income inequality;
- why market income in particular has dropped so precipitously for low and middle income Nova Scotians in an era of increasing dependence on international markets and a time when more open and unregulated markets are intended to create greater market opportunities;
- whether changes in employment patterns and skills requirements are partially responsible for the apparent increasing marginalization of the poor from the market economy and labour market;
- why GDP growth has not raised incomes for lower and middle income groups;
- whether the increasing proportion of GDP growth attributable to exports has routed growth benefits to large international companies at the expense of lower and middle income groups, and whether an increasing proportion of profits and income may be leaving the region and the country;
- why the trend towards greater equality in the 1980s reversed so sharply in the 1990s;

[1] Morisette, R. and Zhang, X, "Experiencing Low Income for Several Years," *Canadian Economic Observer,* May, 2001, Statistics Canada, catalogue no. 11-010-XPB.

- what demographic and policy factors may explain the increase in transfer payments to middle income Nova Scotians and the decline in transfers to the poor.

There are many other vital research questions that stem from the data presented in this report, and the reference section at the end includes investigations into several of these important issues. Here we can only ask some provocative questions in the hope that they will spur further investigation. For example, section 8 asks whether a growing dependence on the international market, free trade and an increasingly open and unregulated market has actually served most Nova Scotians or whether it may be contributing to a decline in economic wellbeing. And section 6 notes that the drop in market income and deepening of poverty are particularly significant in light of arguments that freeing up markets will alleviate poverty. However, the report makes no pretence at answering these causal questions, and offers them as directions for important future research.

The 1990s saw a major restructuring both of the market economy and of government itself. This included expanding globalization and free trade, labour market changes such as the growth of service jobs and the loss of many high-paying primary jobs, government debt and deficit reduction, the downsizing of many businesses, government service cutbacks, and the diffusion of information technology and its new skill requirements. All these changes have affected income dynamics and equality trends in significant ways.

Investigations into these causal factors are essential in order to offer constructive recommendations to policy makers. For example:

- Policy makers will want to know whether cuts in services to the poorest Nova Scotians may exacerbate the stresses of dramatically falling market incomes.
- They will want to assess the potential impact of proposed tax cuts on growing inequality in the province in order to assess whether such cuts disproportionately favour higher income groups that have already seen their share of total income rise sharply in the last decade.
- And they will want to consider whether export promotion and other policies that further our dependence on the international market actually translate into higher standards of living for ordinary Nova Scotians.

In short, income distribution data provide essential information on a wide variety of vital policy issues that directly impact the wellbeing of Nova Scotians. The references at the end of this report include some excellent analyses on the causes of inequality. It is hoped that the basic data on income distribution in this report will assist further analytical efforts and spur a constructive dialogue aimed at improving the long-term wellbeing of the vast majority of Nova Scotians.

Note to Readers

Although the following analysis summarizes only some key issues, **GPI***Atlantic* maintains a database of more than 200 tables, charts and detailed spreadsheets that support and underlie each of the results and conclusions in the following pages. For more information on the underlying database for this report, please visit the **GPI***Atlantic* web site at www.gpiatlantic.org.

2. Regional income gap grows: Nova Scotians get poorer while Ontarians, Albertans get richer.

The income gap between the richest provinces (Ontario and Alberta) and the rest of the country grew dramatically in the 1990s. In 1990, for example, the average Nova Scotian household had 82 cents in disposable income for every $1 in Ontario. By 1998, the average Nova Scotian household income had dropped sharply to 73 cents for every $1 in Ontario (Table 1 and Figure 1).[2]

Table 1: Average Disposable Household Income in Constant 1998$ Compared to Ontario.[3]

	Percent of Ontario		
	1980	**1990**	**1998**
Canada	94.8	90.1	87.6
Newfoundland	81.9	82.0	71.7
Prince Edward Island	81.6	76.3	75.2
Nova Scotia	80.6	82.4	72.9
New Brunswick	79.5	79.8	76.6
Quebec	87.4	80.0	74.3
Manitoba	87.7	81.9	78.7
Saskatchewan	90.9	78.1	74.4
Alberta	101.9	90.6	91.7
British Columbia	102.7	93.8	89.4

In constant 1998 dollars, the average Nova Scotian household has lost nearly $3,000 in disposable income since 1990, an 8% decline, and the second highest rate of loss in the country after Newfoundland. During the same period, the average Ontario household has gained $1,806 (up 4%) and the average Alberta household $2,111 (up 5%). "Average" income figures for Canada clearly conceal growing regional income disparities.[4]

Nova Scotians' disposable income grew during the 1980s, so the overall average income decline since 1980 is $1,065 per household (down 3%) compared to an increase of $3,000 in Ontario (up 7%) (Table 2).[5]

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[2] Calculated from average after tax income data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109 & 124.

[3] Calculated from average after tax income data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

[4] Calculated from average after tax income data in *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

[5] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144. Data from 13F0022XCB has been translated to constant 1998 dollars using the respective provincial consumer price indexes.

Figure 1: Atlantic Provinces Average Disposable Household Income Compared to Ontario.

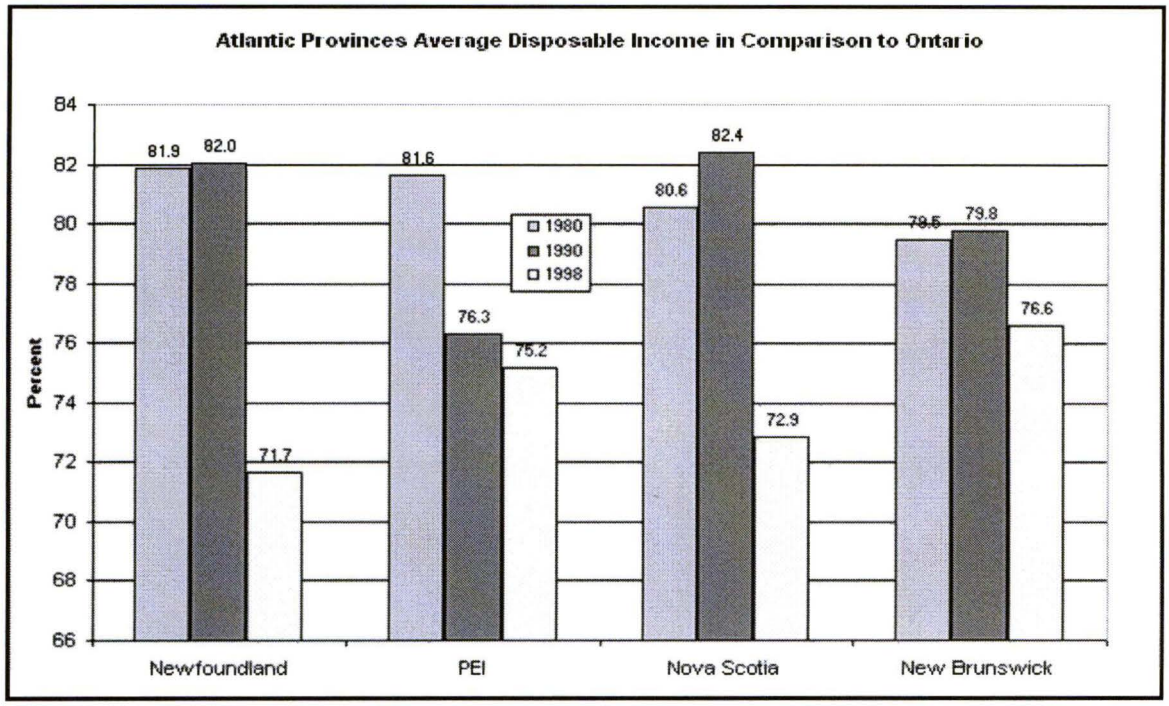


Table 2: Change in Average Disposable Household Income, 1980-1998 ($1998)[6]

	1980	1990	1998	1990-98		1980-98	
Canada	40,375	39,497	39,943	+$446	+1.1%	-$432	-1.1%
Newfoundland	34,856	35,951	32,697	-$3254	-9.1%	-$2159	-6.2%
Prince Edward Island	34,757	33,444	34,309	+$865	+2.6%	-$448	-1.3%
Nova Scotia	**34,305**	**36,093**	**33,240**	**-$2853**	**-7.9%**	**-$1065**	**-3.1%**
New Brunswick	33,837	34,953	34,956	+$3	0.0%	+$1119	+3.3%
Quebec	37,227	35,061	33,900	-$1161	-3.3%	-$3327	-8.9%
Ontario	**42,583**	**43,816**	**45,622**	**+$1806**	**+4.1%**	**+$3039**	**+7.1%**
Manitoba	37,364	35,907	35,923	+$16	0.0%	-$1441	-3.9%
Saskatchewan	38,728	34,206	33,964	-$242	-0.7%	-$4764	-12.3%
Alberta	43,407	39,704	41,815	+$2111	+5.3%	-$1592	-3.7%
British Columbia	43,715	41,099	40,768	-$331	-0.8%	-$947	-6.7%

As noted in the introduction, disposable income reflects household spending power and it can rise or fall due to several different factors and policies, including changes in market income, personal income taxes and government transfer payments. Further investigation is required to assess the causes of these growing regional disparities.

[6] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144. Data from 13F0022XCB has been translated to constant 1998 dollars using the respective provincial consumer price indexes.

It should also be noted that these figures are *averages* for the provinces as a whole. Not all Ontarians and Albertans have shared in their provinces' increasing wealth. It was only the gains of the richest 20% of Ontarians and Albertans that substantially raised "average" incomes in those provinces in the 1990s. Poor and middle income Ontarians actually lost real income in the 1990s, while the richest 20% gained an average of $9,400 per household (up 11%). In Alberta, the incomes of the poorest 20% fell, middle incomes stagnated, and the richest 20% gained an average of $9,800 (up 12%). Alberta now has the widest income gap between rich and poor in the country, and Ontario has the greatest inequality of income using the GINI method of measurement. Alberta's poor have a smaller share of total income than the poor in any other province. [7]

Some questions for further investigation

- Which Canadian and provincial policies are responsible for the increasing income gap between the rich and poor provinces?
- Since the dramatic growth in the regional income gap coincides with growing dependence on international markets, do free trade and related policies furthering open and unregulated markets favour Ontario and Alberta, and if so how?
- Is there a link between the growing regional income gap, declining real wages and Nova Scotia's current health care crisis and recent labour disputes?
  - A decade of sharply falling real wages has seen Nova Scotian workers determined to recoup at least some of their losses.
  - The Nova Scotia government, deeply in debt, says it can't meet the demands.
  - Alberta recruiters are in Nova Scotia, offering health workers $5/hour more than they receive here.[8]
  - Might a decade of growing disparities between the rich and poor provinces allow Ontario and Alberta to afford good public health care and attract health workers, while Nova Scotia and other provinces lose health care workers and see their health care systems deteriorate?
  - At the same time an increasing proportion (now nearly 30%) of health care spending in Canada is in the private sector. Can higher income groups afford health services that are increasingly inaccessible to lower income groups.[9]

3. Poor and middle income Nova Scotians lose most. The rich get richer.

However, the "average" incomes normally reported can be misleading, even within a province because relatively few high incomes can skew the average higher. Nova Scotia's "average" disposable household income is actually $5,000 per annum (17.5%) more than the average

[7] See Section 5 for an explanation of the GINI coefficient and for assessments of equality by province.
[8] Michael Tutton, "Labour war could lead to exodus," *The Chronicle-Herald,* Halifax, 2 July, 2001, pp.1-2.
[9] Tom Arnold, "29% of our health care is private," *National Post,* 29 June, 2001, page 1. The actual private portion of health care spending in Canada is 29.4%, the third highest among the OECD countries.

income of the middle quintile. Closer analysis of the "average" income loss described above shows that it has not been borne equally by all segments of Nova Scotia society.

Since 1990, all income groups have seen their disposable income decline, but the decline has not been evenly shared. In constant dollars, since 1990 the poorest 20% of Nova Scotian households have lost 29% of their disposable income, and the rich just 1%.[10] The average income of the poorest households is also 14% less in real terms that it was in 1980, while the average income of the wealthiest 20% of Nova Scotian households is 3% higher than in 1980.[11]

In fact, *all* Nova Scotian household groups, except for the richest 20%, have experienced a decline in spending power since 1980. The poorer the household, the bigger the percentage drop in income; although in absolute dollar terms, middle income Nova Scotians have lost the most. Middle income households have $3,600 less in constant dollars on average than they did in 1990 and $3,130 less than in 1980 (Table 3 and Figure 2.)[12]

Table 3: Average Disposable Household Income by Quintile, Nova Scotia 1980-1998, and Top Quintile, Ontario ($1998).[13]

	1980	1990	1998	1990-98		1980-98	
Lowest	9,495	11,490	8,205	-$3,285	-28.6%	-$1,290	-13.6%
Second	20,762	21,630	18,421	-$3,209	-14.8%	-$2,341	-11.3%
Third	31,424	31,885	28,295	-$3,590	-11.3%	-$3,129	-10.0%
Fourth	42,294	44,666	41,545	-$3,121	-7.0%	-$749	-1.8%
Highest	67,630	70,822	69,858	-$964	-1.4%	+$2,228	+3.3%
Ontario Top	83,985	87,687	97,170	+$9,483	+10.8%	+$13,185	+15.7%

In sum, Nova Scotia's low and middle income groups got a lot poorer between 1980 and 1998 while the wealthiest 20% of Nova Scotians got somewhat richer and Ontario's wealthiest 20% got a lot richer.[14]

On average, the poorest 20% of Nova Scotian households now survive on just $8,205 a year (*after* taxes and transfers), while the richest 20% have nearly $70,000 in disposable income (*after* taxes and transfers). The richest 20% of Ontario households have nearly $100,000 in annual disposable income.[15]

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[10] Calculated from average after tax income data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109

[11] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p.109.

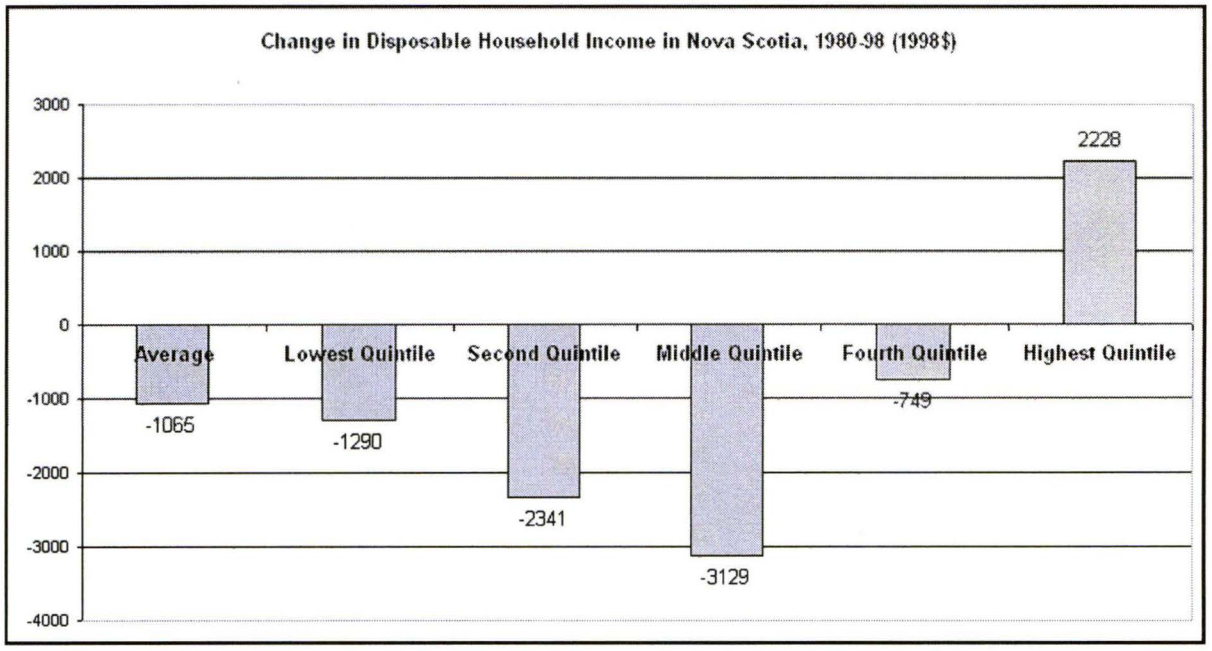
[12] Calculated from average after tax income data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109

[13] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109 & 124.

[14] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109 & 124.

[15] *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109 & 124.

Figure 2: Change in Average Disposable Household Income by Quintile, Nova Scotia, 1980-98 (1998$).[16]



4. Nova Scotia's poor are the poorest in Canada.

The average Nova Scotian household's disposable income in 1998 was $33,240, the second lowest in Canada after Newfoundland ($32,697).[17] However, the *average* income in Newfoundland is lower than that in Nova Scotia only because the rich in Nova Scotia have a higher income than the rich in Newfoundland.[18]

The poor in Nova Scotia are actually considerably worse off than the poor in Newfoundland and the other Atlantic provinces. The disposable income of the poorest 20% of Nova Scotian households is 12% lower than that of the poorest 20% in Newfoundland and 20% less than that of the poorest 20% in PEI and New Brunswick.[19]

In fact, low *and* middle income Nova Scotians (the lowest ***60%*** of households) have the lowest average disposable household income in the country, also less than that in Newfoundland.[20] As noted above, middle income groups in Nova Scotia actually lost the most income in absolute

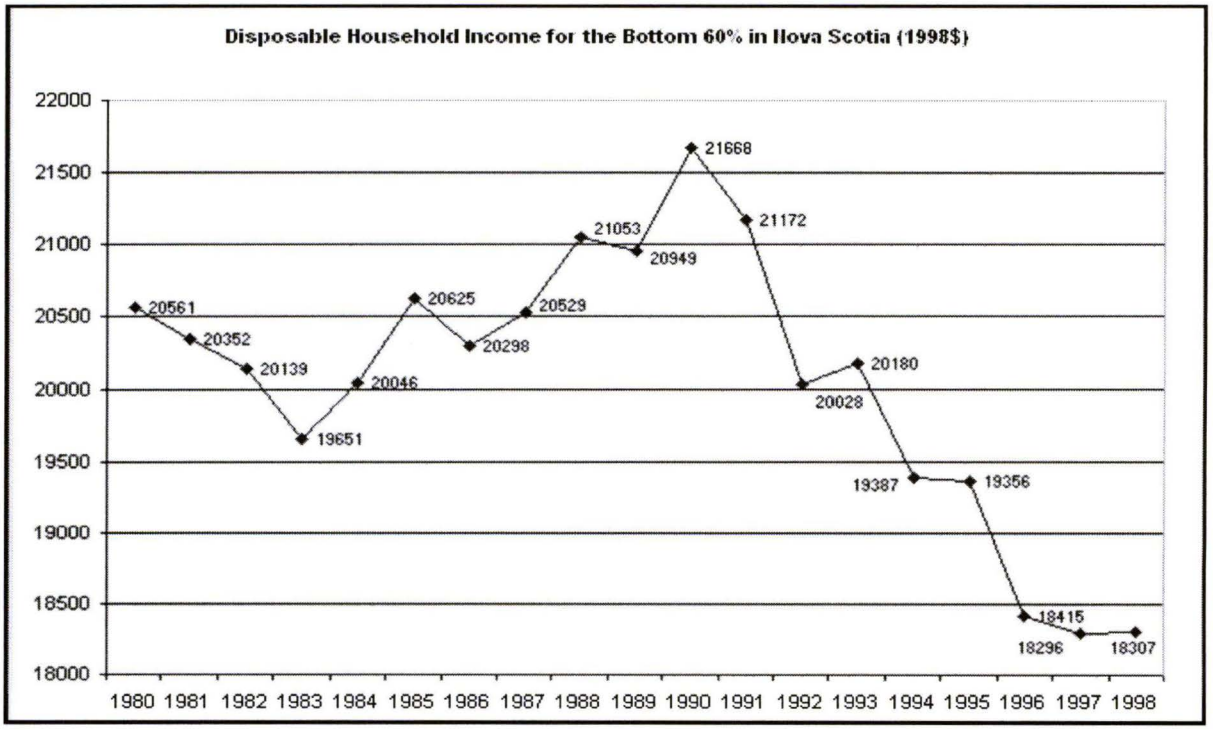
[16] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109
[17] *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.
[18] *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 99, 109.
[19] *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 99, 104, 109, 114.
[20] Calculated from average after tax income data in *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

terms, so *most* Nova Scotian households saw a sharp drop in their disposable income in the 1990s and now have the lowest incomes in Canada (Figures 3 and 4.)[21]

Further investigation is required into the dynamics of Nova Scotia's low income households, into the intensity and duration of their exposure to poverty, into their demographic composition, and into policy factors that may have deepened the poverty of low-income groups.

For example, higher per capita populations of students, single parents or elderly will affect inter-provincial comparisons, and cuts in government services and social assistance payments can accentuate losses in market income. In particular, recent Statistics Canada analyses of the duration of low-income exposure, using the Survey of Labour and Income Dynamics, merit replication at the provincial and regional levels.[22] These studies will allow a more detailed and nuanced profile of the populations most at risk than this analysis of *average* household incomes by quintile.

Figure 3: Average Disposable Household Income for the Bottom 60% of Households, Nova Scotia (1998$).[23]

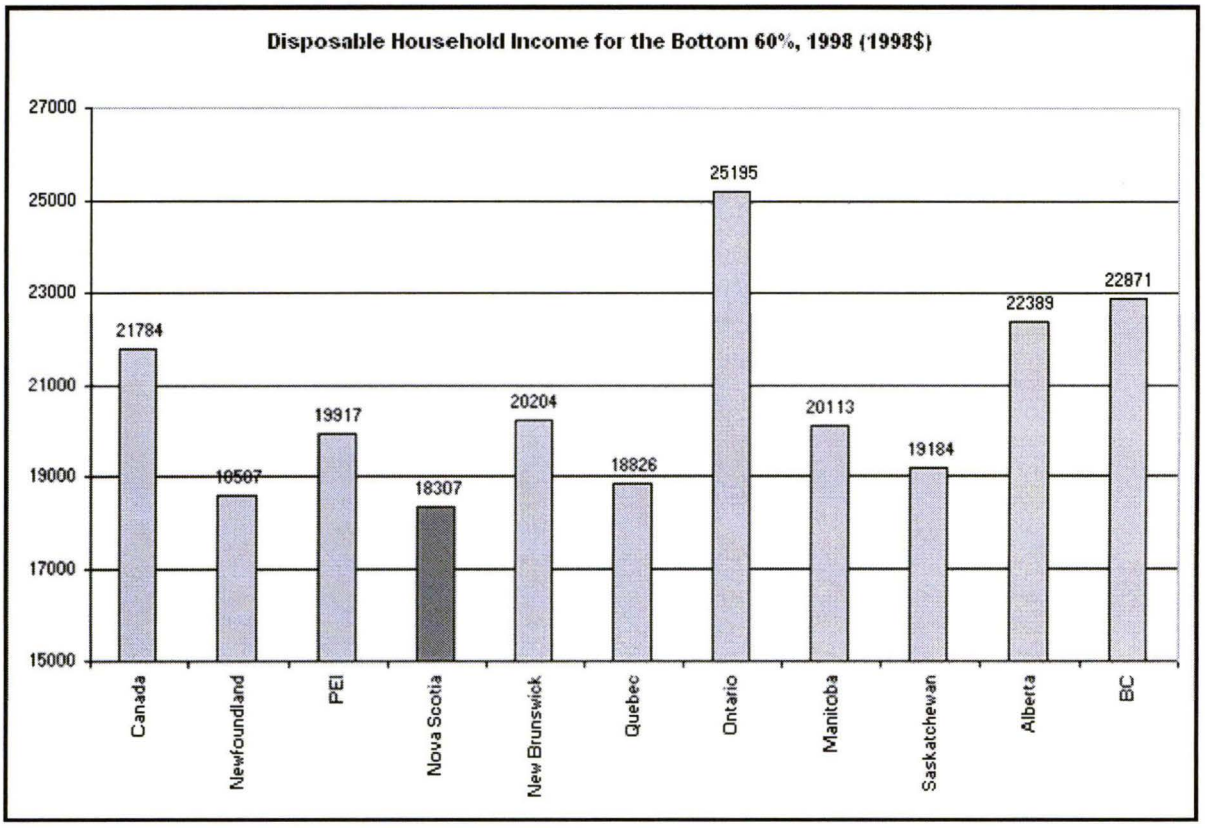


[21] *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

[22] Morisette, R., and Zhang, X., "Experiencing Low Income for Several Years," *Canadian Economic Observer,* May, 2001, Statistics Canada, catalogue no. 11-010-XPB.

[23] Calculated from average after tax income data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109.

Figure 4: Average Disposable Household Income for the Bottom 60% of Households, Canada and Provinces, 1998 (1998$).[24]



The Nova Scotia trends are part of a national trend: -- the poor got poorer *throughout* Canada and in every province in the 1990s. But the poorest 40% of Nova Scotians have lost more income in *both* absolute *and* percentage terms since 1990 than the bottom 40% in any other province (Table 4).

[24] Calculated from average after tax income data in *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

Table 4: Average Disposable Household Income, Lowest 40% of Households, Canada and Provinces, 1980-98 (1998$).[25]

	1980	1990	1998	1990-98 (%)	1980-98 (%)
Canada	16693	17043	15989	-6.2	-4.2
Newfoundland	14828	17254	13909	-19.4	-6.2
Prince Edward Island	14614	15626	15273	-2.3	4.5
Nova Scotia	15129	16560	13313	-19.6	-12.0
New Brunswick	15366	16169	15245	-5.7	-0.8
Quebec	15641	15132	14000	-7.5	-10.5
Ontario	18148	19277	18510	-4.0	2.0
Manitoba	14875	15808	14778	-6.5	-0.7
Saskatchewan	15660	14683	14578	-0.7	-6.9
Alberta	16937	16925	15955	-5.7	-5.8
British Columbia	17464	17224	16665	-3.2	-4.6

5. Inequality grows in Nova Scotia.

Because of the trends described above, the gap between rich and poor grew sharply in Nova Scotia in the 1990s. In 1990, the richest 20% of Nova Scotian households had an average disposable income that was 6.2 times greater than the poorest 20%, making Nova Scotia the third most *equal* province in the country, based on quintile comparisons.[26] By 1998, the richest 20% had 8.5 times the income of the poorest 20% after taxes and transfers, making Nova Scotia the second most *unequal* province in the country after Alberta (Table 5 and Figure 5.)[27]

In 1980, the richest 40% of Nova Scotian households had an average disposable come that was 3.6 times greater than the poorest 40%, the second most *equal* distribution of income based on quintile comparisons.[28] By 1998, the wealthiest 40% had incomes 4.2 times greater than the poorest 40%, again the second most *unequal* distribution of income in the country after Alberta (Table 5 and Figure 6.)[29] In Alberta, needless to say, the inequality gap is due largely to the rich being much richer than most Canadians. In Nova Scotia it is due more to the poor being considerably poorer than most Canadians.

[25] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144. Data from 13F0022XCB has been translated to constant 1998 dollars using the respective provincial consumer price indexes.

[26] Calculated from average after tax income shares in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109.

[27] Calculated from average after tax income shares in *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

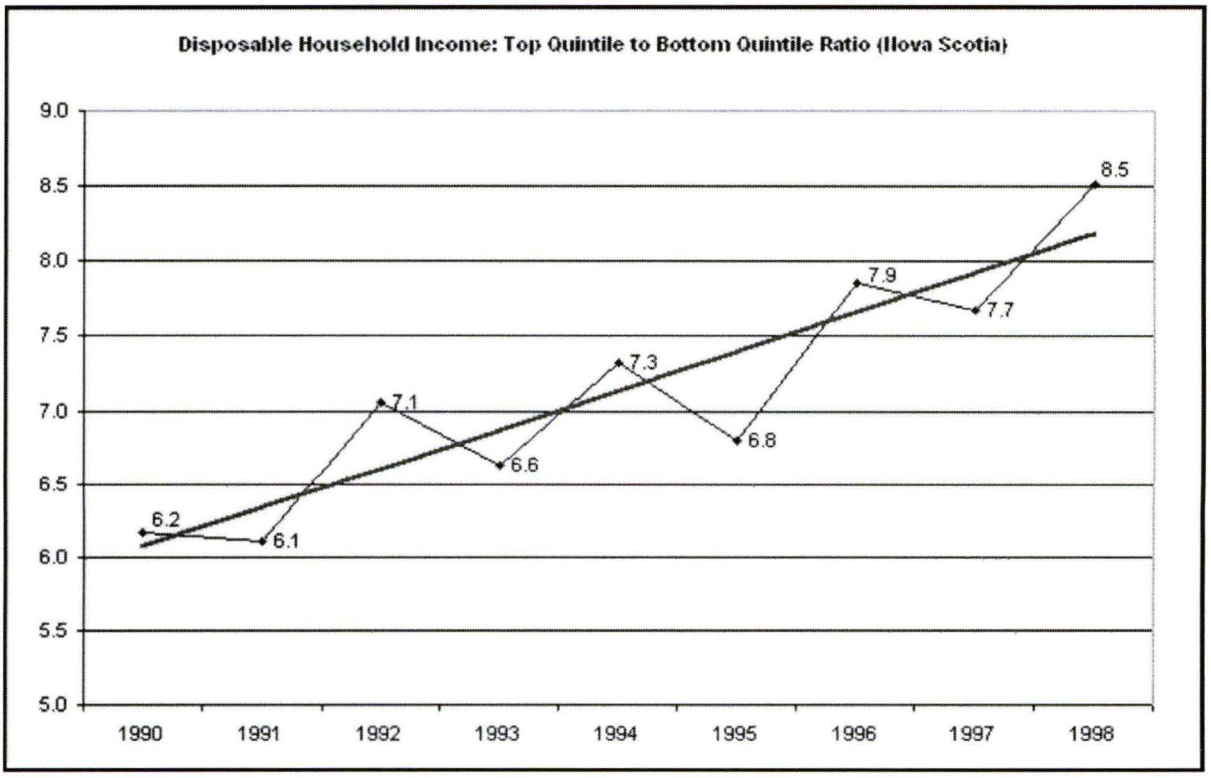
[28] Calculated from average after tax income shares in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109.

[29] Calculated from average after tax income shares in *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

Table 5: Average Disposable Household Income Ratios, 1980-1998.[30]

	Richest 20% : Poorest 20%			Richest 40% : Poorest 40%		
	1980	1990	1998	1980	1990	1998
Canada	8.2	7.1	8.5	3.9	3.8	4.2
Newfoundland	7.6	5.8	7.3	3.9	3.3	3.9
Prince Edward Island	7.4	6.2	6.7	3.9	3.4	3.7
Nova Scotia	7.1	6.2	8.5	3.6	3.5	4.2
New Brunswick	6.7	6.1	7.0	3.5	3.4	3.7
Quebec	7.6	6.9	7.9	3.9	3.8	4.0
Ontario	7.8	7.1	8.3	3.8	3.7	4.1
Manitoba	8.8	6.7	7.6	4.2	3.7	4.0
Saskatchewan	8.1	7.3	7.4	4.1	3.8	3.9
Alberta	9.1	7.4	10.4	4.3	3.8	4.5
British Columbia	9.3	7.6	8.0	4.1	3.9	4.1

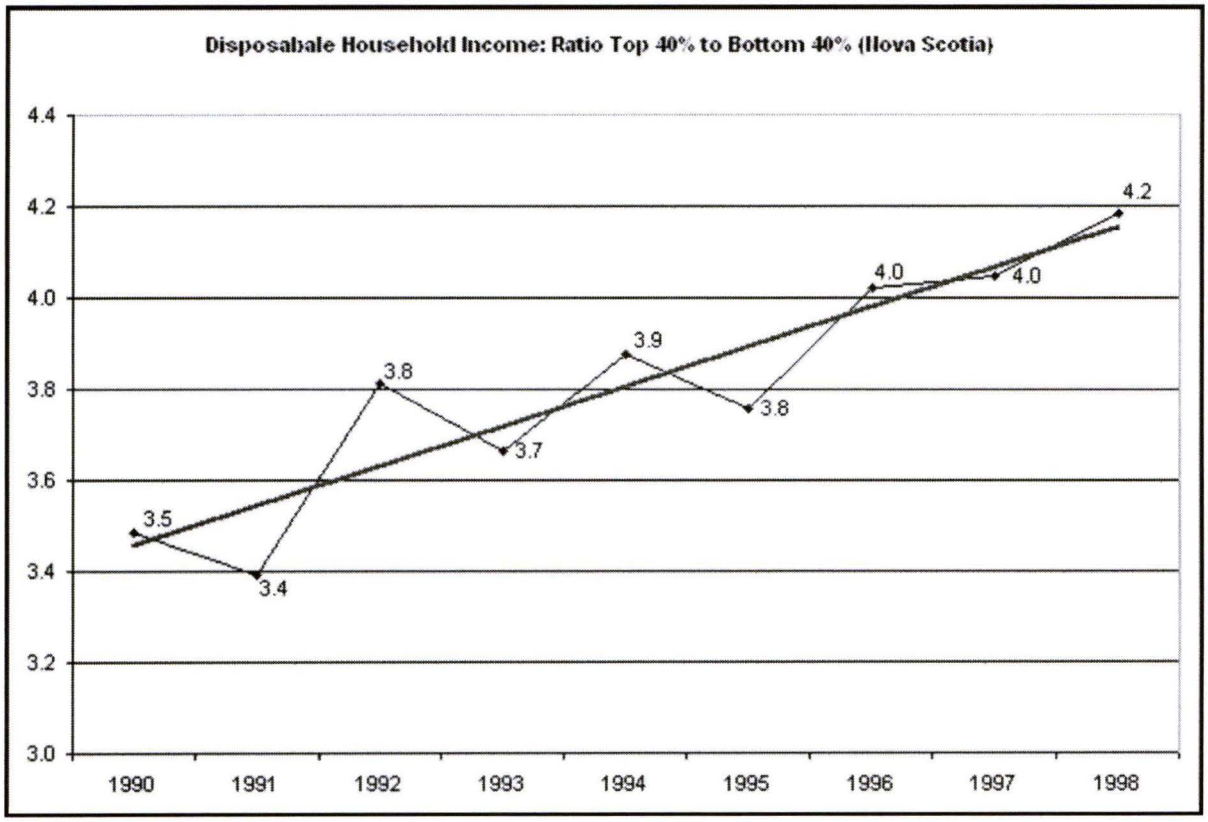
Figure 5: Average Disposable Household Income: Ratio of Top Quintile to Bottom Quintile, Nova Scotia, 1990-1998.[31]



[30] Calculated from average after tax income shares in *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

[31] Calculated from average after tax income shares in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109.

Figure 6: Average Disposable Household Income: Ratio of Top 40% to Bottom 40%, Nova Scotia, 1990-1998.[32]



The richest 20% of Nova Scotian households now have 42% of the total disposable income in the province, up from 39.2% in 1990. The poorest 20% have just 4.9% of the income, down from 6.4% in 1990.[33] In fact the richest 20% of Nova Scotian households have 27% more income than the bottom 60% combined, up from 9% more in 1990 (Figure 7.) Only in Alberta do the poorest households have an even smaller share of household income.[34] The inequality rankings nationwide are somewhat different when GINI coefficients are used.

Again the Nova Scotia trend is part of a national trend: -- inequality is increasing across the country. In the 1990s, the poorest 20% of households saw their disposable income share fall in every province except Saskatchewan[35], and the next 40% saw their income share fall in every single province.[36] In fact, middle income earners in every province have less real disposable

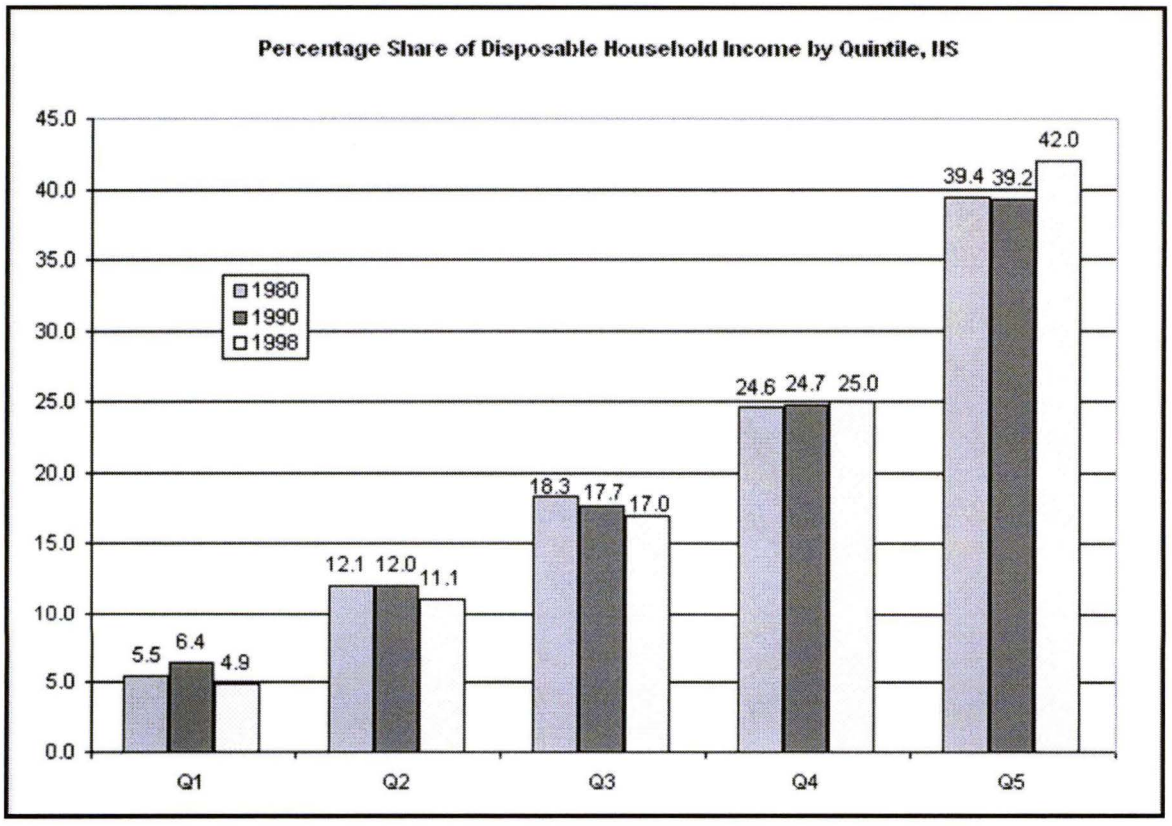
[32] Calculated from average after tax income shares in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109.
[33] *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109.
[34] *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.
[35] *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.
[36] Calculated from average after tax income shares in *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

income now than they did 20 years ago, while the richest 20% have increased their income share in every province.[37]

Nova Scotia's income gap between rich and poor is now far closer to the profiles of more unequal countries like the United States than to more equal countries like Denmark and Sweden. As noted, Nova Scotia's poorest 20% of households have 4.9% of the disposable income while the richest 20% have 42% of the income, (or 8.5 times as much as the poorest).

In the United States, the poorest 20% have 5.2% of the income and the richest 20% have 46.4% of the income, (or nearly 9 times as much as the poorest.) By contrast, in Denmark and Sweden, the poorest 20% have 9.6% of the income and the richest 20% have 34.5% of the income (or just 3.6 times as much as the poorest).[38] By contrast, in 1990, Nova Scotia's income gap was exactly half way between the U.S. and Danish ratios.

Figure 7: Percentage Share of Total Disposable Household Income by Quintile, Nova Scotia, 1980-1998.[39]



[37] *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

[38] International quintile gap figures are from The World Bank, *2001 World Development Indicators,* Section 2.8, "Distribution of Income or Consumption," available at: http://www.worldbank.org/data/wdi2001/pdfs/tab2_8.pdf.

[39] Calculated from average after tax income shares in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109.

GINI coefficient measure of equality

This study focuses on an analysis of income groups by quintile (from the top 20% to the bottom 20%). However, the most commonly used measure of equality and inequality is the GINI coefficient, which does not compare average incomes by quintile group, but considers each household income as a separate entity. The GINI coefficient therefore computes the income gap over the *entire* income spectrum rather than by comparing only the top and bottom income groups.

Thus, perfect equality in the GINI computation occurs if 10% of the population has 10% of the income, if 20% of the population has 20% of the income, if 30% has 30% of the income and so forth. That would produce a GINI coefficient of 0.0. At the other extreme, if one person has all the income, and all the rest have none at all, the GINI coefficient would be 1.0. In other words, higher numbers (e.g. 0.408 in the United States, 0.316 in Ontario) represent a more unequal income distribution than lower numbers (e.g. 0.247 in Denmark, 0.279 in Prince Edward Island).[40]

Graphically, perfect equality is represented in GINI computations by a straight 45^0 line, and the degree of inequality is calculated according to the area between that line and a rising income distribution curve. The greater the area between the curve and the 45^0 line, the more unequal the income distribution and the higher the GINI coefficient.

The GINI coefficient has advantages and disadvantages over the quintile comparison method used in the previous section. On the one hand, it is certainly a more comprehensive computation of equality and inequality, because it does include *all* incomes, including those in the middle. However, unlike the quintile comparison, it does not necessarily tell us about changes in the gap between the rich and the poor. Because it accounts for all incomes, the GINI coefficient can change dramatically as a result of shifts among the middle income groups and even if the gap between rich and poor does not change at all.

Because the GINI coefficient measures a different dimension of inequality than the quintile group comparisons, the World Bank therefore uses *both* measures in its "Distribution of Income" figures. For that reason, too, both measures are also given here.

The GINI results confirm that income inequality is rising across the country in every province except Saskatchewan and British Columbia. However, in the GINI compilations, Nova Scotia ranks fifth in Canada in inequality, after Ontario, Alberta, Newfoundland and Quebec, rather than second when just rich and poor incomes are compared (Table 6.) This indicates that there are smaller income gaps *among* the middle income groups in Nova Scotia than in some other provinces.[41]

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[40] International GINI coefficients are from The World Bank, *2001 World Development Indicators,* Section 2.8, "Distribution of Income or Consumption," available at: http://www.worldbank.org/data/wdi2001/pdfs/tab2_8.pdf

[41] *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 147, 150, 153, 156, 159, 162, 165, 168, 171, 174, 177.

By both measures (GINI and quintile comparison) Prince Edward Island is the most egalitarian province in Canada. The poorest 40% of Island households have actually seen their average disposable income increase by 4.5% since 1980, the best record in the country during a 20 year period when the lowest 40% of households saw their incomes decline in eight out of ten provinces.[42]

Not only does Prince Edward Island have the smallest income gap between rich and poor, it also has the lowest poverty rates in Canada both for men and for women, and the lowest rate of child poverty in the country. It is also the only province in which the poor earn higher incomes today than they did in 1980 and 1990. As indicated in the Appendix, Prince Edward Island also has the least income-based gender discrimination in the country, registering the smallest income gap between men and women. The reasons for Prince Edward Island's remarkable record in the face of contrary national trends merit investigation.

Table 6: Disposable Income GINI Coefficient for Economic Families 2+, Canada and Provinces, 1990 and 1998.[43]

	1990	1998
Canada	0.291	0.315
Newfoundland	0.286	0.307
Prince Edward Island	0.274	0.279
Nova Scotia	0.278	0.302
New Brunswick	0.280	0.299
Quebec	0.282	0.303
Ontario	0.284	0.316
Manitoba	0.277	0.296
Saskatchewan	0.301	0.291
Alberta	0.287	0.310
British Columbia	0.300	0.297

Note: A higher GINI coefficient signifies greater income inequality.

6. Market Income and Transfer Payments.

To this point, we have considered only disposable income, which actually consists of three factors – (1) earned market income (wages, salaries and income from self-employment and investments) plus (2) transfers from government (= total income) minus (3) taxes. In other words, disposable income reflects what people actually have in their pockets to pay their rent, buy their food and support themselves.

[42] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144. Data from 13F0022XCB has been translated to constant 1998 dollars using the respective provincial consumer price indexes.

[43] *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 147, 150, 153, 156, 159, 162, 165, 168, 171, 174, 177.

However it is essential to analyze the components of income carefully, both to assess the success or failure of the free market to provide income benefits, and particularly to emphasize that there is no ideological divide in this analysis. Both Left and Right firmly agree that reliance on earned income is generally far preferable to reliance on government transfers, and all political parties hold that higher disposable *and* market incomes signify economic wellbeing. As well, higher market incomes produce higher tax revenues for s, enhancing their capacity to provide adequate health, education and other services.

Presumably a healthy economy, therefore, is one in which the market effectively contributes to economic wellbeing, and in which *market* income represents a correspondingly high proportion of *disposable* income. That, too, would be a test of the effectiveness of an increasingly open and unregulated market and of its capacity to improve market opportunities. Incomes dependent increasingly on government transfers are not only a drain on the public purse and a tax burden, but a sign of lost personal independence.

However, it is precisely in market income that the major declines have occurred, particularly for poor and middle income Nova Scotians. This is cause for concern, regardless of ideological predisposition, because it signifies a failure of the market economy to generate income benefits.

The poorest 20% of Nova Scotian households have seen their average market income fall by more than 50% since 1990.[44] As a percentage of disposable income, market income for the poor is now just 31%, the lowest level ever recorded.[45] Though all provinces except Prince Edward Island saw a decline in real market income for the poor, the drop was steepest in Nova Scotia ($2,571) (Figures 8 and 9, and Table 7).[46]

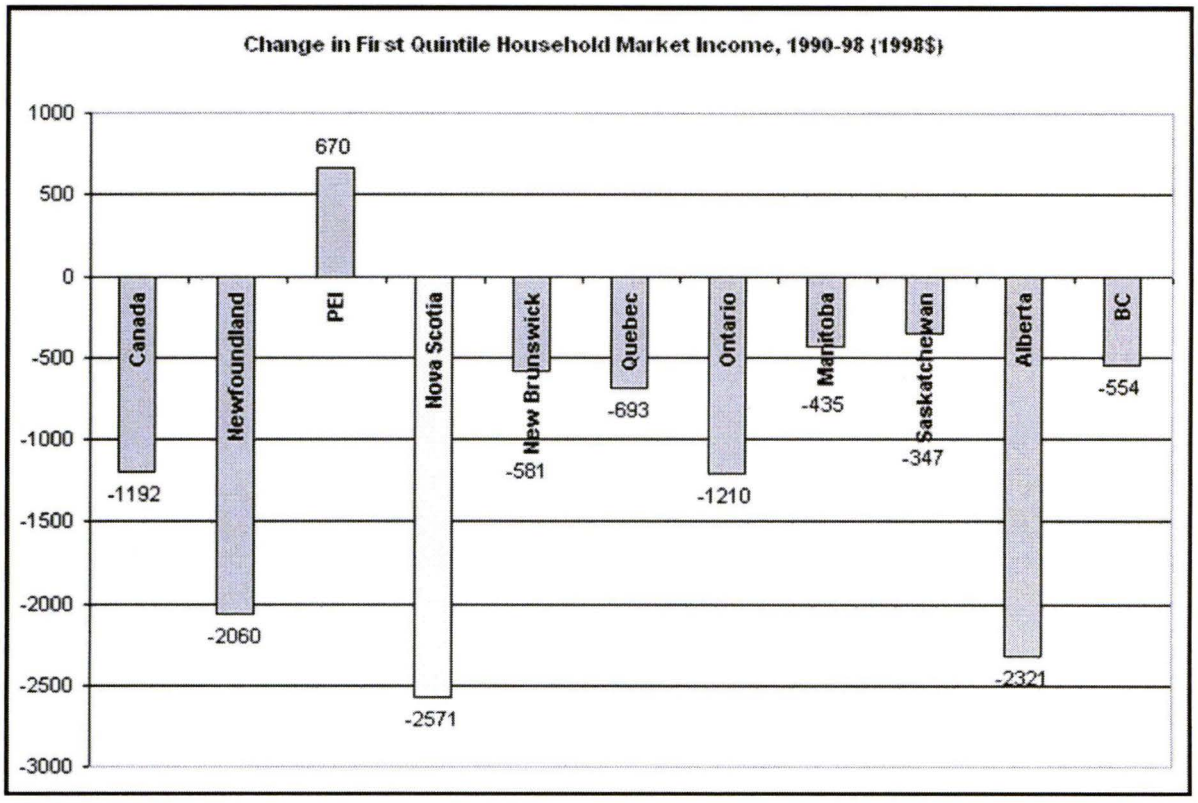
It is essential to conduct further analyses to determine why the market economy has increasingly failed to provide an adequate income for the poor. Employment patterns for low income groups must be carefully examined to assess whether particular types of work are less available, whether this may be partly due to the export of unskilled primary jobs to low-income countries, and whether the growth of temporary service jobs has depressed earned incomes. If the poor are increasingly marginalized from the labour market, are there particular forms of education and skills training that can be promoted to remedy the situation?

Again, Prince Edward Island is a notable exception to the national trends. Not only is Prince Edward Island the most equitable province in the country, as noted earlier, it is also the only province that has successfully harnessed market forces for the benefit of the poor and in which the poor *earn* higher incomes today than they did in 1980 and 1990.[47] Average market income

[44] Calculated from market income quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 105.
[45] Calculated from market and disposable income quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 105 & 109.
[46] Calculated from market income quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, P. 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, & 140.
[47] Calculated from average market income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 105. Data from 13F0022XCB has been translated to constant 1998 dollars using the respective provincial consumer price indexes.

for the lowest 20% of households in Prince Edward Island is higher in real terms than in any province except Ontario and British Columbia, and is fully 68% higher than in Nova Scotia.[48]

Figure 8: Change in Average Household Market Income, Poorest 20% of Households, Canada and Provinces, 1990-98 (1998$).[49]



Middle income Canadians across the country have also seen their market income drop since 1990 in every province. Nova Scotian households lost an average of more than $6,000 (constant 1998$), or 20% of their market income, since 1990, the sharpest decline of any province, and nearly $6,500 since 1980 (Figure 10).[50,51] This has made middle income Nova Scotians increasingly dependent on government transfers, up by 73%, or $3,600, since 1980.[52] (Transfers include EI, CPP, Old Age Security, social assistance, Child Tax Benefit and other payments).

[48] *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, P. 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, & 140.

[49] Calculated from market income quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, P. 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, & 140.

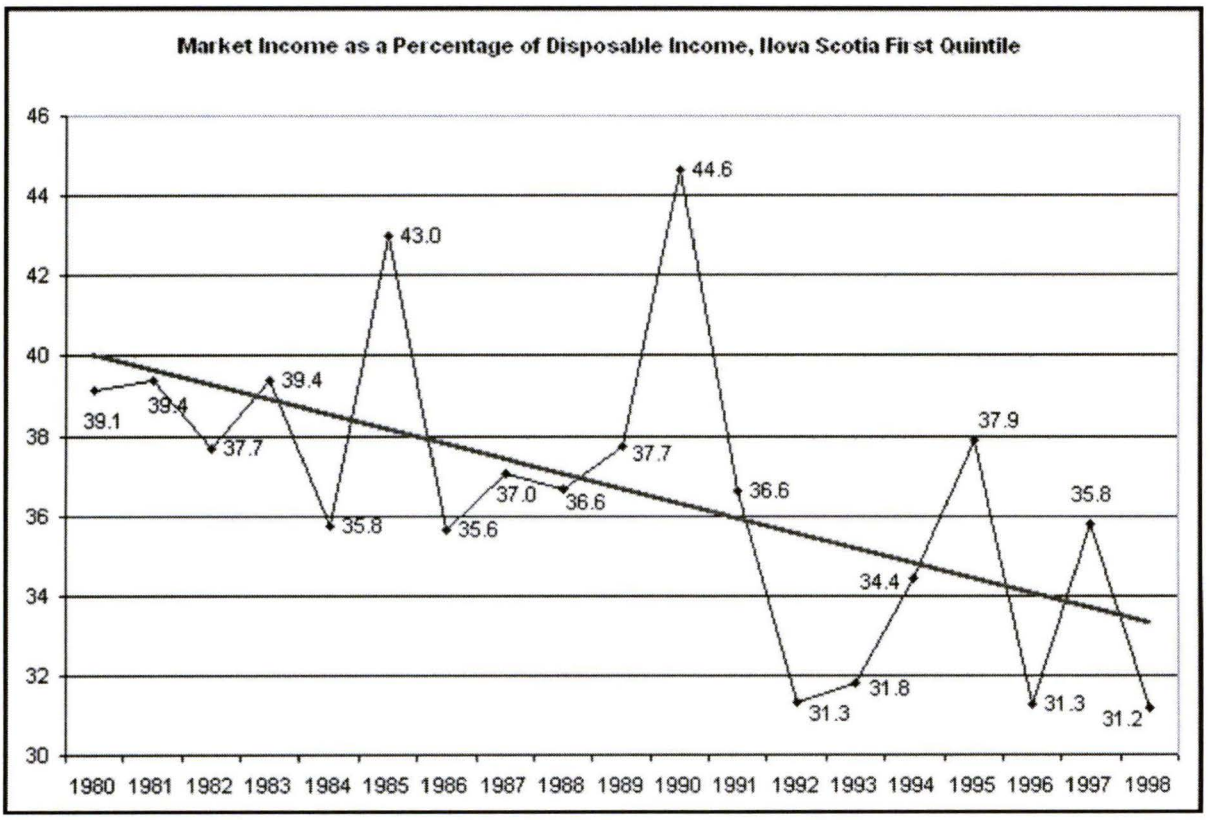
[50] Calculated from market income quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, P. 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, & 140.

[51] Calculated from average market income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 105. Data from 13F0022XCB has been translated to constant 1998 dollars using the respective provincial consumer price indexes.

[52] Calculated from transfer payment quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 106.

By contrast, cash transfer payments to Nova Scotia's poorest 20% of households dropped by an average of 15%, or $1,045 in constant 1998 dollars, between 1990 and 1998, and by 22%, or $1,670, since 1993 alone, accentuating the decline in market income and leaving the poor in particularly dire straits.[53] This indicates that government transfer payments have *partially* compensated for the market income decline for middle income Nova Scotians but not at all for the poorest Nova Scotians (Table 8).

Figure 9: Average Market Income as a Percentage of Disposable Income, Poorest 20% of Households, Nova Scotia, 1980 - 1998.[54]



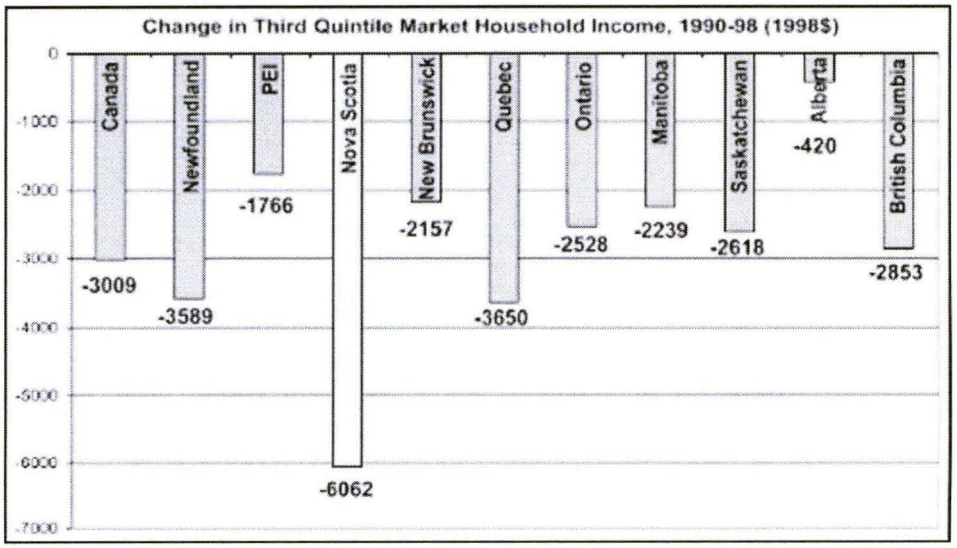
Contrary to the popular image that transfer payments help the poor most, therefore, it is noteworthy that middle income Nova Scotian households actually receive an average of 45% more in government cash transfers in dollar terms than the poorest 20% of Nova Scotians. Even the second wealthiest 20% of Nova Scotian households receive 8.5% more in government cash transfers than the poorest 20%.[55]

[53] Calculated from transfer payment quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 106.
[54] Calculated from market and disposable income quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 105 & 109.
[55] Calculated from transfer payment quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 106.

Table 7: Average Market Household Income, First Quintile, Canada and Provinces, (1998$).[56]

	1980	1990	1998
Canada	4918	5,185	3,993
Newfoundland	3731	3,859	1,799
Prince Edward Island	1567	3,619	4,289
Nova Scotia	3717	5,129	2,558
New Brunswick	4205	3,974	3,393
Quebec	3882	3,560	2,867
Ontario	6172	6,850	5,640
Manitoba	4161	4,203	3,768
Saskatchewan	5268	4,201	3,854
Alberta	6857	6,151	3,830
British Columbia	4967	5,888	5,334

Figure 10: Change in Third Quintile Household Market Income, Nova Scotia, 1990-98 (1998$).[57]



Further investigation is required into the demographic and policy factors that underlie shifts in the composition of government transfers. For example, the loss in transfer payments to the poor may be due to declines in total social assistance, child tax benefit payments, and local transfers in the 1990s. Canada Pension Plan payments and Old Age Security, on the other hand, go to all

[56] *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. P. 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, & 140. Data from 13F0022XCB has been translated to constant 1998 dollars using the respective provincial consumer price indexes.

[57] *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, P. 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, & 140.

income groups albeit in unequal portions. Those payments have increased substantially in the same period, reflecting increasing numbers of aging retirees.

Eligibility and benefit changes in employment insurance have also affected income groups differently. Because employment insurance is tied to income, a decline in market income for the poorest Nova Scotians may have reduced both their eligibility for employment insurance and the amount of benefits received. Employment insurance therefore tends to benefit middle income groups with longer work records and higher wages rather than the lowest income groups who may be more marginalized from the labour market. This, too, may help account for the higher proportion of total transfers accruing to the middle quintiles at the expense of the poorest 20%. Similarly, longer work histories and higher incomes can impact the size of pension transfers.

In short, the shift in distribution of transfer payments can only be assessed by investigating the changing composition both of the transfers themselves and of the demographic composition of the recipients.

Table 8: Transfer Payments by Quintile, Nova Scotia: 1980-98 (1998$).[58]

	Average	Q1	Q2	Q3	Q4	Q5
1980	5547	5960	7933	4914	5009	3924
1981	5716	6147	8301	5056	4551	4526
1982	6339	6205	9395	6355	5037	4695
1983	6391	6144	8450	7555	5251	4537
1984	6445	6473	8881	6402	5694	4777
1985	6545	6601	8857	6936	5753	4595
1986	6822	6943	9268	7007	5818	5075
1987	6580	6563	8900	6699	5141	5595
1988	6427	6810	9449	6538	4612	4725
1989	6734	6953	9454	6709	4940	5609
1990	6908	6904	9343	7174	5965	5155
1991	7211	7481	9596	7485	6048	5443
1992	8066	7120	10412	8610	6801	7383
1993	8038	7528	10247	8538	7790	6091
1994	7522	6542	9909	8566	6936	5658
1995	7487	6410	10227	8816	6963	5023
1996	7310	6243	9325	8689	6864	5430
1997	7019	6022	8866	8475	6704	5016
1998	6931	5859	8953	8504	6357	4970

[58] *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 91, 96, 101, 106, 111, 116, 121, 126, 131, 136, 141. Data from 13F0022XCB has been translated to constant 1998 dollars using the respective provincial consumer price indexes.

7. Income and GDP

In conventional economics, without consideration of social and environmental variables, it is assumed that economic growth, signified by a rising GDP, necessarily makes people "better off." For example, Brian Crowley, of the Atlantic Institute for Market Studies, has written that "growth is a tide that lifts all boats, and the poor in both wealthy and impoverished countries get their full share of the fruits of growth. Nor do the incomes of the poor fall harder than those of the better-off during economic crises." Similarly, a World Bank study by Aart Kray and David Dollar, entitled *Growth is Good for the Poor,* asserts that "income of the poor rises one-for-one with overall growth."[59]

However, the income data of the 1990s indicate that this was not so. In fact, real average disposable household income in Nova Scotia declined in the 1990s even as the national and provincial GDP increased.[60] If economic growth produced benefits, the question is: Where have the benefits of increased production gone?

Only the incomes of the wealthy were positively correlated with economic growth. The poorer a household was in the 1990s, the less correlation there was with economic growth.[61] The disparity between income and growth is even greater when market income rather than disposable income is considered, although conventional economic theory holds that it is precisely market income that should respond most directly to growth.

The following charts examine both disposable and market income trends in relation to GDP. Figure 11 shows a positive correlation between disposable income and GDP nationally for the wealthiest 40% of households and a negative correlation for the poorest 40%. (The higher the number, the stronger the correlation, either positive or negative.) These income-economic growth correlations stand up for both provincial and national GDP, and cannot therefore be attributed to particular regional trends alone.

Considering market income in Nova Scotia, only the wealthiest 20% improved their prospects as GDP increased, while the average market income of Nova Scotia's poorest 20% of households moved in the opposite direction to GDP. The closest correlation between disposable income and GDP is for the very wealthiest, indicated below by Ontario's richest 20% of households (Figures 12, 13 and 14).

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[59] Brian Lee Crowley, "Growth, not government, best friend of the poor," *The Chronicle-Herald,* Halifax, March 14, 2001, page C2; Aart Kray and David Dollar, *Growth is Good for the Poor,* is available at: www.worldbank.org/research/growth/.

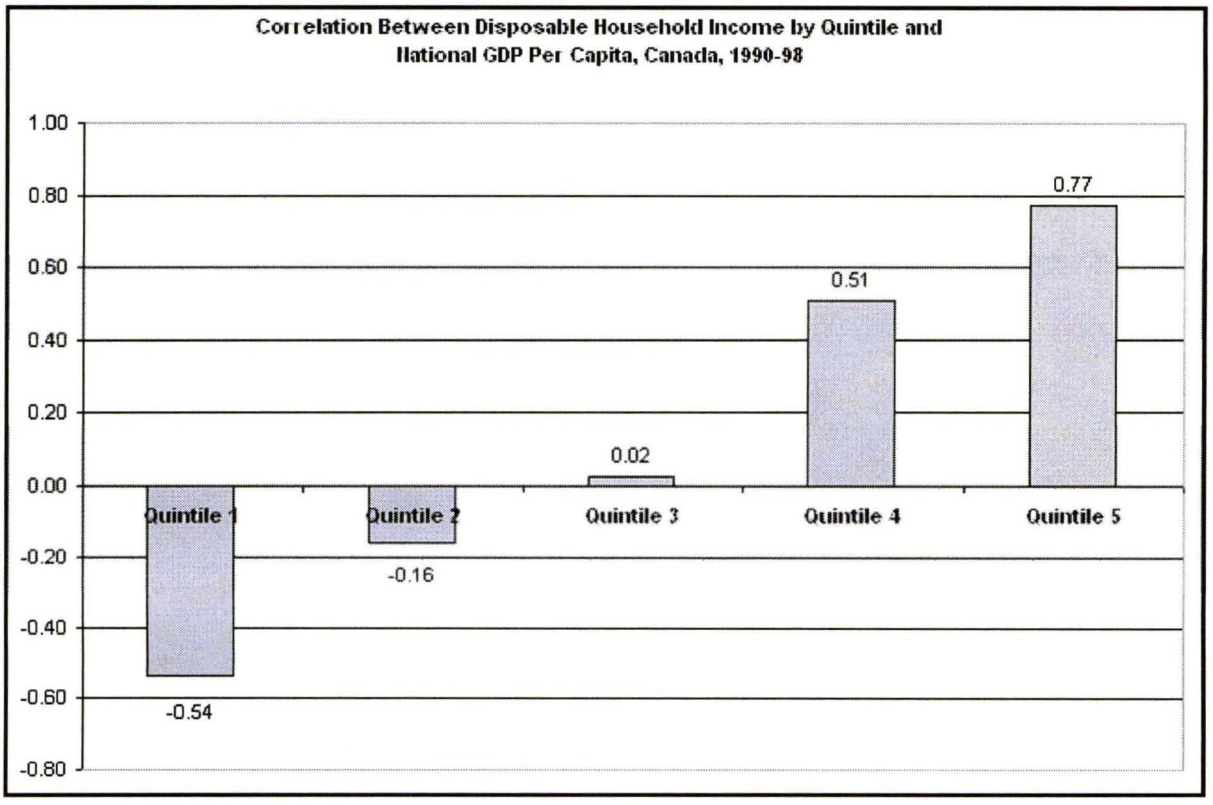
[60] GDP data are from Statistics Canada, *Selected Economic Indicators,* CANSIM matrices 9219 and 6967 for Canada, and 9222 and 6970 for Nova Scotia. Disposable Income data are from *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 105. GDP data was translated into constant 1998$ using the consumer price index.

[61] Average market, total, and disposable income by quintile was correlated against provincial and national GDP per capita in constant dollars using the correlation function in Microsoft Excel. The full results for Canada and all provinces are available at www.gpiatlantic.org

In sum, except for the wealthiest, **it cannot be asserted that a rising GDP necessarily makes people better off *even* in strictly economic and income terms**, and even without consideration of social and environmental variables. On the contrary, the GDP can increase even while most people are worse off, and even while inequality grows. Given the high correlation between GDP growth and income for the wealthy, however, it makes sense for that group to argue that economic growth promotes wellbeing. It does appear to promote *their* economic wellbeing, at least in income terms and at least for the moment.

Because the wealthiest 20% control 42% of disposable income in Nova Scotia, the use of *average* income statistics can conceal the fact that the majority may not be reaping the fruits of economic growth.[62] In Nova Scotia, "average" disposable household income is 17.5% higher than the average income for the middle quintile.[63] For this reason, it is very important to analyze even the standard economic data by income group in order to assess whether particularly economic strategies are actually benefiting the population.

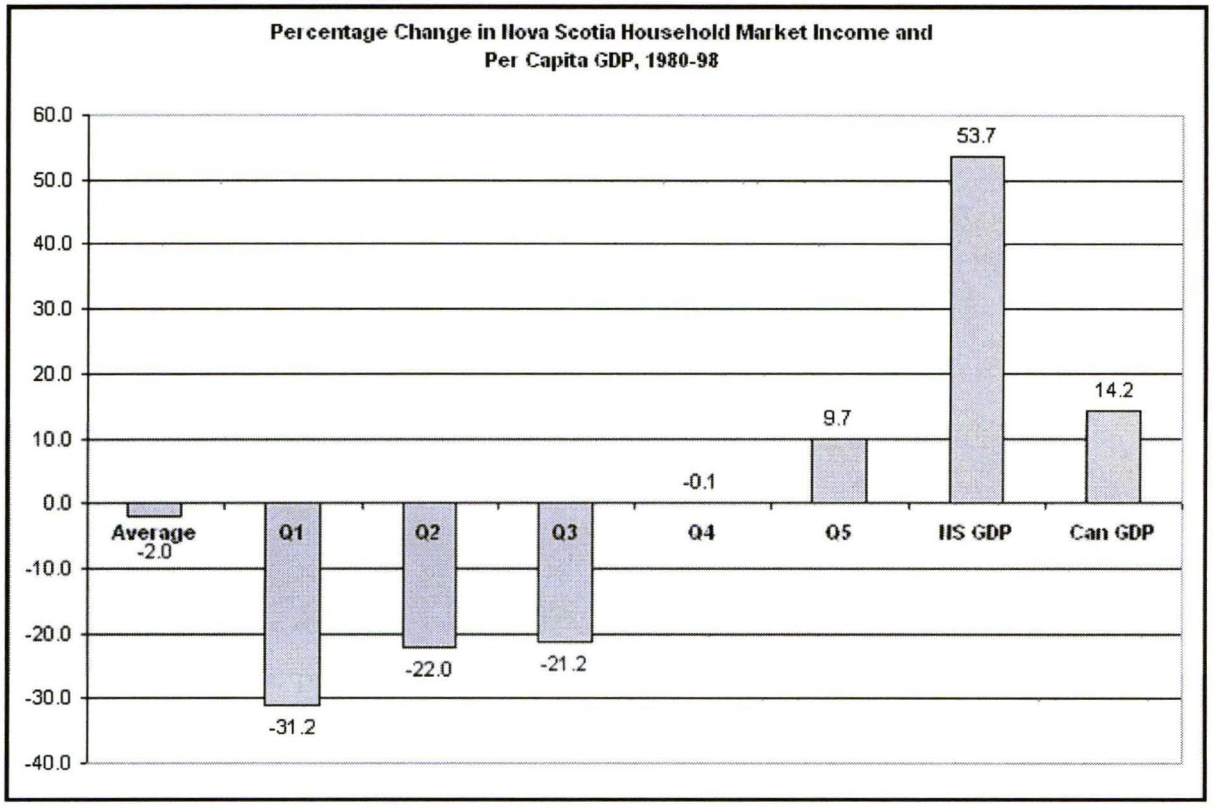
Figure 11: Correlation Between Average Disposable Household Income and National Per Capita GDP, by Quintile, Canada, 1990-98.[64]



[62] *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, P. 109.
[63] Calculated from disposable income data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109.
[64] GDP data are from Statistics Canada, *Selected Economic Indicators,* CANSIM matrices 9219 and 6967 for Canada, and 9222 and 6970 for Nova Scotia. Disposable Income data are from *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 105. GDP data was translated into constant 1998$ using the consumer price index.

Note: The closer the number is to 1.00, the more perfect the correlation. Negative numbers signify that income is negatively correlated with GDP growth.

Figure 12: Percentage Change in Average Household Market Income by Quintile, Nova Scotia, and Per Capita GDP, Nova Scotia and Canada, 1980-98.[65]

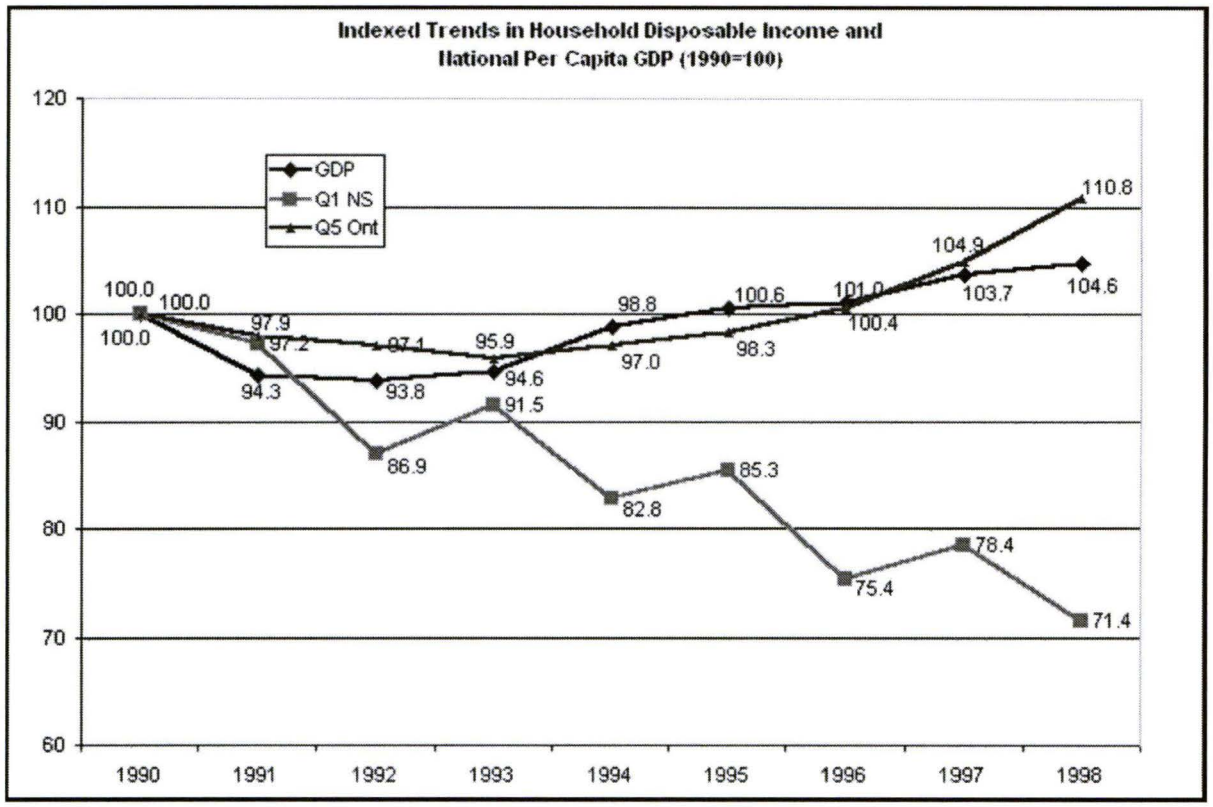


On several occasions this study has noted the need for further investigation into the causes of the trends described here. One of the most fruitful areas of investigation is certainly an assessment of where the benefits of increased production and GDP growth have actually gone in the last decade.

An increasingly open and unregulated market and increasing dependence on the international market have resulted in exports accounting for a growing share of GDP. It is likely that very large companies have been better positioned to avail themselves of export opportunities than smaller enterprises, and that this export growth has fueled corporate profits and increased the share of GDP accruing to higher income groups. It is important to explore, therefore, whether the increasing share of exports in GDP may account for some of the dramatic shifts in income equality and market income seen in the 1990s, and for the failure of GDP growth to "trickle down" to lower income groups.

[65] Calculated from market income quintile data in *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, P. 105, and GDP data from Statistics Canada, *Selected Economic Indicators,* CANSIM matrices 9219 and 6967 for Canada, and 9222 and 6970 for Nova Scotia.

Figure 13: Indexed Trends in Average Household Disposable Income, Wealthiest 20% Ontario, Poorest 20% Nova Scotia, and National Per Capita GDP, Canada, (1990=100).[66]

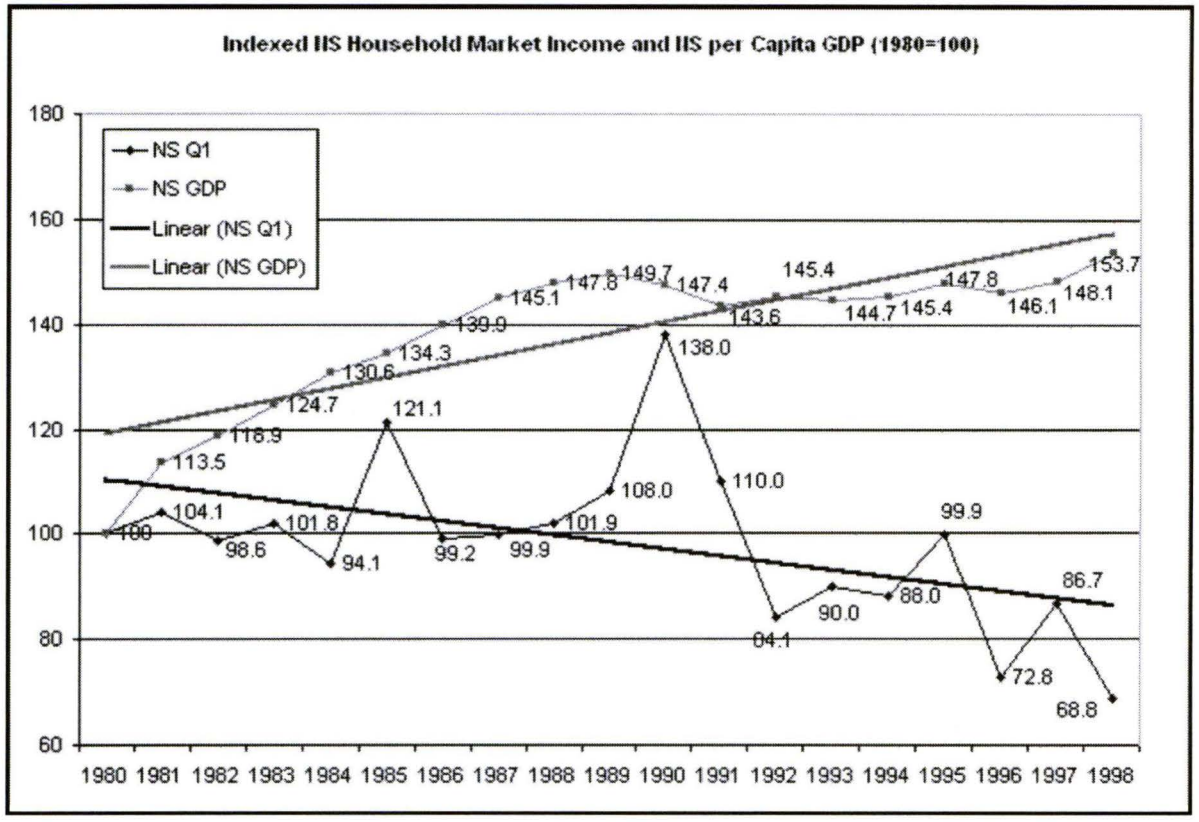


Coupled with this trend is the possibility that foreign ownership of large enterprises along with takeovers and mergers have resulted in an increasing share of profits and income leaving both the Atlantic region and the country as a whole. GDP, after all, measures total production *within* the country, region or province regardless of who owns the producing enterprise and where the profits go. It is essential to investigate whether these trends, too, may account for a growing share of GDP not being translated into income benefits for Nova Scotians and Canadians.

In short, we know that a "rising tide" has not "lifted all boats." But considerable further investigation is required into the reasons that a growing GDP has failed to reduce income inequality and falling real incomes for the lower and middle income groups.

[66] Calculated using household after tax income data from *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 109 & 124, and GDP data from Statistics Canada, *Selected Economic Indicators,* CANSIM matrices 9219 and 6967 for Canada, and 9222 and 6970 for Nova Scotia.

Figure 14: Indexed Average Household Market Income, Poorest 20%, Nova Scotia, and per Capita GDP, Nova Scotia, (1980=100).[67]



8. Are Nova Scotians Better off since free trade?

This study is descriptive rather than explanatory, and **GPI***Atlantic* would welcome further investigation into the causes of the trends described in the preceding sections. In particular, there are many facets of an increasingly open and unregulated market economy that have affected income and equality trends. The economic restructuring of the 1990s included expanding globalization and free trade, labour market changes including the growth of service jobs and the loss of many high-paying primary jobs, the merger and downsizing of many businesses, government debt and deficit reduction, government service cutbacks, the diffusion of information technology and its new skill requirements.

Many excellent studies, including research by Statistics Canada and detailed regression analyses designed to isolate causal relations, have examined the potential impact of these changes on income and equality trends. While not assessing causality, the descriptive data presented in this

[67] Calculated using market income data from *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 105 and GDP data from Statistics Canada, *Selected Economic Indicators,* CANSIM matrices 9222 and 6970 for Nova Scotia.

report do challenge some of the conventional assumptions that an increasingly open and unregulated market necessarily provides greater market opportunities that will improve the wellbeing of Canadians.

These assumptions are nowhere stronger than in the debate on free trade. While free trade is only one element of market restructuring, and while no attempt is made here to create a causal link between free trade and declining incomes, it is worth posing a question here as one example of the type of investigation that is required at this time. Similar questions could be asked about other potential causes of the rising inequality and declining real incomes described in this report. Here we simply ask: Are Canadians and Nova Scotians better off since free trade, as is so often claimed?

It is generally asserted that free trade improves the wellbeing of Canadians. However, income analysis does not support this assertion. It is essential to raise this question here because both the 1989 Canada-US Free Trade Agreement (FTA) and the later North American Free Trade Agreement (NAFTA) were both supposed to create new market opportunities for Canadians and to improve wellbeing.

In the 1980s, *before* the Canada-US Free Trade Agreement and the North American Free Trade Agreement, average *disposable* income increased in real terms for Canadian and Nova Scotian households in *all* income groups. Average household *market* income also increased for all income groups in Nova Scotia except the middle, which showed no change.[68]

Because disposable income grew by a greater percentage for the poor than for other income groups in the 1980s, the income gap between rich and poor also narrowed in this period, and equality grew.[69] In every province, including Nova Scotia, the poorest 20% of households increased their share of disposable income in the 1980s. And in every province the income gap in 1990 was less than it had been ten years earlier. [70]

This situation reversed in the 1990s. [71] Since the free trade agreements, average market and disposable incomes for poor and middle income households have fallen sharply, and inequality has grown both in Nova Scotia and throughout Canada. Eighty per cent of Nova Scotian households are worse off in real terms since free trade, with declines in both market income and disposable income. Only the wealthiest 20% have done better since free trade. [72] The equality gains of the 1980s have been so eroded that the income gap between rich and poor in Nova Scotia is considerably greater today than it was in 1980.

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[68] Calculated from average market income data in *Income in Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 105.

[69] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 109.

[70] Calculated using household after tax income data and household market income data from *Income in Canada,* Statistics Canada Cat No. 75-202, Table 7.2, p. 105 & 109.

[71] Calculated from average after tax income data in *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

[72] Calculated from average market and disposable income data in *Income in Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 105 & 109.

Income is affected by many factors, and these simple correlations do not prove that free trade *caused* incomes to fall and inequality to increase, nor that it is the sole cause of falling real incomes among low and middle income groups. There were certainly other significant impacts on income during the 1990s, like government debt reduction and cuts in services, changing employment patterns and skills requirements, and (in Newfoundland and Nova Scotia) the collapse of the Atlantic cod stocks. But it is also likely that the elimination of trade barriers has exercised a strong negative pressure on wages, as companies rely on cheaper labour to increase their competitive advantage.

Causation aside however, it *can* be stated that the income statistics provide no evidence that free trade has improved the economic wellbeing of the vast majority of Canadians and Nova Scotians, as is generally claimed, and they indicate that the reverse may be the case. Real disposable household income has fallen since free trade for low *and* middle income Canadians (the bottom 60%) in every province in the country, and most sharply in Nova Scotia and Newfoundland.[73] Certainly the negative income and equality trends of the last decade do demand further investigation into the impacts on economic wellbeing of Canada's and Nova Scotia's growing dependence on the international market.

Many of the key trends identified in this analysis are national trends, and so the issues raised here should be investigated for the country as a whole. Nevertheless, Nova Scotia has fared poorly even in relation to the rest of Canada, so both the trends and their potential relation to free trade are even more acute in this province.

Figures 15, 16 and 17 demonstrate that in simple economic terms, 80% of Nova Scotians are worse off since free trade. The charts show that both market income and disposable income have fallen in real terms for 80% of the population, and that only the wealthiest 20% have done better since free trade. The fall in *market* income is particularly significant because of the assertion that the free trade agreements would create new *market* opportunities.

[73] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 94, 99, 104, 109, 114, 119, 124, 129, 134, 139, 144.

Figure 15: Change in Nova Scotia Average Market Household Income by Quintile Since FTA, 1988-98 (1998$).[74]

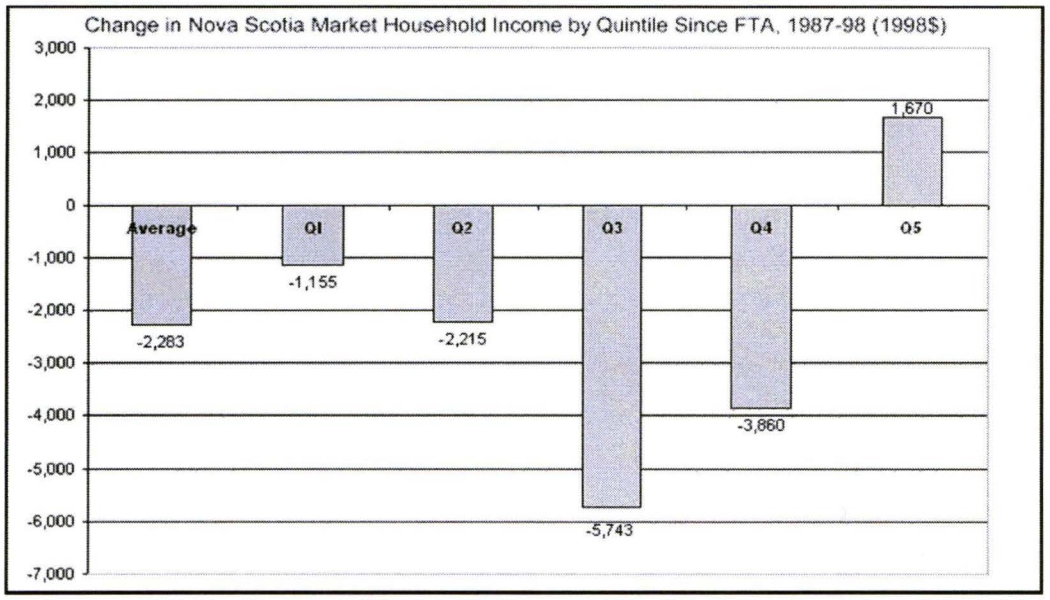
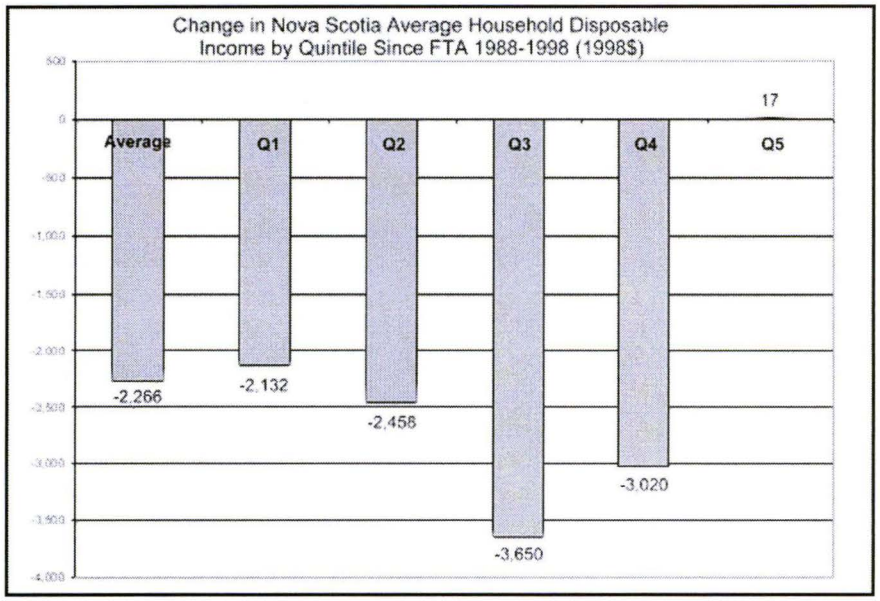


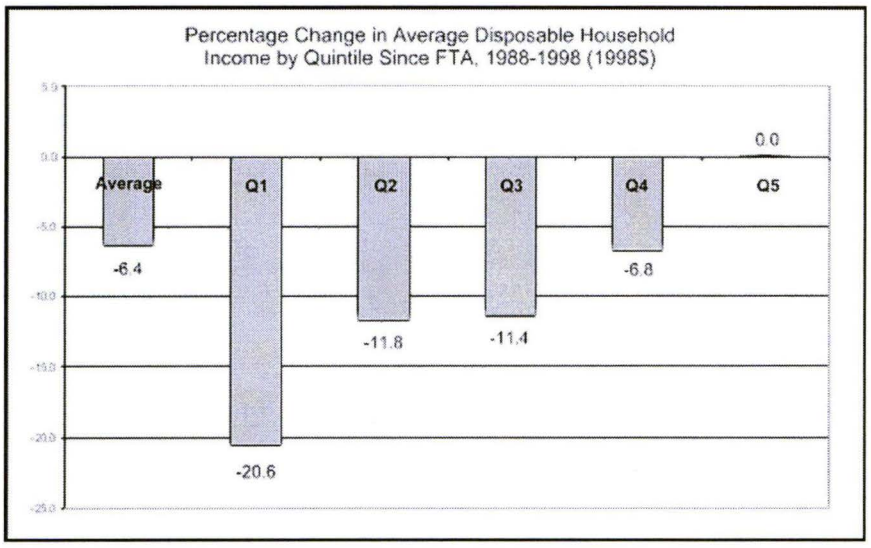
Figure 16: Change in Nova Scotia Average Disposable Household Income by Quintile Since FTA, 1988-98 (1998$).[75]



[74] Calculated from average market income data by quintile in *Income in Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 105.

[75] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 109.

Figure 17: Percentage Change in Average Disposable Household Income by Quintile Since FTA, 1988-98 (1998$).[76]



[76] Calculated from average after tax income data in *Income Trends in Canada,* Statistics Canada Cat. No. 13F0022XCB and *Income in Canada,* Statistics Canada Cat. No. 75-202, Table 7.2, p. 109.

APPENDIX A
THE GENDER GAP

NOTE: The material that follows was previously published as part of an earlier **GPI***Atlantic report: Ronald Colman,* Women's Health in Atlantic Canada *(February, 2000), Halifax (pages 15-24). It is included here as an Appendix, rather than integrated into the main body of the report because it uses different data sources than the previous sections.*

In particular, this analysis relies mostly on individual rather than household earnings, and refers to Statistics Canada's low-income cut-off (LICO). Even though the LICO is not officially a "poverty line," it is commonly used as a proxy, for example, to assess child poverty levels. Because the original report was prepared for the Maritime Centre of Excellence for Women's Health, the analysis also makes specific reference to the health impacts of low income. *Figures 19 and 20 on low income and child poverty levels and the corresponding text sections have been updated from the original report using 1998 data.*

Poverty is recognized as one of the most reliable predictors of poor health, more so than a wide range of medical factors such as high cholesterol and blood pressure levels. No matter which measure of health and cause of death are used, low income Canadians are more likely to have poor health status and to die earlier than other Canadians.[77] Canadians in the lowest income households are four times more likely to report fair or poor health than those in the highest income households, and they are twice as likely to have a long-term activity limitation.[78]

Canadian studies have reported that low income is nearly as important a determinant of health service use as is illness, and a recent study in Ontario found that hospital admission rates were twice as high among poor people as among the non-poor.[79] A detailed Statistics Canada profile of hospital users that controlled for a variety of other factors, found that poverty was an even more reliable predictor of hospital use among women than among men. Men age 15-39 with inadequate income were 46% more likely to be hospitalized than men with adequate income. Poor women were 62% more likely to be hospitalized than non-poor women. For those age 40-64, the percentages increased to 57% and 92% respectively. As hospitals are the single largest

[77] Health Canada, Advisory Committee on Population Health (ACPH), *Toward a Healthy Future,* Ottawa, 1999, page 31.
[78] Ibid., pages 15 and 43.
[79] S.J. Katz, T.P Hofer, W.G. Manning, "Hospital Utilization in Ontario and the United States: The Impact of Socioeconomic Status and Health Status," *Canadian Journal of Public Health,* 1996, volume 87, no. 4, pages 253-6; Kathryn Wilkins and Evelyn Park, "Characteristics of Hospital Users," Statistics Canada, *Health Reports,* Winter 1997, volume 9, no. 3, pages 34-35.

health care expenditure, strategic investments that alleviate poverty are likely to be highly cost effective in the long run.

A growing body of evidence indicates that the *distribution* of income in a given society may actually be a more important determinant of population health than the total amount of income earned by society members.[80] Reviewing the evidence, the editor of the British Medical Journal concluded:

> *What matters in determining mortality and health in a society is less the overall wealth of the society and more how evenly wealth is distributed. The more equally wealth is distributed, the better the health of that society.*[81]

A separate literature review by a University of Waterloo professor found convincing "statistical evidence that inequalities in health have grown in parallel with inequalities in income" and concluded that "relative economic disadvantage has negative health implications."[82]

Hourly Wage Gap

If income inequality impacts health status, then the wage gap between men and women is of concern. The persistence of this substantial gap over time is particularly puzzling in light of the near-parity between men and women in educational attainment. While the wage gap gradually narrowed in the 1970's and 1980's, it has stabilized since then and hardly shifted in the last decade.

Full-year full-time working women in the Atlantic provinces earn an average of 72% of the annual income of their male counterparts.[83] Among all employees, full and part-time, Atlantic

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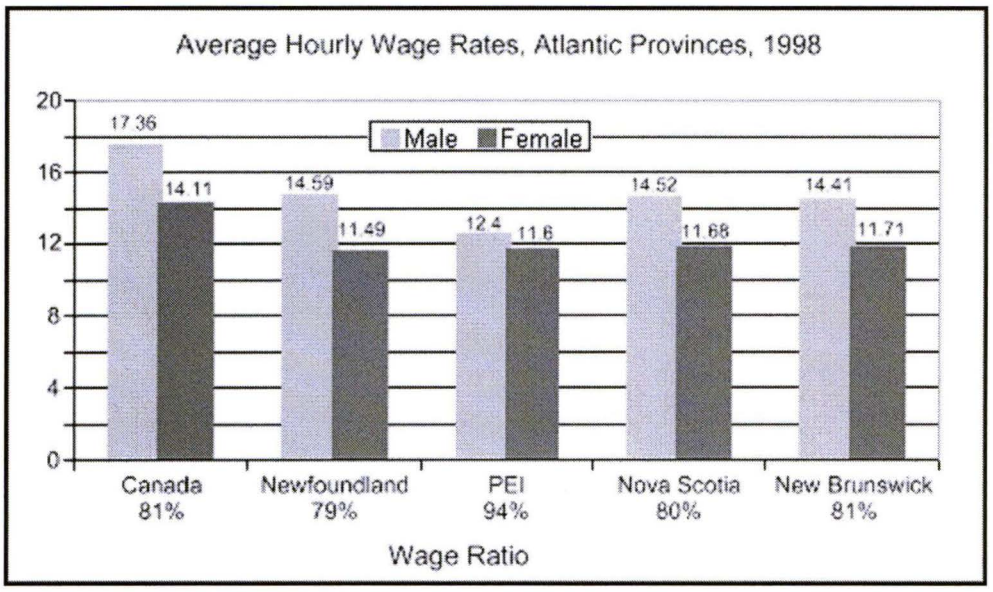
[80] Ibid., page 41; Mel Bartley, David Blane and Scott Montgomery, "Health and the Life Course: Why Safety Nets Matter," *British Medical Journal,* 314, 1997, pages 1194-96; George Kaplan, et. al., "Inequality in Income and Mortality in the United States," *British Medical Journal,* 312, 1996, pages 999-1003; Helen Roberts, "Children, Inequalities and Health," *British Medical Journal,* 314, 1997, pages 1122-1125; Richard Wilkinson, "Health Inequalities: Relative or Absolute Material Standards?", *British Medical Journal* 314, 1997, pages 591-595; Douglas Black, Margaret Whitehead, et. al., *Inequalities in Health,* Penguin, 1992; Douglas Carroll. George Davey Smith and Paul Bennett, "Some Observations on Health and Socio-economic Status, " *Journal of Health Psychology,* 1, 1996, pages 23-39; Margo Wilson and John Daly, "Life Expectancy, Economic Inequality, Homicide, and Reproductive Timing in Chicago Neighbourhoods," *British Medical Journal,* 314, 1997, pages 1271-74; Robert A. Hahn, "Poverty and Death in the United States - 1973 and 1991, " *Epidemiology,* 6, 1995, pages 490-97; George Davey Smith, David Blane and Mel Bartley, "Explanations for Socioeconomic Differentials in Mortality," *European Journal of Public Health,* 4, 1994, pages 131-44; C. McCord and H. Freeman, "Excess Mortality in Harlem," *New England Journal of Medicine,* 322, 1990, pages 173-77.

[81] "Editorial: The Big Idea," *British Medical Journal* 312, April 20, 1998, page 985, cited in ACPH, *Toward a Health Future,* page 39. See previous footnote for citations of several articles on the subject published by the British Medical Journal that are the basis for this editorial.

[82] Ted Schrecker, "Money Matters: Incomes tell a story about environmental dangers and human health," *Alternatives Journal,* 25:3, Summer, 1999, page 16

Canadian women earn 63% as much as men.[84] But, since women average fewer weekly paid hours than men, the most accurate and conservative equality indicator is hourly wage rates. Despite comparable educational qualifications, women earn just 81% of male wages (Figure 17).[85]

Figure 18: Average Hourly Wage Rates, Atlantic Provinces, 1998[86]



In December, 1999, Statistics Canada published its most detailed analysis ever of the male-female wage gap, using the abundant evidence of the Survey of Labour and Income Dynamics to examine 14 different factors that might help explain the persistence of the wage gap over time. After taking into account education, field of study, full-time work experience, job tenure, age of children, part-time status, union membership, firm size, job duties, industry, occupation, and a number of other factors, the study concluded that more than 50% of the wage gap was "unexplained."

In other words, women are earning substantially less than men even when they have identical work experience, education, job tenure and other characteristics, when they perform the same job duties and when they work in the same occupations and industries for the same weekly hours.

[83] Statistics Canada, *Survey of Labour and Income Dynamics,* 1997, Table 6 in Marie Drolet, "The Persistent Gap; New Evidence on the Canadian Gender Wage Gap," Income Statistics Division, Statistics Canada, December, 1999, catalogue no. 75F0002MIE-99008.
[84] Statistics Canada, *Earnings of Men and Women, 1997,* June 1999, catalogue no. 13-217-XIB, page 36.
[85] Statistics Canada, *Labour Force Historical Review,* 1998, CD-ROM, Table 44AN.IVT.
[86] idem. Male:female wage ratios calculated by the author from data provided in this table.

"This 'unexplained' component," says the study, "is referred to as an estimate of the gender based labour market discrimination."[87]

It should be noted here that this study includes job duties, occupation and industry in the "explained" portion of the wage gap. Women are less likely than men to be employed in jobs having supervisory responsibilities (24.8% of women compared to 35.2% of men), and are less likely to be employed in jobs that involve budget and/or staffing decisions (15.7% compared to 21.7%).[88] In addition, many women are clustered in low-wage industries and occupations, including those, like child care and domestic services, that have shifted from the household economy where they were traditionally regarded as "free."

It could be argued that inequities in job duties and wages paid in industries where women predominate also constitute an element of "gender based labour market discrimination." If these factors are added to the "unexplained" portion of the wage gap, then the remaining ten factors account for only about 30% of the wage gap, and the "discriminatory" portion for 70%.[89] (Part-time work status, in which women predominate largely because of family responsibilities, is considered here as part of the "explained" or "non-discriminatory" portion of the wage gap.)

Annual Earnings Gap

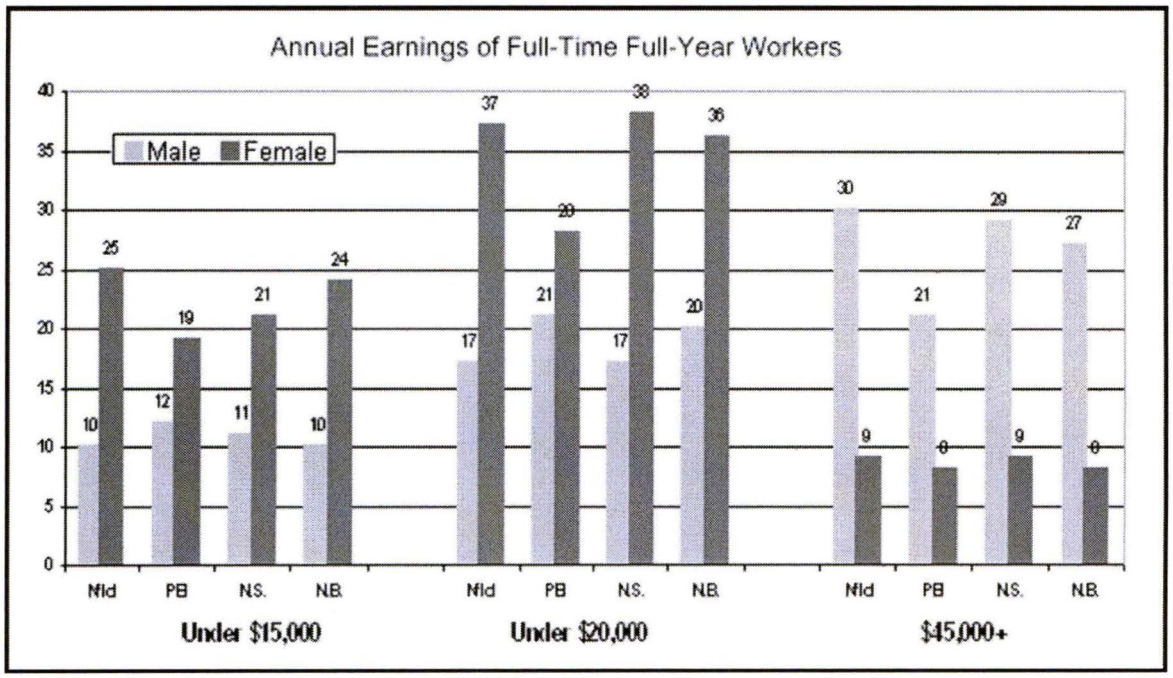
The gender wage gap translates into substantially reduced annual incomes and earnings for women. Nearly one-quarter of Atlantic region women who work full-time for the full year earn less than $15,000 a year, (equivalent to $8 an hour or less), compared to one in ten men. This means that among full-time full-year workers, more than twice as many women as men are low earners, a ratio that still holds at the $20,000 level. In fact, more than half of Atlantic region full-time full-year female workers earn less than $25,000 a year, compared to 28% of full-time male earners (Figure 18).[90]

It is not surprising, therefore, that full-time working women are severely under-represented among high income earners. Three times as many full-time male employees earn $45,000 or more as full-time female workers; and the ratio increases to more than five to one at the $60,000 level. Overall, the average female - male earnings ratio for full-time full-year workers in the Atlantic provinces is 71%, compared to the Canadian average of 72.5%. When average income from all sources (including transfers, interest, dividends, etc.) is taken into account the average

[87] Drolet, "The Persistent Gap," page 13. See also Table 3 for the 14 factors examined and for the fraction of the gender wage gap explained by each factor.
[88] Ibid., page 20.
[89] Ibid., Table 3.
[90] Statistics Canada, *Earnings of Men and Women, 1997,* June 1999, based on Survey of Consumer Finances, April, 1998, catalogue no. 13-217-XIB. Cumulative percentages calculated by the author from data provided on page 32 of this publication.

male - female income ratio for full-time full-year workers in Atlantic Canada is 72.3% compared to the Canadian average of 73.1%.[91]

Figure 19: Annual Earnings of Full-Time Full-Year Workers



Note: Figures are based on percentage of all full-time full-year workers.

One exception should be noted here: Women in Prince Edward Island are more likely to earn a decent wage than women in the other Atlantic provinces. The median wage for full-time working women on the island is more than $2,000 a year higher than the median for full-time working women in the region as a whole. As we shall see below, this helps explain why Prince Edward Island has the lowest rate of child poverty in the country, in marked contrast to the other Atlantic provinces, a factor that will also have long-term health consequences.[92] The connection also demonstrates that a strategic investment in reducing the male - female wage gap can be a direct investment in children.

To be conservative, the preceding statistics have examined the *hourly* wage gap between men and women, and the annual earnings gap between *full-time full-year* male and female workers. When *all* earners are considered (including part-timers), we find that more than two-thirds of Atlantic region women earn less than $20,000 a year, compared to 48% of Atlantic men (and about half of Canadian women). This is because women have a much higher rate of part-time, temporary and on-call work than men, typically at considerably lower wages than full-time

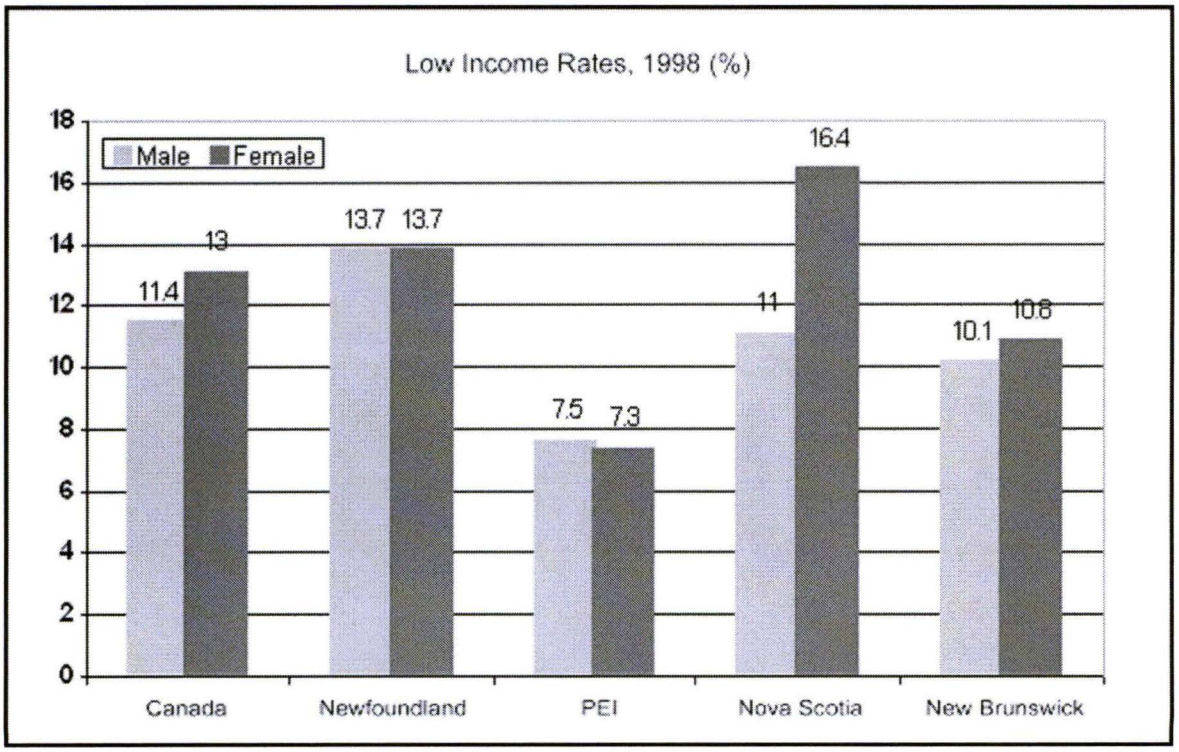
[91] Idem.
[92] Statistics Canada, *Low Income Persons, 1980 to 1997,* catalogue no. 13-569-XIB, Table 5, page 13.

workers. Among all earners, only 2% of Atlantic region women $50,000 or more a year, compared to 12% of Atlantic men (and 7% of Canadian women).[93]

Low income and poverty rates

It is therefore not surprising that a higher proportion of Canadian women than men live in poverty. In Nova Scotia, one in six women lives below Statistics Canada's low-income cut-off line, a rate that is 50% higher than the male rate, the widest gap in the country. Again, Prince Edward Island is a commendable exception, with the lowest poverty rates in the country for both sexes (Figure 19).[94]

Figure 20: Low Income Rates, 1998 (%)



Women are clearly not a homogeneous group; and the averages listed so far conceal significant distinctions. Twice as many elderly Canadian women (one in four) fall below the low-income cut-off line as elderly men; and the low-income rate is particularly high for unattached elderly women (45%).[95] Low-income rates are even higher for Canadian single mothers (48%), four

[93] Statistics Canada, *Earnings of Men and Women, 1997,* page 36.
[94] Statistics Canada, *Low Income Persons, 1980 to 1997,* Table 5, pages 23 and 25. This Appendix was extracted from a report prepared in February 2000 at which time only 1997 data were available. This section and Chart 7 have been updated for this report.
[95] Ibid., pages 29 and 31; ACPH, *Statistical Report,* pages 38 and 41.

times the rate for two-parent families. For these single mothers, the average "depth of poverty" (income deficiency between family income and the low-income cut-off) is more than $10,000 annually.[96]

For many single mothers paid work is not a practical or cost-effective option. In order to handle their household responsibilities, single mothers are often only able to take low-paying part-time or temporary work from which the income "might not offset the expenses of working," according to Statistics Canada.[97] Those with pre-school-age children, for example, spend 12% of their income on paid child-care, compared to just 4.4% for two-parent families.[98] Single mothers who do work full-time are the most time-stressed demographic group, putting in an average of 75 hours a week of paid and unpaid work.[99] They also have only an hour a day to care directly for their children, less than half the time available to their counterparts not in the paid workforce.[100] For all these reasons, most single mothers of young children are not employed.

Those who do work for pay - 31% of Canadian single mothers with children under three, and 47% of single mothers with a child age 3 to 5 -- are likely to experience a different type of poverty. In a seminal study, Robin Douthitt defined "time poverty" as the time below the minimum necessary for basic household production, including food preparation and cleanup, house care and cleaning, laundry and shopping, and argued for its inclusion in Canadian poverty measures.[101] Since single parents have only half the time of married couples to meet fixed household time costs, paid work can produce extreme time stress and neglect of basic household functions.

When time and income are both considered, Douthitt finds that poverty rates of working single mothers in Canada are 70% higher than official estimates, and approach the poverty rates of their unemployed counterparts. When sleep deprivation is taken into account, working single mothers experience nearly twice the absolute time poverty rates of their non-employed or married counterparts. From a health determinants perspective, time poverty may be as important for health outcomes as material poverty. Most workplaces have not yet adjusted to the new reality of women's labour force participation, and it is clear that family-friendly work arrangements are a top priority for working single mothers.

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[96] Health Canada ACPH, *Statistical Report on the Health of Canadians,* page 41; ACPH, *Toward a Healthy Future,* exhibit 2.3, page 45.

[97] Claudio Perez and Marie Beaudel, "The Health of Lone Mothers," Statistics Canada, *Health Reports,* volume 11, no. 2, Autumn 1999, page 27.

[98] Statistics Canada, *Women in the Workplace,* catalogue no. 71-534, pages 50 and 55.

[99] Statistics Canada, *The Daily,* November 9, 1999, catalogue no. 11-001E, pages 2-4; and Statistics Canada, General Social Survey, Cycle 12, 1998, Housing, Family and Social Statistics Division, special tabulation.

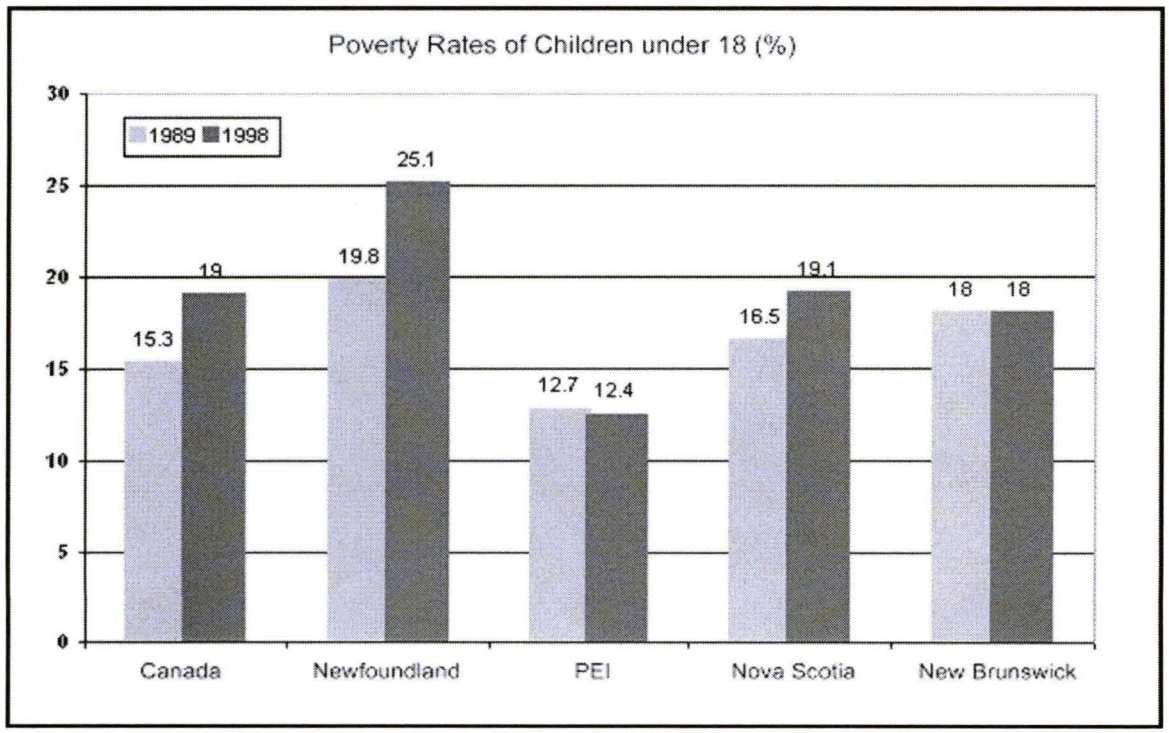
[100] Judith Frederick, *As Time Goes By...Time Use of Canadians,* Statistics Canada, catalogue no. 89-544E, page 25.

[101] Robin Douthitt, "The Inclusion of Time Availability in Canadian Poverty Measures," in ISTAT, *Time Use Methodology: Toward Consensus,* Istituto Nazionale di Statistica, Roma, Italy, 1993, pages 88 and 90. Douthitt argues convincingly that just as the depth of income poverty is measured in relation to the low-income cut-off, the depth of time poverty can similarly be measured in relation to the time required for basic household maintenance.

High rates of poverty among single mothers translate into high rates of poverty among children. Children of single mothers are 14% of children in Canada, but 42% of children in low-income families. A child who lives with a single mother is nearly four times as likely to be poor as a child living with both parents.[102] In Nova Scotia, 17% of all families with children are headed by single mothers, and 70% of these single mothers live below the low-income cut-off, accounting for fully half the children living in poverty in the province.[103] If Douthitt's "time poverty" measure is included, the poverty rate for single mothers in the province jumps to more than 80%.

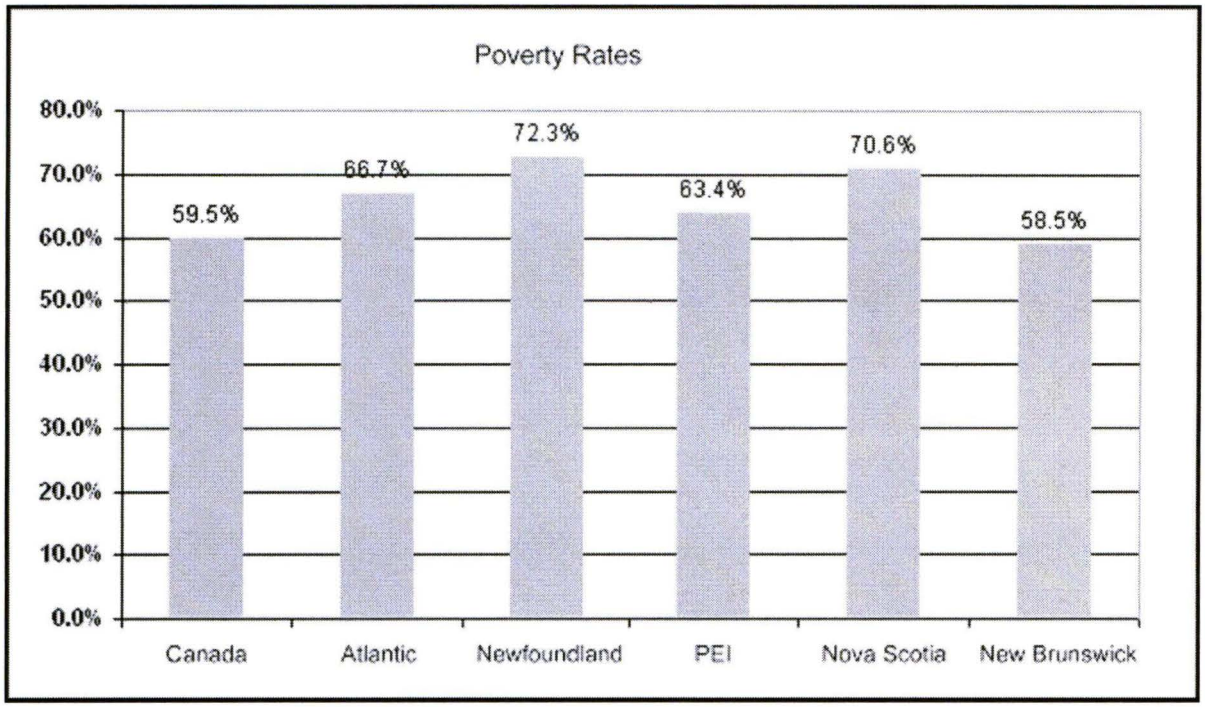
In Canada as a whole, child poverty rates have increased significantly in the last 10 years, with Nova Scotia recording the fourth highest rate in the country after Newfoundland, Quebec and Manitoba. Again, Prince Edward Island is a notable exception, registering the lowest rate of child poverty in the country, 35% below that in Nova Scotia and Canada (Figure 20). Across the country, the younger the child, the greater the likelihood of low-income status. In Nova Scotia, for example, children under 12 have a poverty rate 20% higher than that of children under 18.[104]

Figure 21: Poverty Rates of Children under 18 (%).[105]



[102] Statistics Canada, *Women in Canada,* 3rd edition, catalogue no. 89-503E, page 86.
[103] Statistics Canada, *Selected Statistics on Women in Nova Scotia,* August, 1995, catalogue no. 89-503.
[104] Statistics Canada, *Canadian Social Trends,* Spring 1997, catalogue no. 11-008-XPE.
[105] Statistics Canada, *Low-Income Persons, 1980 to 1997,* catalogue no. 13-569-XIB, pages 32-43. Please note that this Appendix is extracted from a report published in February 2000 at which time only 1997 low income data were available. The latest data available at this time (July, 2001) are 1998 data, and these have been used to update this section on child poverty. However, Figure 21 on child poverty rates in single-parent families is still based on 1997 data.

Figure 22: Poverty Rates of Children under 18 in Single Mother Families



A note of caution should be added here. Statistical analyses of poverty among economic families implicitly assume an equal sharing of resources between all household and family members. Household members are assumed to pool their individual resources, which are then redistributed equally based on need. A household is defined as "poor" if its average level of resources falls below a certain standard, and an individual is poor if he or she is a member of a poor household. However, there is a growing body of literature that questions this assumption, arguing that significant inequality exists *within* households, and that women do not receive their "fair share" of household resources.[106] There is not sufficient Canadian evidence to test this argument here. If it is correct, then conventional estimates of female and child poverty may well be understated.

Health Impacts of Low Income

Though Canadian women live longer than men, they have significantly higher rates of chronic illness, disability days, long-term activity limitations, depression, and physician visits; and lower

[106] Jeanette Findlay and Robert Wright, "Gender, Poverty and the Intra-Household Distribution of Resources," *Review of Income and Wealth,* Series 42, number 3, September 1996, pages 335-351. The authors cite several other studies on this subject, including: J.Pahl, "The Allocation of Money and the Structuring of Inequality within Marriage," *Sociological Review,* volume 31, pages 237-262, 1983; L.Haddad and R. Kanbur, "How Serious is the Neglect of Intra-Household Inequality," *Economic Journal,* volume 100, pages 866-881, 1990; for other sources, see Findlay, pages 350-351.

functional health status, all of which translate into higher health care costs.[107] In every age group up to age 75, women and more likely than men to have consulted a physician twice of more in the previous year. Overall, women were 33% more likely than men to have seen a physician twice or more; and between ages 18 to 54, women were two to three times as likely to have seen a physician in the previous year.[108]

A Statistics Canada analysis of both the 1994/95 and 1996/97 National Population Health Surveys found that "lone mothers reported consistently worse health status than did mothers in two-parent families," and that longer-term single mothers had particularly bad health. Single mothers scored lower on two scales of "self-perceived health" and "happiness", and substantially higher on a "distress" scale. They had higher rates of chronic illness, disability days and activity restrictions than married mothers, and were three times as likely to consult a health care practitioner for mental and emotional health reasons.[109]

Low-income children are more likely to have low birth weights, poor health, less nutritious foods, higher rates of hyperactivity, delayed vocabulary development and poorer employment prospects.[110] Although they engage in less organized sports, poor children have higher injury rates, and twice the risk of death due to injury than children who are not poor.[111] A detailed analysis of both the National Longitudinal Survey on Children and Youth and the National Population Health Survey found that some 31 different indicators all showed that as family income falls, children are more likely to experience problems.[112]

Let us review the evidence in this section as it affects women's health:

- Poverty and inequality have been identified as reliable predictors of health outcomes.
- Low-income earners have higher rates of hospitalization and health service usage.
- Women earn less and have higher rates of low-income status and physician visits.
- Low-income families pass on poverty and lower functional health to their children.

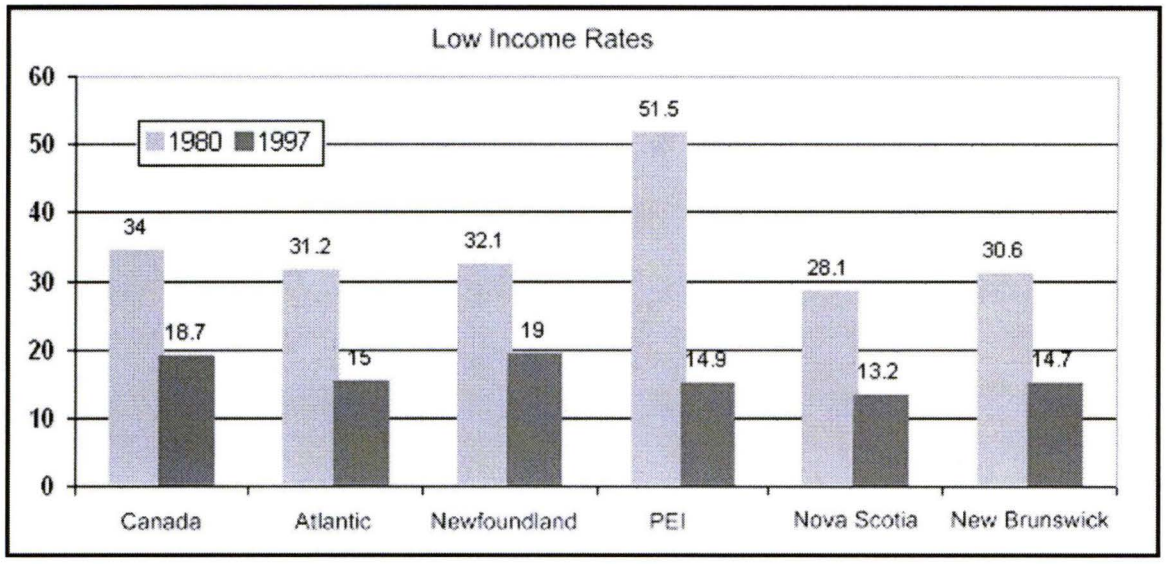
The conclusion is clear: Since higher rates of health service usage are costly to taxpayers, strategic investments in reducing poverty rates among the most vulnerable groups will yield long-term cost savings to the health care system. As single mothers and elderly women living alone have the highest poverty rates of any demographic group in the region, adequate social supports for these groups are one of the most cost-effective investments governments can make.

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[107] ACPH, *Statistical Report,* Table 68, page 270 (chronic conditions); page 234 (two-week disability days); page 237 (long-term activity limitation); page 231 (functional health status); pages 292 and 294 (depression); pages 90 and 93 (physician visits).
[108] Ibid., pages 90 and 93.
[109] Claudio Perez and Marie Beaudet, "The Health of Lone Mothers," Statistics Canada, *Health Reports,* volume 11, no. 2, Autumn 1999, catalogue no. 82-003-XPB, pages 21-32.
[110] ACPH, *Toward a Healthy Future,* page 85, and chapter 3.
[111] Barbara Morrongiello, "Preventing Unintentional Injuries Among Children," *Determinants of Health: Children and Youth,* Canada's Health Action: Building on the Legacy, Volume 1, National Forum on Health, 1998.
[112] David Ross, "Rethinking Child Poverty," *Insight, Perception,* 22:1, Canadian Council on Social Development, Ottawa, 1998, pages 9-11.

It can be done. Concerted public policies and improved income supports have dramatically and continuously lowered poverty rates among Canadian seniors in the last 20 years, with the notable exception of unattached elderly women, as noted. The Atlantic provinces have reduced the poverty rate among seniors by more than half overall, and have proportionately less low income elderly than the Canadian average, with Nova Scotia recording the lowest rate in the country (Figure 22).[113] It is unfortunate that this substantial gain has been offset by rising poverty rates among children, and unacceptably high poverty rates for single mothers and elderly women living alone.

Figure 23: Low Income Rates, Elderly, 65 and over, 1980 and 1997 (%)



This shift in the distribution of poverty illustrates one of the most interesting aspects of a population health approach based on the determinants of health -- the highly interactive functioning of the various determinants. The 1994-95 National Population Health Survey found that depression rates are highest and psychological well-being lowest among youth, and that mental well-being increases with age. This is a remarkable reversal from the patterns of a generation ago, when seniors were more likely than younger Canadians to be depressed.[114]

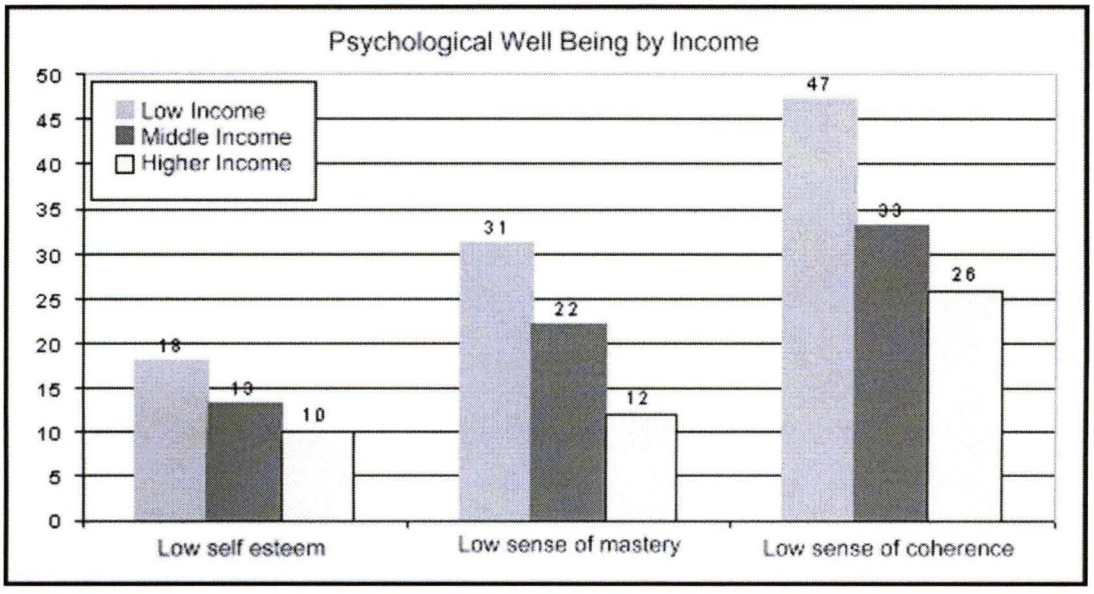
Time use and population health surveys have recorded rising rates of time stress, chronic stress and psychological distress among women.[115] It is clear that the steady reduction in poverty rates over two decades among older Canadians is highly correlated with their improved well-being. Conversely, the higher rates of child poverty, youth unemployment and job insecurity, student debt, and single mother poverty help explain declines in mental well-being among those groups.

[113] Statistics Canada, *Low Income Persons, 1980 to 1997,* catalogue no. 13-569-XIB, pages 26-27.
[114] ACPH, *Toward a Healthy Future,* page 16.
[115] Colman, Ronald, *Women's Health in Atlantic Canada,* **GPI***Atlantic* and Maritime Centre of Excellence for Women's Health, Halifax, NS, February, 2000.

Understanding the relationship between income and health is very good news for the practical cost-conscious health official, because a strategic investment in one determinant of health, like the alleviation of poverty among single mothers, will have far-reaching positive effects in many other spheres. In every instance, working with the underlying causes and conditions of health and illness is a far more cost-effective approach to reducing health costs than the medical interventions required to deal with disease after it has occurred. Those illness-treatment interventions are generally so symptom-specific that they have few, if any, positive spin-off benefits in other health areas. We have already noted the enormous financial burden of treating mental disorders, and the extraordinarily high number of psychiatric patient days.[116] The close link between mental health and income level thus provides clear guidance for cost-conscious and responsible policy makers (Figure 23).[117]

Single mothers represent a comparable population sample to the elderly. If determined public policy can achieve this measure of success in reducing poverty among the elderly, there is no reason why governments cannot act just as decisively to provide the necessary supports to single mothers, their children and to elderly women living alone. The dividends will be substantial in reduced health care, social service and justice costs, improved educational performance, and enhanced workplace productivity and taxation revenues.

Figure 24: Psychological Well-being, three measures, by income, 1994-95 (%)



[116] Ibid., page 9-13. Note that this Appendix is part of the **GPI***Atlantic* report on *Women's Health in Atlantic Canada,* and so the reference here refers to the original report.
[117] Idem.

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