



Income MOBILITY

The Rich and
Poor in Canada

Herbert G. Grubel

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Executive Summary

One set of government statistics shows that the average incomes of Canadians in the lowest quintile of the distribution, the “poor”, remained constant during the period from 1990 to 2009. Another set of government statistics indicates that, over the same period, the “poor” enjoyed a 180% increase in income. The same two sets of statistics reveal similarly different results for the middle class and the rich.

This study explains the reasons for this difference. Chapter 1 shows that Statistics Canada calculates the average incomes of the different quintiles using survey data on the incomes of all Canadians in a given year, ranks them in descending order, and calculates the average incomes of each quintile. The problem with this methodology is that each quintile contains different persons who have experienced higher or lower incomes than they did in the preceding year and moved into different positions on the income scale.

This income mobility is the outcome of well-known events in human life. The young or new immigrants entering the labour force have low incomes that increase as they gain work experience and become more productive. Temporary reductions in income are due to unemployment or illnesses while increases are due to temporary events like capital gains, bonus payments or professional success of limited duration.

Chapter 2 documents how income mobility influences the average incomes of an unchanged set of Canadians over a number of years. This calculation uses the income-tax data of individuals, which has been made possible only recently through the availability of computerized

information maintained by Revenue Canada. The information about the income of Canadians derived through the traditional set of statistics provides the rationale for the clichés that “the rich are getting richer and the poor are getting poorer” and that “the poor are trapped in poverty”. The new measure based on income mobility shows, in contrast, that “all Canadians are getting richer, the poor more so than the rich” and refutes the existence of poverty traps.

Chapter 3 considers the public outcry over the great income gains enjoyed recently by the very top of the income distribution, the infamous “one-percenters”. The statistics show that income mobility is also high among this group of Canadians. Most important, the data reveal that these high incomes are earned by entrepreneurs and professionals in business, sports, entertainment, and creative arts as a result of their investments in education, training, and risky enterprises. These high incomes are not the result of the illegal practices, immoral behaviour, and political cronyism that produced the plutocrats in Russia, China, and other transitional and third-world economies.

The high growth in the incomes of Canadians at the very top of the distribution started in the 1980s when free-trade agreements led to the globalization of commerce and labour markets and when technological revolutions in communication, transportation, and travel broadened world markets. Canadian business professionals, stars in sports, entertainment, and the arts, and successful innovators now sell in world markets, which are much larger and reward them more richly than the much smaller Canadian market did before.

The policy implications of the findings of this study are presented in Chapter 4. One of them is that the government should be required to produce and publish regularly statistics on income mobility at the same time that it publishes the traditional data on income distribution so that public and political discussions of the need for more income redistribution policies will become more fact-based and consider properly the relative merit of preserving income mobility and equalizing incomes.

For example, the mobility data show that the rich are mostly Canadians at an age where they have the highest incomes of their lives but also have the highest levels of responsibility towards their

families. Is it fair to tax them at punitive rates and transfer the funds to the young who have no such responsibilities? Another example is that, according to mobility data, government aid for the poor in the lowest quintile benefits the 87% who will have higher incomes in the future. Would it not be better to cut or eliminate the aid to these individuals and use the saved money to increase aid to the 13% who are the unfortunate victims of permanent physical and mental disabilities?

Finally, debates about higher taxes for the very rich should consider that these Canadians earn their high incomes through investment in education and risk-taking. Is it fair to punish individuals who have made such investments and reduce the incomes of future generations because these taxes reduce incentives to invest in education and risk-taking?

Income Mobility

The Rich and Poor in Canada

Chapter 1. The Distribution of Income

One of the widely held views about income distribution in Canada is summarized by cliché “the rich are getting richer and poor are getting poorer”. This chapter examines the validity of this view by presenting a number of conventional measures of income equality that are widely used and have served as the dominant source of public information about the fairness of the distribution of income.

The data are reliable since they have been collected and published by Statistics Canada in periodic censuses, monthly labour market surveys, and some other special surveys. These measures consider the incomes of individuals and families from different sources and after adjustment for taxes and transfers.¹

1. Statistics Canada (2013c) provides the following information about the statistical definition of income:

Part A – Short definition: Total of income from all sources, including employment income, income from government programs, pension income, investment income and any other money income.

Part B – Detailed definition: Total income refers to monetary receipts from certain sources, before income taxes and deductions, during a calendar year 2010. It includes employment income from wages, salaries, tips, commissions and net income from self-employment (for both unincorporated farm and non-farm activities); income from government sources, such as social assistance, child benefits, employment insurance, Old Age Security pension, Canada or Quebec pension plan benefits and disability income; income from employer and personal pension sources, such as private pensions and payments from annuities and RRIFs; income from investment sources, such as dividends and interest on bonds, accounts, GIC’s and mutual funds;

The first measure of income inequality presented here is the Gini coefficient, which is an index that takes on a value of one if the distribution of income is completely unequal (all income is earned by one recipient) and a value of zero if the distribution is perfectly equal (everyone earns the same income).² The Gini coefficient is widely used in studies of the distribution of income through time and across countries because it is a simple number and for international comparisons has the added advantage of being independent of countries' population size and average incomes.

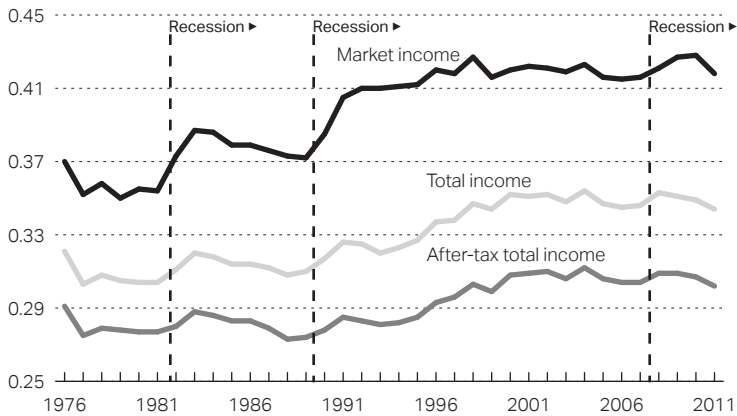
Chart 1.1 shows the annual values of the Gini coefficient for Canada during the years from 1976 to 2011. The coefficients shown are for the annual incomes for “economic families of two persons or more”, which is appropriate because much of the public concern about income inequality focuses on families and because income statistics for families in other countries are published regularly by international organizations like the Organisation for Economic Co-operation and Development (OECD). The vertical lines in the chart show the beginning of recessions, which are associated with the changes in equality to be discussed below.³

and other regular cash income, such as child support payments received, spousal support payments (alimony) received and scholarships. The monetary receipts included are those that tend to be of a regular and recurring nature. It excludes one-time receipts, such as: lottery winnings, gambling winnings, cash inheritances, lump sum insurance settlements, capital gains and RRSP withdrawals. Capital gains are excluded because they are not by their nature regular and recurring. It is further assumed that they are less likely to be fully spent in the period in which they are received, unlike income that is regular and recurring. Also excluded are employer's contributions to registered pension plans, Canada and Quebec pension plans, and employment insurance. Finally, voluntary inter-household transfers, imputed rent, goods and services produced for barter, and goods produced for own consumption are excluded from this total income definition.

2. Appendix 1.D at the end of this chapter (p. 20) discusses the statistical properties of the Gini coefficient, how it is calculated, and some of the statistical problems that complicate its interpretation.

3. For the definition, timing, and duration of these recessions, see Statistics Canada, 2013b <<http://www.statcan.gc.ca/daily-quotidien/110113/dq110113b-eng.htm>>.

Chart 1.1: Gini coefficients, Canada, economic families, 1976–2011



Source: Statistics Canada, CANSIM table 202-0709.

Note to the table from source: "The Gini coefficient is a number between zero and one that measures the relative degree of inequality in the distribution of income. The coefficient would register zero (minimum inequality) for a population in which each person received exactly the same adjusted family income and it would register a coefficient of one (maximum inequality) if one person received all the adjusted family income and the rest received none. Even though a single Gini coefficient value has no simple interpretation, comparisons of the level over time or between populations are very straightforward: the higher the coefficient, the higher the inequality of the distribution, and vice versa."

Developments through time

The top line in chart 1.1 shows the Gini coefficients for market incomes that consist of earnings from employment and investments. Between 1976 and 1998, the value of the coefficients increased consistently and indicated a reduction in income equality, except for a five-year period in the 1980s. It remained virtually constant after 1998. During the entire period it has averaged 0.41.

The effects of government policies

The middle line of chart 1.1 shows the Gini coefficients for total incomes, which for present purposes of analysis may be considered to consist basically of the sum of earnings from work and investment plus government transfers, though technically it is a much more comprehensive index.⁴ During the period from 1976 to 2011, the coeffi-

4. See footnote 1, Appendix C, and Clemens, 2012: 17 for more precise definitions.

cients for total income followed the same basic pattern as those for market income. The average of the coefficients during the period was 0.34, which is .07 points lower than that for market income.

The lowest line of chart 1.1 shows the coefficients for total incomes after taxes. It repeats the time profile of the other two indices through time. The average Gini coefficient of this index was 0.30, which is 0.04 points lower than the index for total income because the equalization effect of Canada's progressive personal income-tax system.

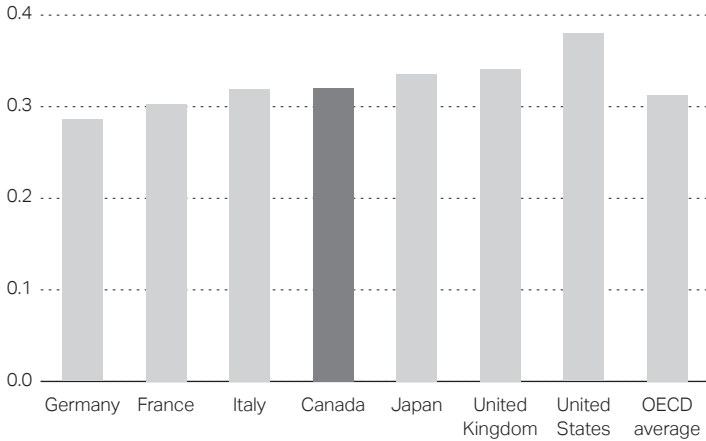
In sum, the difference in the Gini coefficients displayed in chart 1.1 indicates that government policies lowered inequality from an average market income of .41 to .34 through transfers and to .30 through the progressivity of the personal income-tax system. The total reduction in inequality resulting from government policies is from .41 to .30, which amounts to a reduction of 37% ($.41 - .30 = .11 \div .41 = .37$).

The chart also allows insights into the role played by government policies in the determination of income equality in the wake of economic recessions. During the recession from 1981 to 1983, the coefficient for market income rose from .354 to .387 or .033 percentage points. However, during the same recession, the coefficient for total income after tax rose from .277 to .288 or .011 percentage points. These figures imply that government policies diminished the impact of the recession on inequality significantly: inequality due to market effects was reduced by 9.3% ($.387 - .354 = .033 \div .354 = 9.3$) while the reduction in total incomes after taxes was 4.0% ($.288 - .277 = .011 \div .277 = 4.0$). These figures imply that government policies during this recession reduced by one half the effects changes in market incomes have had on total incomes after taxes. The effects of government policies on income equality following the onset of the 1989 recession were about the same as in the 1981 recession. However, during the recession that started in 2008 conditions were different. All three coefficients indicated only a comparatively small increase in inequality for two years and then returned to the level that had existed before 2008.

International comparisons

Critics of Canada's income-distribution policies often argue that they are weaker than those of other Western countries. To evaluate this claim, chart 1.2 compares the Gini coefficient for a number of OECD

Chart 1.2: Gini coefficient, after-tax family income, Canada and OECD countries, 2010



Source: Organisation for Economic Co-operation and Development, 2013.

countries in 2010. As it turns out, Canada's income distribution has been more equal than that of Japan, the United Kingdom, and the United States, the same as that of Italy, and less equal than those of France and Germany. The last bar in the chart shows that the unweighted average Gini coefficient for the 34 OECD countries is .32. Canada's coefficient at .313 is very slightly below this average. These data suggest that Canada's income distribution after transfers and taxes is not out of line with conditions in some major democratic countries with market-oriented economies.

Income quintiles—averages

A widely used metric of income equality is based on the average incomes⁵ of Canadians in different quintiles of the income distribution. Canadians in the highest quintile are often referred to as “the rich”;

5. Appendix C discusses statistical problems that arise from the use of means as the index of average incomes for comparisons of different quintiles. For the lowest four quintiles, the means and medians always for logical reasons are nearly the same. However, for the highest quintile, they are different. When it contains some very high incomes, the mean can be much above the median. Therefore, the mean

those in the lowest as “the poor”, and those in the middle 60% as the politically much courted “middle class”. Chart 1.3 presents information about the real family-adjusted incomes of these classes for the years 1976 to 2011.⁶ The most noticeable feature of the chart is that it consists of two time periods with distinctly different characteristics. Between 1976 and 1996 average real incomes of all three groupings have been virtually constant. After 1996 until 2011, incomes have increased for all three income groups but only minimally for the lowest quintile.

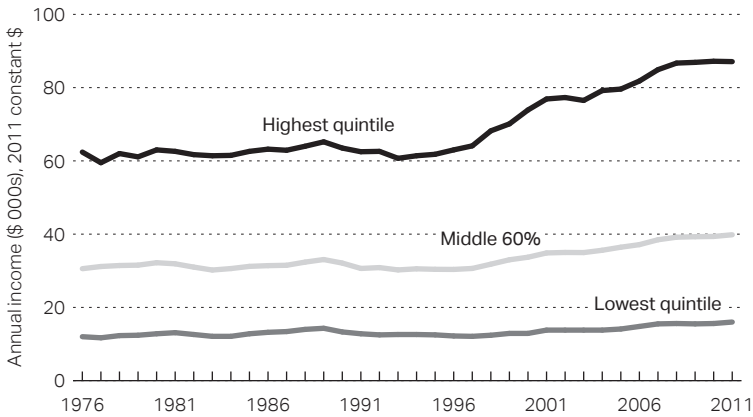
Comparison of charts 1.1 and 1.3 reveals some interesting facts about the relationship between income distribution and economic growth. During the period from 1976 to 1989 the indices of inequality and real income remained constant. This was the time when left-of-center governments adopted several important policies to equalize incomes. For example, the unemployment insurance system was made more generous. Agricultural supply management and many regulations affecting industry, labour, and consumer markets were adopted. The size of the civil service was increased to administer these programs and regulations.

Over the period from 1989 to 1996 inequality and income also remained unchanged as these extensive government programs remained in place. However, in 1995/96 the government adopted a number of

can provide much misleading information about the incomes of the majority of subjects in the highest quintile. Appendix D discusses another potentially serious problem associated with the tracking of means through time. It is due to changes in the characteristics of subjects joining a given group, which gives misleading information about the changes in income of the original group.

6. See the footnotes to Statistics Canada’s CANSIM table 202-0706 used for the production of chart 1.3 for more precise information about the definition of income and family underlying these data. Relevant footnotes to the table provided by Statistics Canada are: “The data are for adjusted after tax income for all family units. They are in 2011 constant dollars. They are average of family income concept per adult equivalent. In order to take into account the economies of scale present in larger families, the family after-tax income is transformed to express the family after-tax income per adult equivalent. All the persons of the population are ranked from lowest to highest by the value of their adjusted family after-tax income. Then, the ranked population is divided into five groups of equal numbers of units, called quintiles”.

Chart 1.3: Average, family-adjusted real (2011) income after tax, 1976–2011



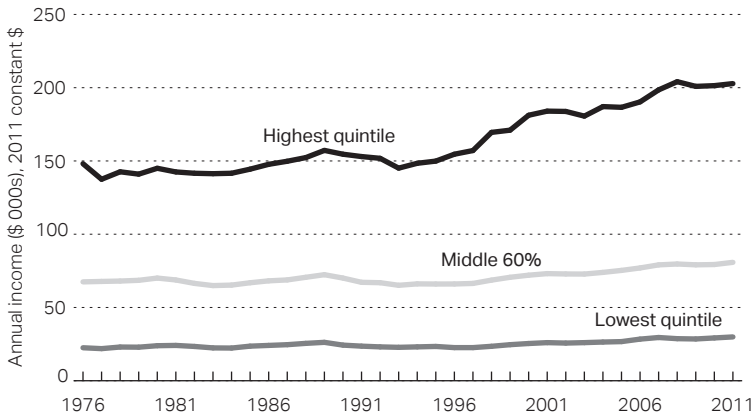
Source: ESDC calculations based on Statistics Canada, CANSIM table 202-0706 (constant dollars, annual, CANSIM database).

policies designed to eliminate an unsustainable budget deficit through reductions in the generosity of the unemployment insurance system, cuts in the size of the civil service, privatizations, and other measures. In addition, Canada's economy benefited from the adoption in the early 1990s of the efficiency-increasing Goods and Services Tax (GST) and of the North American Free Trade Agreement (NAFTA).

During the years 1996 to 2000 the implementation of these policies was accompanied by an increase in inequality. After the transition to the new policies had been completed in 2000, income equality remained unchanged but the incomes of the rich and middle class increased substantially while the incomes of the poor also rose, but by only a small amount. These positive changes came after more than 25 years of unchanged incomes and it is more than likely that they were caused at least in part by the return to more market-oriented social and economic policies associated with the 1995/96 efforts to eliminate the fiscal deficit.

The real family incomes shown in chart 1.3 are for after-tax incomes. This fact raises the possibility that the observed increases after 1996 reflect changes in personal income-tax rates in Canada. To explore this possibility, chart 1.4 shows the total nominal incomes of economic families by the same groupings used in chart 1.3.

Chart 1.4: Average total economic-family income, 1976–2011



Source: Statistics Canada, CANSIM table 202-0701 (market, total and after-tax income, by economic family type and income quintiles, 2011 constant dollars, annual).

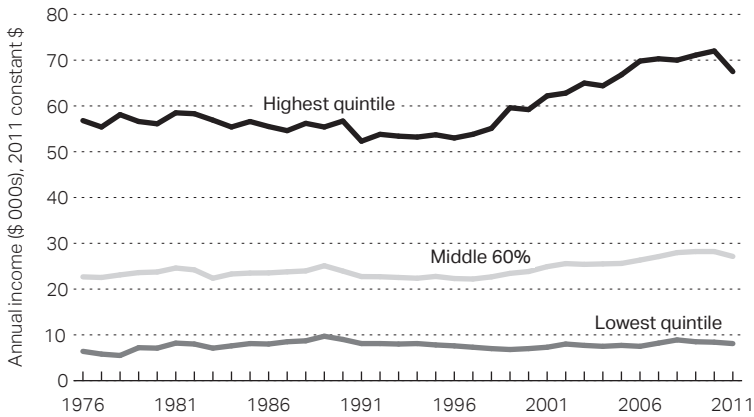
While the two charts are not strictly comparable (in chart 1.4 incomes are nominal rather than adjusted for inflation and they involve economic families rather than adjusted families), a comparison of charts 1.3 and 1.4 reveals that the time pattern of incomes for all three groupings is very similar, though the gains of the rich were greater than those of the rest. But, basically, the improvement in incomes has not been due primarily to changes in income tax policies but to broadly based real economic growth.

Chart 1.5 is presented for two reasons. The first is to show that the trends in average incomes of the three groupings are virtually identical for families and individuals. Second, the information on the incomes of individuals in chart 1.5 is used in chapter 2 to compare with the incomes derived by tracing the same individuals through time.

Absolute dollar differences

Much public and political discussion about income equality focuses on the absolute dollar differences between the rich and the poor. Chart 1.6 presents information about these differences in the average family real income after tax, which is produced by the use of the same data underlying chart 1.3.

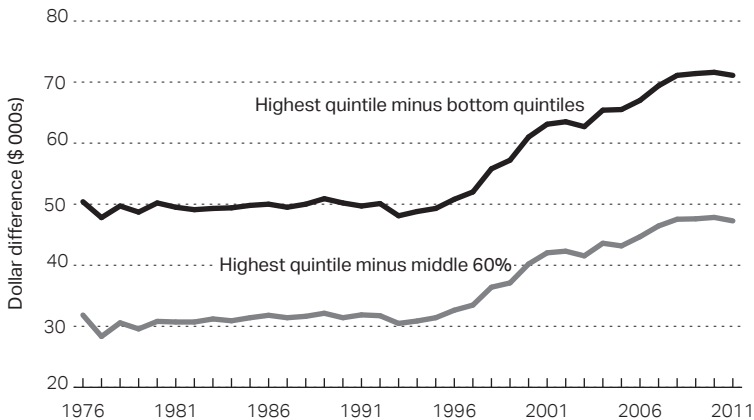
Chart 1.5: After tax, total income of individuals, 1976–2011



Source: Statistics Canada, CANSIM table 202-0706.

Note: Total after-tax income of individuals unadjusted for economic family income, 2011 constant dollars.

Chart 1.6: Dollar difference, family income after tax, 1976–2011



Source: ESDC calculations based on Statistics Canada, CANSIM table 202-0706 (constant dollars, annual, CANSIM database).

The top line shows that the gap between the real incomes of the highest and lowest quintiles was constant at \$50,000 between 1976 and 1996. Beginning in 1997, the gap increased steadily and in the year 2011 had reached \$70,000, an increase equal to about 40%. The gap between

the highest quintile and the middle class also was constant in the earlier period and increased from \$30,000 to \$50,000, 67%, during the 15 years after 1996.

These increases in the dollar gaps between the top income quintile and lower quintiles since 1996 have been used widely by critics of Canada's income distribution policies. For example, the Conference Board (2011) produced a study claiming: "Income inequality in Canada has increased over the past 20 years". The Canadian Centre for Policy Alternatives regularly publishes studies under the heading, *Growing Gap*. A quotation from the January 28, 2013 report is: "Income inequality in Canada is on the rise ..." (CCPA, 2013). Drawing on an earlier edition of the update, Tavia Grant (2011, Sept. 13) published an article in the *Globe and Mail* entitled "Income inequality rising quickly in Canada".

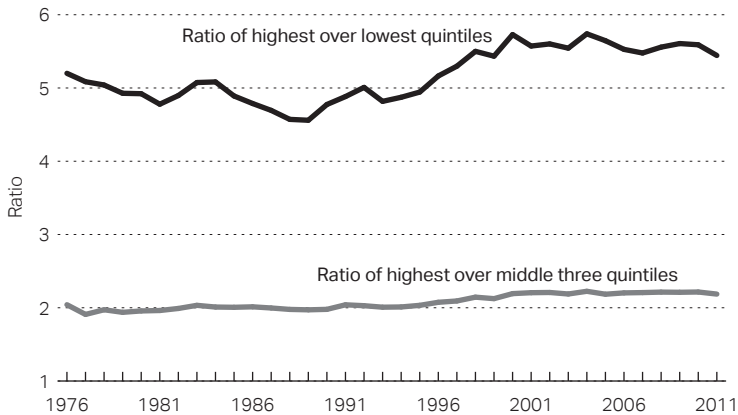
Before turning to a critical analysis of the use of absolute dollar magnitudes in discussions about income equality, it is worth noting that the difference remained constant during the period when Canada adopted the social policies reviewed above but when there also was no growth in the average incomes of any of the three income groups. After the austerity policies adopted in the mid-1990s, the dollar gap increased but the average incomes of all groups also rose. These relationships may be interpreted as evidence that redistribution and other social policies were accompanied by the cost of stagnating incomes for all and that a reduction in these policies increased the incomes of all.

Income quintiles—relative measures

For many purposes of analysis, absolute magnitudes of the sort just discussed can be misleading. For example, parents may be concerned about a child's weight but this concern is unwarranted if that child's weight is comparable with that of others of the same age, gender, and height. By analogy, to assess the significance of the income gains of the highest income quintile it is useful to compare these gains to the gains of other quintiles. For this reason, Statistics Canada regularly publishes ratios of the incomes of different quintiles, which are presented in chart 1.7.

The top line of this chart presents the ratio of the average incomes of families that make up the highest and the lowest quintiles of the

Chart 1.7: Quintile ratios, family income after taxes, 1976–2011



Source: Statistics Canada, CANSIM table 202-0706; author's calculations.

income distribution. The ratio was 5.2 in 1976 and 5.4 in 2011, which is not a big change for a period of 35 years. However, there were three distinct sub-periods during these years. From 1976 to 1995 the ratio was relatively constant around an average of 4.9. Between 1996 and 1999 it increased noticeably, when the government of Canada had taken strong measures to reduce a large fiscal deficit. It remained virtually constant after 2000 with a small decline over the years from 2009 to 2011. This pattern is virtually the same as was found and discussed in the context of chart 1.5 above. The bottom line in chart 1.7 shows the ratio of the highest quintile to the middle 60% of the income distribution. The line is virtually unchanged over the entire period with only a slight increase after 1996 and the start of fiscal austerity.

Summary and conclusions

None of the different metrics of income equality in Canada presented in this chapter support the claim that “the rich are getting richer and the poor are getting poorer”. The Gini-coefficients and ratios of average income quintiles show that income inequality was constant during the years 1976 to 1996, that it increased slightly during the middle 1990s when the government took serious measures to eliminate an unsustainable fiscal deficit, and that since 2000 inequality has again remained constant but at a slightly higher level than it had been from 1976 to 1996.

The data also suggest that income redistribution and other social welfare policies are correlated negatively with income growth. Thus, the policies adopted over two decades after 1976 did not materially lower inequality but were associated with stagnant incomes for all Canadians. Inequality increased slightly for a few years when these policies were modified in the middle 1990s to eliminate the fiscal deficit. However, after 2000 inequality remained unchanged while real incomes increased substantially.

One metric of income equality involves the comparison of average dollar incomes of different quintiles. These averages had been constant for all quintiles between 1976 and the middle 1990s. Thereafter, the real incomes of the lowest income quintile rose by only a trivial amount while those of the middle three and top income quintiles increased significantly. While these data support the first half of the slogan about the rich and poor, they contradict the second half. The poor have not been getting poorer.

The next chapter gives evidence provoking even greater doubt on the validity of the prevalent cliché that the rich are getting richer and the poor are getting poorer. It does so by considering the implication of the fact that the conventional measures of income equality presented in this chapter are based on the use of periodic surveys of the incomes of individuals and families, which involve sets of such individuals and families that differ from year to year. Thus, as the data in the next chapter prove, most of the individuals and families in the lowest quintile in year one in later years move to higher levels of income and in these later years are replaced in the lowest quintile by other individuals and families.

Issues around the distribution of income in Canada are shaped by the data presented in this chapter, which totally disregard the fact that Canadians enjoy much income mobility throughout their lifetimes. The next chapter documents how much income mobility exists and suggests that it is fundamentally a more important and relevant indicator of the well-being of Canadians than the income distribution measures presented in this chapter. At the very least, the traditional views on the need for income redistribution based on the statistics presented in this chapter need to be re-examined carefully in the light of the high income mobility enjoyed by almost all Canadians.

Appendix 1.A. Taxonomy of Income Distribution Bases

[1] Units deriving income:

[a] unattached individuals;

[b] traditional families;

[c] economic families (a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law, or adoption).

[2] Definition of income:

[a] market income—the sum of earnings from employment and net self-employment, net investment income, private retirement income, and the items under other income (this category is also known as income before taxes and transfers);

[b] total income—the sum market income plus government transfers consisting of public pensions, employment insurance, and other social programs:

[i] before taxes;

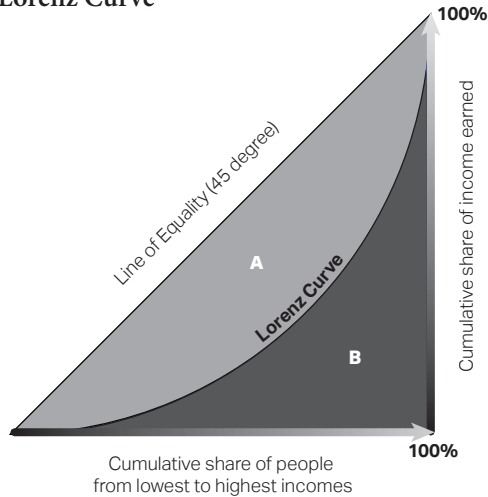
[ii] after taxes.

Useful sources for details surrounding these concepts are supplied by Statistics Canada 2006, 2013b. For more discussion of measurement issues, see Lammam, Karabegović, and Veldhuis, 2012

Appendix 1.B. Properties of Gini Coefficient Used as a Measure of Income Equality

The *Gini Coefficient* is an index of income equality that has been used for many years and in many countries. Its nature can best be understood by considering the *Lorenz Curve* (figure 1.1) and measures along the horizontal axis the cumulative percentage of people with income from the lowest to the highest level and along the vertical axis the cumulative share of income earned by them. The 45° line represents a situation in which income is distributed equally. The two axes represent total inequality as one person earns all income in the country. The curved line shows a realistic degree of equality similar in nature to that found for Canada and most countries in the world.

Figure 1.1: Lorenz Curve



The calculation of the Gini Coefficient basically involves dividing the area labeled A by the areas labelled A plus B in figure B.1. In other words, the Gini Coefficient (G) is $G = A \div (A + B)$. If the Lorenz Curve coincides with the 45° line, the denominator of the equation is zero so that G is also zero and income is perfectly equal. If the Lorenz Curve

coincides with the two axes, B is zero and the ratio G is equal to one, reflecting perfect inequality. The arithmetic formula involved in the calculation of the areas A and B using the basic data on family incomes is complex and need not be discussed here. They are discussed in the scholarly and well-documented Wikipedia article (*Wikipedia*, 2015a).

The Gini Coefficient has some undesirable statistical properties that require that it be used with caution. Table 1.B.1 illustrates one problem. The total incomes in the two countries A and B are the same at \$200,000. However, in country A, the income of the lowest quintile group is \$20,000 while that in B is only \$9,000. Yet, the calculated Gini Coefficient is the same for both countries, 0.2. The explanation is that incomes of the second and third quintiles in A are below those in B. For the top two quintiles, the relationship is reversed with incomes in A exceeding those in B. Analysts focusing on the incomes of the bottom quintile would declare the distribution in B to be less fair than that in A but the Gini Coefficient contradicts this conclusion.

There are other problems with the Gini Coefficient as a reliable guide to changes in income equality through time. Thus, the coefficient changes when the aggregation of the basic data goes from deciles to quintiles and when previously single income earners form families.

Table 1.B.1: Different income distributions with the same Gini Index

Household group	Annual Income (\$)	
	Country A	Country B
1	20,000	9,000
2	30,000	40,000
3	40,000	48,000
4	50,000	48,000
5	60,000	55,000
Total	<u>200,000</u>	<u>200,000</u>
Gini	0.2	0.2

Source: Bellù and Liberati, 2006.

Appendix 1.C. Median Compared to Mean

The preceding analysis needs to be interpreted with some caution because of an important statistical problem besetting all studies of income distribution. The problem is that for the lowest four quintiles the mean and median incomes are very similar but for the highest quintile they are not. This fact is disregarded in the presentation of almost all official statistics used to measure the distribution of income. Following this practice, the data presented in this study also rely completely on income means for all quintiles.

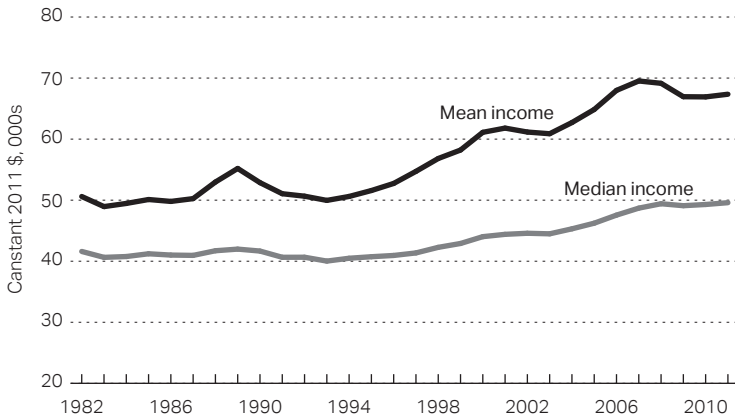
The statistical problem due to the difference between mean and median can be illustrated by considering a group of 101 workers, each of which in period one earns \$10. The mean ($\$1,010 \div 101 = 10$) and the median (the income of the 51st worker) are the same and equal to \$10. Now assume that, in period two, one worker in the group earns \$1,000 while the rest continue to have an income of \$10. Under this assumption the median (the income of the 51st) is unchanged at \$10. However, the group's mean income is \$19.80 ($((100 \times 10) + 1000) \div 101 = 19.80$).

The importance of this statistical problem can be illustrated with the help of data from Statistics Canada, which has published mean and median real incomes of Canadian households who were in the highest decile during the period 1982 to 2011. As can be seen in chart 1.8, the mean was above the median consistently and by a considerable margin. The gap between the mean and median was 18% in 1982 and 26% in 2011.

The policy implications flowing from these results are important. Consider that in period one the mean and median incomes of the highest quintile were \$10 and of the lowest quintile \$5, resulting in a gap of \$5. Now assume that the only change in period two is that a small number in the highest quintile earn much larger incomes than before. In the illustrative example above, the result is assumed to be an increase in the mean for the group to \$19.80.

Using the mean, the dollar gap between the highest and lowest quintiles has increased from \$5 to \$14.80 or nearly 300% from one period to the next. It is likely that this metric would result in strong

Chart 1.8: Mean and median real incomes (000s, constant 2011 \$) of the highest tenth percentile, 1982–2011



Source: Statistics Canada, CANSIM table 204-0001.

demands for taxes on the rich to reduce the growth in the increase in income equality, but it is clear that such taxes would be highly unfair to all in the top quintile except a few, in the above illustration the one whose income had jumped from \$10 to \$10,000.

The issue raised by the analysis of this section is relevant to conditions in Canada and other countries in recent years. According to Thomas Piketty and other economists, the incomes of the highest 1% or 0.1% of the income distribution have increased dramatically while the incomes of the rest have either stagnated or grown very little. Traditional measures of equality using quintiles therefore need to be interpreted carefully as guides to new equalization policies.

Appendix 1.D. A Problem with Averages

Another statistical problem haunts the calculation of average incomes, which can be explained by considering a family that, on January 1st of every year, calculates the average height of their three children by adding up the height of each and dividing the sum by three. This calculation allows them to track their annual rate of growth and presumably act on any deviations from normal.

Now assume that another child is born and enters the next calculation of the average height of the family's children. It is clear that in the year after the birth of the new child, the average height of the family's children is decreased and its most recent rate of growth has become negative.

The calculation of the average income of Canadians involves essentially the same methodology as that used by this family. Statistics Canada adds up the incomes of all individuals in the country and divides the sum by the number. If, in one year, holding all else constant, this number is increased by the addition of persons with low incomes, like young and inexperienced workers, pensioners, retirees, or immigrants, the calculated average incomes of the lowest quintile in the following year will be for reasons that few would consider to be a justifiable case for more redistribution policies.

This statistical problem implies the need for correcting statistics on income averages and rates of growth in Canada for the effects of demographic changes, including the growth in the number of workers with different levels of income. More important for the present study of income equality, this problem is likely to be particularly acute for the calculation of the average incomes of the lowest quintile of the distribution, which can easily be distorted by a relatively large growth in pensioners or the influx of immigrants with low incomes who lack relevant Canadian-specific work skills or are not yet fully integrated into the labour market.

Unfortunately, there appear to be no studies by Statistics Canada or academics that have corrected estimates of average incomes for the entire labour force or the lowest income quintile for these demographic

changes. This leaves readers to ponder the reliability of existing income distribution data as a guide for public policies. This is important since it makes little sense for the family whose children's average rate of growth has become negative through the addition of a child to seek medical help and embark on costly efforts to restore their normal rate of growth. Nor does it make sense to increase income redistribution policies because the average incomes of the lowest quintile have decreased and income disparities with the rest of Canadians have risen as a result of a large addition to the stock of low-paid workers.

Chapter 2. Income Mobility

A widely held view about the determinants of income in Canada is that “the poor are trapped in poverty”. Most Canadians are likely to consider the idea that people are unable to move above a low level of income to represent a more serious indictment of the country’s economic system and social conditions than accusations about the lack of fairness in the distribution of income. The reason is that the individual Canadian’s sense of well-being is influenced importantly by the prospect for a better future in which no traps prevent them from obtaining the returns they expect from their personal investments in education and training and their hard and reliable work effort.

This chapter presents data that show that most Canadians can confidently expect to be rewarded for their personal efforts and investments. The vast majority systematically and consistently earn low incomes when they are young and join the labour force; they enjoy growing earnings as they age and become more productive; their incomes decrease again as they reach their fifties, are afflicted by age-related infirmities, and ultimately retire from work.

Mobility in the short term

Statistics Canada provides the following definitions of income mobility:

Income mobility can be gauged in a relative or an absolute manner. *Absolute mobility* measures the changes in individuals’ income over time. It tells us how many people experienced an increase in income and how many incurred a decrease. An increase

in income represents absolute upward mobility; a decrease represents absolute downward mobility. To study income mobility (relative or absolute, downward or upward), data on the income of the same person over at least two time periods are compared. Longitudinal data from SLID make possible the analysis of income mobility ... *Relative income mobility* depends on changes in both the person's income and those of others. It captures the movements of an individual's rank, measured by their quintile in the income distribution, between two periods. (Statistics Canada, 2013a; emphasis added).

Absolute income mobility

Table 2.1 provides information about the absolute mobility of Canadians during recent years.⁷ Column [1] shows what percentage of Canadians experienced a reduction in income from one year to the next in the years shown in the first column. This percentage was around 40% in what might be considered normal years and 37.6% in the boom year 2006/07 (before the onset of the 2008 recession). In the recession year and the year immediately following, the percentage rose to 42.3% and 47.2%, respectively. Column [2] shows the average percentage of decline suffered by those whose income had fallen. This percentage was highest during the recession year 2008/09 but averaged 17.3% with small variations during the other four years.

Column [3] shows the percentage of Canadians who enjoyed an increase in annual income. The most notable fact is that more experienced increases than decreases and that these increases on average were higher (column [4]) than the decreases. These increases were also sensitive to cyclical economic conditions. They were highest in the boom year 2006/07 and lowest in the recession years 2008/09 and 2009/10.

7. Exact references to the Statistics Canada publications used in all tables in the study are found at the bottom of each and the technical details about the methods and data base used by Statistics Canada to produce this and other tables below can be found on the website shown at the bottom of table 2.1.

Table 2.1: Absolute mobility of individuals, after-tax income

	[1] Percentage of Canadians with reduced income	[2] Decrease in average income (%)	[3] Percentage of Canadians with increased income	[4] Increase in average income (%)
1997/98	40.5	17.9	59.5	20.4
2003/04	40.8	16.8	59.2	18.4
2006/07	37.6	18.3	62.4	19.6
2008/09	42.3	20.7	57.7	18.6
2009/10	47.2	16.3	52.8	18.7

Source: Statistics Canada, 2013a.

Note: Includes individuals whose income remained the same both years.

While the precise extent of income gains and losses shown are interesting for some purposes of analysis, the main objective of this study is to show the existence of a high degree of income mobility among Canadians. This fact emerges clearly from table 2.1. On average during the years shown, 42% of Canadians suffered reductions in income but more of them, 58%, enjoyed increases. The losses amounted to 18%, the gains to 19%.

Relative income mobility

Public discussions about the fairness of the income distribution are concerned predominantly with the relative average incomes of the poor, the middle class, and the rich along the lines discussed in chapter 1. The remainder of this chapter presents evidence on relative income mobility, which reflects the extent to which Canadians through time move among these income quantiles.

A first bit of evidence on relative mobility is found in table 2.2 and considers data for the after-tax incomes of individuals. This information is published by Statistics Canada (2013a) and shows that 22.3% of Canadians who were in the lowest quintile in 2003 had become members of higher quintiles of the entire population in the year 2004. Large proportions of individuals in the next three quintiles also had moved

Table 2.2: Proportion of Canadians whose after-tax earnings moved them to a different quintile in one year

	2003–2004		2008–2009	
	Up	Down	Up	Down
Lowest	22.3	0.0	24.8	0.0
Second	22.8	14.8	27.1	14.0
Third	20.9	20.4	24.0	20.6
Fourth	15.1	21.6	18.8	23.2
Highest	0.0	19.8	0.0	23.5

Source: Statistics Canada, 2013a.

up. Downward mobility is also considerable: 19.8% of the those earning the highest income in 2003 had moved to lower quintiles in 2004 and individuals in the other quintiles also experienced lower incomes.⁸

The last two columns in the table provide information analogous to that found in the first two data columns but for the recession years 2008 and 2009. There are some minor differences for the two periods but, somewhat unexpectedly, during the recession the lowest four quintiles moved upward relatively more than they did during the boom years 2003 and 2004. For example, in the boom period 22.3% of the lowest quintile moved up while 24.8% did so in the recession year.

The main conclusion to be drawn from table 2.2 is that Canadians enjoy a high degree of income mobility from year to year and that there is considerable movement out of both the lowest and highest quintiles.

Mobility over six-year periods

Table 2.3 also draws on data published by Statistics Canada and covers the same demographics and income definition as those found in tables 2.1 and 2.2. It shows the mobility of Canadians over two six-year

8. Downward mobility for the lowest quintile and upward mobility for the top quintile are necessarily zero since there are no lower or higher quintiles into which individuals can move from these two extreme quintiles.

Table 2.3: Proportion of Canadians whose earnings moved them to different quintiles in six-year periods

	1999–2004		2005–2010	
	Up	Down	Up	Down
Lowest	42.3	0.0	43.5	0.0
Second	39.1	19.8	42.1	19.8
Third	33.4	31.5	34.4	30.9
Fourth	25.3	37.0	25.5	40.0
Highest	0.0	43	0.0	43.4

Source: Statistics Canada, 2013a.

periods. During the first period, 1999 to 2004, 42.3% of those in the lowest quintile in 1999 had moved into higher quintiles. For the second period, 2005 to 2010, the percentage was 43.5%. Downward mobility from the highest quintile was nearly identical. Over the first six-year period, 43.0% had moved from the highest to lower quintiles; over the second six-year period, 43.4% had done so.

The fact that mobility up and down was virtually identical during the two periods and for both the lowest and highest quintiles is striking since the economy boomed during the first period and went through a severe recession during the second.

The data in tables 2.2 and 2.3 suggest two further generalizations. Income mobility increases with time and the percentage changes are more stable the longer the period considered.

Tracking moves through quintiles over 19 years

Table 2.4 presents data on income mobility of Canadians over a span of 19 years. These data are not available in Statistics Canada publications but were compiled by employees of Statistics Canada using income tax data from the Canadian Revenue Agency upon a special request and after payment of a considerable fee from the Fraser Institute. The data are based on the incomes of a representative sample of tax filers whose annual returns were linked through the use of their social security

Table 2.4: Movement into different quintiles by individuals (%) between 1990 and 2009, market income

Where they started (quintiles in 1990)	Where they ended up (percentage in each quintile in 2009)				
	Lowest	Second	Third	Fourth	Highest
Lowest	13	21	24	21	21
Second	9	21	27	23	19
Third	7	13	29	32	20
Fourth	6	8	15	35	36
Highest	7	6	7	16	64

Source: Lammam, Karabegović, and Veldhuis, 2012: table 7.

Note: The Data Appendix of Lammam, Karabegović, and Veldhuis (2012) in the section headed "Data for measuring long-term income mobility (1990–2000 and 1990–2009)" (p. 36) outlines the characteristics of the individuals and their incomes forming the basis for the compilation in table 2.4.

numbers. The sample includes only individuals who had filed income tax returns over 19 years from 1990 to 2009 and who had incomes of at least \$1,000 in any year. Their ages in 1990 were limited to between 20 and 45 to exclude Canadians over the age of 65 in the study.⁹

The data in table 2.4 show that only 13% of individual Canadians in the lowest quintile in 1990 were still in that quintile 19 years later. In other words, of 100 of the "poor" in the lowest quintile in one year, only 13 were still in this category, the rest had in almost equal proportions moved into each of the four higher quintiles, including the highest. However, it should be noted that those who were in the same lowest or any other quintile in both 1990 and 2009 could have moved out of, and back into, these quintiles in any of the 19 years. Available data do not provide information about the extent of this churning.

9. An argument can be made that Canadians over 65 who have low incomes in retirement should be included in the data base since they are included in the income distribution statistics discussed in chapter 1. This data coverage would increase the comparability of the mobility and distribution statistics much as has been achieved by the inclusion of Canadians from age 20 to 24, who tend to have low incomes and low productivity because they are students or at the beginning of their working careers.

In spite of this limitation of the data, the important fact revealed in table 2.4 is that high degrees of upward mobility exist for all Canadians, not just those in the lowest quintile. For example, of a 100 who were in the second quintile in 1990 only 21 remained, nine had moved to the lowest, and 70 had moved in nearly equal proportion to the three highest quintiles.

For the public debate over the alleged permanence of the unfair distribution of income it is important to note that downward mobility has also been large. Of a 100 who were in the top quintile in 1990, 64 remained in it in 2009, 16% had moved to the fourth quintile and 7%, 6%, and 7% had moved to each of the lowest three quintiles.

Implications for views about the “poverty trap”

In the light of the public discussion in Canada and other Western democracies about the misfortune of the poor in society and the need for more government assistance for them, one of the most important and relevant aspects of the data in table 2.4 is the information that over 19 years only 13% of Canadians remained in the lowest quintile and poor; and this figure may overstate the phenomenon since, during these 19 years, they may well have several times moved into and out of higher quintiles.

This result is in clear conflict with the widespread public understanding, advanced by the advocates for more income redistribution to help the poor, that all of Canadians in the lower quintile are trapped permanently in this condition and that they are kept in this condition through unfair and rigid labour market institutions, racial and other forms of discrimination, and cultural practices.

Instead, while there are no hard data, it is very likely that most of the 13% permanently poor are Canadians who suffer from mental and physical handicaps, which make them unable to earn high incomes. Some may have permanently low incomes because for personal reasons they are unable or unwilling to finish high-school, and learn a skilled trade or profession. Some may have had the misfortune of spending many years as single or unwed mothers. Many of these needy Canadians deserve society’s support, but they are not the victims of “poverty traps”.

In addition, it is likely that the 13% includes some who choose to live in isolated parts of the country where there are no highly paid employment opportunities but where they can take advantage of non-market sources of income, such as home-grown food, hunting, fishing, and the use of self-procured fuel for heating the home. As a result, the income statistics tend to understate their real income and some would not be among the 13% if their income in kind were properly included in their annual income reports.¹⁰

The preceding analysis raises the question why conventional distribution statistics as described in chapter 1 show the incomes of the lowest quintile to have been constant while those of the middle three and highest quintile have risen for several decades. The answer is that the average productivity of new labour force entrants has been reduced by an increase in their numbers greater than total labour force growth, even as overall labour productivity has increased. One significant source of these new entrants has been immigrants to Canada who are known to have well below average incomes for several years after their arrival.¹¹ The average incomes of the higher income quintiles in turn are increased by the addition of smaller numbers of Canadians whose incomes have been raised by the overall gains in labour productivity and their increased average ages.

The working poor

Of course, not all Canadians travel smoothly along their age-income path all their lives. Some see their normal profiles disrupted by temporary influences. Illness, unemployment, and similar events reduce incomes for limited periods of time. Others enjoy temporarily higher incomes through the realization of capital gains, bonus payments, prize winnings, inheritances, or similar unique events. Other Canadians never move along a normal age-income path because

10. For a discussion of the important role of income-in-kind in the distribution of income in Canada, see Sarlo, 1996: 157–158, 188, 225.

11. The incomes well below average of recent immigrants into Canada are documented by Statistics Canada in publications that are referenced and discussed at length in Grubel and Grady, 2012.

physical or mental disabilities prevent them from productive employment. Some of the very young and very old may have higher than officially recorded incomes because they receive cash and in-kind transfers from family and friends. Canada's private and public sectors provide a safety net that uses transfers and other venues to assist those with permanently or temporarily low incomes.

However, there are also Canadians who experience normal patterns of life-time incomes but whose incomes are relatively low and are often referred to as the "working poor". These are workers who have low levels of education and work in such jobs as janitors and food service providers. Some have low-paid and seasonal jobs working as fishermen or farm workers or they choose to live in areas of the country where normal opportunities for employment do not exist, as do many of Canada's natives.

The extent to which such workers with low life-time earnings merit subsidies financed by taxes on the rich will always be the subject of public debate. Social activists ask for higher subsidies for more Canadians with low incomes while others point to the damaging effects such subsidies have on the recipients' efforts to improve their earnings through more education, training, and effort, and the risk that they become dependent on government subsidies at the cost of reduced self-esteem and independence.

The optimal level of support for the working poor in Canada has always been decided through the political process, which sees the public informed by the arguments for and against more subsidies, which leads them to vote for politicians that best reflect their own views on the issue so that it is reasonable to assume that at any moment in time it reflects a wide public consensus. The information presented in this study has important implications for this ongoing public debate over the optimal level of government support for the poor. It should improve the quality of the debate by pointing to the fact that only 13% of Canadians are permanently poor and, along with those temporarily poor, in need of public support. With the temporarily poor already receiving benefits from Canada's social security net, the focus of debate should be on the 13% who have permanently low incomes.

Quintile movements after redistribution policies

The preceding analysis considered the mobility of individuals based on their market incomes, which are free from the effects of government redistribution policies. The present section focuses on the effect government redistribution policies have on incomes of individuals through government transfers and income taxes. The analysis is based on the data in table 2.5, which draws on previously unpublished data obtained by the Fraser Institute, which requested a special compilation from Statistics Canada. It shows income mobility of Canadians after taxes over 19 years from 1990 to 2009.

The data in table 2.5 show that after-tax mobility is high, but a comparison of table 2.5 with table 2.4 reveals the interesting fact that government redistribution policies reduce upward mobility. Only 13% remained in the lowest quintile based on market income (first number in table 2.4) but 33% remained in the lowest quintile based on total income after tax (first number in table 2.5).

It follows logically that, if government policies increase the percentage of individuals who remained in the lowest quintile, there must also be reductions in the percentage of those who moved into higher quintiles. Thus, in the absence of these redistribution policies, 21% of those in the lowest quintile in 1990 were in the highest quintile 19 years later while, under income redistribution policies, only 11% of those in the lowest quintile moved into the highest quintile over this period.

While redistribution policies lowered upward mobility for the poor, it increased downward mobility for the rich. Thus, calculations based on market income show 64% to have remained in the highest quintile after 19 years (last figure in table 2.4), but only 49% remained in the highest quintile in terms of total after-tax income (last figure in table 2.5).

Table 2.6 presents the effect of redistribution policies on mobility for all of the cells in the matrix by showing the difference in the percentage figures in tables 2.4 and 2.5. Column [1] of table 2.6 shows that the reduction in upward mobility caused by government policies is greatest (20 percentage points) for the lowest quintile, 6 points for the second, and 2 points for third quintile. Column [5] of table 2.6 shows

Table 2.5: Movement into different quintiles by individuals (%) between 1990 and 2009, total income after taxes

Where they started (quintiles in 1990)	Where they ended up (percentage in each quintile in 2009)				
	Lowest	Second	Third	Fourth	Highest
Lowest	33	23	19	15	11
Second	15	21	25	24	16
Third	9	16	23	27	26
Fourth	6	12	20	28	35
Highest	5	8	14	24	49

Source: Statistics Canada, special request by the Fraser Institute from the Income Statistics Division using data from the Longitudinal Administrative Databank (LAD). The data in table 2.5 have been made available by the Fraser Institute for this study and have not been published before.

Note: For the characteristics of the individuals surveyed in table 2.5, see Lamman, Karabegović, and Veldhuis, 2012 in the section headed "Data for measuring long-term income mobility (1990–2000 and 1990–2009)" (p. 36).

Table 2.6: Difference (percentage points) in mobility due to government income redistribution policies (percentages before minus after policies)

Quintiles in 1990	[1]	[2]	[3]	[4]	[5]
	Lowest	Second	Third	Fourth	Highest
Lowest	-20	-2	5	6	10
Second	-6	0	2	-1	3
Third	-2	-3	6	5	-6
Fourth	0	-4	-5	7	1
Highest	2	-2	-7	-8	15

Sources: Tables 2.4, 2.5; author's calculations..

that the increase in downward mobility was the greatest at 15 percentage points for those who were in the highest quintile in 1990 and less for those in lower quintiles.

The data in tables 2.4, 2.5, and 2.6 have some important implications for assessing the cost of income-redistribution policies that go beyond their normally considered negative effects on average incomes through reduced incentives to work, invest, and take risks. Assuming that income mobility is a desirable and positive feature of Canadian society as an expression of opportunities for individuals to succeed in life through work efforts and investment, then the reductions in mobility caused by equalization policies, especially for the poor, represents a social cost that should enter into government decisions on the optimal level of income redistribution policies. The analysis of chapter 4 returns to this issue.

Total dollar incomes after taxes

Table 2.7 presents what might be considered to be the economically and socially most important information about incomes of the poor and other groups in Canada that is produced by tracing incomes of individuals through time. Thus, Canadians aged 20 to 45 who in 1990 were poor with incomes in the lowest quintile, enjoyed increases in income of \$34,000 or 180% over the 19-year period from 1990 to 2009. The incomes of the higher quintiles also increased substantially. Interestingly, the higher the quintile, the lower both the absolute *and* percentage increases. The highest quintile had the smallest increases: \$13,400 or 12.4%.

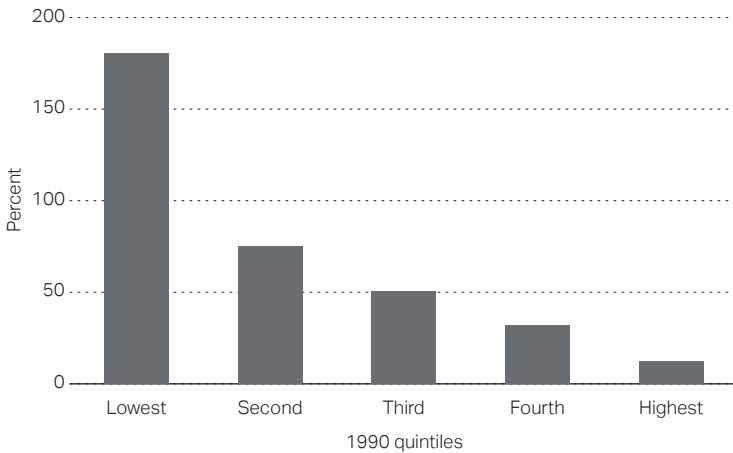
The importance of the information in table 2.7 for public discussions about the fairness of the income distribution warrants presenting it with the help of chart 2.1, which shows very effectively that the percentage growth in income has been greater, the lower the earnings quintiles. The data are also important for assessing the claim that the middle class is getting “hollowed out”. Defining the middle class as Canadians with incomes in the middle three quintiles, the data show that their real incomes after tax increased by 52.7% during the period from 1990 to 2009, which is right between the growth rates of the highest and lowest quintiles.

The increases in real income just discussed are especially remarkable because the 19 years under consideration includes a period when the federal government in the 1990s engaged in drastic spending cuts and when the recessions in 2001 and in 2008 had serious negative

Table 2.7: Individual real income after subsidies and taxes

Quintile in 1990	Years			Increase 1990–2009	
	1990	2000	2009	Dollars	Percentage
Lowest	\$19,300	\$42,500	\$54,100	\$34,800	180.3
Second	\$38,800	\$54,900	\$68,000	\$29,200	75.3
Third	\$52,900	\$66,600	\$79,700	\$26,800	50.7
Fourth	\$68,300	\$78,300	\$90,300	\$22,000	32.2
Highest	\$108,500	\$109,000	\$121,900	\$13,400	12.4

Source and notes: see table 2.4, p. 28.

Chart 2.1: Percentage gain in real incomes, 1990–2019

Source and notes: see table 2.4, p. 28.

effects on employment and economic growth. In sum, the data in table 2.7 prove wrong the clichés that “the rich are getting richer and the poor are getting poorer”, that the “poor are trapped in poverty”, and the “middle class is getting hollowed out”. The data clearly support the different and much more positive statement that “all Canadians are getting richer, the poor more so than the rich”.

Reason for conflict with popular views

The conflict between the popular views on income growth of the different quintiles in Canada and the data presented here invites an explanation. Chart 1.3 is reproduced as a reminder of the information that underlies these popular views. It does show that the incomes of the poor have stagnated, those of the middle class have grown very little and those of the highest quintile increased substantially.

The conflict between the information contained in chart 1.3 and chart 2.1 stems from the fact that the former is based on annual surveys of income that involve different persons every year while the information in chart 2.1 uses data on the incomes of the same individuals at different points in time. More discussions of the policy implications of the findings in this chapter will be presented in chapter 4.

The causes of changing incomes through time

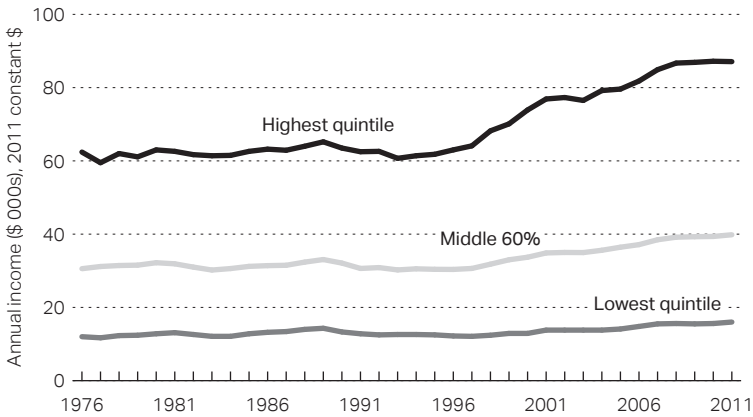
The information about income mobility just presented raises questions about the determinants of this mobility. The following analysis identifies two determinants. One of these is the life cycle of incomes that most Canadians have experienced in their own lives or, if they are young, know about from their parents' history. The second are random events causing temporary increases and decreases in income to which all are exposed.

The life cycle of incomes

Chart 2.2 presents information about the life cycle of the incomes of Canadians. It shows average incomes of Canadian men in the year 2008: incomes are very low for the age group 16 through 19, rise for each group thereafter until a peak is reached for the age group 44 to 54. Incomes drop again for the following age groups. The increases in income in the early years are due to the growing productivity of workers who learn to apply their mostly academic learning through actual work and who acquire the needed work discipline. The reductions in earnings after age 54 are due to age-related disabilities that reduce their productivity and to early retirement caused by other forces.

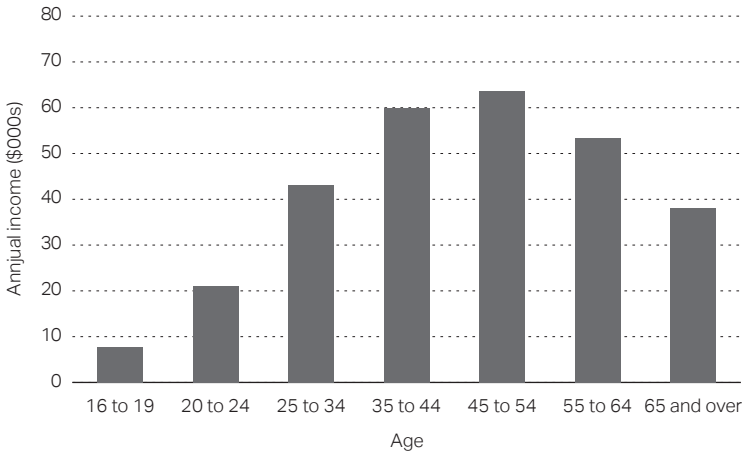
Not shown here are differences in the incomes of individuals around the average for their age and therefore their life-times. These

Chart 1.3: Average, family-adjusted real (2011) income after tax, 1976–2011



Source: ESDC calculations based on Statistics Canada, CANSIM table 202-0706 (constant dollars, annual, CANSIM database).

Chart 2.2: Annual income (\$000s) of Canadian men, 2008



Source: Statistics Canada, CANSIM table 202-0407.

differences are a function of the individuals’ educational attainment, gender, intelligence, emotional and physical health, occupation, geographic location, and others. The role played by these other determinants will not be discussed here because they do not change the basic conclusion that average earnings and age are related systematically.

However, some Canadians—the “working poor”—have very low life-time incomes. As discussed above, the threshold level of income at which the working poor deserve to be supported by government subsidies and the amount of the subsidies will always be a subject of public and political debate. The analysis of this study should make this debate better informed.

The concept of the age-income profile has been used in sophisticated models to estimate the impact the life-cycle income patterns on conventional estimates of the distribution of income. Morton Paglin (1975) did so in a path-breaking study that has attracted much attention. He found that the conventionally estimated Gini coefficient and the magnitude of inequality for the United States are reduced by 30% after adjustment for the income variations resulting from the life cycle of income. Paglin’s study led to a large body of academic studies that explored the impact that other personal characteristics such as gender and educational attainment have on inequality. None of these studies have invalidated the basic conclusion that the natural life cycle of incomes has a strong impact on the conventional measures of income equality and that measures of income equality should be based on life-time earnings, not annual earnings, as is the case with the current, widely used measure of equality.¹²

Random influences on income

Many Canadians move into and out of income-distribution quintiles for limited periods of time because their productivity and pay are influenced by random events. Typical events causing temporary reductions in income are:

- physical and mental illnesses due to disease or accidents;
- unemployment caused by economic downturns or personal decisions;
- the birth and raising of children;
- voluntary time off from work to, for example:
 - obtain further education and training;
 - engage in creative work in the arts and literature;
 - enjoy leisure, travel and other non-paying activities;
- and, for immigrants, integration into the labour force and acquiring language skills.

12. For a recent review of these studies, see Rycroft, 2009.

Typical events causing temporary increases in income are:

- realizing capital gains from the sale of securities, real estate, buildings, art, antiques, and so on;
- receiving bonus payments for extraordinary work achievements in the private and government sectors;
- winning prizes for outstanding scientific and literary achievements;
- starting or ending work in occupations requiring extraordinary abilities:
 - professional athletes;
 - entertainers working in the music, film and similar industries, and artists and writers of best-selling literature;
 - top managers of firms and other organizations;
- winning in games of chance and inheriting income producing assets.¹³

It is important to note that the effects of negative temporary influences on incomes are modified by a wide range of government policies, which provide assistance to the unemployed, sick and otherwise disabled, parents of young children, single mothers, new immigrants, retired workers, and other groups of needy individuals and families. On the other end of the income spectrum, Canadians with temporarily high incomes see them reduced through high marginal tax rates and the loss of means-tested benefits like Old Age Security benefits.

A note on intra- and intergenerational income mobility

The analysis above involves the study of what technically is known as the *intragenerational* mobility of income. It is so named because it traces the pattern of income of individuals over their lifetime or within their generation. By contrast, *intergenerational* mobility refers to the degree to which individuals enter occupations and earn lifetime incomes that are different from those of their parents. In most countries, descriptions of this mobility are part of the national narrative. For example, in Germany Thomas Mann's 1901 novel *Buddenbrooks* describes the rise and fall of a bourgeois family's economic fortune

13. Canadian tax law makes such winnings and inheritances exempt from taxation. Winnings from games of chance are taxable in the United States.

and social status over three generations. The novel is well known in Germany and accepted widely as a realistic description of intergenerational mobility that has long existed in that country. Historians and economists throughout the world often refer to the “Buddenbrooks Effect” on intergenerational mobility.

Statistical studies of intergenerational mobility require data about the occupations and incomes of fathers and mothers and their sons and daughters over their entire life times. Few such data exist and surveys of individuals have to rely on their imperfect knowledge of the economic success and occupations of their ancestors. However, researchers have been able to use some data collected for other purposes to shed light on intergenerational mobility. Corak reviews the existing literature on this subject and concludes:

In countries like Finland, Norway, and Denmark the tie between parental economic status and the adult earnings of children is weakest: less than one-fifth of any economic advantage or disadvantage that a father may have had in his time is passed on to a son in adulthood. In Italy, the United Kingdom, and the United States roughly 50% of any advantage or disadvantage is passed on. (Corak, 2013: 4).

Corak assessed intergenerational mobility through the use of income changes experienced by sets of Canadians and Americans through time, which are the same type of data used in the discussion of intra-generational mobility above. He reached the following conclusion: “a comparison of the full decile transition matrices reveals a good deal of mobility ... to the point that there is little relationship between family background and child outcomes” (2013: 5).

The issue of changes in intergenerational mobility in recent times is addressed in a paper by Fortin and Lefebvre (1998). They conclude: “Our estimates show that the rate of intergenerational income mobility is higher among more recent cohorts than among older cohorts ... An analysis by birth cohort [in Canada] ... shows an increase in the degree of intergenerational income mobility over time” (1998: 51, 62).

Advocates for income redistribution use any findings that inter-generational mobility is positively related to intragenerational mobility to argue for more equalization policies by government. However, as the preceding quotations show, the existing evidence on conditions in Canada does not lend strong support for this argument. Moreover, international studies in this field rely on Gini coefficients to reflect income equality in different countries. This metric uses income distribution statistics, the merit of which as guides to redistribution policies needs to be re-examined in the light of the income mobility statistics found in this study and already undertaken by Corak.

Summary and conclusions

The data on income mobility in this chapter have revealed some important facts: in recent decades Canadians have become richer, the poor more so than the rich, and the proportion condemned to the lowest levels of income are a small proportion of the total. These findings clearly contradict both widely held views about poverty traps and the rich getting richer at the expense of the poor. In fact, all Canadians are getting richer, the poor more so than the rich.

Income mobility is the result the life cycle of incomes experienced by most Canadians. It is determined by the evolution of productivity that depends on skills and work disciplines, which are a function of age and work experience. Income mobility is also affected by temporary forces, which for limited periods of time cause the incomes of individuals and families to rise and fall and, as a result, into and out of individual income quintiles.

Income mobility is a basic characteristic of life in Canada that is valued in its own right. It is also a reflection of economic and personal freedoms, which allow individuals and families to determine what amount of education, savings, and work they like to engage in to raise their life-time incomes. The life cycle also plays a role in the average productivity and incomes of Canadians through its effect on workers' incentives to improve their skills and productivity. Matching productivity and wages are essential to the efficient functioning of Canada's labour market and economy.

The policy implications of the data in this chapter will be discussed at greater length in chapter 4. Suffice it here to note that the existence of income mobility adds to the well-known efficiency costs of income distribution policies that reduce the upward mobility of the poor and create unfair transfers of income from older Canadians facing the high costs of raising children and looking after the needs of their parents to young Canadians who have no such financial obligations.

Appendix 2.A: Mobility Statistics from the United States

The preceding analysis presented dynamic income data for Canada. This appendix contains analogous data for the United States and is presented to show that conditions are very similar in both countries.

The data shown in table A2.1 have been produced by the US Treasury Department and cover the years from 1996 to 2005. The first five lines and five columns concern mobility from quintile to quintile. Of those in the lowest quintile in 1996, 57% had moved to higher quintiles in 2005, 5.3% to the highest quintile. The table also shows that 30% in the top quintile had moved to lower quintiles during these nine years, 2.6% to the lowest.

Table 2.A.1: Income mobility in the United States, 1996–2005

Quintile in 1996	2005 Income Quintile								
	Lowest	Second	Middle	Fourth	Highest	Total	Top 10%	Top 5%	Top 1%
Lowest	42.4	28.6	13.9	9.9	5.3	100	2.3	1.3	0.2
Second	17.0	33.3	26.7	15.1	7.9	100	3.0	1.2	0.1
Middle	7.1	17.5	15.1	29.6	12.5	100	4.2	1.4	0.3
Fourth	4.1	7.3	40.2	40.2	30.2	100	8.6	2.7	0.3
Highest	2.6	3.2	17.8	17.8	69.4	100	43.4	22.5	4.4
Top 10%	2.6	2.2	4.9	11.8	78.6	100	61.1	37.6	8.3
Top 5%	2.6	1.8	3.9	8.6	83.1	100	71.6	54.4	15.2
Top 1%	3.2	1.3	2.2	4.9	88.4	100	82.7	75	42.6

Note: The table uses the tax returns of primary and secondary non-dependent taxpayers who were age 25 or over in 1996 and 2005. Income breaks for the quintiles and top percentiles are based on the full cross-section of tax returns for each year, where the taxpayer is age 25 and over. Income is cash income in 2005 dollars.

Source: United States, Department of the Treasury (2008). Uses data from IRS Statistics of Income, Individual Income Tax Files for tax years 1996 and 2005. Graphic presentation of results.

Unfortunately, the data available for Canada and the United States do not allow a strict comparison of mobility in the two countries for several reasons. First, the data cover different lengths over which income mobility is measured. Nevertheless, the results are very similar. The 42.4% of Americans left in the lowest quintile after nine years is close to the 42.3% left after five years in Canada (table 2.3).

Second, the US data are for individuals over the ages of 24 and the Canadian are for individuals over 20. The exclusion of the cohort of those 20 to 24 years old from the US study is justified on the grounds that many of the individuals in it are students and recent graduates whose inclusion would create an upward bias in the estimates of income mobility for the entire population. The main problem with this methodology is that it complicates unnecessarily discussions about income distribution and mobility. The incomes of those from 20 to 24 years old are included in the distribution statistics and contribute much to inequality because of their age-related low incomes, as the Canadian mobility statistics indicate. So, excluding them from the US mobility statistics prevents full empirical understanding of the causes of income inequality.

Data on the top percentiles

Table A2.1 contains information about the mobility of individuals in the very top percentiles that is not available for Canada but has been used widely in recent public discussions about growing income inequalities in the United States and Canada. They reveal that, of those who in 1996 were in the bottom quintile by the year 2005, 2.3% had moved into the top 10%, 1.3% into the top 5% and 0.2% into the top 1% (last three columns of the top 5 rows). Of course, more of those in the higher quintiles in 1996 reached these top percentiles but the data show that Americans can rise from the bottom to the very top, not just a few rungs up the ladder.

The data concerning the top tenth, fifth, and first percentiles show that many Americans in these income categories over nine years have moved out of the highest quintiles. Only 78.6%, 83.1%, and 88.4% in these three percentiles, respectively, were still in the highest quintile. However, these Americans were less likely to move to lower quintiles

than those who started off in the highest quintile in 1996. For example, while 78.6% of the top 10% were still in the highest quintile in 2005, only 69.4% on the original top quintile were so. Of the top 1%, 88.4% remained in the highest quintile over the same period.

The nine cells in the bottom right corner of the table show that mobility into, and out of, the top 10%, 5%, and 1% is quite high but occurred mainly within these three groupings. For example, of those in the highest 10% in 1996, 61.1% were still in the percentile nine years later, 37.6% had moved to the top 5%, and 8.3% had moved to the top 1% (the percentages need not add up to 100 since the highest 1% are included in the highest 5%). The last three cells in the bottom row indicate that mobility into, and out of, the highest 1% is much lower. After nine years 42.6% were still in that percentile and 82.7% had remained in the highest tenth percentile.

Chapter 3. Canada's Rich

Advocates of policies enforcing greater redistribution of income are striving for a utopia in which the incomes of all Canadians are equal; they will always demand higher taxes on the rich and more subsidies to the poor. These demands have recently gained much momentum with the publication of statistics showing that since about 1980 the incomes of the top 1% of the population in Canada and other Western democracies have been growing much more rapidly than the incomes of the rest of the population. The publicity surrounding the growth in the incomes of the top 1% led to massive public demonstrations and protests in many countries, including Canada. One of the most widely publicized of these was the first meeting on September 17, 2011 of the Occupy Wall Street movement in New York City's financial district, which operated under banner "We are the 99%".¹⁴

The recent focus on the incomes of the top 1% represents a useful strategy used by redistributionists because it provides a clearly defined group of the rich for which precise income data can be produced and tax increases recommended. Analogous data for the top 1% in many countries invited international comparisons and opened the door for claims that this apparent growth in the incomes of the top 1% reflected a basic pathology of market economies. Such international comparisons and theorizing was provided in a book published by Thomas Piketty (2014), which became an influential international best-seller in spite of

14. For a history of the movement and the publicity accompanying it, see Weinstein, 2011.

its length of 600 pages, the dry scholarly writing, and many tables and charts. In this book Piketty documents the growth in the wealth of the top 1% in several countries, but, most importantly, predicted that this growth was an unavoidable aspect of capitalism. Doing so, Piketty followed in the footsteps of Karl Marx, who had made the same argument about the inevitable demise of capitalism, the impoverishment of the proletariat, and a revolution bringing communist nirvana. Tellingly, Piketty entitled his book *Capital in the 21st Century*, inviting comparisons with Marx's book *Das Kapital* and the Bolshevik revolution.

Using the data on the income growth of the top 1% and his model of income distribution, Piketty warned that conditions in most Western democracies are leading to the kind of critical levels of income equality that had precipitated the French revolution in the 18th century and the communist revolution in Russia around the turn of the 19th century unless governments adopted policies to stop the growth in the incomes of the top 1%. While Piketty's work demonized capitalism and the top 1% by suggesting that their growing incomes threaten economic and social stability, other authors had demonized the top 1% by attributing to them other unsavoury characteristics. Among these authors were Michael Lewis¹⁵ and Cynthia Freeland (2012), who presented data not only on the incomes of the top 1% but also on the rapidly growing number super-rich billionaires.

These authors presented evidence that many of these super-rich in major Western democracies reached their lofty positions through unethical or illegal business practices and that, in transition economies like Russia and China, they had exploited opportunities to acquire wealth that were created by the privatization of publicly owned enterprises and the switch from planned to market economies—all at the expenses of the rest of the population. The authors further demonized the super-rich by describing their lavish life styles, the creation of family dynasties, and their ruthless dealings with workers and traditional practices, cultures, and the environment. They also discussed how these super-rich used their assets to exert political influence and to bribe officials to increase their income and wealth. The media have

15. His latest book is *Flashboys* (2014). Of his earlier books, see, e.g., Lewis, 2010.

publicized widely these demonizing stories and thus increased the public's inclination to listen to, and accept, the arguments for higher taxes on the rich and more subsidies to the poor.

The remainder of this chapter presents information designed to make discussions about the need for more taxes on the top 1% more fact-based and rational than it has been under the influence of the information presented by Piketty, Freeland, Lewis, and other authors who have written about this issue. This effort is in the same spirit as the one that has gone into the information presented in the preceding two chapters, where it is argued that the case for income redistribution based on the traditional distribution statistics is weakened greatly by the widely ignored existence of high levels of income mobility in Canada.

The first section below presents a chart from Piketty's book that shows the share of income earned by the top 1% in Canada and the United States to provide a solid empirical basis for the following discussions about the timing and causes of the recent growth in these shares. The second section provides information about the threshold of income needed to belong to the top 1% in Canada and what their average income levels are. This information will surprise many readers who have been led to believe that the top 1% are millionaires or billionaires. The third part presents evidence on the occupations of the top 1% that shows that their high incomes are the result mostly of high levels of professional training and entrepreneurship. These Canadians earn their high incomes in markets where buyers voluntarily pay for the services and goods they produce.

Part four sheds important light on the process that creates the top 1% incomes by noting that the growth started in 1980, coinciding with the globalization of world commerce made possible by substantial innovations in technology and changes in institutions that create markets and freedom. Part five presents some casual evidence on the way in which Canadian and US billionaires use their wealth to support charitable causes rather than spend it on conspicuous consumption and the building of family empires as the billionaires of Russia and China do. The final section presents some data that are limited in scope but show that significant income mobility exists also among the top 1% in Canada and the United States.

Income shares of the top 1%

Chart 3.1 is found in Piketty's book and shows the share of income earned by the top 1% of the income distribution in Canada and the United States for the years from 1920 to 2010.¹⁶ The income shown excludes capital gains, which would have shifted the lines upward, and do not include the effects of income taxes, which would have shifted the lines down. Since both capital gains and income taxes affect mostly the incomes of the top 1%, the net effect is likely to be small.

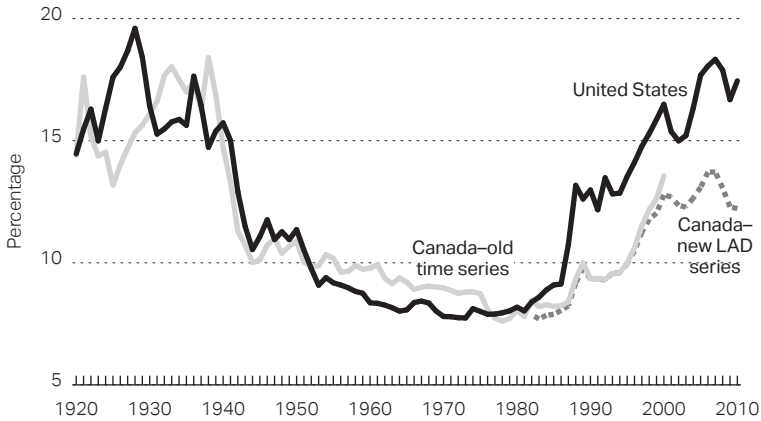
The graph reveals that the share of total income earned by the top 1% in Canada and the United States was at a peak during the years from 1920 to 1940. The share fell with the onset of the Second World War, sharply at first and then more gradually until it reached a nadir in 1980. It has since risen quite sharply. The shares in Canada and the United States were very similar both in levels and trends until the 1980s, when the US shares began to rise more rapidly than those of Canada. In 2007, the share of income earned by the top 1% was 18.77% in the United States and 13.72% in Canada.

The collection of the data by Piketty and his co-authors involves many different sources and the use of many assumptions to piece together the long time series found in his publications and website. The assembly of these data is especially problematic for periods when national statistical agencies did not produce official statistics. In spite of these problems, the information about the strong growth in the share of the top 1% shown in Chart 3.1 has received much publicity and forms the basis for the demand in North America for higher taxes on these high-income earners.

Chart 3.2 shows the share of income earned by the top 1% in Canada that is provided by Statistics Canada and uses a clear and unambiguous data source, the incomes of all tax filers. The top (solid) line in chart 3.2 represents the share of total income (market income

16. The traditional Canadian series shown as a solid line was based on census and other survey data. In 1980 it was supplemented by a new series, which draws on personal income tax returns and is published in the Longitudinal Administrative Database (LAD). This series is shown as a dotted line in the graph. It overlaps the solid line until in 2000 the traditional series was discontinued and the dotted line represents the only information published by Statistics Canada.

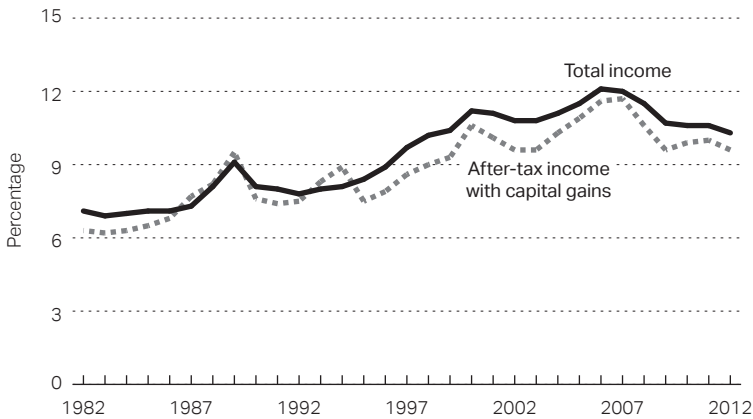
Chart 3.1: Income share (%) of top 1% in Canada and the United States, 1920–2010



Source: The graphs for the two countries were copied from *The World Top Incomes Database* found at <http://topincomes.g-mond.parisschoolofeconomics.eu/>, as of November 3, 2015. This data base is hosted by the Paris School of Economics.

Note: The incomes exclude capital gains and are before taxes.

Chart 3.2: Income share (%) of top 1% in Canada, total and after-tax income, 1982–2012



Source: Statistics Canada, CANSIM table 204-0001.

Note: Based on incomes of all tax filers

plus transfers) while the lower (dotted) line shows after-tax income with capital gains. It is interesting to note that in the years before 1996 the net effect of taxes and capital gains lowered and raised the share of income for limited periods of time, so that over the entire period the effect of the two government policies on the income share of the top 1% was nearly zero. However, after 1996—the year in which Canada adopted policies that reduced the generosity of social programs and the size of the bureaucracy to eliminate a serious fiscal imbalance—the net effect of the two policies was to reduce the share of income earned by the top 1%.

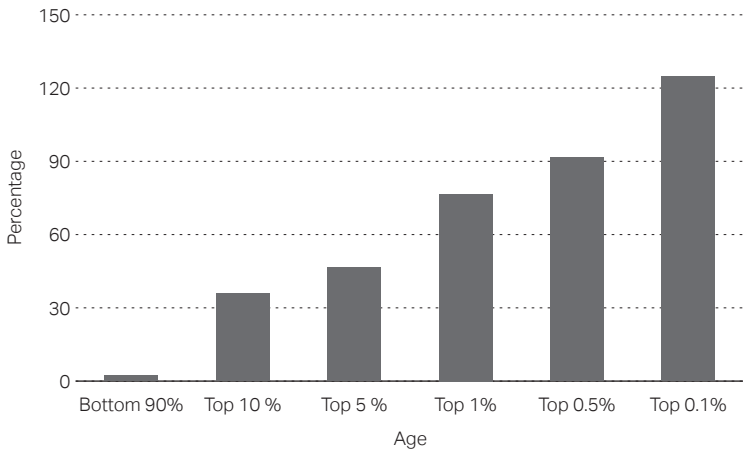
There are some interesting differences between the shares of the top 1% found in the two sources reporting income shares in Canada. Piketty's data show that in 1982 the share was 7.9% while Statistics Canada's data show it to have been 7.1%; over the period from 1982 to 2012, Piketty's data record a maximum gain in the shares of 73% and the Statistics Canada show maximum gains of 70%. These differences are interesting and imply that Piketty's data exaggerate somewhat the levels and gains in the share of incomes by the top 1% since 1982. However, for the analysis of the issues around income redistribution policies, what counts is the substantial increase in the share of income earned by the top 1% in Canada, which is supported by both data sources.

Growth in the income of top groups

One of the developments related to the incomes of the top 1% that led to much public outcry is shown in Chart 3.3. The income gains between 1982 and 2010 were virtually zero for the bottom 90% and 121% for the top 0.1%. The gains by Canadians in the top 10%, 5%, 1% and 0.5% were between 38% and 86%. For many Canadians, even more disturbing than the percentage gains in income shown in chart 3.3 are the gaps in absolute dollar incomes of different percentage groups. Chart 3.4 shows that the gap between the annual incomes of the top 1% and the 90% was \$190,000 in 1982 and \$340,000 in 2010. The gaps between the annual incomes of the top 1% and top 10% were \$110,000 and \$240,000 in first and last year.

The data in these three charts make it easy to understand why recently there has been so much public interest in the distribution of

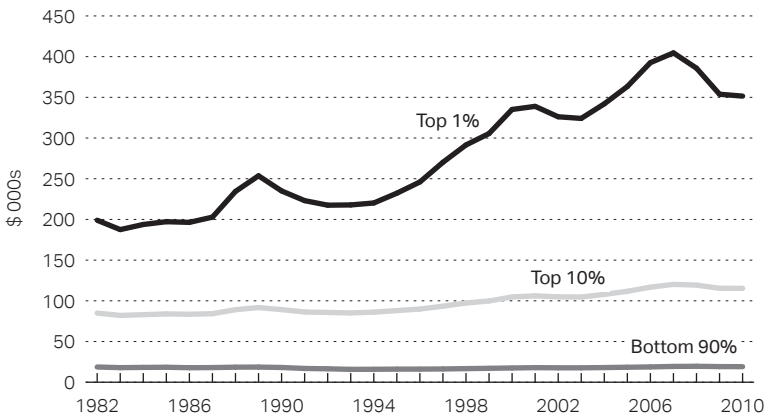
Chart 3.3: Income gains of top earners in Canada, 1982–2010



Source: Paris School of Economics (no date). *The World Top Incomes Database*.

Note: Incomes are in constant 2000 dollars and exclude capital gains.

Chart 3.4: Average annual incomes (\$ 000s) of Canadians, 1982–2010



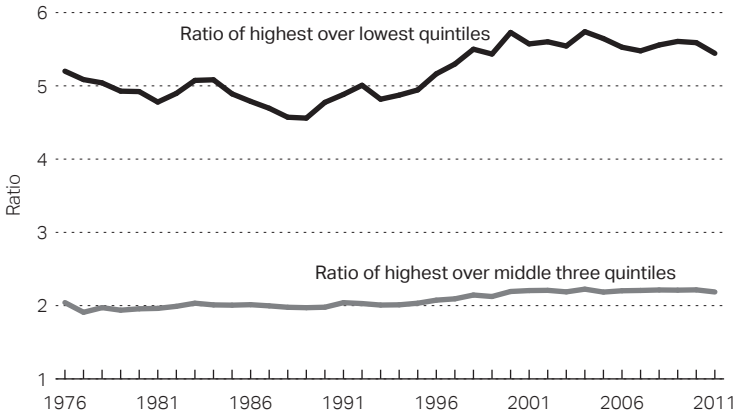
Source: Paris School of Economics (no date). *The World Top Incomes Database*.

income in Canada. However, the preceding chapters of this study already discussed the problems associated with all of these data, namely that the figures are based on the incomes of different Canadians in every year and that the information they convey about inequality is modified considerably by taking account of the mobility of income

earners into and out of the different quintiles. The mobility of the top 1% and other rich in the highest quintiles is substantial and will be discussed later in this chapter.

A further perspective on the relationship between the growth in the incomes of the top 1% and the issue of income equality is found in chart 1.7, reproduced here from the earlier chapter. It shows that the ratio of the highest to the lowest and middle quintiles has risen only moderately since 1986. Since the income data underlying this chart involve the mean incomes of the different quintiles, the fact that the ratios changed so little suggests that the incomes of the top 1% have been a relatively small proportion of the total incomes of the highest quintile.

Chart 1.7: Quintile ratios, family income after taxes, 1976–2011



Source: Statistics Canada, CANSIM table 202-0706; author's calculations.

Facts about the top 1%

Rational public and political discussions about income redistribution policies and the income shares of the top 1% should be based on facts about the levels and sources of their incomes, their numbers, tax payments, and other characteristics. Table 3.1 reveals that, in 2012, it required an income of \$215,700 or more to belong to the top 1% of income earners in Canada. The median and mean incomes of the top 1% were \$290,000 and \$445,200, respectively. There were 261,365 Canadians with incomes in the top 1%. On average, they were 52 years

Table 3.1: Facts about Canada's top 1%

	2008	2009	2010	2011	2012
Threshold value (\$)	202,600	198,000	201,400	209,600	215,700
Median income (\$)	291,000	278,700	283,400	293,300	299,000
Average income (\$)	461,800	424,900	429,600	443,500	445,200
Share of income (%)	11.5	10.7	10.6	10.6	10.3
Share of all Canadian income taxes paid (%)	22.3	21.5	21.2	20.8	20.3
Number of tax filers (persons)	249,755	252,300	254,730	258,465	261,365
Percentage, males	79.7	79.2	79.1	78.9	78.7
Percentage, females	20.3	20.8	20.9	21.1	21.3
Median age (years)	51	51	51	52	52

Source: Statistics Canada, CANSIM table 204-0001.

Notes: Total Income; all dollar values are current; income taxes are federal and provincial or territorial

old. They earned 10.3% of national income and paid 20.3% of all income taxes. About two thirds of the incomes of the top 1% were in the form of wages and salaries.

The developments between 2008 and 2012 revealed some interesting trends about the top 1%. Threshold and median incomes increased but mean incomes decreased while the income share fell from 11.5% to 10.3% and income taxes paid fell from 22.3% to 20.3%. The decrease in mean incomes and taxes paid is likely to have been caused by the “Great Recession”, which had started in 2008 and reduced prosperity for a number of following years.

Personal characteristics of the top earners

Some interesting information about the demographics of the top 1% is presented in table 3.2, using information found in a paper by Fortin and colleagues (2012), which employed Statistic Canada’s Public Use Data from the 2006 census: The top 1% earned more of their income

Table 3.2: Characteristics of Top Income Earners (Top 1%), 2006

	Top 1%	All Individuals
Mean Income	\$452,887	\$36,837
	(Percent)	(Percent)
Share of Employment Income	69.9	82.7
Men	82.7	48.4
Work 50 hours or more	52.2	18.6
Education		
Less than bachelor's degree	41.8	81.0
Bachelor's degree	28.1	12.3
Medicine, dentistry, veterinary	8.4	0.5
Other postgraduate degrees	21.7	6.2
Age groups		
Under 35	4.5	28.8
35 to 64	79	54.5
Over 64	16.5	16.7
Selected Occupations		
Senior management	14.1	0.9
Other management	19.1	6.1
Professional in health	11.6	2.0
Professional in business and finance	7.1	1.8
Selected Industries		
Mining, oil and gas	4.6	1.0
Finance and insurance	10	3.0
Professional, scientific and technical	15.8	4.9

Source: Fortin, Green, Lemieux, Milligan, and Riddell, 2012: 129.

Note: Calculations made by Fortin and colleagues (2012) were based on the public use files of the 2006 census. Sample size is 656,884 individuals aged 15 and above. The 99th percentile of the income distribution is \$230,000. The "Top 1%" includes all individuals earning \$230,000 and more. The "selected" occupations and industries are those with the highest fraction of workers in the Top 1%.

from employment than the rest of Canadians (69.9% compared to 82.7%); over 80% are men; 52.2% work more than 50 hours a week while only 18.6% of all Canadians do.

The data on the educational attainment of the top 1% indicate that university and professional degrees raise by large margins the probability of a Canadian having top 1% income. The data on occupations show that top 1% incomes are earned mainly by managers and professionals in health and business and finance. Selected employers that provide large proportions of top 1% income earners are the mining, oil and gas, finance and insurance and professional, scientific and technical industries.

The incomes of professional athletes and public figures

As a supplement to the information about the occupations of the top 1%, table 3.3 presents information about the earnings of some professional hockey players in Canada. The team selected is the Vancouver Canucks, which in the year 2014/15 had 27 hockey players on the roster. The incomes of all of these athletes were high enough to qualify them easily as members of the 1% club. The lowest paid was Ryan Stanton with a salary of \$550,000.

Data not presented here but readily available on the internet indicate that the Toronto Blue Jays in 2015 had a roster of 21 players, all of whom had salaries in excess of the 1% threshold. Troy Tulowitzki was the highest paid with an annual salary of \$US20 million; Roberto Osuna was at the bottom and earned \$US507,500 (ESPN, 2015). The basketball team, Toronto Raptors, in 2015/16 had 15 players, of whom the highest paid was DeMarre Carroll with a salary of \$US13.5 million; Norman Powell had the lowest pay, earning US\$650,000 (basketball-reference.com, 2015). The Vancouver Whitecaps in 2013 had 21 players, six of whom were paid over \$200,000 a year.

Coaches of these professional sports teams also have incomes above the 1% threshold. Sammy Said (2013) provides a list of the 10 most highly paid coaches in the National Hockey League. At the top is the late Patrick Quinn of the Maple Leafs with a salary of \$1.5 million. Four coaches earn \$1 million or more. The lowest paid among the top ten is Ron Wilson who earned \$750,000. Coaches working in the other professional sports earn similarly high incomes.

Table 3.3: Vancouver Canucks Salaries 2014/15

Daniel Sedin	\$7,000,000	Zack Kassian	\$1,500,000
Henrik Sedin	\$7,000,000	Bo Horvat	\$925,000
Ryan Miller	\$6,000,000	Derek Dorsett	\$2,000,000
Radim Vrbata	\$5,000,000	Jacob Markstrom	\$1,400,000
Alexander Edler	\$4,250,000	Brad Richardson	\$1,150,000
Kevin Bieksa	\$4,000,000	Eddie Lack	\$1,000,000
Alexandre Burrows	\$5,000,000	Ronalds Kenins	\$718,000
Dan Hamhuis	\$4,250,000	Adam Clendening	\$818,000
Chris Higgins	\$2,500,000	Yannick Weber	\$850,000
Jannik Hansen	\$1,500,000	Linden Vey	\$735,000
Luca Sbisa	\$2,900,000	Brandon McMillan	\$625,000
Christopher Tanev	\$2,000,000	Alex Biega	\$600,000
Nick Bonino	\$1,700,000	Ryan Stanton	\$550,000
Shawn Matthias	\$1,850,000		

Source: Sports City, 2015.

Other groups with high incomes

In 2012 a public controversy erupted when the Canadian Broadcasting Corporation refused to publish the salaries it paid to some of its star broadcasters. Instead, it reported that in 2012 730,000 of its employees had annual salaries over \$100,000 (Mcgregor, 2012). It is likely that a large proportion of these 730,000 had incomes above the top 1% threshold of about \$200,000 that year.

The 308 elected members of Canada's Parliament in 2015/16 received a base salary of \$167,400 annually while the base salary of the 105 Senators was \$142,400. Many of these legislators receive additional compensations: for example, cabinet ministers earned an extra \$80,100 (Munroe, 2015a, b). These incomes put all of the legislators above the top 10% threshold and ministers above that for the top 1%. The highest

paid civil servants in the federal and provincial governments receive salaries, pensions, and other forms of compensation that easily exceed these thresholds. Much of this information is publicly available but is too extensive to reproduce here.¹⁷

Canadians with assets greater than a billion dollars attract much attention from the media and advocates for the redistribution of income and wealth. All of them have incomes well above the threshold for the top 1% since one billion dollars of investments yielding 5% generate an annual income of \$50 million. Forbes' list of the world's 1,645 billionaires in 2013 includes 30 Canadians. Their names and industrial interests are shown in table 3.4, which allows insights into the sources of their wealth and incomes. The largest numbers have their holdings in the real estate, retail, and financial services. The rest have them concentrated in a range of industries like oil and gas, entertainment, and e-commerce.

Reality and demons

The information about the characteristics of several representative groups of Canadians making up the top 1% is important because it indicates that most of them appear to have earned their incomes as professionals and entrepreneurs who have sold their services or the goods they have produced to others in free exchange that raised the well-being of the buyers. The process by which Canadians in the top 1% have reached their high incomes is much different from the process that was described by several authors and that has recently helped create a more negative and misleading public perception of high-income Canadians than has existed for a long time.

According to Freeland (2012), the "Plutocrats" (to use the title of her book)¹⁸ of Russia and China used political connections to acquire

17. For example, *Vancouver Sun*, 2015, contains a data base listing the salaries of the 75,000 highest-paid employees of the Government of British Columbia.

18. According to the Merriam-Webster dictionary (<http://www.merriam-webster.com/>), plutocrats are "a group of very rich people who have a lot of power". Closely related to this word and definition is that of oligarchs, who are "a small group of people who control a business or country". The very rich Russians who emerged after the collapse of communism, and the end of central economic planning and public ownership of industry and agriculture are often referred to as "Oligarchs".

Table 3.4: Canadians in Forbes' list of billionaires

#27	David Thomson & family	\$22.6 billion	media
#153	Galen Weston & family	\$8.5 billion	retail
#184	Jim Pattison	\$7.3 billion	diversified
#234	James Irving	\$6 billion	diversified
#256	Arthur Irving	\$5.5 billion	oil
#278	Jacqueline Desmarais & family	\$5.1 billion	financial services
#345	Emanuele (Lino) Saputo	\$4.3 billion	cheese
#388	Bernard (Barry) Sherman	\$3.9 billion	pharmaceuticals
#408	Joseph Tsai	\$3.7 billion	e-commerce
#483	Daryl Katz	\$3.3 billion	pharmacies
#483	Clayton Riddell	\$3.3 billion	oil and gas
#520	David Azrieli & family	\$3.1 billion	shopping malls
#687	David Cheriton	\$2.5 billion	Google
#731	Lawrence Stroll	\$2.4 billion	retail
#764	Robert Miller	\$2.3 billion	retail
#796	Jean Coutu	\$2.2 billion	pharmacies
#796	Chip Wilson	\$2.2 billion	Lululemon
#828	Charles Bronfman	\$2.1 billion	liquor
#828	N. Murray Edwards	\$2.1 billion	oil and gas
#869	Carlo Fidani	\$2 billion	real estate
#869	Guy Laliberte	\$2 billion	Cirque du Soleil
#931	Ronald Southern	\$1.9 billion	structures, utilities
#973	Mitchell Goldhar	\$1.85 billion	real estate
#1036	Alain Bouchard	\$1.75 billion	retail
#1036	Gerald Schwartz	\$1.75 billion	finance
#1092	Stephen Jarislowsky	\$1.6 billion	money management
#1210	Peter Gilgan	\$1.4 billion	homebuilding
#1284	Frank Stronach	\$1.3 billion	auto parts
#1356	Allan Slaight	\$1.25 billion	broadcasting
#1372	Ronald Joyce	\$1.2 billion	restaurants
#1465	Marcel Adams	\$1.1 billion	real estate
#1540	K. Rai Sahi	\$1.05 billion	real estate

Source: Heaven, 2014.

their wealth and income when the governments of these countries privatized enterprises that were previously owned and operated by the state. Their gain was at the expense of the income of the rest of the citizens of their countries. None of these changes in the economic system took place in Canada and therefore no Canadians in the top 1% owe their income to them.

Michael Lewis in *Flash Boys* (2014) and his other best-selling books described the culture of the financial industries in the United States and some other countries and argues that it permitted many of its members to use unethical, ruthless, and often illegal means to gain extraordinary riches without making corresponding real contributions to the efficiency of capital markets and world output. It is possible that some Canadians in the top 1% have earned their incomes through the use of unethical or illegal means. The billionaire Charles Bronfman inherited his fortune from his father Sam Bronfman, who started his industrial empire during the prohibition of the 1920s by illegally exporting liquor to the United States. But the biography of Sam Bronfman by Marrus (1992) indicates that the bulk of his fortune was created by successful entrepreneurial initiatives that increased the sales and profits of his firms after the end of prohibition.

Of course, the analysis of the sources of the high incomes of Canada's top 1% presented above will never convince ideologues of the political left who argue that the rich owe their income and wealth to greed, illegal and unethical practices, unfair government policies created by corrupt politicians, and other economic and social pathologies. However, in evaluating these arguments readers should remember that, in Canada, the media, law enforcement agents, and politicians continuously watch over business practices and are skilled in discovering, punishing, and shaming wrong-doing by professionals and companies. As a result, it may be presumed that in fact nearly all of Canada's top 1% have earned their income and wealth in free markets and through voluntary exchange that have benefited buyers and raised their incomes. The description of the characteristics of these Canadians presented above reinforces this conclusion.

Economic theory and the top 1%

Chart 3.1 (p. 55) shows that the growth in the share of income by the top 1% in Canada started in 1980 after a long period of decline. What caused this increase to start at that time and what forces drove it? This section uses traditional economic theory to provide answers to these questions and then presents some empirical evidence in support of the theory.

Theory

The economic theory explaining the growth in the income of top earners was first developed in the late 19th century through the work and publications of Alfred Marshall (1920), who was one of the best economists of that century. His theory was prompted by the unprecedented growth in the incomes of performers and entrepreneurs that, much as in recent times, had become the subject of wide public discussion. His theory is encapsulated in the following quotation:

[T]he operations in which a man exceptionally favored by genius and good luck can take part, are so extensive as to enable him to amass a large fortune with the rapidity hitherto unknown ... The causes of this change are two: firstly the general growth of wealth, and secondly, the development of new facilities for communication by which men ... are enabled to apply their constructive or speculative genius to undertakings vaster, and extending over a wider area than ever before. (Marshall, 1947: 685).

Sherwin Rosen (1981) and Finis Welch (1999) in widely cited studies used modern analytical tools to elaborate on Marshall's theory and provide empirical evidence to support it.

This theory about the relative growth in the incomes of top earners can be summarized in simple language and with reference to current conditions like this:

- the large increases in income accrue to persons who are especially talented and blessed by luck and, in more recent times, developed their native abilities through high levels of education and training;

- these persons can sell their goods and services at higher prices because buyers have higher incomes and can afford to pay them;
- they can sell their goods and services in markets that have grown in size as a result of the globalization of economic activity made possible by significant technological and institutional innovations.

Empirical evidence—education

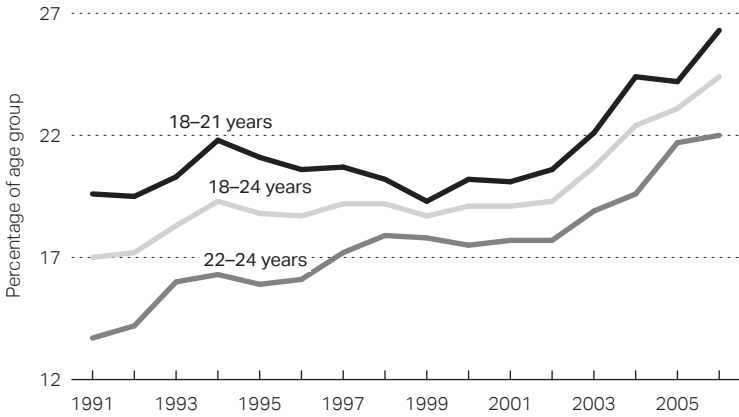
The percentage of Canadian students in different age cohorts who are enrolled in universities has increased substantially in recent years. As chart 3.5 shows, the percentage of Canadians in the age group 18 to 24 enrolled in universities increased from 19.6% to 26.3% percent between 1991 and 2006. Data for other years in Canada and other countries are difficult to obtain, but it is likely that there has been a significant trend of increasing enrolment of young people in institutions of higher learning throughout the world.¹⁹

In recent years, there has also been a large increase in the internationalization of education. According to the Canadian Bureau for International Education (2014), enrolment of international students grew from 159,426 in 2003 to over 290,000 in 2013 and international students make up 8% of the post-secondary student population in Canada. This internationalization is believed to have increased the productivity of Canadians who studied and worked with them in Canada and other countries.

Another recent development in education has been the creation of a large number of universities in Canada and the rest of the world that offer a Master in Business Administration (MBA), which is widely considered to be a most useful qualification for employment by international companies. Many of these institutions offering an MBA have links with universities abroad and offer their students the opportunity

19. Statistics on student enrolment are difficult to summarize and compare internationally since there are many different types and levels of education from Kindergarten to post-secondary and from skills training to purely academic curricula and mixtures of these types. There are also data on the number of foreign students and full-time and part-time students. For some information on these complexities, see Association of Universities and Colleges of Canada, 2011.

Chart 3.5: Participation in university education in Canada, 1991–2006



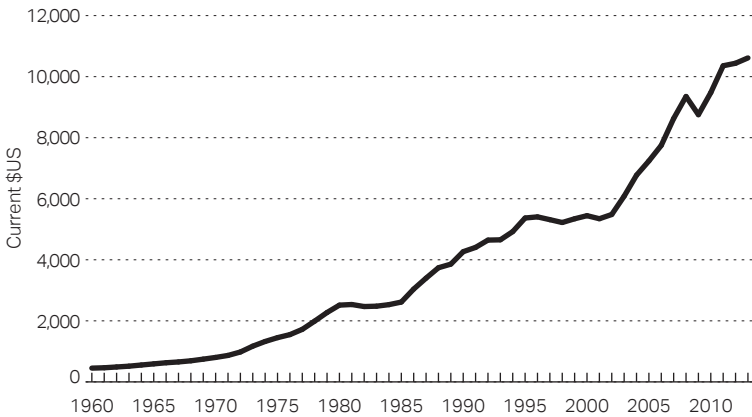
Source: Employment and Social Development Canada, 2015. Calculated by Human Resources and Skills Development Canada (HRSDC) based on special data request from Statistics Canada, Labour Force Survey, 2006.

to attend some of their courses there. No data on the number of universities offering such tertiary degree programs could be found but an internet search and the advertising pages of *The Economist* show that large numbers of them seek to attract students.

One effect of this growth and internationalization of higher education is that it has increased the productivity and pool of skilled professionals in Canada. Of these professionals, many have been employed by large and international corporations who have used the large networks of graduates and information about them to select the very best in the pool.

Incomes of buyers

The employers of these talented professionals can afford to pay higher salaries because they sell their goods and services to customers with ever growing incomes and the ability to pay higher prices. The growth in the incomes of buyers is revealed by chart 3.6, which shows the average per-capita incomes in the world between 1961 and 2012. The data are from the World Bank and are in current dollars. They show that the growth in incomes started to accelerate around the mid-1980s, a date when the share data above showed the accelerated growth in the share of income earned by the top 1%.

Chart 3.6: World per-capita income (current \$US), 1960–2013

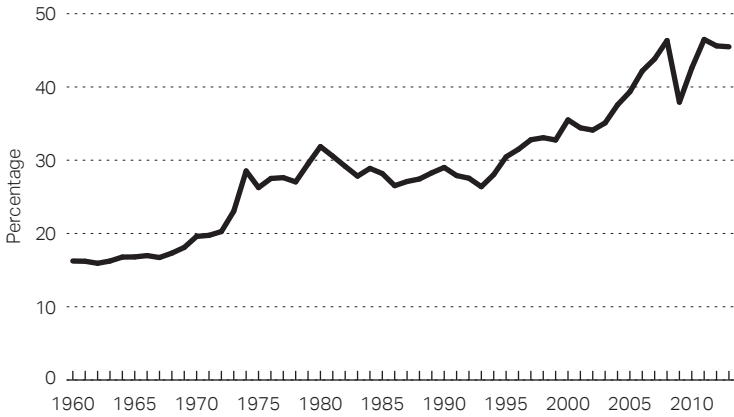
Source: World Bank, 2014a.

Size of the market

The theory explaining the growth in the income of the top 1% postulates that one of the contributing factors is the growth in the number of potential customers or size of the market in which employers sell their goods and services. The growth in the size of the market is caused not only by the growth in average incomes and of the middle class of buyers that can afford the goods and services produced by the employers of the top 1%, it is also caused by the broadening of the market resulting from increased trade among countries, which in recent years has risen more rapidly than the growth in world income.

Chart 3.7 shows that merchandise trade as a percentage of national income among OECD countries increased three-fold between 1960 and 2014 from 15% to 45%, which means that trade has grown three times faster than national income. This increase was especially rapid after 1993 until it was interrupted temporarily by the “Great Recession” in 2008. The growth in trade relative to national incomes was caused by a number of developments, which collectively resulted in what has become known as the globalization of production and trade. One of these developments has been the move towards free trade in most countries of the world that took place under the guidance of GATT and the WTO since the end of the Second World War.

Chart 3.7: Merchandise as percentage of GDP, OECD countries, 1960–2013



Source: World Bank, 2014b.

In more recent times, trade was also increased through the creation of free trade zones like that among the countries of the European Economic Community and among Canada, Mexico, and the United States under the North American Free Trade Agreement (NAFTA). The growth in international trade was also accelerated by the opening up of the previously planned command economies of Russia and China and some heavily regulated economies of countries in Africa and South America.

A final important development stimulating globalization and the widening of markets throughout the world were technological innovations that lowered the cost and raised the quality and reliability of computing. The quotation below, which summarizes more detailed data found in the source, indicates that the rate at which computing costs fell showed a distinct increase over the period after 1985.²⁰

From 1945 to 1985, the cost of computation halved roughly every 17 months. This interval spans several technologies, from vacuum tubes, germanium transistors, discrete silicon transistors and

20. Similar information is found in Pakko, 2002.

ultimately integrated circuits. Since 1985, the cost of computation has continually halved every 10.3 months, and has spanned several computing form-factors, from mainframes to minicomputers to desktop PCs. (Poor, 2008)

The use of computers in myriads of applications lowered the costs of communication, travel, and transportation facilities and allowed the creation of the internet. They also led to an acceleration of scientific research and discovery, which brought large improvements in the quality and variety of metals and chemical products used in the production of airplanes, cars, ships, and other modes of transportation. All of these technological developments increased globalization and per-capita income in the world.

An essential aspect of the growth in globalization and trade has been that it consisted of what is known as intra-industry trade rather than trade in raw materials or highly standardized products. Intra-industry trade involves countries in the production, import, and export of products and services that are close substitutes for each other, such as textiles, cars, machinery, and services like those offered by financial, insurance, and accounting firms. The cost of production of these goods and services was lowered through the development of economies of scale and scope, which in turn contributed to overall economic growth.²¹

From richer and bigger markets to higher incomes

This section presents a narrative on how the incomes of professionals in such fields as accounting, law, finance, marketing, human resources, and information technology was increased through globalization and more international trade. Consider a business professional who has a well-known record of increasing profits of any firm that he joins. The opportunity to do so clearly is a function of the size of the profits of the firm at the time of his employment. Thus, if the profits of a firm are \$20 million when the professional is hired in the expectation of

21. The growth and nature of intra-industry trade was gains in world real income, as was documented and explained by Grubel and Lloyd (1975).

raising them by 10%, profits rise by \$2 million. If the profits are \$200 million at the time of hiring, the gain is \$20 million. Globalization has allowed many firms to grow in size and profits and thus opened the opportunities for professionals to increase the benefits they bring to their employers.

Given competition among firms for the services of such professionals and their ability to pay higher wages, globalization thus explains the recent increases in their pay and a large part of the increase in the share of total income earned by the top 1% since they make up over 40% of the top 1% in Canada. Globalization has increased not only the incomes of business professionals but also those of entrepreneurs, inventors with successful patents, the holders of copy-rights, and professional athletes, entertainers, and artists. The increase in the size of the market in which they sell their goods and services and in the ability of buyers to pay higher prices have made many of these individuals earn incomes above the 1% threshold in Canada.

Summary, conclusions and qualifications

Economic theory produced by Marshall, Rosen, and Welch explains why elites in market economies enjoy income increases that exceed those of the rest of the population. This theory explains that these increases are the result of higher education of top 1% income earners, greater incomes of the buyers of the goods and services they produce, and growth in the size of the market for their output resulting from technological and institutional innovations.

The evidence in support of these theoretical propositions is strong. More people than ever before in Canada and the rest of the world have obtained high levels of education and curricula have become more international. Average per-capita incomes in the world have risen significantly, allowing buyers to pay more for greater varieties of goods produced and marketed around the world by larger and more numerous international corporations. Free-trade agreements, lower trade barriers, and the switch to market economies in Russia and China have increased the size of the markets served by the employers of the elites. All of these developments received much of their impetus from scientific advances and technological innovations in electronics,

materials, chemicals, and engineering that encouraged the globalization of production through lower costs of production, transportation, travel and information flows.

Of course, this theory is not a perfect explanation of conditions in the real world. In any given period of time, some people may be paid top 1% compensation without correspondingly high productivity while others are highly productive but are not paid what they should have earned to join the top 1%. The reason for these conditions is the uncertainty that surrounds all information. Business professional or athlete hired on the basis of his past performance may fail to deliver expected results because their success may have been due to unusually favourable conditions affecting their work with the previous employers. Or it may be that conditions in the new employment are unexpectedly unfavourable for reasons beyond their control and they fail to perform as their past record would have suggested.

It is clear that luck, good or bad, plays an important role in creating conditions that lead to performance by professionals in business and other fields that is above or below what is expected. However, the deviations of pay from performance of some professionals do not mean that the basic explanation of income determination is wrong. Past performance remains the best predictor of future performance and productivity tends to be the best predictor of income.

This conclusion is important because episodal evidence on deviations of pay from productivity often is cited by writers like Freeland and Lewis and in the media as evidence that other forces determine the pay of the rich. Examples of such forces are the ability of professional managers to appoint their friends to boards of directors, who readily give in to suggestions about the proper level of compensation issued by the managers.

The other source of disconnect between performance and income that has nothing to do with the workings of markets is the relations that many of the rich have with politicians. This is alleged to have been especially important in the case of Russia and China as these countries replaced planning with markets and privatized state enterprises. In other cases, the rich are accused of using illegal and unethical business practices. Authors like Piketty also make much of the fact that many

of the rich in Europe and Latin America have inherited their wealth from ancestors who long ago had been awarded land by sovereigns in return for special services in war and government.

In Canada, the media, politicians, and the democratic process provide a good protection against the use the processes described by authors like Freeland, Lewis, and Piketty. These watchdogs of the public interest are rewarded highly by their employers and voters for uncovering foul play at the expense of the general public. Their activities ensure that most top 1% Canadians earn their high through the delivery of outstanding contributions to the output of the country.

What the rich do with their money

The writings by Freeland and Lewis are full of descriptions of ostentatious spending by the rich and top 1% and these have been given much publicity by the media. Through this information, public opinion is made more receptive to recommendations for taxes on the rich who are considered to waste money that would be better used to help the poor. Stories of ostentatious spending involve the ownership of luxury dwellings in major cities and resorts around the globe; the ownership of helicopters, business jets, yachts, and luxury automobiles; spending on expensive personal consumption items like jewelry, clothing, and shoes and attendance at exclusive, costly, and glittering parties and social events.

Piketty wades in on the issue by referring to French history and culture. He argues that in the 18th century, the rich neglected the interest of the masses and were responsible for the social divisions that culminated in the Revolution and the storming of the Bastille on July 14, 1789. The popular TV series, *Downton Abbey*, shows how the landed gentry in Britain in the 19th and part of the 20th century lived in luxury and used little of its income to support charitable causes outside its close circles of family, tenants, and local communities. The landed elites of Latin America are famous for preserving their wealth and keeping low the wages of their workers. These practices have maintained very unequal distributions of income over centuries and continue to exist some extent to this day.

One problem with these narratives about the spending patterns of the rich is that they involve selective examples from countries other

than Canada and the United States. In fact, American and Canadian billionaires have spent in the past, and continue to spend, much of their incomes on charitable causes and dispose of their wealth by creating charitable foundations. For example the infamous 19th-century robber barons in the United States are well known for having done so. Steel baron Andrew Carnegie financed a large network of public, free libraries in the United States and Canada. Stanford University was created by railroad tycoon and politician Leland Stanford in memory of his son, who had died in his youth. The Rockefeller and Ford foundations, which are famous for their support of socially valuable causes, are named after their creators, the oil tycoon John D. Rockefeller and automobile pioneer Henry Ford.

Current US billionaires have similarly endowed large charitable foundations. The Bill and Melinda Gates foundation finances efforts to eradicate major global health problems like Aids and Malaria and to provide basic services like clean water to poor communities in developing countries. Warren Buffet, the world's most successful investor, has contributed a large share of his assets to the Gates foundation and mounted a successful campaign to get other billionaires to do the same.

Canadian billionaires have records similar to those of US billionaires. The food distribution empire created by Galen Weston finances a foundation that supports education, science, and land conservation. British Columbia's billionaire Jimmy Patterson directs large resources from his successful companies into a foundation that has financed large facilities at local hospitals and other facilities serving the public. The companies founded by K.C. Irving in the Atlantic Provinces provide large resources to the Irving Foundation to finance its charitable activities.

The preceding list covers only some of the best-known billionaires. Unfortunately, no systematic information exists to generalize about the rest. Nor are there data about the way in which Canadians who are not billionaires but have top 1% incomes spend their income and wealth on charitable causes. However, the information in this section should be useful in balancing to some extent the negative view on the spending patterns of the rich that authors like Freeland have presented.

Avoiding taxes

Another argument used by proponents for higher taxes on the rich is that they accumulate their wealth and add to it by paying very low taxes on their incomes from work and investment. In 2012, Warren Buffet raised the profile of this argument when he deplored publicly that he paid taxes at a lower rate on his billions of income than his secretary paid on her low salary. A Google search of “Buffet taxes” in early 2015 brought 163,000 references dealing with his assertion. For some reason, the debate over the low taxes paid by the rich sparked by Buffet in the United States did not stir a similarly widespread and heated debate in Canada. Nevertheless, it is useful here to examine the logical, empirical, and political issues raised by Buffet.

It is most important to realize that Buffet’s payment of low income taxes is not the result of his illegal evasion of taxes. His taxation practices are under constant surveillance by the government and he and his companies cannot engage in illegal behaviour without being discovered. The low tax rates are instead due to the legal avoidance of taxes, which uses provisions in the tax code to make deductions from taxable income. For example, the interest paid by some bonds issued by US states and municipalities is not taxable. If Buffet invested all of his wealth in such bonds, he would pay zero income tax on all of his considerable income.²² Other forms of tax avoidance involve contributions to charitable institutions and eligible retirement funds that lead to lower taxable income. One of the most important opportunities for tax avoidance in the United States—available to the rich but also to the rest of Americans—involves the deductibility of mortgage interest from taxable income.

Legislators in Canada and all other Western countries have introduced these opportunities for tax-avoidance in order to funnel subsidies to what they deem to be economically and socially worthy

22. In the United States, the widely publicized practice of a very rich widow who invests all of her financial assets in tax-exempt bonds and escapes all tax obligations led to pressure on Congress to pass a law limiting the amount of income that is non-taxable in this fashion. The present alternative minimum-tax law limits the amount tax filers can deduct from taxable income through mortgage payments, charitable contributions, designated retirement savings plans, and tax-free bond holdings.

causes. They do so because the subsidies do not appear in budgets and their financing does not require politically unpopular tax increases, as do outright cash subsidies. The existence of these so-called tax expenditures results in a serious policy dilemma. In effect, tax-payers who avoid taxes directly support economically or socially desirable causes but they also create what is known as vertical and horizontal inequities in the tax system. Vertical inequity arises when those who earn low incomes pay higher rates than high-income earners, as is true in the case pointed out by Buffett. Horizontal inequity exists when tax-payers with the same level of income pay different rates depending on the extent to which they use tax-deduction opportunities.

The obvious solution to this dilemma and the existence of vertical and horizontal inequity is for governments to end tax subsidies and replace them with cash subsidies for worthy causes, which would then be financed out of general tax revenue. A large economics literature exists showing that such a switch would eliminate the unfair income distribution effects that Buffet lamented (US-CBO, 2013). Unfortunately, politicians have failed to follow this advice because tax subsidies are useful in buying votes and hiding from the public the true level of government intervention in the economy. Recipients of such subsidies like them because it insulates them from the regular popular scrutiny to which cash subsidies are exposed when government budgets are prepared. The recipients, therefore, provide electoral support to politicians who vote for the creation and retention of all tax-subsidies.

US law-makers have reduced the negative political impact from publicity about the use of tax evasion by the rich through the adoption of a minimum tax and through imposing limits on the deductibility of mortgage payments, which in effect limits the gains to taxpayers from the use of deductions. This policy has the political benefit of improving equity without the need to reduce the votes from individual beneficiaries of tax expenditures, even as the total amounts all of them receive is diminished.

For the present purposes of analysis, the discussion in this section implies that, to the extent that Canada's rich pay low income taxes, they are not engaged in illegal or unethical behaviour. These individuals take advantage of the opportunities provided by governments to

do so. In the process, they subsidize efforts to advance projects deemed by governments to be economically or socially useful. Imposing higher taxes on the rich using these opportunities to reduce their income taxes would harm the success of the very projects the government deems to be worthy of subsidies through tax expenditures.

In conclusion, it should be noted that, in spite of the ability of the top 1% to reduce their tax obligations, in 2012 they paid over 20.3% of all income taxes collected by the government of Canada while their share of total income was 10.3%. According to Table 3.1, this relationship between shares of income and taxes paid has been much the same in other recent years.²³

Income Mobility of the Top 1%

Chapter 2 dealt with income mobility of Canadians into and out of quintiles in the distribution. This section provides information about the income mobility of the top 1%. The first row of table 3.5 shows that 72.8% of those who in 2010 had top 1% incomes still had this level of income in 2011. Row two reveals that after five years, only 52% had remained in the top 1% in 2011. The extent of the downward movement of top income earners, however, was quite limited. The last row in the table shows that 80% in the top 1% in 2011 had always been in the top 5% in the preceding five years. The next-to-last row indicates that 96.7% had been in the top 5% at least once during the preceding five years.

The data in table 3.5 suggest that generally income mobility among the top 1% is high but limited in range. Unfortunately, there are no data documenting the mobility of the rich over longer periods and their movement into the full range of lower percentiles.

Mobility among millionaires and top 400

The statistics in table 3.5 provide information that is relatively complex and difficult to summarize, in part because the threshold levels needed for the top 1% and top 5% are changing every year and

23. The comparison of Canadian and US data on this relationship is complicated by the fact that mortgage payments are deductible in the United States but not in Canada.

Table 3.5: Income mobility of top 1% in Canada, current dollars, total Income

	2000	2002	2004	2006	2008	2009	2010	2011	2012
Percentage in the top 1% last year	71.1	72.1	74.2	73.4	72.1	71.3	72.1	72.8	72.4
Percentage in the top 1% five years ago	49.4	51.0	52.5	52.3	52.5	52.7	52.7	52.0	52.1
Percentage in top five percentiles last year	93.9	94.2	94.7	94.0	94.1	94.1	94.1	93.9	93.6
Percentage in top five percentiles five years ago	79.4	82.1	83.9	83.5	83	84.3	84.9	85.3	85.3
Percentage in top five percentiles at least once during the preceding five years	96.5	96.9	97.1	96.6	96.6	96.8	96.9	96.7	96.4
Percentage always in top five percentiles during the preceding five years	74.3	76.7	78.7	78.2	78.4	79.6	80.4	80.0	80.0

Source: Statistics Canada, CANSIM table 204-0001.

for most Canadians are difficult to relate to. However, such problems are avoided by considering the mobility of millionaires, an expression that in common use is virtually synonymous with the “rich”. The data found in table 3.6 show the mobility of US millionaires. There are no analogous data for Canada but, in the light of the similarities of the US and Canadian economies and labour markets they may be considered to be at least indicative of the mobility of Canadian millionaires and rich. This similarity can be seen by considering the data on the mobility of the top 1% in Canada found in table 3.5 and in the United States found in Table A.2.1.²⁴

24. Of those who were in the top 1% in Canada in 2006, 52% were still in that group five years later. In the United States, of those in the top 1% in 1996, 42.6% were still in this group in 2005.

Table 3.6: Income Mobility and the Persistence of Millionaires

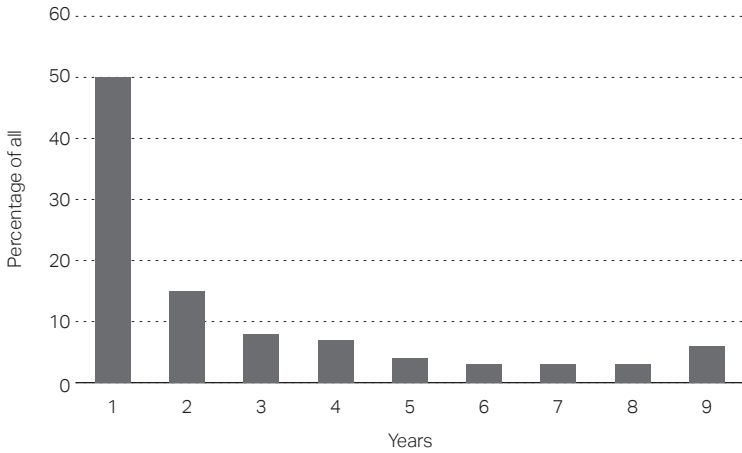
	Number of years									Total
	1	2	3	4	5	6	7	8	9	
Gross income										
Tax returns (000s)	338	102	54	50	29	23	24	17	38	675
Percentage	50	15	8	7	4	3	3	3	6	100
Gross income excluding capital gains										
Tax returns (000s)	175	77	41	38	22	17	17	13	29	431
Percentage	41	18	10	9	5	4	4	3	7	100

Source: Carroll, 2010: 11; computed from the 1999–2007 Internal Revenue Service Statistics of Income (SOI) Individual Tax Panel. Incomes are in 1999 dollars.

The statistics in table 3.6 were compiled by Robert Carroll (2010), a Senior Fellow at the Tax Foundation in Washington, who used a representative sample of individual US tax returns provided by the Internal Revenue Service. The study covers only tax returns of filers who appeared at least once in every year in a period of nine years and had real gross incomes of \$1 million or above.²⁵ Tax returns that showed divorces were excluded.

The last column of the first row of numbers in table 3.6 shows that there were 675,000 American tax-payers whose incomes made them millionaires during at least one year during the period from 1999 to 2007. The important statistics are in the other columns of the first row of data: 338,000 of the total of 675,000 (or 50%) were millionaires for only one year, 102,000 (or 15%) for two years and 38,000 (or 6%) were millionaires for all nine years. The numbers and percentages of millionaires in the other years were much smaller than those for the three years just listed. Chart 3.8 shows this relationship graphically and demonstrates effectively the high mobility of Americans into and out of the millionaires’ club.

25. Current dollar incomes were adjusted for inflation with the base of 100 in 1999. The threshold income in 2007 was \$1.27 million nominal dollars.

Chart 3.8: Income Mobility and the Persistence of Millionaires

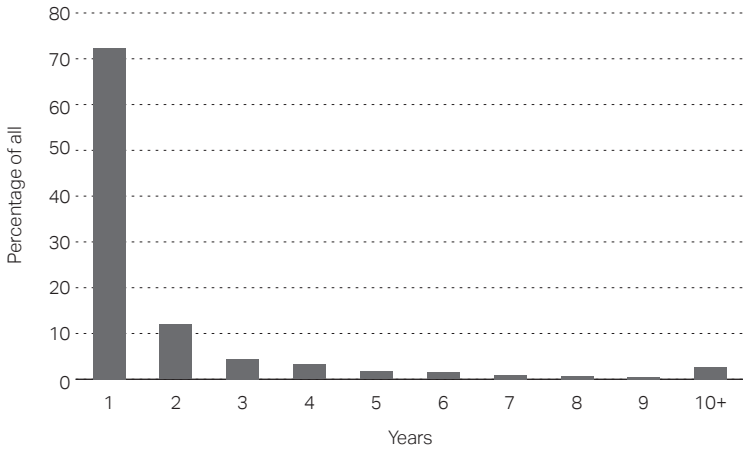
Source: Table 3.6: top panel, line two.

The second panel in table 3.6 presents data on gross income minus capital gains. As might be expected, the number of millionaires is smaller than that for gross income—431,000 rather than 675,000. Important is the fact that the percentage of those who had million-dollar incomes in only one of the nine years was only 41%. Since 55% of millionaires had reported income including capital gains for only one year, it is clear that once-off capital gains contribute much to Americans temporary status as millionaires.

Information of the top 400 US income earners

The US Government Office of Income Studies, drawing on tax files of the Internal Revenue Service for a number of years has tracked every year the 400 filers with the largest gross incomes. The report referenced at the bottom of chart 3.9 shows that there were 4,321 unique filers among the top 400 during the 20 tax years from 1992 to 2012. Of this number, 3,128 (or 72.4%) during this period were among the top 400 in one year only. Chart 3.9 shows that the percentage who appeared in two of the years was 11.9%. The percentage appearing more than once or twice is seen to be much smaller for the larger number of years. Only 2.6% appeared 10 or more times.

Chart 3.9: Frequency of appearing in the top 400 US income tax returns, by Years, 1992–2009



Source: United States, Internal Revenue Service, 2012: table 4.

Note: The top 400 returns on the basis of adjusted gross income (AGI) were selected from the Individual Income Tax Complete Report Files prepared by the Statistics of Income Division of IRS for Tax Years 1992 through 2012.

These statistics reinforce the information about the high income mobility of millionaires found in chart 3.8. Most of the super-rich top 400 tax filers, who in 2012 had an average income of \$335,694, were in this group for only one year. Only a very small proportion had incomes that placed them among the top 400 for 10 or more years. Unfortunately, such statistics for income mobility for top income earners are not available for Canada but, as noted above, given the similarity of the US and Canadian economies and labour market, there is a high probability that income mobility for top income earners in the two countries is very similar.

Summary and conclusions

According to data produced by Piketty and Statistics Canada, the share of national income earned by Canadians in the top 1% of the income distribution rose substantially over the period from 1980 to 2012 while the incomes of the lowest 90% remained unchanged. These results are based on the use of income data, which are collected through annual surveys involving Canadians that have higher or lower incomes at

every point in time. The misleading nature of these data was discussed above. It also applies to the incomes of the top 1%. Statistics on the mobility of this group of income earners are limited but suggest that most of them experience fluctuations in income all the time, some of which lower their incomes to levels below the 1% threshold.

Information about the characteristics of Canadians with top 1% incomes provided in this chapter are useful in countering the images about them created by some authors using mostly episodal accounts of unethical or illegal behaviour and ostentatious and wasteful spending by some prominent super-rich individuals in the world.

The main conclusion drawn from the information about Canadians in the top 1% is that they are highly educated and talented and that they earn their incomes by selling goods and services in competitive markets where they deal with buyers who engage in transactions voluntarily and raise their well-being correspondingly. This fact implies that those who earn high incomes have the right to retain the fruits of their efforts, which they earned by ethically correct and legal behaviour. They also are entitled to retain their incomes on the basis of property rights that have been one of the important foundations of Canada's prosperity and economic growth.

The rapid growth in the incomes of professionals in the top 1% in Canada since the early 1980s is the result of globalization that was stimulated by new technologies, free trade, and the adoption of market economies by countries that had previously embraced planning. This globalization increased the size of the markets and the incomes of the buyers served by Canadian businesses and other professionals, whose productivity and pay rose correspondingly. These developments have been driven by free markets and competition rather than unethical or illegal behaviour.

Chapter 4. Policy Implications

The most important policy implication of the preceding analysis is that the traditional case for income redistribution is weakened considerably by taking account of the existence of income mobility. The clichés based on the traditional measures of income equality are false. It is not true that “the rich are getting richer and the poor are getting poorer”, that many Canadians are “trapped in poverty”, and that the rich are an exclusive club with unchanging membership.

In fact, the overwhelming proportion of individuals and families in Canada enjoy rising incomes after they enter the labour force. The number of permanently poor is overestimated by failing to note that most are poor for limited periods of time, just as many of the rich consist of an ever changing set of Canadians who enjoyed temporary windfalls in income. Nor is the middle class suffering from stagnating incomes. Defined as Canadians with incomes in the middle three quintiles of the distribution, over a recent 19-year period, they enjoyed real increases in income of 52.7% while the rich in the highest quintile gained only 12.4%.

The main practical implication for government policy arising from this study is that Statistics Canada should be required to produce and publish more comprehensive data on income mobility, following individuals and families for longer periods than is the recent practice. These data should be published at the same time as the traditional statistics on the distribution of income. The agency should also discuss what these two measures of income patterns imply for the fairness of the existing distribution of income. Think tanks and the media may

be relied upon to analyze the data and interpretations published by Statistics Canada. The result of these efforts to inform the public will be more fact-based and rational public and political discussions about Canada's income redistribution policies. Some of the topics likely to be discussed have been raised above.

An important topic is that only a small proportion of the poor are in this condition permanently. It is these individuals and families that should be the focus of government assistance programs, not the large majority who are poor only for limited periods of time and have high life-time incomes. Related to this issue are the different needs of Canadians who are permanently poor because of physical and mental handicaps and those who are the so-called working poor. At issue for the former group is mainly the level of assistance while for the second group it is the threshold of the low life-time income at which they become eligible for benefits.

A second topic is the relative importance assigned by Canadians to policies that equalize incomes at all times (as is done presently) and policies that maintain or increase income mobility. Income mobility is a basic characteristic of life in Canada that is valued in its own right. It is also a reflection of economic and personal freedoms, which allow individuals and families to determine what amount of education, savings, and work they like to engage in to raise their life-time incomes. The life cycle also plays a role in the average productivity and incomes of Canadians through its effect on workers' incentives to improve their skills and productivity. Matching productivity and wages are essential to the efficient functioning of Canada's labour market and economy.

Related to this issue is the conflict between two definitions of fairness that presently are not part of the public discussion. Higher taxes on the rich and greater subsidies to the poor improve fairness according to the conventional definition. However, as the analysis above implies, the higher taxes for the most part reduce the disposable income of Canadians at an age when they face the peak in their financial obligations resulting from the cost of raising children, making mortgage payments, saving for retirement, and looking after needy parents. At the same time, the increased subsidies go mainly to young Canadians

who have none of the family and other financial obligations faced by the older tax payers and who are poor only temporarily and expect higher incomes later in life. Therefore, policies that improve fairness of the distribution of income defined conventionally reduce fairness in the intergenerational distribution of income.

Finally, Canadians need to be informed about the characteristics of Canadians in the top 1% of income earners and even the highest decile or quintile. There are too many misleading narratives about them that have been created by populist writers using too much episodal evidence. Only Statistics Canada has the resources to produce systematic and unbiased information about the rich, who they are, how they earn their income, and how they use it. Think tanks and the media have to do their job in making this information available to Canadians, whose views and votes determine the fairness of income distribution before and after it has been affected by government policies.

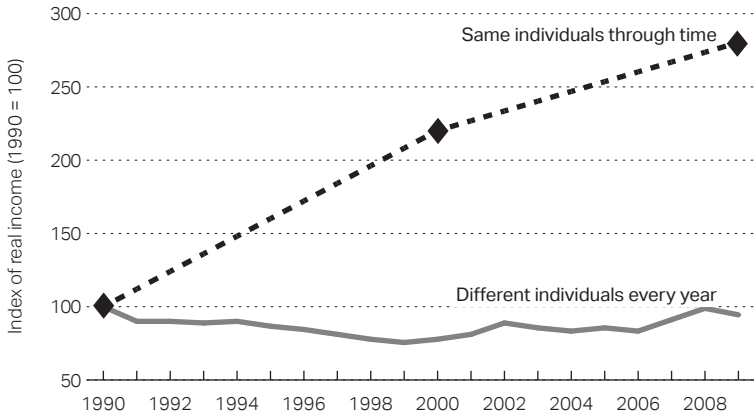
Proposed presentation of information

This section gives detailed suggestions on how Statistics Canada might present and discuss the different information about income distribution obtained through the conventional surveys and the tracing of incomes of the same individuals and families through time. Charts 4.1 to 4.3 are samples of the way these statistics can be presented. The data trace the real incomes of different quintiles using the year 1990 as a base of 100²⁶ and, in one graph, show the levels according to the two metrics.

Chart 4.1 is relevant to the cliché that the poor are trapped in poverty. While the traditional metric shows that their real incomes have been stagnant over the period from 1990 to 2019, the alternative metric shows that the same individual Canadians who were poor in 1990 had income gains of 183% over the same period.

26. The use of this statistical approach is necessary because the annual census data are available for incomes adjusted for 2011 prices while the other data tracing individuals are adjusted for 2009 prices. Thus, while both series show real incomes, levels in 1990 are not comparable but rates of growth after the base year 1990 can be compared legitimately.

Chart 4.1: Real income of individuals in the lowest quintile (1990 = 100), 1990–2009



Sources: Chart 1.5; table 2.7; author's calculations.

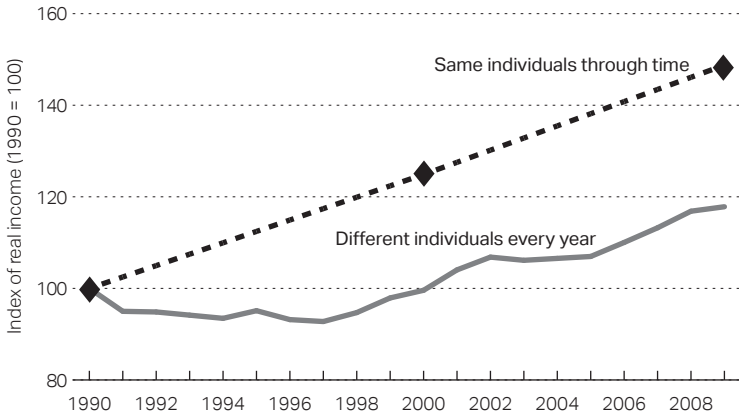
Note: The data for income through time are available only for the years 1990, 2000, and 2009. The years between are linear extrapolations between these three years.

Chart 4.2 shows analogous developments for the so-called middle class, defined here as Canadians whose incomes place them in the middle three quintiles of the distribution. While the traditional data show an increase of nearly 20%, the alternative metric shows gains of about 150%.

Chart 4.3 is of particular relevance to recent debates over the need for income-redistribution policies. It shows that the highest quintile of Canadians had income gains of 25% while the data on the same individuals' gains show them to be *less*, only 18%.

Chart 4.4 presents an alternative way of reporting the ratio of the average incomes of the highest over the lowest quintiles, which is the key statistic used by advocates for more income redistribution policies. The top line of that chart shows the ratio using average incomes derived from conventional, annual surveys. It shows that the ratio was 6.5 in 1990, rose to a peak of 8.8 in 1999, which implies a 35% increase in inequality and which provided the main stimulus for the vocal demands for more redistribution policies. The chart also shows that the ratio remained virtually constant at an average of 8.5 over the

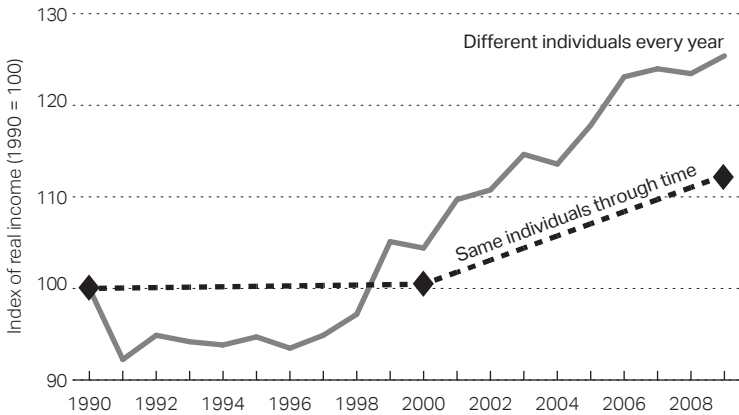
Chart 4.2: Real income of individuals in the middle three quintiles (1990 = 100), 1990–2009



Sources: Chart 1.5; table 2.7; author's calculations.

Note: The data for income through time are available only for the years 1990, 2000, and 2009. The years between are linear extrapolations between these three years.

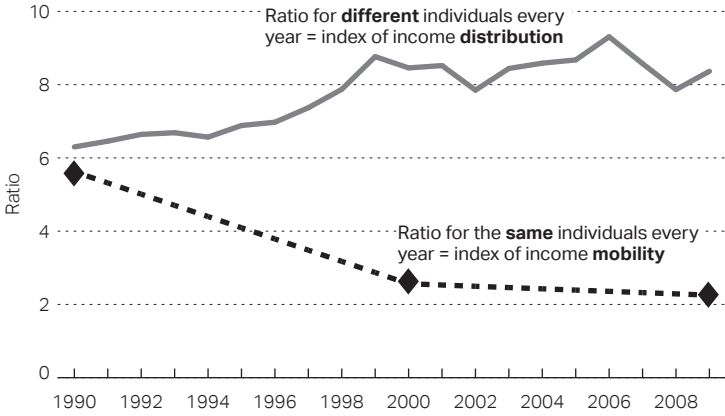
Chart 4.3: Real income of individuals in the highest quintile (1990 = 100), 1990–2009



Sources: Chart 1.5; table 2.7; author's calculations.

Note: The data for income through time are available only for the years 1990, 2000, and 2009. The years between are linear extrapolations between these three years.

Chart 4.4: Ratio of total income after taxes of highest and lowest quintiles, 1990–2009



Source: for income distribution: Statistics Canada, CANSIM table 202-0706; for income mobility: table 2.7.

Notes: Individuals' total income after taxes for both lines. The bottom line is based on the linear extrapolation of years 1990, 2000, and 2009, the only years for which data are available. The two ratios should be identical in 1990. The small difference shown is due to the use of different data bases by the government responsible for their publication, in particular the base years used for the calculation of real income (see notes to table 4.1). This difference has no significant impact on the basic finding about the great differences in the development of these ratios through time.

following 10 years.²⁷ The bottom line in chart 4.4 shows the ratio of the average incomes of the highest over the lowest quintile for the same individuals every year.²⁸ The ratio fell from 5.6 in 1990 to 2.5 in 2009, which implies a decrease of inequality by nearly one half.

Benefits of international comparisons

One comparatively less important practical policy implication of the preceding analysis is that efforts should be made to encourage the creation of income mobility statistics in other countries to allow comparisons to be made of the levels of income mobility in different countries. These data can be used to study relationships between mobility and economic and social outcomes in different countries, much as has

27. 2009 was the last year for which the data on income mobility are available.

28. Unfortunately, these data are available only for years 1990, 2000 and 2009 so that the lines between these data points are linear extrapolations.

been done with data on economic freedom (Hall and Lawson, 2014). They could also be used to examine what role institutions and laws play in the level of income mobility (see Grubel, 2015), pointing to political movements and economic developments that change them. Rankings of countries according to their level of income mobility could influence discussions in different countries about the need for policies to increase mobility, just as rankings of countries according to their levels of economic freedom have had such an effect on domestic policies.

An effort to get other countries to collect and publish statistics on income mobility could draw on the relationship among the think tanks around the world that are co-publishers of the Fraser Institute's annual report, *Economic Freedom of the World*. This publication has had significant influence on academic research and public opinion in many countries. An initial international conference could be held to discuss the many statistical and practical issues surrounding the production of data on income mobility, such as standardization of the methods used to collect and present data to promote international comparisons and the ranking of countries. Annual meetings could be used to ensure the continuous production of, and improvements in, the data that are published annually, which helped make *Economic Freedom of the World* widely known among the public, politicians, and academics.

Appendix 4A: The Evolution of Motives for Income Redistribution Policies and the Impact of Information on Income Mobility

This appendix discusses the evolution of Canada's treatment of the needy from the early times when it was carried out by families and neighbours to the present when it is part of the welfare state, which uses progressive income taxes on the rich to both finance support for the needy and equalize incomes. This history is important for the discussion of present and proposed income redistribution policies that arises from the existence of income mobility and the analysis presented in this study.

Early ways of caring for the needy

Human beings have always assisted the needy in their midst. In Canada, during colonial times when most people lived in rural areas, assistance was provided almost exclusively by families and neighbours. Later, as the population living in towns and cities grew, the assistance by families was supplemented by workers' societies and other private fraternal and religious organizations. During the twentieth century, when society became more complex and the impact of business cycles was felt by growing segments of the population, the primary responsibility for assisting the needy was increasingly taken on by governments and resulted in the welfare state that exists in Canada in the twenty-first century.

The welfare state consists of programs administered at different government levels. Provincial and local governments operate welfare programs, which provide financial and other support to all those who are unable to afford a socially acceptable minimum standard of living. Provincial governments, with the financial assistance of the federal government, provide medical care to all who need it. The federal government pays pensions under the Old Age Security (OAS) program to all retired Canadians but claws it back from tax filers with incomes

above a certain threshold. The Guaranteed Income Supplement (GIS) is paid to Canadians whose income from other sources is deemed insufficient. Provincial governments provide free education to most Canadian children through high school (in some Western provinces privately financed schools offer an alternative). The essential character of these assistance programs is that they are free to all residents and that they are financed out of general tax revenue.²⁹

The welfare state also operates two important paternalistic programs that force Canadians to contribute a specific percentage of their earnings to funds operated by the federal government. The Employment Insurance system draws on these funds to pay unemployed workers for limited lengths of time, pays benefits to sick workers, and finances paternity and maternity leaves. The Canada Pension Plan makes monthly pension payments to retired workers.

These two programs were designed to be self-financing through what is essentially a state-sponsored system of insurance. Canadians on average receive benefits equal to the value of their contribution. In the case of the employment insurance system, the unemployed indirectly receive payments from the employed. In the case of the pension system, Canadians living longer than the average receive payments financed indirectly by those who live less than the average length of time though, when the pension system was first created, there were transfers from the employed to retired workers who had not made any payments into the system.

In its early stages the welfare state's universal benefits were financed by taxes that were roughly proportional to income, such as tariffs and customs, real estate levies, and natural resource royalties so that the tax system did not add to the income equalization effect resulting from the spending on the needy. However, in 1917 the federal government introduced an income tax on individuals and corporations (Pontifex, 1918). Under this regime, tax rates were an increasing function of income. For example, single individuals with incomes

29. Except for some provincial medical programs that are financed at least in part by special tax premiums.

below \$2,000 paid no taxes. An income of \$2,000 was taxed at one percent. Individuals with an income of \$100,000 paid a marginal rate of 14.82%. The progressivity of the personal income tax has been a feature of the Canadian tax system since its inception.

The politics of redistribution

The level of social spending and the progressivity of the income tax have always been the subject of public discussion and political lobbying. The ideal for some is the perfect equality of income, an outcome that is inspired by Communist ideals of perfect equality achieved by aggressive government activism. For others the ideal is the absence of all redistribution policies by government. The advocates of such policies tend to be inspired by Libertarian principles formulated by Ayn Rand in *Atlas Shrugged*, which consider ideal the distribution of income resulting from individual efforts in free markets.

The views of most Canadians on the ideal distribution of income lie between these two extremes. This majority is motivated less by views about ideal worlds but by considerations of the two basic effects that benefits and taxation have on behaviour. Benefits reduce efforts by the needy to escape their conditions while high taxes on the rich reduce their incentives to work, invest and, take risks and, therefore, bring about a slower rate of economic growth for the entire economy, taxation, and the funds available for the provision of government benefits, including subsidies to the poor.

The actual effects of the welfare state's policies on the distribution of income in recent years are documented in the first two chapters of this study. They are substantial and are the outcome of the democratic political process, which sees political parties appeal to voters through election platforms that promise different redistribution policies. It is reasonable to assume that the public elects the politicians whose promised redistribution policies match their preferences and that, therefore, the existing distribution of income reflects the public consensus and will of the majority of Canadians at any given time. This consensus is subject to constant challenge as advocates for more or less income redistribution use new arguments and empirical evidence on current income distribution patterns in Canada and the rest of the

world. As these arguments are discussed by the public and enter the election platform of political parties, the results of future elections can lead to changes in existing redistribution policies.

Recent, new arguments for redistribution

The argument for more generous assistance to the needy in recent years was strengthened by media reports of the growing number of homeless people and their plight. The increase in the time required to receive certain types of medical treatment led to the demand for more spending on health care. Forecasts of the adequacy of retirement incomes in the future induced calls for the expansion of the existing public pension system. Since longevity is an increasing function of income, it has been argued that by raising the incomes of the poor to that of the rich, 40,000 lives could be saved annually in Canada.³⁰

Demands for higher taxes on the rich increased after the publication of data showing that since about 1980 the income share of the super-rich increased substantially while the incomes of the middle class stagnated. This information led to public demonstrations under the banner “Occupy Wall Street” and “We Are the One Percent” that spread throughout the Western world, including Canada.

A subtle but important change has taken place over time about the reasons for higher taxes on the rich. During the early history of income taxation, progressive income tax rates were seen as a fair way for the rich to share in the cost of financing assistance to the needy based on the principle of “ability to pay”. Later, the progressivity of income-tax rates was justified by appeals to what is popularly known as “the tall poppy syndrome”:

a pejorative term primarily used in the United Kingdom, Australia, New Zealand, and other Anglosphere nations to describe a social phenomenon in which people of genuine merit are resented, attacked, cut down, or criticised because their talents or

30. See Raphael and Bryant, 2014 for this argument and Taylor (2015) for a critical assessment of it.

achievements elevate them above or distinguish them from their peers. This is similar to begrudgery, the resentment or envy of the success of a peer. (*Wikipedia*, 2015b)

This syndrome underlies the popularity and use of extra taxes on people with high achievements on the grounds that this policy improves the equity of the distribution of income just like the cutting of tall poppies is considered to make a field more attractive.

A new, powerful argument in favour of higher taxes on the rich was presented by Piketty (2014). He argued that inequality in 18th-century France led to the socially and economically disruptive French Revolution and that inequality in the United States, Canada, and many European countries has reached that same critical level. He hinted darkly that these countries could face challenges to their societies and economies similar to those in 18th-century France unless governments made incomes more equal.

It is impossible to know with any degree of certainty what motivates individuals to recommend higher taxes on the rich, but it is possible to speculate that envy plays an important role. Holloway (2014) discussing envy as a motivator for human action noted: “Envy is the meanest sin in the book, which is why few people ever own up to it. François de La Rochefoucauld captures its joyless secrecy in 1665: ‘We often pride ourselves on even the most criminal passions, but envy is a timid and shame-faced passion we never dare acknowledge.’” For this reason, arguments in favour of higher taxes on the rich tend to be based on the alleged need to create a fairer society, to prevent revolutions, and bring other often ephemeral benefits.³¹

31. I have had many discussions about income equality and taxation with professorial colleagues at the universities at which I was employed. Most of these professors believed that government should reduce inequality by taxing away the incomes of the rich who had incomes above a certain level. Their preferred justification for this policy was that no one needed incomes above that level to live a happy and satisfying life. When asked to indicate the level of income at which individuals reach this condition of bliss, they usually suggested an amount that was slightly above the salaries the university paid them. Instead of admitting that their answer was driven by envy, they chose to justify their recommendation by reference to their own judgment of what income others need to be happy.

Canadian culture provides powerful obstacles to the ability of redistributionists to influence voters to cast their ballots for politicians with greater redistributionist agendas. One of the elements of Canadian culture working in this fashion is a strong belief in the merit of freedom, which has a value of its own but also provides incentives to work, invest, and take risks that made Canada into one of the richest countries in the world. Income taxes reduce these freedoms and lead to lower incomes through their negative effects on economic incentives. A second important element of Canadian culture is a strong belief in the merit of self-reliance and hard work in living a fulfilling life. Incentives to escape personal misfortunes are believed to be reduced by government support, which risks the creation of dependency and cycles of poverty. Assistance to the needy must be balanced carefully between providing relief from suffering and creating these detrimental outcomes.

Public views on a fair distribution of income and cultural values are fluid and changeable. These views are influenced by new information about the effects of taxation and welfare payments, about the magnitude of existing levels of income inequality, and about the validity of slogans like “the rich are getting richer and the poor are getting poorer”, “poverty traps”, and the rich gaining at the expense of the middle class.

If history is any guide to the future, the evolution of public views about the fairness of the distribution of income and the need for government policies may be expected to be influenced by the information about income mobility presented in this study. At the very least, this information will help to make public views about income distribution issues more evidence-based and rational.

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