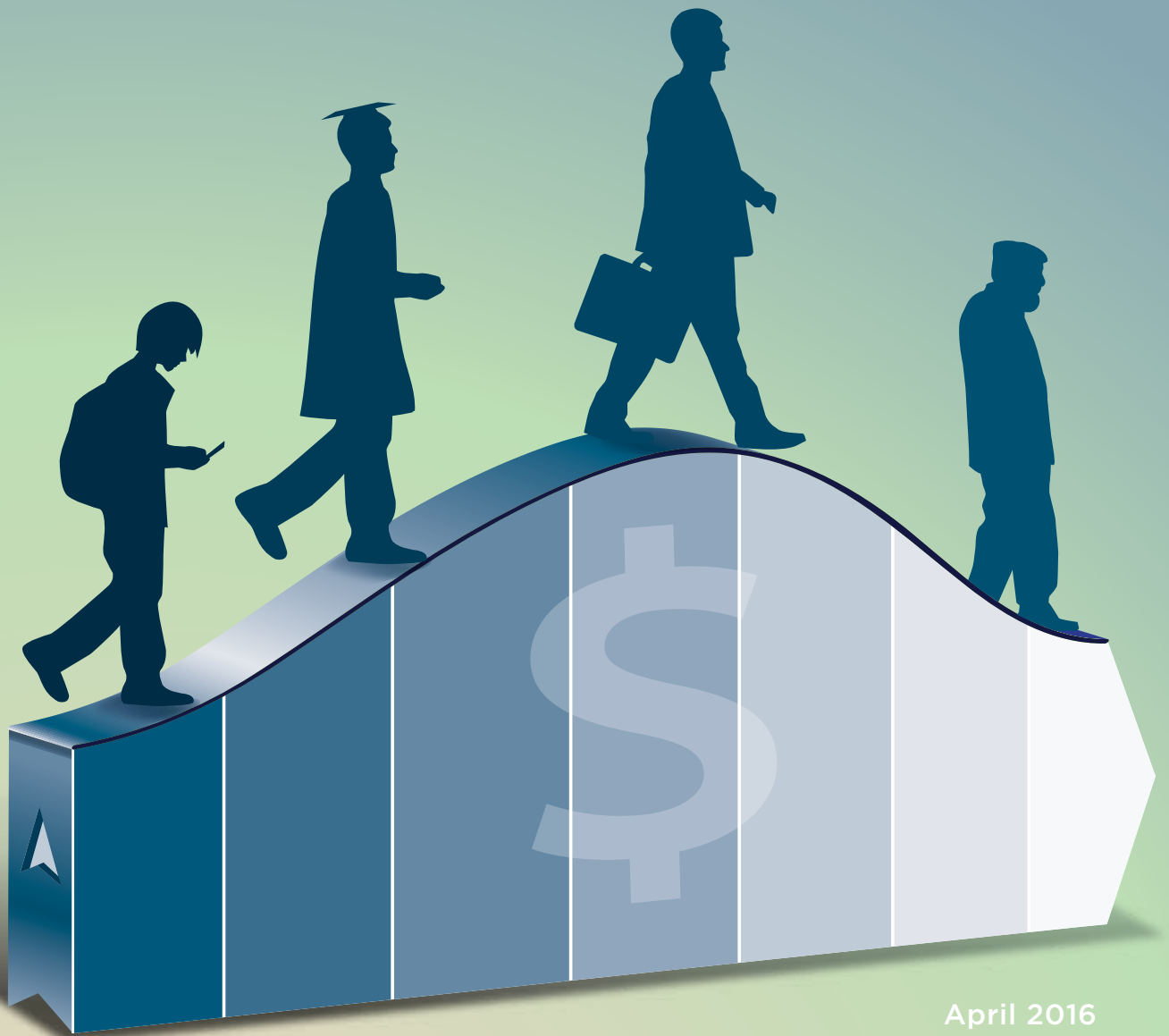


Measuring Income Mobility in Canada, 2016

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April 2016



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Executive Summary

Too often, an underlying assumption in the income inequality debate is that low- and high-income Canadians are the same people year in and year out. In reality, however, Canadians are not permanently stuck in certain income groups. Over the course of their lives, the overwhelming majority move up and down the income ladder.

Fluctuation in our income is a part of the natural cycle of our lives. People typically start off with relatively low income early on when they are young, new to the workforce, and lack work and life experience. Once they acquire education, job-related skills, and experience, their income tends to increase until it peaks in middle age and then drops again as they retire (income may fall, perhaps temporarily, if someone exits the workforce or changes jobs).

Using data obtained from Statistics Canada, this study tracks nearly 1 million Canadians starting in 1993 to measure how their income changes after five years (1993-1998), ten years (1993-2003), and 19 years (1993-2012).

The people covered in the study were divided into five groups based on their initial income (defined as wages and salaries before taxes). The groups are referred to as: the bottom 20% (the lowest income group), the second, third, fourth, and the top 20% (the highest income group). If someone starts in the lowest income group in one year, but moves to a higher group after several years, he or she has experienced upward relative income mobility. Conversely, if someone ends up in a lower income group than the one they started in, he or she has experienced downward relative mobility.

The study finds considerable upward relative mobility over all time periods, particularly for the bottom 20%. In just five years, 79% of Canadians who started in the bottom 20% in 1993 had moved to a higher income group by 1998. After 10 years (1993 to 2003), 88% in the lowest income group moved up at least one income group. The 19-year period (1993 to 2012) similarly had nearly nine of every 10 individuals (89%) in the lowest income group moving up. The results show being in the lowest income group is generally a temporary experience and that upward mobility occurs fairly quickly in one's life.

The results also show that many of those initially in the bottom 20% climbed high up the income ladder reaching the top income groups. Remarkably, nearly one in four (24%) of the bottom 20% in 1993 had reached the top 20% by 2012, and nearly half (46%) ended up in the top two income groups.

Some Canadians also moved down the income ladder over time, particularly those who were initially in the top 20%. Specifically, 35% of individuals in the top 20% in 1993 moved down at least one income group by 2012.

The study also examines absolute mobility, which is the change in average income of the same people over time (after accounting for inflation). In 1993, the average income earned through wages and salaries of Canadians in the bottom 20% was \$5,800. However, the average income of those same individuals increased dramatically to \$51,100 by 2012 (all income in 2012 dollars). The \$45,300 increase in average income translates into an impressive 781% gain.

By comparison, those that began the 19-year period in the top 20% had an average income of \$82,600 in 1993, which increased to \$106,100 by 2012. That is an increase of \$23,500 or just 28%. In absolute terms, individuals in the bottom 20% in 1993 experienced by far the largest income gains of any group.

Another telling figure emerges from the data: in 1993, the average income of individuals in the top 20% was 14 times greater than those in the bottom 20%. By 2012, those who were in the top 20% in 1993 now had an average income that was only twice as high as those who were initially in the bottom 20% in 1993. In other words, in a comparison of income of the same group of people over time, income inequality declined significantly. This is because people's incomes were mobile—some moved up while others moved down.

This study provides compelling evidence that the rich and poor do not remain stuck in their respective income groups year after year. In any measure of income inequality, it is misleading to rely solely on comparisons of “snapshots” of the income distribution at any two points in time because doing so does not capture the fact that Canadians are mobile.

Introduction

In recent years, the issue of income inequality and its implications for public policy have received renewed attention in Canada and internationally. Unfortunately, too many observers and participants in the debate have relied on piecemeal facts and faulty assumptions to support their positions. Doing so has led to a misunderstanding of a very complex issue. [1]

One assumption frequently underlying the debate about income inequality is that people's economic positions are fixed. That is, it is assumed that Canadians who have low incomes today will have low incomes tomorrow. (Similar assumptions are made about Canadians with higher incomes). Nothing could be further from the truth. In reality, Canadians with low or high incomes in one year are often not in that same income group in subsequent years. Thus, those who are experiencing low income today are not necessarily those who will experience it tomorrow.

This report tells a powerful story. [2] Contrary to the perception proclaimed by a number of prominent voices in the income-inequality debate, Canadians are not permanently stuck in the same income groups year after year. We are fortunate to live in a dynamic society where the majority of us experience significant upward—and downward—income mobility over the course of our lives.

The evidence in this report comes from a special data request made to Statistics Canada. This evidence should help everyone gain a better and more accurate understanding of income mobility in Canada. Importantly, the report is only a starting point in the research on income mobility, in that it helps to ensure Canadians are aware of the existence and extent of income mobility. Future research may focus on what propels some Canadians to be more mobile than others, though uncovering these drivers is beyond the scope of this report.

Organization of the study

This report consists of four sections and three appendices. Section 1 defines income mobility and explains why mobility is important to any debate about income inequality. Section 2 reviews the existing literature that has empirically

[1] See Clemens (2012) for an excellent discussion of the many complex issues related to income inequality.

[2] This report is an update to Lammam, Karabegović, and Veldhuis, 2012.

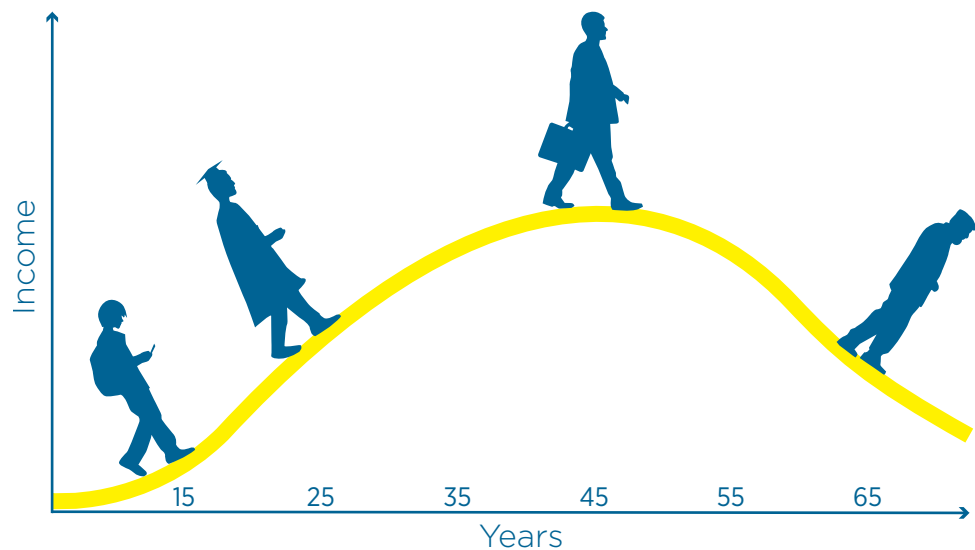
examined income mobility in Canada. Section 3 presents new evidence on relative income mobility in Canada over three periods: 1993–1998 (five years), 1993–2003 (10 years), and 1993–2012 (19 years). Section 4 presents evidence on absolute income mobility for the 19-year period. The final section concludes and summarizes the study’s findings. There are three appendices with additional details about the data used in this report.

1 What Is Income Mobility and Why Is It Important?

Defining income mobility

The concept behind income mobility is that people’s incomes change over the course of their lives. [3] The typical life cycle of income is such that most individuals start with a relatively low income early in life because they are young, new to the workforce, and lack work and life experience (figure 1). Once they have acquired education, job-related skills, and experience, their income typically increases until it peaks in middle age (the prime earning years), and then drops again after they retire (income may fall, perhaps temporarily, if someone exits the workforce or changes jobs).

Figure 1: Typical life cycle of income



[3] A related concept is the “permanent income hypothesis” proposed by the eminent economist Milton Friedman (Friedman, 1957). The fundamental insight is people change their consumption patterns in response to permanent changes in income, not temporary changes, where their permanent income is based on what they expect to earn over their life-cycle. An important implication is people will generally smooth their consumption patterns despite fluctuations in income over the life cycle. They may save during unusual periods of high income and draw upon savings or borrow during unusual periods of low income.

The life cycle of income is a reflection of human capital theory, which says human capital is the stock of competencies and knowledge embodied in one's labour-producing capability. [4] Investment in formal education and skills training as well as on-the-job experience typically increase one's human capital, leading to greater working efficiency and productivity. Ultimately, a more productive worker is able to command a higher wage, meaning a connection exists between one's development of human capital and the capacity to earn income.

An insight from human capital theory is that people make most of their investments in education and skills training during their younger years, which explains why earnings often rise quickly early on in life. [5] However, as people age, their human capital investments decline and, as a result, their earnings continue to rise but at a decreasing rate until they eventually fall. The theory suggests, therefore, that upward income mobility is generally greater for younger individuals than those who are at or near their peak earning years.

Measuring income mobility

Income mobility is measured using statistical databases that regularly follow and record income data for a group of individuals over some period of time. These data allow us to analyze how the incomes of these individuals change over time. In other words, the data enable us to measure the extent to which individuals move up and down the income ladder.

Here's how a typical database is assembled: a statistical authority such as Statistics Canada first identifies a group of individuals. In addition to income, the authority records an assortment of statistics for all individuals in the group at various points in time. [6] For example, the statistical authority identifies the group based on particular characteristics in some year, say 1993, and at regular intervals (perhaps every year or every couple of years) checks in with members of the group to assess changes in income and other relevant statistics. The income data can be collected either through surveys or from the income tax returns of the group's members.

[4] See Mincer, 1958; Becker, 1964; and Ben-Porath, 1967 for seminal research on human capital.

[5] See Polachek, 2007, for an overview of the insights from human capital theory.

[6] Statistics Canada has two databases that can be used to measure income mobility: the Survey of Labour and Income Dynamics (SLID) and the Longitudinal Administrative Databank (LAD). LAD, which is based on data from income-tax returns, has the advantage of a larger sample size (20% of T1 tax returns) and the ability to follow individuals over a longer period. SLID is based on survey data rather than administrative tax data and can only track income mobility over a five-year period. However, SLID was terminated as of 2013.

Income mobility can be measured both in absolute and relative terms. Absolute income mobility simply measures the actual change in an individual's income after accounting for inflation, regardless of their relative standing within a broader group. Relative income mobility measures income changes compared with other members in a group. It is measured by dividing the broader group into smaller groups according to their initial income and examining the extent to which individuals move up, down, or stay within these groups over a specific time. Someone who starts in the lowest income group in one period but moves to a higher group over time has experienced greater relative income mobility. [7]

Why income mobility is important

There can be no meaningful discussion about income inequality in Canada without considering income mobility. Unfortunately, many researchers often neglect income mobility and consequently their analysis of income inequality is incomplete and misleading. When they examine income inequality, researchers may calculate the share of national income earned by the “richest 20 percent” and the “poorest 20 percent” of Canadians, and observe how the share for each group changes over time. [8] However, these year-to-year comparisons compare snapshots of the income distribution at specific

[7] There are drawbacks when measuring relative income mobility. Individuals may experience no relative income mobility even though they have increased their absolute income mobility. For instance, if someone moved from the bottom to the top of a given income group, they would have experienced upward absolute mobility but not relative mobility. Alternatively, if someone merely crossed one dollar over their income group threshold, they would be counted as moving up, even if by a very small amount. In addition, the extent of relative mobility can be influenced by how the income thresholds are determined—and specifically whether the groupings are quintiles, deciles, or some other categorization. Finally, if income mobility is measured at two points in time with several years in between, the terminal year may not reflect what happened between the points when income mobility is measured. For instance, someone could have moved to a higher income group and then fallen to a lower income group but the analysis would not capture the individual's complete mobility.

[8] See Conference Board of Canada, 2011 for an example of this type of research methodology. Other research methodologies for examining income inequality also fail to account for income mobility. One is a simple comparison of “Gini coefficients” for a country at two different points in time. A Gini coefficient can range from zero (a state of perfect equality where everybody in the country has the same level of income) to one (a state of perfect inequality where all the income is held by one person). See OECD, 2008, and Keeley, 2015 for examples of the Gini coefficient methodology.

points in time and, as a result, do not account for the fact that the “rich” and “poor” may not be the same people in the different years of comparison. [9]

Of course, significant and growing income inequality would be a concern if we lived in a society where the rich and the poor were the same group of people year after year. A society that lacks income mobility over long periods is undesirable for many reasons—primarily because it suggests that luck and historical circumstances, not hard work or individual effort, largely determines one’s economic fortunes. Some level of income inequality is tolerable as long as people in that society are sufficiently mobile. If they are moving up and down to higher and lower income groups over the course of time, the people in the top 20% and bottom 20% are constantly changing.

As this report will show, Canada is not a caste society where the rich and poor are permanently stuck in their respective income groups. Rather, our country is a dynamic one where individuals are economically mobile. This stands in stark contrast to some developing countries, such as Brazil and Peru, where not only is there large income disparities but also little economic mobility (Corak, 2012). In those societies, income inequalities may translate into a permanent divide between low-income individuals and the well off. [10]

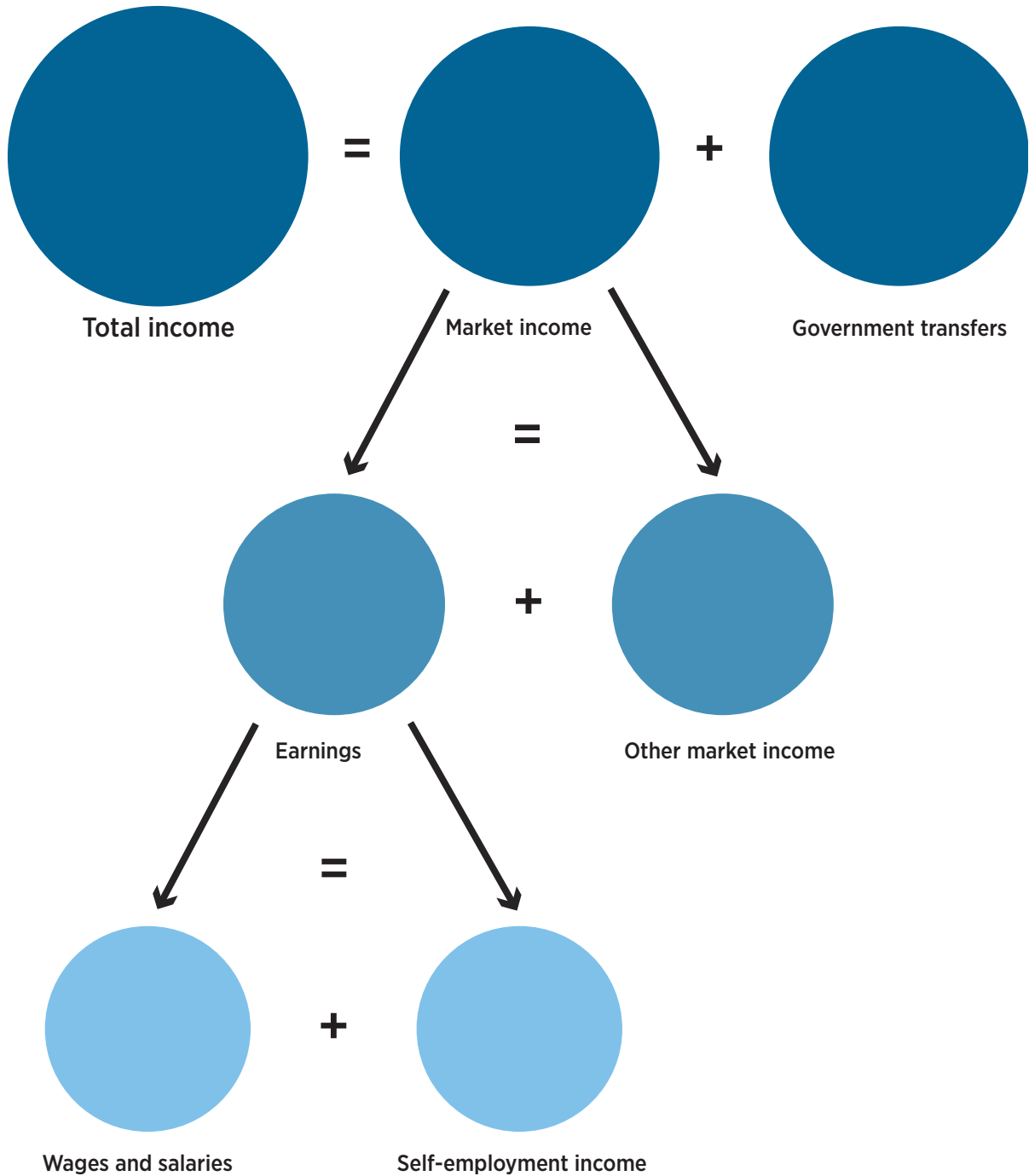
Defining “income”

It is important to understand the various definitions of income because different measures of income can be used to measure income mobility. **Figure 2** shows the various components of total income as defined by Statistics Canada. Broadly speaking, according to Statistics Canada, total income consists of market income and income from government transfers. The two main components of market income are earnings and other market income. Earnings are the sum of wages and salaries and self-employment income. Other market income may include investment and retirement income. Finally, income from government transfers includes income from various benefit programs such as the Canada Pension Plan (CPP), Old Age Security (OAS), the Guaranteed Income Supplement (GIS), social assistance, and Employment Insurance (EI).

[9] In addition, such comparisons do not account for age differences in the population. Since income tends to rise as people gain education and experience, inequality at any given age should be lower than inequality within the broader population. A more informative measure of static income inequality would calculate changes in inequality for cross-sections of the population by age.

[10] For an excellent discussion on the importance of income mobility and the interplay between it and income inequality, see Friedman, 1962, chapter 10. See also Cox and Alm, 1999 for a discussion about why income mobility is important in the United States. Finally, see Murray, 1994, for a discussion about alternative measures of well-being and success.

Figure 2: Components of total income



Notes: Income from government transfers includes Canada Pension Plan (CPP), Old Age Security (OAS), Guaranteed Income Supplement (GIS), Social Assistance, Employment Insurance (EI), child benefits and other transfers. Other market income includes investment income, retirement income, and other income.

Sources: Statistics Canada, 2015a; calculations by the authors.

Table 1 displays the average composition of total income [11] for Canadian families (including single individuals) [12] in 2013. Market income and, specifically, earnings are by far the largest source of total income at approximately 73%. Wages and salaries, the main component of earnings, is the single largest source of income for Canadian families, making up approximately 68% of the total. [13] Other market income and income from government transfers represent much smaller proportions of total income, 15% and 12%, respectively (see table 1).

Table 1: Average composition of total income for Canadian families, 2013

Component of total income	Percentage of total income
Market Income	87.7
<i>Earnings</i>	73.1
Wages and salaries	68.4
Net income from self-employment	4.7
<i>Other market income</i> [1]	14.6
Income from government transfers [2]	12.3
Total	100.0

Notes: [1] "Other market income" includes investment income, retirement income, and other income. [2] "Income from government transfers" includes Canada Pension Plan (CPP), Old Age Security (OAS), the Guaranteed Income Supplement (GIS), social assistance, Employment Insurance (EI), child benefits, and other transfers.

Source: Statistics Canada, 2015a.

Some researchers examine income mobility using the measure of total income after taxes. This income measure is calculated by simply deducting income taxes from total income. The result is after-tax income. Ultimately, when measuring income mobility, the selected definition of income should be based on the researcher's measurement objectives.

[11] Other sources of income not displayed in Table 1 also contribute to the total income available for many Canadians. For instance, Canadians may earn unreported income, draw down their savings when the additional income is needed, obtain in-kind (non-monetary) transfers through various government programs, or receive inter-family transfers and transfers through religious or charitable organizations.

[12] In this context, a family refers to a group of two or more persons who live in the same dwelling and are related to each other by blood, marriage, common-law, adoption, or a foster relationship. A single individual is a person living either alone or with others to whom he is not related.

[13] As a percentage of market income, however, wages and salaries make up an even larger proportion (78%) (Statistics Canada, 2015a).

2 Review of Research on Income Mobility in Canada

This section briefly summarizes the existing research on income mobility in Canada; it also includes one study on income mobility for a group of developed nations including Canada. [14] Research into income mobility requires income data on the same group of Canadians over a specified time period. Since access to such data is not readily available and often expensive, the body of research in this area is sparse and consists of only a handful of studies.

One of the earliest studies in Canada was written by economists Charles Beach and Ross Finnie (Beach and Finnie, 1998). The authors examined how the income of a sample of Canadian men and women changed over one year (1993–1994), six years (1982–1988 and 1988–1994), and 12 years (1982–1994). They measured income as earnings (wages and salaries plus self-employment income). The authors divided their sample of Canadians into six income groups, from lowest to highest. [15] Overall, they found a “considerable amount” (Beach and Finnie, 1998: 9) of income mobility and that income mobility generally increased over longer time periods, as more and more people moved upwards from one income group to another. For instance, 59% of men and 45% of women in the lowest income group moved to a higher income group after

[14] This section reviews the literature that has examined income mobility in Canada across various income groups (high and low income) but there is a separate strand that focuses only on the mobility of low-income Canadians. For studies in this strand, see Morissette and Berube, 1996; Finnie, 1997, 2000; Drolet and Morissette, 1998; Morissette and Drolet, 2000; Morissette and Zhang, 2001; Finnie and Sweetman, 2003; Janz, 2004; Morissette and Zhang, 2005; Ren and Hu, 2011; Murphy, Zhang, Dionne, 2012; and Statistics Canada, 2013. In addition, our literature review covers only Canadian research on “intragenerational mobility”, which is the extent to which individuals’ income changes over their lifetimes. This is distinct from “intergenerational mobility”, which is the extent to which individuals’ incomes are connected to that of their parents. That being said, research shows Canada has one of the highest levels of intergenerational mobility in the developed world (Grawe, 2004; Blanden, 2005; Corak, 2006). A recent study estimated that, in Canada, a son whose father was in the bottom quintile of the distribution of lifetime earnings would have a 69% chance of being in a higher lifetime earnings quintile than his father, representing strong upward intergenerational relative income mobility (Corak, Lindquist, and Mazumder, 2014). In Canada, there is a relatively weak relationship between parents’ economic standing and that of their child.

[15] The six income groups were: very low (25% or lower than the median income), low (25%–50% of the median), low middle (50%–100% of the median), high middle (100%–150% of the median), high (150%–200% of the median), and very high (200% or higher than the median).

just one year (1993–1994). However, after 12 years (1982–1994), 86% of men and 80% of women in the lowest income group had moved to a higher income group. [16] The authors also found that income mobility wasn't all upwards. In the highest income group, for instance, 12% of men and 17% of women moved to a lower income group after one year; after 12 years, 31% of men and 34% of women had dropped to a lower income group.

Another study by Finnie (1999) examined income mobility for a group of Canadians between 1982 and 1992 over periods ranging from one to 10 years. In this study, Finnie measured income more narrowly to include only wages and salaries. He divided the sample of Canadians into quintiles—five groups from lowest to highest income with each group containing 20% of the total. After tracking the change in people's income, Finnie found considerable upward income mobility. [17] Specifically, he found that on average, 36% of Canadians in the lowest quintile had moved to a higher income group after one year, 45% had moved up after two years, 61% had moved up after five years, and 72% had moved up after 10 years. At the same time, he found that on average 14% of Canadians in the top quintile had moved to a lower income group after one year, 17% had moved down after two years, 22% had moved down after five years, and 27% had moved down after 10 years (Finnie, 1999). [18]

In later work, Beach and Finnie (2004) again collaborated to examine income mobility in Canada. This time they examined income mobility for several one-year periods between 1982 and 1999. As they had in Beach and Finnie, 1998, they divided their sample into six income groups from lowest to highest. Their measure of income was earnings (wages and salaries plus self-employment income). Beach and Finnie found that Canadians are quite mobile, even over the very short time period of just one year. [19] For instance, they found that in 1998, 51% of Canadians in the lowest income group had moved up at least one income group by 1999. During the same period, 14% of Canadians from the highest income group had moved to a lower income group. [20]

[16] A notable finding in Beach and Finnie (1998) is that upward earnings mobility is higher for men than women. In addition, they observe that men's income mobility has declined over time while women's mobility has increased. Their observation is based on the results from two periods: 1982–1988 and 1988–1994. They observed a similar trend in their later work (Beach and Finnie, 2004).

[17] Finnie (1999) also found that income mobility was greater for those who started in lower income groups, for younger workers, and for men.

[18] These averages were calculated by the authors using Finnie's (1999) results.

[19] Beach and Finnie (2004) may be measuring income volatility, not income mobility, since large changes cannot easily be explained by the accumulation of human capital over very short time periods like one year.

[20] Interestingly, Beach and Finnie (2004) found that economic conditions may affect income mobility. In comparing income mobility over two one-year periods (1991–1992 and 1998–1999), they found less upward and more downward mobility in Canada's

In the previous edition of this report, Lammam, Karabegović, and Veldhuis (2012) provide further evidence of income mobility in Canada. Income was defined in terms of individual wages and salaries and the sample was divided into income quintiles based on the overall population. The report's primary results focused on the relative income mobility of a sample of approximately one million Canadians starting in 1990 after 10 years (1990–2000) and 19 years (1990–2009). It found that 83% of those initially in the lowest quintile in 1990 had moved to a higher income group by 2000. By 2009, 87% had moved up with over 40% reaching the top two quintiles. The report also found considerable downward mobility, with 21% of those initially in the highest quintile in 1990 moving to a lower income group by 2000 and 36% moving down by 2009.

In contrast to the research summarized thus far, Statistics Canada produced an annual publication (terminated as of 2013) that measured income mobility but using a different data source, different income definition, and a different unit of analysis. Statistics Canada uses survey-based data, not data derived from Canadian income-tax returns. Instead of measuring income by earnings or wages and salaries, Statistics Canada uses total, after-tax income (total income from all sources including government transfers, investment income, and pension income minus income taxes paid). Finally, Statistics Canada uses a measure of income that adjusts for family size rather than solely using an individual's income.

In the most recent and final edition of this publication, Statistics Canada (2013) examined income mobility in Canada over four one-year periods (2003–2004, 2006–2007, 2008–2009, and 2009–2010) and two five-year periods (1999–2004 and 2005–2010). The group of Canadians analyzed were divided into quintiles. As in previous studies, Statistics Canada found a greater degree of income mobility, the longer the time period. On average, 24% of Canadians in the lowest quintile had moved up at least one quintile after one year. But after five years, 43% of individuals in the lowest income group had moved up. Conversely, Statistics Canada found that, on average, 21% of those in the top quintile had moved to a lower quintile after one year, and 43% had moved down after five.

A study by Chen (2009) also includes income mobility results for Canada over several periods in the 1990s and 2000s. [21] Chen's definition of income is

recessionary 1991–1992 period. Finnie (1999) also found that upward mobility decreased during economic downturns.

[21] While Chen (2009) includes income mobility results for Canada, the goal of the study was to compare income mobility in four countries and to uncover the underlying reasons for the differences. The four countries were Canada, the United States, Great Britain, and Germany. After examining an assortment of income-mobility measures, Chen's international comparison revealed that Canada generally has less income mobility than do the

the same as that of Statistics Canada (2013): total income including government transfers minus income taxes. Chen's analysis divided the Canadian samples into deciles—10 groups from lowest to highest income with each group containing 10% of the total. The findings on relative income mobility for Canada were as follows: on average, 50% to 55% of Canadians were not in the same decile after one year; approximately 70% were not in the same decile after four years; and around 35% had moved up at least one decile after four years. [22]

While the specific data source, definition of income, and methodology may differ in the studies summarized above, the consistent finding is that Canadians are mobile. That is, existing research shows Canada is a dynamic society where many of us move up and down the income ladder over time—often in very short order.

other countries. He found that a key reason for lower mobility rates in Canada is the stabilizing effect of government transfers. Given this finding, it would be interesting to replicate Chen's international comparison using a different definition of income (say, wages and salaries), to avoid the distortionary impact of a country's system of taxes and transfers. [22] In addition to relative mobility, Chen also examined other measures of income mobility, including a measure of absolute income mobility and the relationship between income mobility and income inequality.

3 Relative Income Mobility in Canada over 5-, 10-, and 19-Year Periods

This section presents the results from our special data request to Statistics Canada. The results for income mobility are based on the experience of nearly one million Canadians whom we follow starting in 1993 over three time periods: five years (1993–1998), 10 years (1993–2003), and 19 years (1993–2012). The various periods allow us to measure income mobility over short and longer periods. The section starts by describing the data and then explains the measure of income used in the analysis. A discussion of the results follows.

Data source and description

The data for the analysis in this section are from Statistics Canada’s Longitudinal Administrative Databank (LAD), which is constructed from the income-tax returns of a group of Canadians from 1982 to 2012. By linking tax-filing information to an individual’s Social Insurance Number, Statistics Canada is able to track and record annual changes in income for the same group of individuals. Our data request covers one group of nearly a million Canadians over three time periods: 1993–1998, 1993–2003 and 1993–2012. That is, we measure income mobility for a group of Canadians in 1993 after five years, after 10 years, and again after 19 years. The age range for those in our sample in 1993 is 20 to 45 (inclusive). This means the maximum age for people in the sample at the end of each period is: age 50 for the 5-year period, age 55 for the 10-year period, and age 64 for the 19-year period. [\[23\] Appendix A](#) (p. 35) has additional details on the data used for the income mobility analysis.

[\[23\]](#) It would be interesting to conduct a sensitivity analysis by varying the age range of individuals contained in the sample. One way to conduct the sensitivity analysis would be to examine the impact on relative income mobility by limiting the sample to individuals with ages at which most people are increasing their labour market income. This could be achieved by constraining the maximum age for people in the sample to 45 at the end of the 10-year period and 55 at the end of the 19-year period. However, we do not have direct access to the mobility data to perform such an analysis. All tabulations are performed by Statistics Canada and additional data requests are costly.

Definition of income

As section 1 explained, there are several ways to define income when measuring income mobility. The definition used here is wages and salaries. We have chosen that definition for many reasons. First, wages and salaries is by far the single largest component of total income (see table 1). Second, our objective is to measure income mobility with a definition of income that relies solely on one's labour-market efforts. That is, our objective is to measure the extent to which Canadians are able to improve themselves by their own effort and diligence. As a result, our income definition excluded non-labour market income such as government transfers, investment income, and retirement income. We also excluded income from self-employment, which is a form of labour-market income, because there is considerable annual fluctuation in this income source over time and its volatility obscures any clear indication of mobility.

The "wages and salaries" definition is before taxes to minimize the impact of the tax system on income mobility. Finally, we are analyzing individuals, not the family. Changes in family size and structure often alter family income, and by extension, the income mobility of the family unit. This means that changes in a family's income mobility can occur without any changes in the income of individual earners in that family. Our analysis of income mobility focuses on individuals to avoid the direct influence of changes in family size and structure.

Results

Income mobility over five years (1993–1998)

Table 2 summarizes the results for income mobility over the five-year period from 1993 to 1998. The table divides the sample of individuals into five groups based on their income in 1993. The groups range from lowest to highest income with each group containing 20% of the total LAD population (such groupings are called quintiles). [24] We refer to the income groups as: the bottom 20% (the lowest income group), second, third, fourth, and the top 20% (the highest income group).

[24] A previous edition of this study measured five-year income mobility with data from the Survey of Labour and Income Dynamics (SLID), which is now terminated (Lammam, Karabegović, and Veldhuis, 2012). For the purpose of measuring income mobility, LAD has several advantages over SLID. The sample from LAD is larger than the sample from SLID. Also, panel data from SLID follows individuals for a limited number of relatively short (six-year) periods. Because LAD collects data from income-tax returns rather than a survey, it can track individuals over a longer period.

Table 2: Summary of five-year income mobility from 1993 to 1998

		Income group five years later		Total mobility (%)
		Percentage that moved into a higher income group	Percentage that moved into a lower income group	
Income group in 1993	Bottom 20%	78.6	0.0	78.6
	Second	58.5	10.4	68.9
	Third	40.7	16.1	56.8
	Fourth	27.9	17.7	45.6
	Top 20%	0.0	15.6	15.6

Notes: [1] Income is measured by wages and salaries. [2] Zero percent for the bottom 20% since it is the lowest income group and individuals cannot move down any further. [3] Zero percent for the top 20% since it is the highest income group and individuals cannot move up any further.

Source: Statistics Canada, 2015b.

The income thresholds for the quintiles were determined by the income of all individuals in the broader LAD group, not the income of just the individuals in our sample. To be part of the overall LAD group in these calculations, individuals had to report at least \$1,000 of income from wages and salaries (in 2012 dollars). This methodology is in line with previous research on income mobility using earnings or wages and salaries as a definition of income. [25] We measured income mobility relative to the broader LAD group because it is a better reflection of the income distribution of the entire Canadian population. Our decision to compare changes in income for the working-age population relative to the overall population is appropriate since that is the society that everyone lives in—young or old. Ultimately, we are interested in knowing into which income groups individuals in our sample fall relative to the overall Canadian population.

The first column in table 2 displays the proportion of individuals that had moved from their initial income group in 1993 to a higher income group by 1998. The second column displays the proportion of individuals that had moved to a lower income group by 1998. The third column displays total mobility, the sum of the first and second columns.

[25] Finnie (1999: 10) measured income mobility for individuals in his sample relative to the income of individuals in the broader panel group, not relative to those in his sample. It appears that Beach and Finnie (1998: 5) and Beach and Finnie (2004: 222) did the same, although they do not explicitly state so. We also consulted a senior official at Statistics Canada who is a leading expert on income mobility data regarding the methodology we used to measure relative income mobility.

The results in table 2 point to considerable mobility across all income groups. By a wide margin, the lowest income group experienced the highest level of upward mobility: 79% of individuals in the bottom 20% in 1993 had moved to a higher income group by 1998 (figure 3). Put differently, in only five years, nearly eight out of ten individuals in the lowest income group moved into a higher income group. [26] Indeed, most Canadians who start in the bottom 20% do not remain there for long and move up quickly.

The other income groups also experienced upward income mobility from 1993 to 1998: 59% of the second income group, 41% of the third income group, and 28% of the fourth income group moved to higher income groups in that time. For those in the highest income group (the top 20%), the rise in income mobility was zero because relative to others, individuals in that group cannot move up any further.

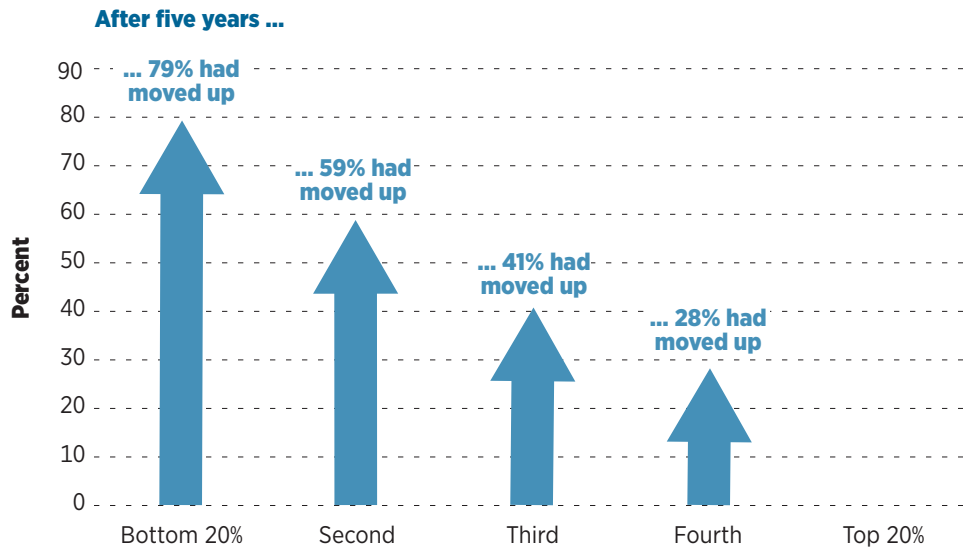
Table 2 shows that, while some individuals moved up the income ladder over the five-year period, others moved down the ladder between 1993 and 1998 (figure 4). Sixteen percent of the top income group, 18% of the fourth income group, 16% of the third income group, and 10% of the second income group moved to a lower income group during the five-year period. Individuals in the lowest income group (bottom 20%) did not drop further because they are already in the lowest income group. Interestingly, despite the relatively short time period of just five years, some Canadians did move down the income ladder, demonstrating notable mobility among the top income group.

Overall, a considerable degree of total mobility is evident. When we sum up the proportion of individuals in each income group in 1993 that moved up and down the income ladder over the five-year period, total mobility for the second, third, and fourth income groups was 57% on average. This means, on average, almost three of every five individuals in these income groups were not in their initial income group five years later—some moved up while others moved down. Table 2 understates the true level of total mobility for the bottom 20% and top 20% since individuals in these income groups can only move either up or down the income ladder, not in both directions. [27] Nonetheless, total mobility after five years was approximately 79% for the bottom 20% and 16% for the top 20%.

[26] A robustness check was conducted by Statistics Canada using LAD data for various five-year periods and the conclusion was that the upward income mobility results for the bottom 20% presented here are consistent across the various time periods.

[27] Total mobility is understated because we are comparing income mobility at two points in time without accounting for what happened in the years in between. Individuals in the bottom 20% may after one year move to higher income group (say, the second) and then fall back into the bottom 20% by the fifth year. In our analysis, we do not account for the income mobility that may have occurred between the first and last year of the period.

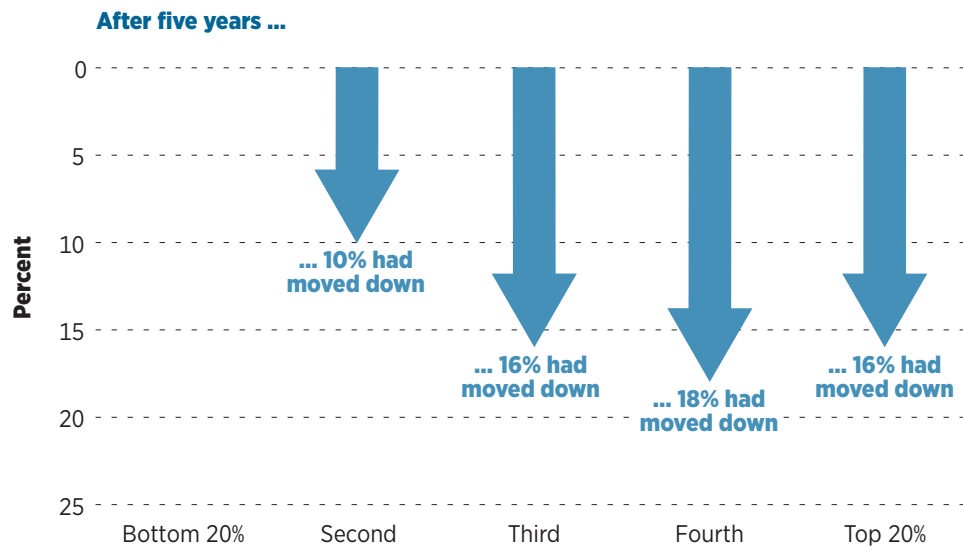
Figure 3: Proportion of each income group in 1993 that had moved to a higher group by 1998



Notes: [1] Income is measured by wages and salaries. [2] None from the top 20% had moved up since this is the highest income group and individuals cannot move up any further.

Source: Statistics Canada, 2015b.

Figure 4: Proportion of each income group in 1993 that had moved to a lower group by 1998



Notes: [1] Income is measured by wages and salaries. [2] None from the bottom 20% had moved down since this is the lowest income group and individuals cannot move down any further. [3] Downward income mobility for the top 20% is likely understated because the maximum age of the sample is 50, and so this downward mobility does not capture the effect of income falling as individuals approach retirement.

Source: Statistics Canada, 2015b.

While the overall results show the proportion of individuals that moved up and down from each income group in 1993, it is informative to examine which income group these individuals ended up in 1998. **Table 3** shows where individuals from the various income groups in 1993 finished up five years later. Consider the results for the bottom 20% (first row) in 1993, which are displayed graphically in **figure 5**. The largest proportion of the bottom 20% in 1993 (31%) moved up to the second income group in 1998. However, nearly half of the individuals who were in the bottom 20% in 1993 moved up to the third income group or higher, and more than 20% moved to the two highest income groups. In the relatively short span of just five years, many Canadians initially in the lowest income group moved to the top rungs of the income ladder.

Table 3: Where individuals from income groups in 1993 ended up five years later in 1998

		Where they ended up (percentage in income group in 1998)				
		Bottom 20%	Second	Third	Fourth	Top 20%
Income group in 1993	Bottom 20%	21.4	30.7	25.8	16.5	5.6
	Second	10.4	31.1	32.9	19.0	6.6
	Third	4.3	11.8	43.3	31.6	9.1
	Fourth	1.9	4.0	11.8	54.5	27.9
	Top 20%	0.8	1.3	2.7	10.8	84.4

Note: Income is measured by wages and salaries.

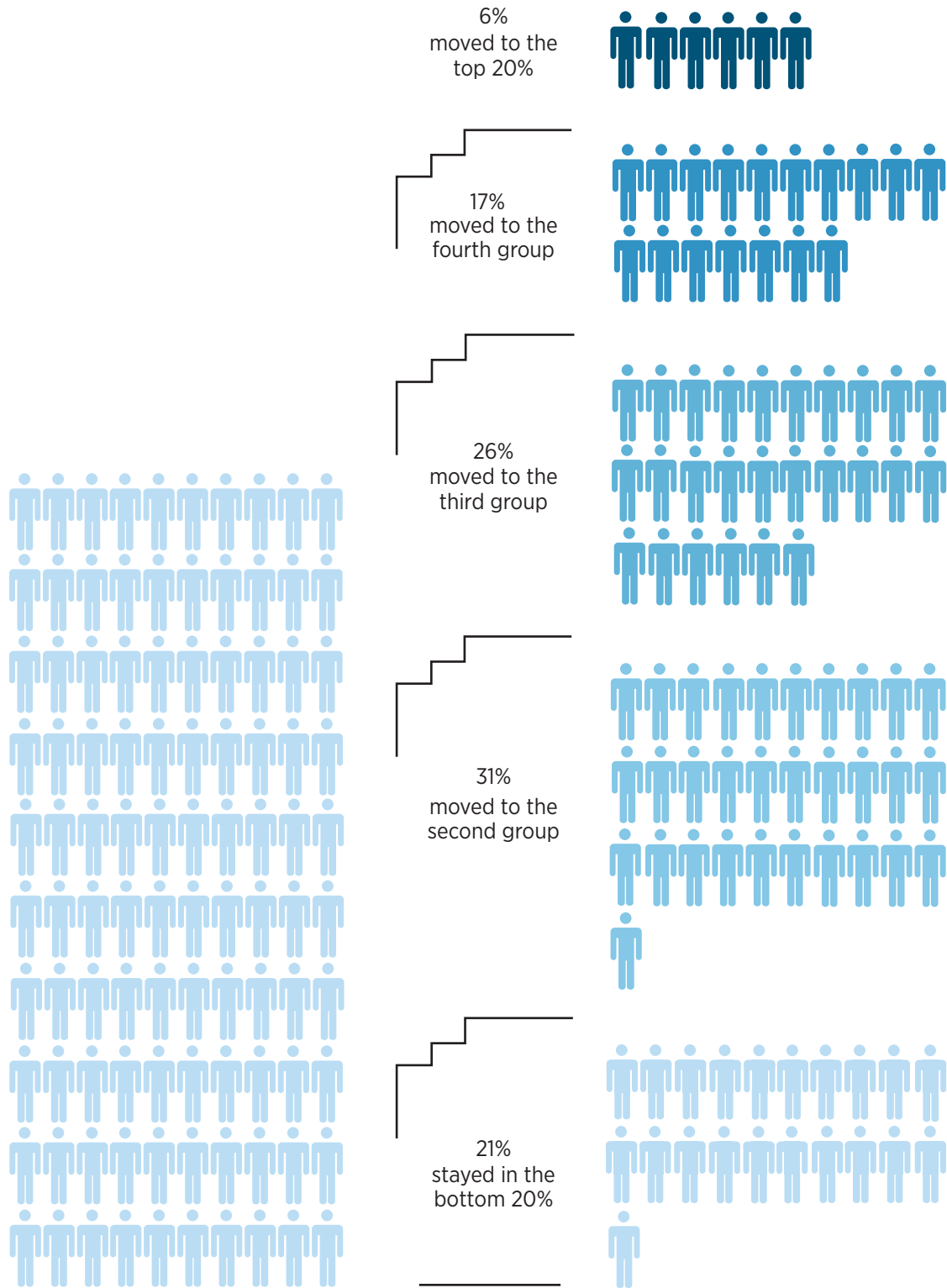
Source: Statistics Canada, 2015b.

Income mobility over ten years (1993–2003)

Table 4 summarizes the results for income mobility over the 10-year period from 1993 to 2003. As with the five-year period, the table divides the sample of individuals into five groups based on their income in 1993. The results are for the same group of individuals from the five-year analysis except that we now examine how their incomes have changed after 10 years. The first column in table 4 displays the proportion of individuals that moved from their initial income group in 1993 to a higher income group by 2003. The second column displays the proportion of individuals that moved to a lower income group by 2003. The third column displays total mobility (the sum of the first and second columns).

The results of the 10-year analysis reveal income mobility was greater in this time period than in the five-year period. Individuals in the lowest income group again had the greatest upward mobility: 88% of those in the bottom 20% in 1993 had moved to a higher income group 10 years later. Put differently, over

Figure 5: Where the bottom 20% in 1993 were five years later in 1998



Notes: [1] Income is measured by wages and salaries. [2] Numbers in this graph may not add to 100 due to rounding.

Source: Statistics Canada (2015b).

Table 4: Summary of 10-year income mobility from 1993 to 2003

		Income group 10 years later		Total mobility (%)
		Percentage that moved into a higher income group	Percentage that moved into a lower income group	
Income group in 1993	Bottom 20%	87.5	0.0	87.5
	Second	69.6	7.6	77.2
	Third	50.7	14.6	65.3
	Fourth	36.4	18.2	54.6
	Top 20%	0.0	18.5	18.5

Notes: [1] Income is measured by wages and salaries. [2] Zero percent for the bottom 20% since it is the lowest income group and individuals cannot move down any further. [3] Zero percent for the top 20% since it is the highest income group and individuals cannot move up any further.

Source: Statistics Canada, 2015b.

a decade, nearly nine of every 10 individuals in the bottom 20% moved up the income ladder. This compares to the upward mobility in the five-year period of roughly eight of every 10 individuals in the bottom 20%. Indeed, most of the upward mobility out of the bottom 20% group took place in the first five years but many continued to move into higher income groups over time as they developed and amassed their human capital.

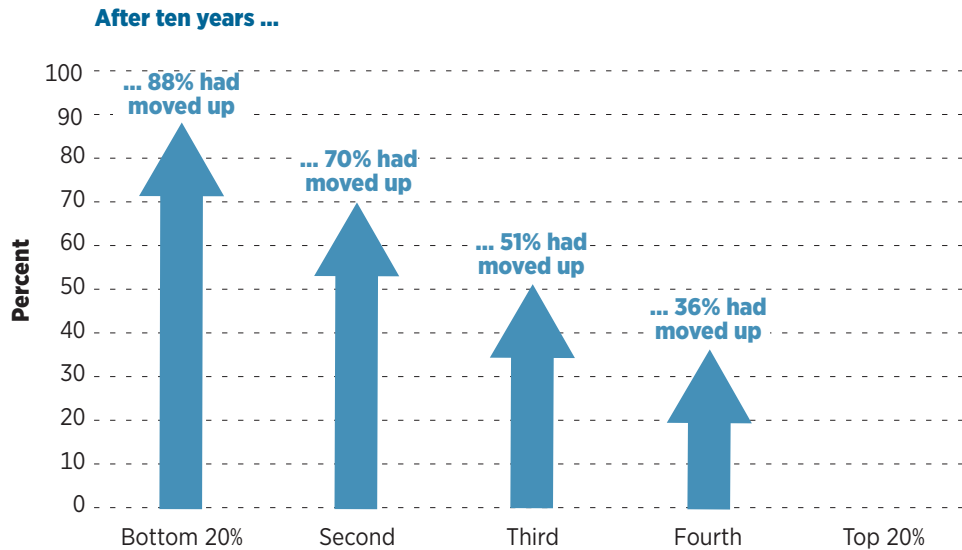
Figure 6 shows the proportion of individuals in the various income groups in 1993 that had moved to a higher income group by 2003. There was clearly upward mobility across all income groups. [28] Specifically, 70% of individuals in the second income group in 1993 had moved to a higher group by 2003, while 51% in the third income group had moved up, and 36% in the fourth income group had done so. Taken together, the results indicate that a large number of individuals in our sample from 1993 experienced substantial relative income mobility over the decade.

Yet, table 4 also shows that individuals in our sample moved down the income ladder. Those in the top 20% in 1993 experienced the greatest downward mobility after 10 years. Specifically, 19% of individuals in that group in 1993 had moved to a lower income group by 2003. Eighteen percent from the fourth income group had moved down, as did 15% from the third income group, and 8% from the second income group (**figure 7**).

Total mobility over the 10-year period is sizeable. On average, 66% of individuals in the second, third, and fourth income groups in 1993 had moved to a higher or lower income group by 2003. So, within the span of a decade,

[28] The only exception was individuals in the top 20%; they cannot move into a higher income group because they are already in the highest possible group.

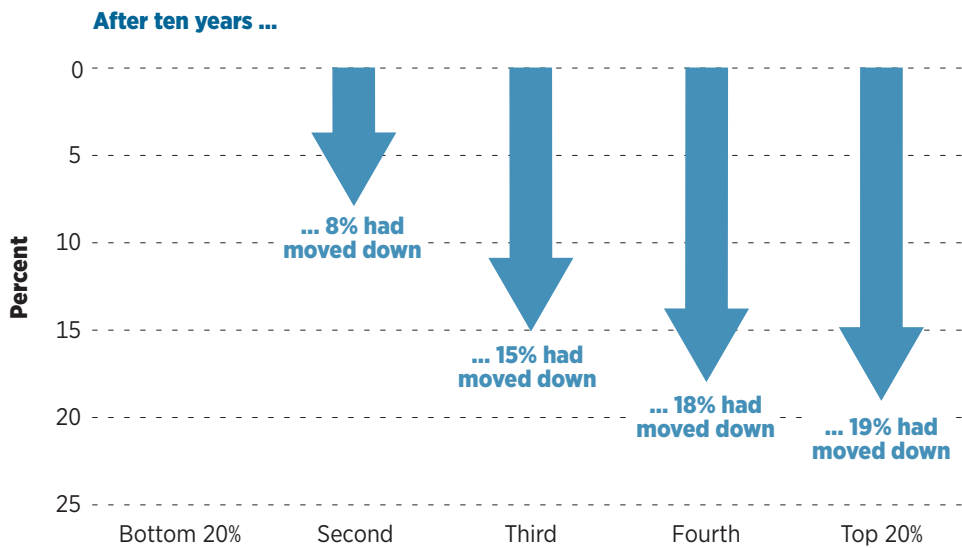
Figure 6: Proportion of each income group in 1993 that had moved to a higher group by 2003



Notes: [1] Income is measured by wages and salaries. [2] None from the top 20% had moved up since this is the highest income group and individuals cannot move up any further.

Source: Statistics Canada, 2015b.

Figure 7: Proportion of each income group in 1993 that had moved to a lower group by 2003



Notes: [1] Income is measured by wages and salaries. [2] None from the bottom 20% had moved down since this is the lowest income group and individuals cannot move down any further. [3] Downward income mobility for the top 20% is likely understated because the maximum age of the sample is 55, and so this downward mobility does not capture the effect of income falling as individuals approach retirement.

Source: Statistics Canada, 2015b.

most Canadians did not stay in their initial income group, reinforcing the notion that Canadians are not economically stationary and highlighting the presence of considerable income mobility—in both directions.

Let us now look at where the individuals from the various income groups in 1993 ended up 10 years later. These data are displayed in table 5; the results for the bottom 20% is shown graphically in figure 8.

Figure 8 shows that approximately 13% of the individuals that started in the bottom 20% in 1993 were in that income group in 2003. However, of the 88% that moved up, 24% ended up in the second income group, 26% ended up in the third income group, 23% ended up in the fourth income group, and 15% were in the top 20% after only 10 years. The results are impressive: nearly two thirds of the people in the bottom 20% in 1993 ended up in one of the top three income groups by 2003; nearly two fifths ended up in the top two; and well over a tenth found their way from the bottom to the very top income group.

Table 5 also shows that many individuals from the second, third, and fourth income groups in 1993 managed to reach the top 20% group by 2003. Specifically, of those in the second income group, 15% reached the top 20% group after 10 years. Of those in the third income group, 16% reached the top 20% group, and of those in the fourth income group, 36% reached the top 20% group. This means that the make-up of the top 20% changed a lot after 10 years as many new people entered this group who were not there in 1993.

In sum, the 10-year mobility analysis not only shows that many low- and middle-income Canadians moved up the income ladder but that many who started in lower income groups in 1993 were able to reach the higher income groups within a decade.

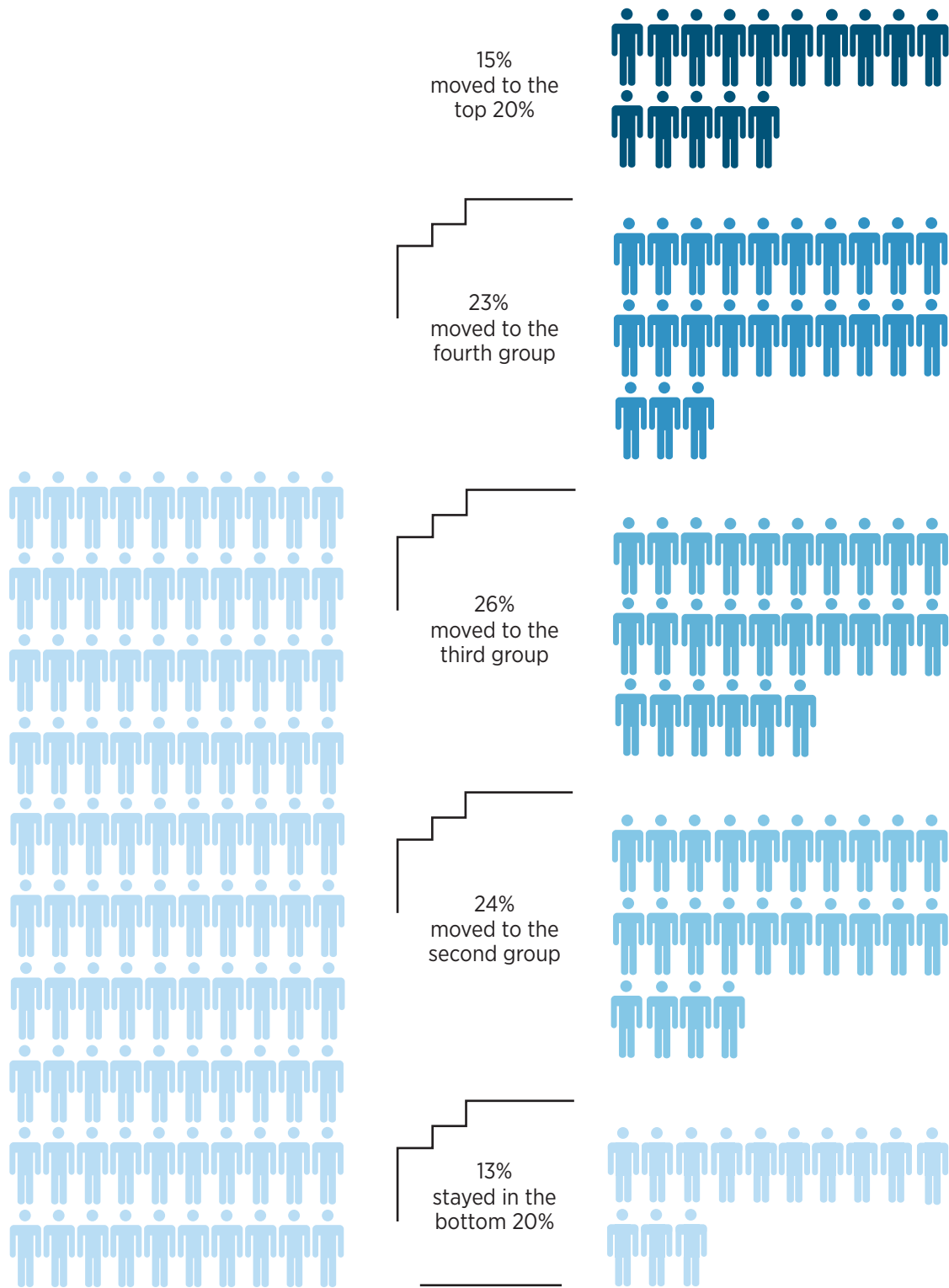
Table 5: Where individuals from income groups in 1993 ended up 10 years later in 2003

		Where they ended up (percentage in income group in 2003)				
		Bottom 20%	Second	Third	Fourth	Top 20%
Income group in 1993	Bottom 20%	12.5	23.6	26.3	22.5	15.1
	Second	7.6	22.9	30.8	24.1	14.7
	Third	4.0	10.6	34.7	34.4	16.3
	Fourth	2.1	4.2	11.9	45.3	36.4
	Top 20%	1.2	1.9	3.4	12.0	81.5

Note: Income is measured by wages and salaries.

Source: Statistics Canada, 2015b.

Figure 8: Where the bottom 20% in 1993 were ten years later in 2003



Notes: [1] Income is measured by wages and salaries. [2] Numbers in this graph may not add up to 100 due to rounding.

Source: Statistics Canada (2015b).

Income mobility over 19 years (1993–2012)

Table 6 summarizes the results for income mobility over the 19-year period from 1993 to 2012. These results are for the same group of individuals from the previous analyses except that now we examine their income mobility after 19 years. The table divides the sample into the same five groups (quintiles) based on their 1993 income. The first column displays the proportion of people that had moved from their initial income group in 1993 to a higher income group by 2012. The second displays the proportion that had moved to a lower income group. The third column displays total mobility.

Table 6: Summary of 19-year income mobility from 1993 to 2012

		Income group 19 years later		Total mobility (%)
		Percentage that moved into a higher income group	Percentage that moved into a lower income group	
Income group in 1993	Bottom 20%	89.0	0.0	89.0
	Second	72.1	8.3	80.4
	Third	51.8	18.7	70.5
	Fourth	35.5	28.0	63.5
	Top 20%	0.0	34.6	34.6

Notes: [1] Income is measured by wages and salaries. [2] Zero percent for the bottom 20% since it is the lowest income group and individuals cannot move down any further. [3] Zero percent for the top 20% since it is the highest income group and individuals cannot move up any further.

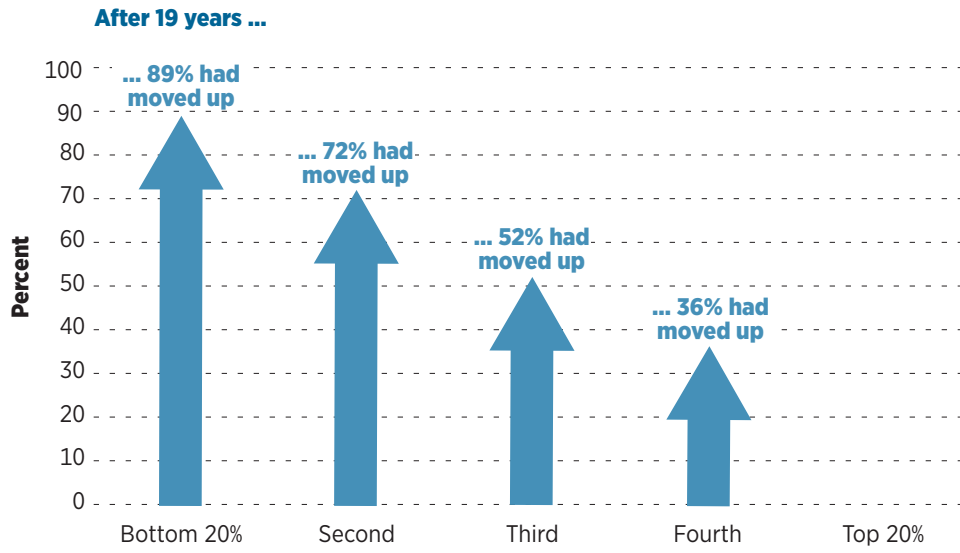
Source: Statistics Canada, 2015b.

As expected, individuals who were in lower income groups in 1993 saw the greatest degree of upward mobility (**figure 9**). Of those from the bottom 20% in 1993, 89% moved into a higher income group by 2012. Put differently, nearly nine of every 10 Canadians in the lowest income group moved up the income ladder within the span of two decades. About 72% of those from the second income group moved up, as did 52% and 36% of individuals in the third and fourth income groups, respectively.

Table 6 also shows the proportion of individuals in 1993 that moved to a lower income groups after 19 years (see **figure 10** for a graphical representation). Downward mobility is proportionately higher for individuals who started the period in higher income groups and is largest for those in the top 20%. Specifically, over a third (35%) of individuals from the top 20% in 1993 had moved to a lower income group by 2012. Among those in the fourth income group, 28% had moved down, as had 19% in the third group, and 8% in the second.

Total mobility over the 19-year period is higher than in all other periods examined. For individuals in the second, third, and fourth income groups, total mobility over the period was 71%, on average. Except for those in the top 20%,

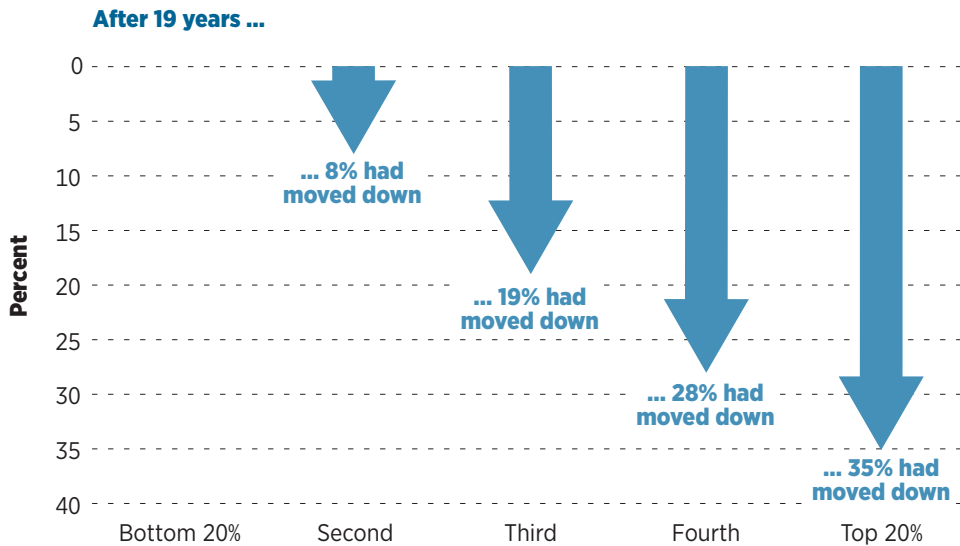
Figure 9: Proportion of each income group in 1993 that had moved to a higher group by 2012



Notes: [1] Income is measured by wages and salaries. [2] None from the top 20% had moved up since this is the highest income group and individuals cannot move up any further.

Source: Statistics Canada, 2015b.

Figure 10: Proportion of each income group in 1993 that had moved to a lower group by 2012



Notes: [1] Income is measured by wages and salaries. [2] None from the bottom 20% had moved down since this is the lowest income group and individuals cannot move down any further.

Source: Statistics Canada, 2015b.

total mobility was approximately two thirds (64%) or higher, which means the vast majority of Canadians were not economically stationary. As explained earlier, the true amount of total mobility for the top 20% (and bottom 20%) is somewhat understated because individuals that start in these income groups can move in only one direction, given the methodology used.

Table 7 provides more detailed information on where individuals from the various income groups in 1993 ended up after 19 years. The results for the bottom 20% are displayed graphically in **figure 11**. Of those in the bottom 20% in 1993, 19% ended in the second income group by 2012, 24% in the third income group, 23% in the fourth income group, and 24% in the highest income group. Remarkably, almost one of every four people in the bottom 20% in 1993 eventually made it to the highest income group after 19 years. Nearly half (46%) ended up in the top two income groups after 19 years, while more than two of every three (70%) ended up in the top three income groups.

Table 7: Where individuals from income groups in 1993 ended up 19 years later in 2012

		Where they ended up (percentage in income group in 2012)				
		Bottom 20%	Second	Third	Fourth	Top 20%
Income group in 1993	Bottom 20%	11.0	19.2	23.6	22.6	23.6
	Second	8.3	19.5	26.9	24.1	21.1
	Third	6.2	12.5	29.5	30.9	20.9
	Fourth	5.5	7.4	15.1	36.5	35.5
	Top 20%	6.9	5.4	6.3	16.0	65.4

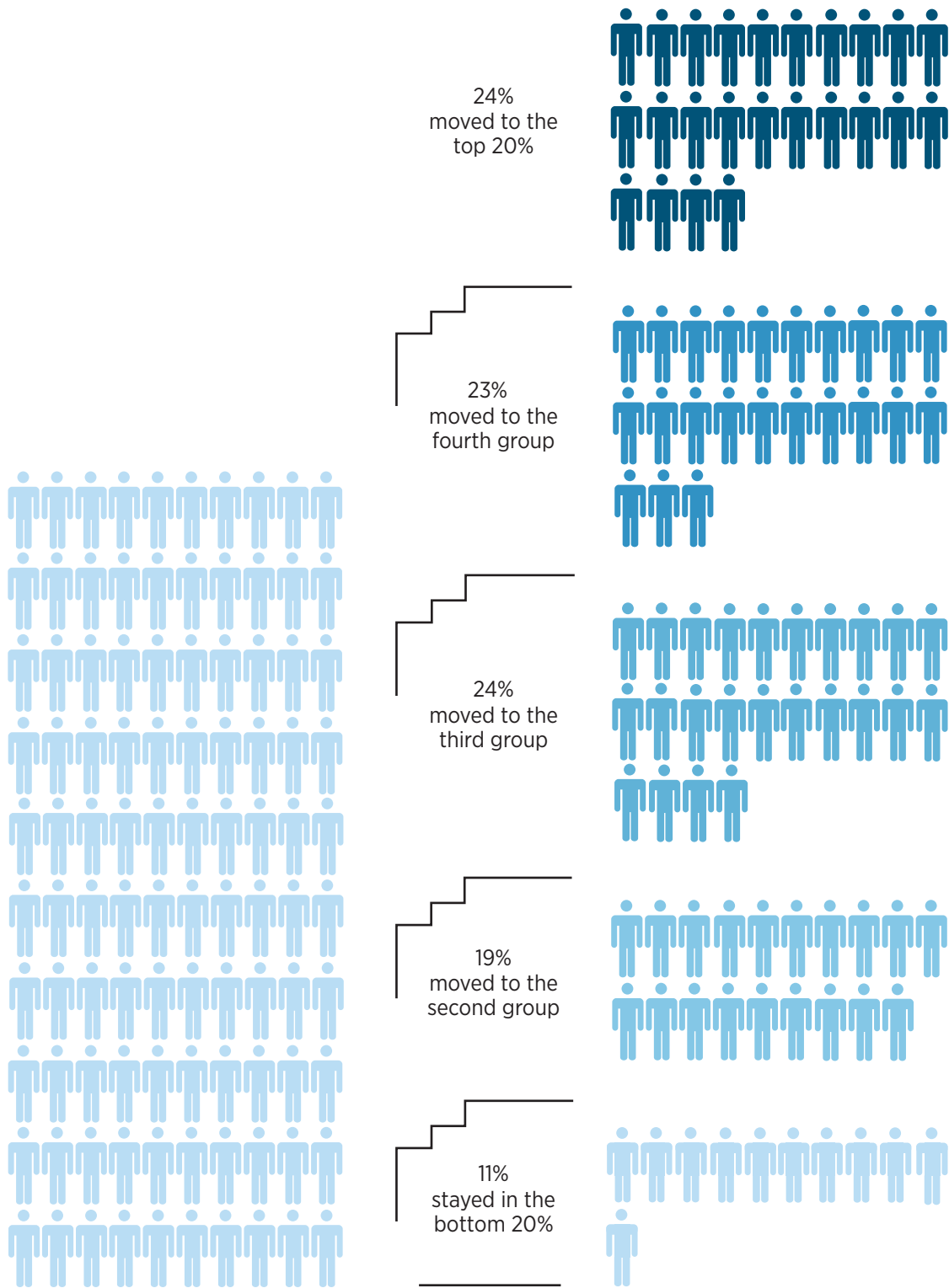
Note: Income is measured by wages and salaries.

Source: Statistics Canada, 2015b.

A meaningful proportion of Canadians initially in the second, third, and fourth income groups also managed to reach the top 20% by 2012 (see table 7). Specifically, 21% from the second income group in 1993 were in the top 20% after 19 years, while 21% from the third, and 36% from the fourth reached the highest income group. Table 7 demonstrates yet again that Canada is an economically mobile society where in time many income earners—including the lowest—climb the income ladder. [29]

[29] To check the robustness of the results, we measured income mobility using two alternative methods. The first method defined income as earnings (wages and salaries plus net self-employed income) instead of wages and salaries. There were only small differences in the results. For example, if income is defined as earnings, 88% of the bottom 20% moved to a

Figure 11: Where the bottom 20% in 1993 were 19 years later in 2012



Notes: [1] Income is measured by wages and salaries. [2] Numbers in this graph may not add up to 100 due to rounding.

Source: Statistics Canada (2015b).

Comparing results from the three time periods

In comparing the results from the five-, 10-, and 19-year periods, a key finding is that most of the upward mobility out of the bottom 20% takes place in very quickly. In just five years, 79% of Canadians in the bottom 20% in 1993 had moved to a higher income group. After 10 years, 88% of the same group of individuals had moved up. And after 19 years, 89% had moved out of the bottom 20%. Clearly, the lion's share of mobility out of the lowest income group occurred after five years.

However, the differences in upward relative mobility between the various periods are more pronounced when we consider which income groups the bottom 20% ended up in. For instance, after five years, 6% of those initially in the bottom 20% in 1993 had moved to the highest income group. After 10 years, this percentage increases to 15%. After 19 years, 24% of those initially in the bottom 20% had moved into the top 20%. As time passed, the vast majority of those initially in the bottom 20% were not only able to move out of this group, but many reached the very highest group.

The results show that downward mobility among the top two income groups is similar for the five- and 10-year periods. Specifically, 16% of the top 20% had moved to a lower income group after five years and 19% had moved to a lower income group after 10 years. For the second highest income group, 18% had moved to a lower income group over both the five- and 10-year periods. However, downward mobility was considerably higher for the two top income groups in the 19-year period. By 2012, 35% of the top 20% in 1993 had moved to a lower income group. That is 16 percentage points higher than the figure for the 10-year period. Similarly, after 19 years, 28% of the second highest income group had moved to a lower income group (a difference of 10 percentage points from the 10-year period). Thus, the proportion of individuals in the top two income groups that moved down is noticeably higher after 19 years than after 10 years.

These results are consistent with the life cycle of income. Typically, a young person's income increases until it peaks during the prime earning years (around age 55) and then drops near and after retirement. The individuals in our mobility sample are between the ages of 20 and 45 (inclusive) in 1993. By 1998 and 2003, the oldest person in our sample is 50 and 55, respectively, still within their prime earning years. However, by 2012 some of the people in our

higher income group from 1993 to 2012, while the figure when income is defined as wages and salaries is 89%. The second alternative method determines quintile thresholds by the income of the cohort sample rather than by the income of the broader LAD group. The results yielded by this method support the conclusion that Canada is an economically mobile country. Relative to the sample group, the upward mobility of the bottom 20% from 1993 to 2012 was 70%. See [Appendix C](#) (p. 37) for more detailed results using this alternative method.

sample reach age 64 and are near retirement. From age 55 to 64, many people experience downward income mobility because they have passed their prime earning years and are beginning to pare back their working hours in preparation for retirement. Some may even be partially or fully retired. The life cycle of income, coupled with our sample's demographics, suggests that we should expect upward income mobility to slow, and downward income mobility to accelerate, in the 19-year period compared to the five- and 10-year periods.

Summary of the relative income mobility results

The results from the relative income mobility analysis for the three time periods tell a powerful story. Over time, the vast majority of individuals from the lowest income group moved to a higher income group—and often in very short order. Being in the lowest income group is generally a temporary experience. Not only did many from the bottom 20% end up in higher income groups, but a meaningful proportion of them ended up in the top 20%. While many individuals from the lower income groups moved up the income ladder, some from the higher income groups moved down. Total mobility was considerable over five-, 10-, and 19-year periods. Critically, the Canadians in our sample generally did not stay in their initial income group.

4 Absolute Income Mobility in Canada over the 19-Year Period

The analysis thus far has focused on relative income mobility. However, it is instructive to examine absolute income mobility, which is how people's income changes over time (after accounting for inflation), regardless of their relative standing within a broader group. **Table 8** shows the average income of individuals in the five income groups in 1993 (in 2012 dollars). It also displays the average income of the same individuals 19 years later in 2012, regardless of which income group they ended up in (also in 2012 dollars). The table gives the dollar and percentage increase in average income for individuals in each initial income group.

Table 8: Average income of the same group of people in 1993 and 2012 and the increase in dollars and percentage

		Where they ended up (percentage in income group in 2012)			
		Average income in 1993 (\$2012)	Average income in 2012 (\$2012)	Dollar increase 1993-2012	Percentage increase 1993-2012
Income group in 1993	Bottom 20%	5,800	51,100	45,300	781%
	Second	16,500	50,700	34,200	207%
	Third	31,200	53,100	21,900	70%
	Fourth	48,400	65,500	17,100	35%
	Top 20%	82,600	106,100	23,500	28%

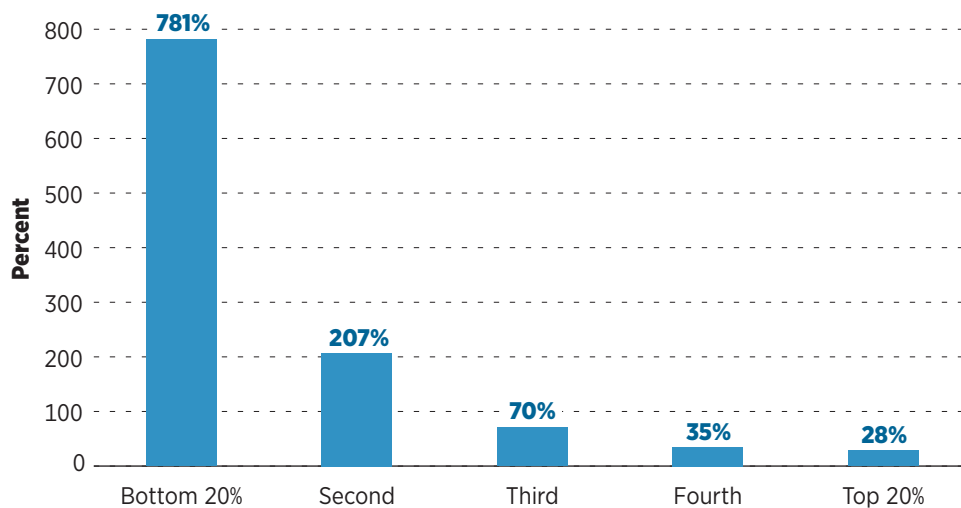
Note: Income is measured by wages and salaries.

Source: Statistics Canada, 2015b.

The first row in table 8 contains individuals that began the 19-year period in the bottom 20%. Their average income earned through wages and salaries in 1993 was \$5,800 but increased dramatically to \$51,100 by 2012 (all income in 2012 dollars). The \$45,300 rise represents an impressive 781% gain in average income. Now consider the increase in absolute mobility for those in the top 20% (last row of table 8). Individuals that began the 19-year period in the top 20% had an average income of \$82,600 in 1993, which increased by \$23,500 to \$106,100 by 2012. This growth represents a percentage increase of just 28%

(figure 12). Interestingly, among individuals in the five initial income groups, the percentage increase in absolute mobility is greatest for those in the bottom 20% (781%). While the growth in average income is also large for those initially in the second income group (207%), it is considerably smaller for those in the other income groups: 70% growth for those in the third income group, 35% growth for those in the fourth, and just 28% growth for those in the top 20%. In absolute terms, individuals in the bottom 20% in 1993 had by far the largest gains in absolute income mobility. In other words, the income of the poor increased at a faster rate than the income of the rich.

Figure 12: Percentage growth in average income of the same group of people, 1993–2012

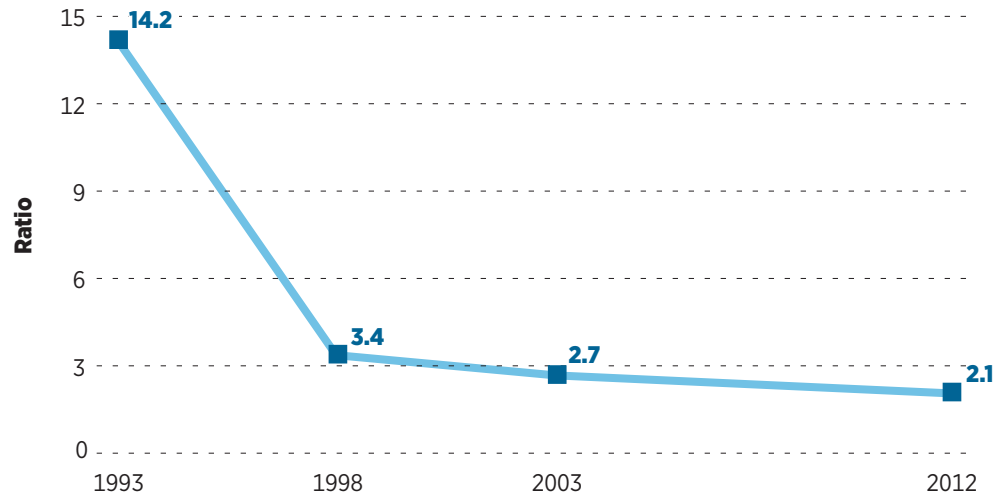


Note: Income is measured by wages and salaries and adjusted for inflation.

Source: Statistics Canada, 2015b.

Another telling figure emerges from the data: the ratio of average income for those initially in the top 20% in 1993 to those initially in the bottom 20% in 1993 compared to this ratio for the same group of people 19 years later. In 1993, the average income of individuals in the top 20% was 14 times greater than those in the bottom 20%. By 2012, those who were in the top 20% in 1993 now had an average income that was only twice as high as those who were initially in the bottom 20% in 1993. In other words, in a comparison of income of the same group of people over time, dynamic income inequality declined significantly (figure 13). The reason for the decline is that people's incomes were mobile—some moved up while others moved down. Unfortunately, this critical fact is never reported in debates about income inequality.

Figure 13: Ratio of average income of those who were in the top and bottom 20% in 1993 from 1993 to 2012



Note: Income is measured by wages and salaries and adjusted for inflation.

Source: Statistics Canada, 2015b.

Conclusion

This study measured income mobility in Canada. The data are based on the experience of nearly one million Canadians whom we follow starting in 1993 over three time periods: five years (1993–1998), 10 years (1993–2003), and 19 years (1993–2012). The study found considerable upward relative mobility in all time periods, with individuals initially in the lowest income group (the bottom 20%) experiencing the most upward relative mobility. For instance, in just five years (1993–1998), 79% of Canadians who started in the bottom 20% had moved to a higher income group and 88% had moved up after 10 years (1993–2003).

The 19-year period (1993–2012) is the longest covered in the study and best captures income changes over the life cycle. Here, 89% of those in the bottom 20% in 1993 moved up at least one income group by 2012. That is, within two decades, nearly nine of every 10 individuals in the lowest income group had moved up the income ladder. And, those in the lowest income group were not alone in their mobility. About 72% of people from the second income group moved up at least one income group, while 52% of Canadians from the third, and 36% from the fourth, income groups also did so.

Being in the lowest income group was generally a temporary experience, as the vast majority of people covered in the study moved to a higher income group over time. But, in which income groups did the bottom 20% end up after the 19-year period? By 2012, 19% ended in the second income group, 24% in the third income group, 23% in the fourth income group, and 24% in the highest income group. Remarkably, nearly one of every four Canadians in the bottom 20% in 1993 eventually made it to the highest income group 19 years later.

The study also found that some Canadians move down the income ladder over time, including those initially in the top 20%. Over the 19-year period, 35% of individuals in the top 20% in 1993 moved down at least one income group by 2012, as did 28% from the fourth income group, 19% from the third, and 8% from the second. Downward mobility was generally greater for individuals who started the 19-year period in higher income groups and greatest for those who started in the top 20%.

Taken together, the results of our analysis of relative income mobility showed that many Canadians initially in the bottom 20% moved to higher income groups over time while some Canadians initially in the top 20% moved to lower income groups.

The study also examined absolute mobility, which is the change in average income of the same group of people over time after accounting for inflation. In absolute terms, individuals initially in the bottom 20% in 1993 experienced by far the largest income gains (in both in dollars and percentages).

This study provides compelling evidence that low- and high-income Canadians do not remain stuck in their respective income groups year after year. This evidence is critical to enable a better understanding of the debate about income inequality. In any measure of income inequality, it is very misleading to rely solely on comparisons of “snapshots” of the income distribution at any two points in time because doing so does not capture the fact that Canadians are mobile. By not accounting for income mobility, one paints an incomplete picture of the well-being of Canadians. Ultimately, such an analysis could lead to misguided policies and a reduction in Canada’s prosperity.

Appendix A—Data Description

The income mobility data for this report relies on data from Statistics Canada’s Longitudinal Administrative Databank, which were obtained through a special request made to Statistics Canada. At the time of writing, the databank provided income data on a group of Canadians from 1982 to 2012. The income data is derived from income-tax returns collected by the Canada Revenue Agency (CRA). The databank includes a sample of 20% of all tax-filers in a given year. By linking tax-filing information using an individual’s Social Insurance Number, Statistics Canada is able to track and record the income of the same individuals year after year.

We examined income mobility for a group of nearly one million Canadians starting in 1993 over the course of five years (1993–1998), 10 years (1993–2003), and 19 years (1993–2012). The sample consists of 995,556 individuals, which corresponds to 23.9% of the overall group available through the Longitudinal Administrative Databank (4,167,335 individuals in total).

Our sample consists of individuals between the ages of 20 and 45 (inclusive) in the first year of the period (1993). Thus, the sample consists of individuals between the ages of 39 and 64 (inclusive) in the final year of the 19-year mobility period (2012). Individuals under the age of 20 in the initial year are excluded because they are typically students and not expected to experience significant income mobility while enrolled in post-secondary schooling or training. Unfortunately, the Longitudinal Administrative Databank does not allow us to directly identify tax-filers who are post-secondary students. [30] Individuals who are 65 and older also were excluded since they are typically retired, are unlikely to have significant income from wages and salaries, and are therefore unlikely to experience material income mobility.

In addition, our sample includes only individuals who reported at least \$1,000 of income from wages and salaries (in 2012 dollars) in order to exclude individuals with only a marginal attachment to the labour force. And, finally, the sample used for analysis of income mobility from 1993 to 2012 includes only individuals who filed a tax return in four years: 1993, 1998, 2003, and 2012 (but not necessarily in any of the years in between).

[30] Indirectly, researchers can estimate whether a tax-filer is a post-secondary student through LAD according to whether or not they claimed tuition tax credits. This is an imperfect method, however, because we would be unable to discern whether they are full- or part-time students. In addition, parents or spouses may claim these credits if transferred by a student. Finally, students may not choose to claim their tuition tax credits in the year in which they are a student as they have the option to carry forward the amount eligible for the tax credit to years when they will be earning a higher income.

Finally, the relative income mobility of individuals in our sample is evaluated relative to all individuals contained in the entire LAD group. That is, for each year that we analyzed income mobility, income thresholds for the quintiles were determined by the income of all individuals in the LAD group, not just the income of individuals in our sample. To be part of the overall LAD group in these calculations, individuals had to report at least \$1,000 of income from wages and salaries (in 2012 dollars).

The specifications for our data request on long-term mobility are generally in line with existing Canadian research that examines income mobility using earnings or wages and salaries as a definition of income (see Beach and Finnie, 1998, 2004; Finnie, 1999).

Appendix B—Income Range by Quintile Group and Year

	1993	1998	2003	2012
Bottom 20%	1,000–10,000	1,000–11,000	1,000–11,000	1,000–12,000
Second	10,000–23,000	11,000–24,000	11,000–25,000	12,000–28,000
Third	23,000–39,000	24,000–40,000	25,000–41,000	28,000–45,000
Fourth	39,000–59,000	40,000–61,000	41,000–63,000	45,000–70,000
Top 20%	59,000 and over	61,000 and over	63,000 and over	70,000 and over

Note: Income is measured by wages and salaries and adjusted for inflation.

Source: Statistics Canada, 2015b.

Appendix C—Mobility Results Based on Quintile Determination Relative to Sample

To arrive at the results in this report, the income thresholds for the quintiles were determined by the income of all individuals in the broader LAD group. To be part of the overall LAD group in these calculations, individuals had to report at least \$1,000 of income from wages and salaries (in 2012 dollars). We measured income mobility relative to the broader LAD group because it is a better reflection of the income distribution of the entire Canadian population. Ultimately, we are interested in knowing into which income groups individuals in our sample fall relative to the overall Canadian population. However, an alternative way of determining income quintiles is to base it on the income distribution of just the sample group, which primarily consists of relatively younger working Canadians. Still, the data in [table C1](#), [table C2](#), and [table C3](#) show that this method of measuring income mobility also points to significant mobility, and particularly to upward mobility for the bottom 20%.

Table C1: Summary of five-year income mobility from 1993 to 1998 (income groups determined by the sample)

		Income group five years later		Total mobility (%)
		Percentage that moved into a higher income group	Percentage that moved into a lower income group	
Income group in 1993	Bottom 20%	51.2	0.0	51.2
	Second	32.6	32.1	64.7
	Third	21.7	42.3	64.0
	Fourth	15.8	39.8	55.6
	Top 20%	0.0	29.1	29.1

Notes: [1] Income is measured by wages and salaries. [2] Zero percent for the bottom 20% since it is the lowest income group and individuals cannot move down any further. [3] Zero percent for the top 20% since it is the highest income group and individuals cannot move up any further. [4] Quintiles are based on the cohort (not the entire LAD population) with at least \$1,000 (in 2012 dollars) in each period.

Source: Statistics Canada, 2015b.

**Table C2: Summary of 10-year income mobility from 1993 to 2003
(income groups determined by the sample)**

		Income group 10 years later		Total mobility (%)
		Percentage that moved into a higher income group	Percentage that moved into a lower income group	
Income group in 1993	Bottom 20%	59.0	0.0	59.0
	Second	37.5	33.0	70.5
	Third	24.2	47.9	72.1
	Fourth	17.3	49.3	66.6
	Top 20%	0.0	39.6	39.6

Notes: [1] Income is measured by wages and salaries. [2] Zero percent for the bottom 20% since it is the lowest income group and individuals cannot move down any further. [3] Zero percent for the top 20% since it is the highest income group and individuals cannot move up any further. [4] Quintiles are based on the cohort (not the entire LAD population) with at least \$1,000 (in 2012 dollars) in each period.

Source: Statistics Canada, 2015b.

**Table C3: Summary of 19-year income mobility from 1993 to 2012
(income groups determined by the sample)**

		Income group 19 years later		Total mobility (%)
		Percentage that moved into a higher income group	Percentage that moved into a lower income group	
Income group in 1993	Bottom 20%	69.5	0.0	69.5
	Second	45.1	26.6	71.7
	Third	28.5	45.5	74.0
	Fourth	18.8	53.5	72.3
	Top 20%	0.0	53.3	53.3

Notes: [1] Income is measured by wages and salaries. [2] Zero percent for the bottom 20% since it is the lowest income group and individuals cannot move down any further. [3] Zero percent for the top 20% since it is the highest income group and individuals cannot move up any further. [4] Quintiles are based on the cohort (not the entire LAD population) with at least \$1,000 (in 2012 dollars) in each period.

Source: Statistics Canada, 2015b.

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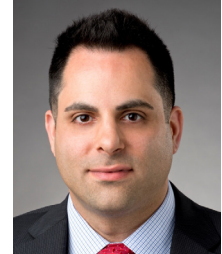
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Acknowledgments

The authors wish to thank the Lotte & John Hecht Memorial Foundation for its generous support of this project. They also acknowledge the anonymous reviewers for their comments, suggestions, and insights. Any remaining errors or oversights are the sole responsibility of the authors. As the researchers have worked independently, the views and conclusions expressed in this paper do not necessarily reflect those of the Board of Directors of the Fraser Institute, the staff, or supporters.

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Date of issue

April 2016

ISBN

978-0-88975-395-2

Citation

Charles Lammam, Niels Veldhuis, Milagros Palacios, and Hugh MacIntyre (2016). *Measuring Income Mobility in Canada, 2016*. Fraser Institute. <<http://www.fraserinstitute.org>>.

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