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SLOWER ECONOMIC GROWTH AND SUBJECTIVE WELL-BEING IN THE CANADIAN CONTEXT: A DISCUSSION PAPER

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Slower Economic Growth and Subjective Well-Being in the Canadian Context: A Discussion Paper

Abstract

Most mainstream forecasts for national economies expect that mature nations such as Canada will experience a few decades of slower economic growth, relative to past rates. This was reflected in the recent long-term forecast for the Canadian economy by the Centre for the Study of Living Standards. This transition is due to underlying demographic factors which are slowing labour force growth as well as slower rates of labour force productivity. Although there is a consensus among forecasters about the inevitability of slower growth there is less consensus about the magnitude of the change. This model suggests that countries such as Canada could enter into a prolonged period of slower growth without pronounced negative consequences for population well-being if other contributors to well-being are both protected and mobilized to offset the impacts of slower income growth. The most serious threat to well-being that is associated with the slow-growth scenario is an expected increase in income inequality and household debt. Canada may be particularly vulnerable to these effects because it is entering a slow growth era with relatively high levels of inequality and household debt, relative to most other mature nations.

About the Author

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Slower Economic Growth and Subjective Well-Being in the Canadian Context: A Discussion Paper

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Slower Economic Growth and Subjective Well-Being in the Canadian Context: A Discussion Paper

Executive Summary

Most mainstream forecasts for national economies expect that mature nations such as Canada will experience slower economic growth, in both absolute and per capita terms, in the coming decades relative to past rates. This was reflected in the recent long-term forecast for the Canadian economy by the Centre for the Study of Living Standards. This transition is due to underlying demographic factors which are slowing labour force growth as well as slower rates of labour productivity. Although there is a consensus among forecasters about the likelihood of slower growth there is less consensus about the magnitude of the change.

The research literature concerning economic growth and well-being strongly suggests that business cycle fluctuations are strongly related to population well-being while there is relatively little evidence that longer-term economic growth has a consistent relationship with well-being. A proposed model of economic development and well-being is described in this paper which suggests that the levels of well-being in nations increase with economic development if it is accompanied by a growth and strengthening of other contributors, such as protection of human rights, respect for diversity, freedom of choice, access to education, maintenance of health, social capital and an equitable sharing of the benefits of economic growth.

Canada routinely ranks among the top 5 to 8 nations with respect to measured levels of well-being, most frequently defined as satisfaction-with-life (SWL). It is one of a number of mature nations that enjoys higher levels of SWL than would be predicted by its level of national wealth as measured by GDP per capita. This is because Canada ranks particularly high on other known determinants; most importantly, Canada ranks highly in respect for diversity, freedom, effective courts, support for human rights and social capital. Canada also appears to be advanced with respect to value changes which are known to accompany economic development, particularly with regard to decreased levels of materialism in the population.

This model suggests that countries such as Canada could enter into a prolonged period of slower growth without pronounced negative consequences for population well-being if other contributors to well-being are both protected and mobilized to offset the impacts of slower income growth. The most serious threats to well-being that are associated with the slow-growth scenario are an expected increase in income inequality and household debt. Canada may be particularly vulnerable to these effects because it is entering a slow growth era with relatively high levels of inequality and household debt, relative to most other mature nations.

Of particular importance is the impact of slower growth upon government revenues and the need for expenditure priorities. It is critical that these expenditures focus upon adaptations to slower growth rather than expensive and futile attempts to foster growth from an economy which is unable to respond with the growth rates of the past for reasons that are primarily demographic in nature. Of particular concern is the level of funding support for the public institutions which support the non-economic contributors to well-being. The possible requirement for increased revenues from taxation to allow this

support to maintain its current levels, on a per capita basis, will ignite long-standing arguments about the best size and role of government in a slower growth future. Given the fundamental importance of this issue, it is crucial that this discussion shift from ideology to evidence for the purpose of supporting the development of evidence-based public policy for the transition to a slower growth economy in Canada.

Slower Economic Growth and Subjective Well-Being in the Canadian Context: A Discussion Paper[1]

I. Introduction

A. Purpose

There is an emerging consensus among analysts and forecasters that mature economies, such as Canada, are entering a prolonged period of much slower economic growth than we have become accustomed to in the past, primarily for demographic reasons. For some analysts, this trend is viewed positively because a shift in the trajectory of developed nations toward steady-state economies will result in crucial ecological and climate benefits. The more traditional view, however, is that slower growth will have substantial negative impacts on the health and well-being of the population and, consequently, ought to be offset through the development of public policy initiatives which will create additional growth, despite the demographic headwinds.

This paper takes a different view by arguing that the demographic sources of this shift require that we accept slower growth as a "given" for at least the next two to three decades and that public policy should be directed at the adaptation to this new reality and the mitigation of potential negative impacts on the well-being of Canadians rather than upon futile attempts to foster more growth.

The thesis of this paper is as follows:

> **Canada can move through a prolonged period of slower economic growth without a reduction in the traditionally high levels of well-being among Canadians if public policy addresses a number of predictable threats to well-being which may result from slow growth and ensures the continued vitality of a variety of non-economic contributors to well-being.**

This paper will describe the empirical research literature which has led to the development of this thesis.

The first section briefly reviews a number of projections that support the notion that Canada and other mature economies will experience a prolonged period of relatively slow growth and will explain the primary reasons for this trajectory. Section 2 discusses the relationship between well-being and economic growth with a focus upon Canada. Section 3 reviews the current situation in Canada with respect to the potential threats that slower growth could pose for the well-being of Canadians. The final section synthesizes the material from the previous sections to discuss the implications for public policy.

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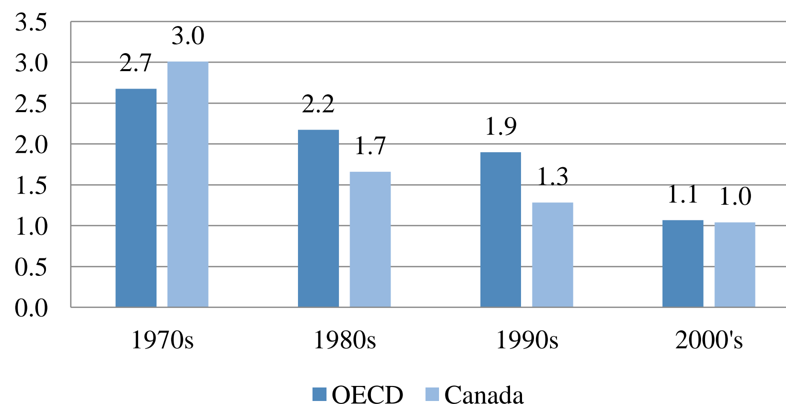
[1] This paper was written by Mike Pennock. The author would like to thank three anonymous referees for useful comments. Email: Mike.Pennock@gov.bc.ca

II. The Economic Transition

As reflected in Chart 1, the average rate of increase in real GDP per capita has been dropping in Canada and other mature economies over the past four decades. In the first decade of the 21st century, Canada's rate of growth was exactly one-third of what it had been in the 1970s. A similar trend has been apparent for the other industrialized nations that comprise the membership of the Organization for Economic Cooperation and Development or OECD.

Chart 1: Average Annual Change in GDP Per Capita, $US, Constant PPPs, OECD Base Year



Source: OECD.

And what of the future? The Centre for the Study of Living Standards (CSLS) recently released a set of projections for the Canadian economy to 2038 for the purpose of identifying potential impacts on provincial government finances (Drummond and Capeluck 2015). Table 1 presents the summary of their projection compared to four other projections for the Canadian economy.

Table 1: Projections for the Canadian Economy

Source	Period	Average Annual Growth		
		Real GDP	Labour Productivity	Labour Input
Centre for the Study of Living Standards	2016-2038	1.6	1.0	0.6
TD Bank	2016-2038	1.7	1.2	0.5
Parliamentary Budget Office	2016-2038	1.6	1.1	0.6
Conference Board	2016-2035	1.9	1.6	0.3
Rotman School of Management	2016-2038	2.2	1.5	0.7

Given that all of the projections, except one (Rotman) used the same Statistics Canada projections for the working-age population, the primary differences in anticipated growth in real GDP were the result of different assumptions about productivity trends and, in some cases, the average number of hours worked. The CSLS study and the Parliamentary Budget Office projected the slowest annual growth rate in GDP and also projected the slowest rates of productivity growth across the period. The Conference Board and Rotman projections assumed the highest rates of productivity growth.

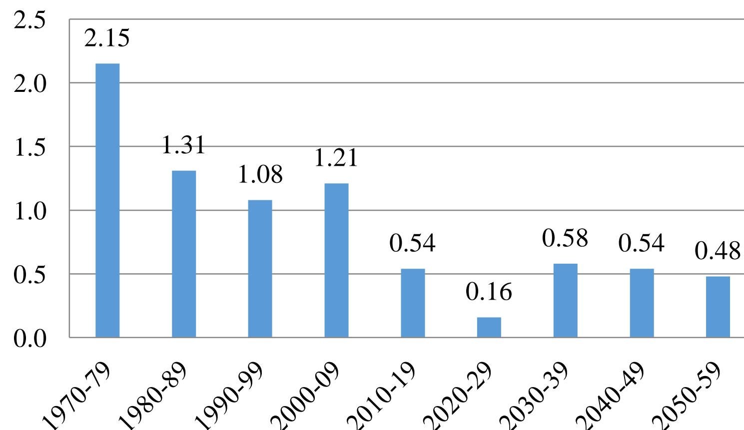
The GDP growth rates forecast by the CSLS will generate per capita growth rates of less than one per cent across the period, corresponding to a continuation of the rates of the past decade, as reflected in Chart 1.

This paper will frequently use the term "mature" to describe economies like that of Canada. The notion of "maturation," when applied to economies, relates to the developmental process through which most economies appear to pass. At their earliest stages, economies tend to rely on primary industries (e.g. agriculture and such resource-extraction industries as mining and forestry). Then they develop a stronger base of secondary industries such as manufacturing and construction and a growing share of the labour force shifts from primary industries to secondary. This is typically accompanied by an increase in the pace of urbanization and a reduction in birth rates. Throughout this time, the service sector continues to grow and eventually surpasses the manufacturing sector as a generator of jobs. This sector includes everything from government, to finance, real estate and sales.

In Canada, for example, only 25 per cent of the labour force was employed in service industries in 1911. By 2011, this number was close to 80 percent. The size of the agricultural labour force peaked in the 1930s. Employment in other primary industries like forestry and fishing peaked in the 1950s. The number of people employed in manufacturing peaked in 2004.[2] This industrial transformation is associated with a slowing in the rate of labour productivity growth and is accompanied by a reduction in birth rates which inevitably results in slower labour force growth. This is important because labour force growth is one of two forces which drive economic growth and the demographic forces of slower labour force growth act as an inevitable drag on the economy.

The labour force growth rate in Canada is slowing because of a corresponding decrease in the growth of the working age population (Chart 2). High rates of growth during the 1970s were due to the movement of the post-war baby-boom cohort into the working-age group. The smaller bump during the first decade of the current section reflected the movement of their children, the so-called baby-boom echo, into their adult years. The substantial reductions in growth in the current and next decade are due to the movement of the baby-boom cohort out of the labour force and into their retirement years. The powerful change in the age-structure of the nation will have a profound effect on labour force growth rates.

Chart 2: Average Annual Rate of Growth in the Canadian Working Age Population, Actual and Projected, 1970-2059



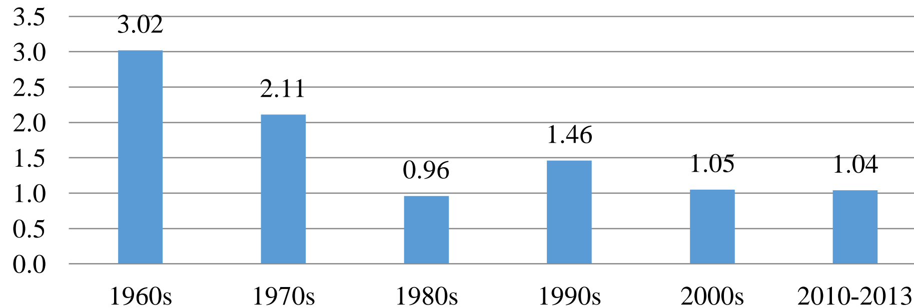
Source: CANSIM Table 051-0001.

The second engine of economic growth is labour productivity (Chart 3). Canadian rates of labour productivity fell dramatically during the 1970s and 1980s before rising slightly in the 1990s as a result of

[2] These figures are taken from two CANSIM Tables. The figures for 1911 and the 1950s are from Historical Labour Force Tables Series D8-85. The more recent figures are from Table 282-0088.

the information/communications technology revolution of that decade. With the turn of the century, labour productivity growth rates dropped to a level only slightly higher than in the 1980s. As reflected in Table 1, current forecasts range from a continuation of current rates across the next two to three decades to rates similar to the 1990s. None of the forecasts envision a return to the rates of the 1960s and 1970s.

Chart 3: Average Change in GDP Per Hour in the Canadian Economy by Decade, 2007 CADs, 1960-2013



Source: CSLS productivity statistics database.

The twin forces of slowing labour force growth and slowing labour productivity growth will interact to slow economic growth in Canada during the coming decades. This dynamic is not just a Canadian phenomenon. It appears to be characteristic of most mature economies (Braconier, Nicoletti and Westmore 2014).

A. Slower Growth in a Historical Context

Thomas Piketty (2014) and his associates amassed data about incomes, investments and economic growth for 20 countries over a period of 300 years. The results of their longitudinal analysis led to the conclusion that the magnitude of economic growth experienced by developed nations during the post-world-war period of the twentieth century was a historical anomaly. For most of the past three centuries, advanced national economies grew at a rate of about 1 per cent per year.

There were a variety of reasons for the unusual growth rates of the last half of the twentieth century, not the least of which was the need to rebuild much of the developed world after destroying a good part of it in two world wars which used technological advances to wreak a magnitude of destruction that was unimaginable in earlier conflicts. High rates of population growth and labour productivity made rapid growth possible. Growth rates on continental Europe reached the very high level of 4 per cent per annum between 1950 and 1980. These rates were substantially higher than those realized in North America which also benefitted from high rates of labour force and labour productivity growth in the post-war decades.

Piketty (2014) argued that the twenty-first century will see a return to more traditional growth rates among mature economies – somewhere between 0.5 per cent and 1.5 per cent. For the purpose of his analysis he picked a median scenario in which growth rates in the mature economies settle at about 1.2 per cent per annum. He acknowledged that even this reduced rate of growth represented an optimistic forecast. Labour productivity will need to grow at about one per cent per annum and this will require significant technological advances, particularly in the area of clean energy. He emphasized that even these limited expectations of growth are based on the assumption that rapid developments in renewable energy resources will occur to replace the diminishing supply of affordable hydrocarbons and the need to reduce the use of hydrocarbons in the face of climate change.

B. The Prospect of No-Growth and Secular Stagnation

Some analysts argue that even these slow-growth estimates are unrealistically optimistic. A recent Club of Rome forecast by Jurgen Randers projected that the United States would hit negligible to no-growth by 2020 with the per capita value of consumption in real dollar terms going into a decline (Randers, 2012). Other mature economies would soon follow as a result of their slowing labour force growth and labour productivity growth rates. Given the inter-related nature of the American and Canadian economies, it could be expected that the date at which Canada entered a period of no-growth would be closer to the American than the European schedule. Randers based his no-growth forecast upon declining labour force and labour productivity growth rates in mature economies as well as a decreased share of household consumption expenditures within the slower-growing GDP. This shift away from household consumption would be the consequence of an increased share of GDP going to the investment requirements of developing renewable resources to replace the declining supply of natural resources.

Another prominent no-growth scenario is based on an analysis by Gordon (2012) and his rebuttal of the critiques that it generated (Gordon, 2013).

Gordon took a historical perspective on U.S. economic development and argued that America's climb to the foremost economy on the globe had been propelled by three periods of intense innovation. The first of these was the result of a number of inventions that came into being between 1750 and 1830 including the steam engine, cotton spinning, and the railroads. The second important period was between 1870 and 1900 when most of the products which drove the economy of the twentieth century were invented, from automobiles to telecommunications. According to Gordon, the three most important inventions from that period were electricity, the internal combustion engine and running water with indoor plumbing. Both of these periods of innovation required about 100 years for their full effects to work their way through the economy. The primary impacts of the second wave were largely spent by the 1970s, when productivity in the United States and elsewhere slowed markedly.

The third period, the computer and Internet revolution, had its roots in the 1960s and reached its peak in the late 1990s. The primary impacts of the information technology revolution on productivity were largely spent by the end of that decade. Most of the developments in the post-2000 period related to entertainment and "smart" communication devices which had only marginal effects on productivity when they are stacked up against developments like electricity, the motor car, or even the introduction of word processing into the office environment. He concluded that the effects of the third revolution were decidedly shorter in duration and much more limited in scope than the previous two.

According to Gordon, there are no similar innovation revolutions on the horizon and, to make matters worse, the American economy is being slowed by six major headwinds, some of which are widely shared by other industrial countries and some of which are the unique product of American culture and history: (1) demographic change; (2) the deterioration of the American educational system; (3) international price equalization which has occurred because of globalization and the Internet; (4) rapidly increasing income-inequality which ensures that most of the diminishing gains from dwindling economic growth accrue to the upper economic tier and not the remaining 99 per cent of the population; the growth in necessary environmental regulations; (5) taxes and the "overhang" of government; and (6) higher levels of consumer debt which drive down consumption. Based on these considerations, Gordon saw little possibility that economic growth will exceed half of one per cent per annum for most of the next century.

He was careful to emphasize that he was confining his analysis to the United States and not generalizing to other countries. In fact, he suggested that the Canadian future might not be quite so bereft

of growth: "My guess is that a Canadian or Swedish economist looking at the past and future of his or her country would not be nearly so alarmed" (Gordon, 2012:21). He provided no details to support this claim but it is possible that he was referring to the fact that the growth of inequality in the United States and the deterioration of the American education system are more serious than similar trends north of the border.

The protracted nature of the current slowdown and the apparent failure of traditional fiscal and monetary policies to re-establish traditional growth rates has resulted in the resurrection of a concept which was articulated during the Depression of the 1930s: secular stagnation. First coined by the American economist Alvin Hansen in his presidential speech to the American Economic Association in 1938, it gave a name to his fears that the world economy might not recover from the depression in which it languished at the time. The idea was soon buried beneath the dramatic rates of growth that followed the Second World War but reappeared at a 2014 Research Conference of the International Monetary Fund in a speech by Larry Summers, the former Treasury Secretary of the United States. He raised the possibility that the developed world may be facing a future of secular stagnation. The American economist Paul Krugman suggested that most of the previous twenty years may have been characterized by secular stagnation because it had taken a series of bubbles to force growth throughout the period (Krugman, 2013). He argued that there has been relatively little growth in the real economies of developed nations for a long period of time.

The jury is still out about whether we are in a period of secular stagnation or simply a period of slow growth. It is a question of whether it is "slow" or "no" growth. A recent study by economists at the OECD came to a sobering conclusion: "Signs of secular stagnation are most evident in the Euro area, particularly in the vulnerable areas, in contrast to the United States and the United Kingdom, where evidence is less firm. Japan is arguably in the advanced stage of secular stagnation that started almost two decades ago. (Rawdanwicz *et al*., 2014:3)"

This paper will focus on the implications of the slow-growth scenario for population well-being but will reference the possibility of additional impacts if the no-growth scenario were to unfold.

C. Summary

There is an emerging consensus in economic forecasts that Canada and other mature economies are entering a protracted period of reduced economic growth as a result of demographically induced slower rates of labour force growth and rates of labour productivity that are likely to remain below the standards of the late twentieth century. This slower rate of economic growth does not represent a sudden collapse or reduction in growth. It is the continuation of a longer term trend that began in the 1970s.

Some analysts believe that a no-growth future is a more likely outcome, primarily because of lower expectations with respect to productivity growth. This paper, however, will focus on the slow-growth scenarios but will reference major threats to well-being which would result from a no-growth alternative.

The next section explores the relationship between well-being and economic growth and the current dynamics of well-being in Canada as it sits on the cusp of a slower growth era.

III. Well-Being and Economic Growth

There are two general approaches to measuring well-being. Objective measures of well-being are typically based on counts of observable phenomena that are thought to comprise well-being. An important example of this approach is the Index of Economic Well-Being (Thomas and Uguccioni, 2016). This composite index provides a more meaningful perspective on economic growth than GDP because it accounts for some of the negative consequences of economic growth such as environmental degradation, increased income inequality and poverty, and includes measures of economic security, such as the risk of unemployment, illness, and poverty among single parents and the elderly. It also adds the dollar value of changes in leisure time into the calculation and adjusts consumption measures for household size and life expectancy. In general, it tries to balance the costs and benefits of economic growth into a more meaningful measure of economic well-being. Among fourteen OECD nations, Canada ranked eleventh on this measure in 2014.

The current paper will focus on subjective measures which reflect a person's self-reported general feelings of well-being. In sorting out the complexities and the sometimes inconsistent research results concerning the economics of well-being, researchers have differentiated between two types of subjective well-being. The first is represented by a general sense of satisfaction with one's life that is commonly measured by responses to the question: "How satisfied are you with your life as a whole these days?" Several scales have been used to record responses to this question. A five point response scale ranging from "Very Dissatisfied" to "Very Satisfied" is the shortest of the available alternatives and an eleven-point ladder, Cantril's Self-Anchoring Scale, requires respondents to place themselves on the appropriate rung of a ladder which is labelled "the worst possible life for you" at the lowest rung and "the best possible life for you" at the highest rung. This type of subjective well-being is typically labelled "life satisfaction" or "satisfaction with life (SWL)" and these are the terms that will be used in this paper.

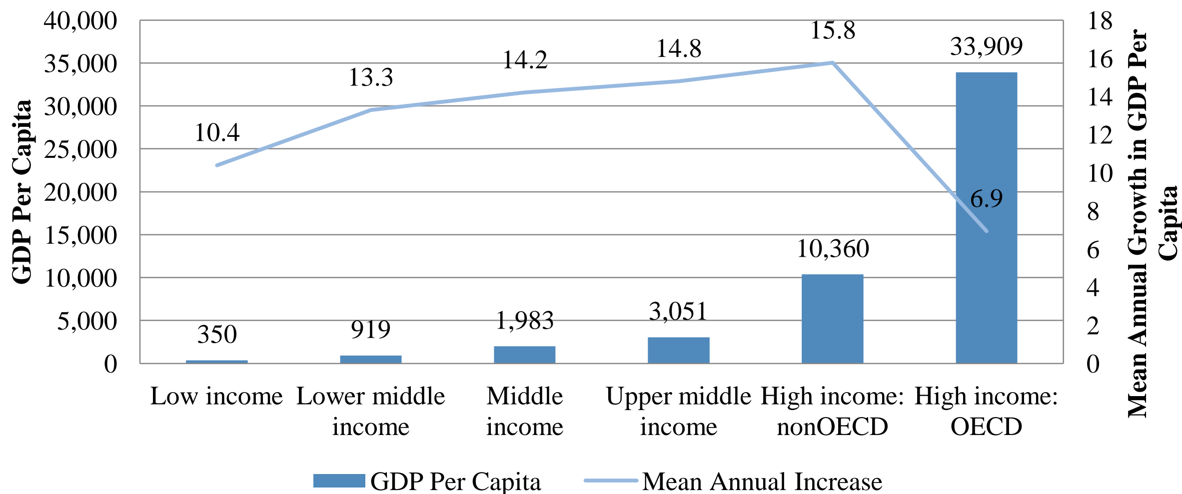
The second type of subjective well-being that is used in the research literature relates to the extent to which a person experiences positive emotions such as joy, fascination and affection, as opposed to negative emotions such as anger and anxiety in the course of their daily lives. This type of subjective well-being is typically called "emotional well-being" or "affective well-being." Although life satisfaction and affective well-being are often correlated, the relationship is not perfect.

The current paper will use "life satisfaction" as the primary measure of well-being, based on the notion that "emotional well-being," like physical well-being or social well-being, is one of a number of contributors to well-being but it is not by itself "well-being". The use of "life satisfaction" as a measure of well-being is consistent with most of the research literature on the subject (Helliwell and Wang, 2013).

On most international surveys of well-being, Canada scores quite well. This paper will focus, primarily, on an international survey that is carried out by the Gallup organization which covers 156 nations. The results reported in this section of the report were based on the analysis of these survey results by Helliwell, Layard and Sachs (2012, 2013 and 2014). On the measure of life satisfaction, which used Cantril's ladder, Canada ranked fifth in 2008-2011 behind (in order) Denmark, Finland, Norway and the Netherlands. Among the 156 countries included in the survey, most of the more mature nations of the OECD ranked in the top thirty. The exceptions were Greece (42), Japan (44), Portugal (73), and the former Soviet nations of Slovenia (49), Poland (53), and Slovakia (55). The overall dominance of the mature economies among the higher ranks of life satisfaction reflects the well-documented tendency for life satisfaction to increase with the level of economic development. Nations that are further along the development process tend to have higher rates of life satisfaction.

The ranking of nations based on life satisfaction changes dramatically when measures of emotional well-being are used. In the 2008-2011 period, Canada, New Zealand, and the United States were the three countries whose rankings are relatively unaffected by the change in measures. Canada ranked fifth in life satisfaction, fourth in positive affect and fourth in a measure of "average happiness yesterday." Our companions in the top ten, however, changed dramatically. For the positive affect measure, Canada, New Zealand, and the United States were joined by Ireland, Costa Rica, Laos, Panama, Thailand, and El Salvador. On "average happiness yesterday," Canada, New Zealand, and the United States were joined by Thailand, the Philippines, and Panama. Some of the changes in ranking were dramatic. Denmark, which has topped the list on life satisfaction on survey after survey, dropped to 38th on positive affect and a 100th on the "average happiness yesterday" measure.

Chart 4: Mean GDP Per Capita and Annual Growth in $US for World Bank National Income Groupings, 2002-2007



Source: World Bank Statistics.

The other differentiation which is important to this discussion is the distinction between economic development and economic growth. The latter term refers to the expansion of an economy which is typically measured as the rate of growth in GDP or, more directly relevant to incomes, growth in GDP per capita. Economic development, on the other hand, typically refers to the structural changes that are apt to accompany economic growth. This development can include dimensions such as expanding health-care and educational systems, which lead to higher levels of health and education in the population; higher quality government services, which are free of corruption; effective police and courts; the protection of civil rights and democratic organizations, which are responsive to the needs of the population; the emergence of service sector and knowledge sector occupations; and the aging of the population as a result of declining birthrates and longer life-expectancies.

Thus we talk about "developed" and "developing nations" to refer to different stages of economic development. Economic growth is a fuel for economic development but "developed" or "mature" nations tend to grow at a slower rate than developing nations. Economic growth may drive the economic development process but it tends to dissipate once higher levels of development are attained. This is probably the inevitable result of the demographic and structural changes which tend to accompany economic development and which reduce rates of labour productivity and labour force growth.

This distinction is clear in Chart 4 which depicts GDP per capita and the growth rate in GDP per capita between 2002 and 2007 among nations classified into the World Bank's Income Grouping. The

OECD member nations have a GDP per capita which is many times higher than the rest of the world, but they have the lowest rate of growth in GDP per capita over the period.

A. National Income

Early research suggested that the level of life satisfaction within nations increased dramatically as GDP per capita increased to a level of approximately $10,000 US at which point further increases in GDP per capita had relatively little impact upon life satisfaction. Beyond a certain point, continued growth in affluence appeared to pay diminishing returns with respect to SWL. Most of this research was based on the results of the World Values Survey, a survey of up to 86 countries which has been carried out in a number of waves since the 1980s. Just as a scientific consensus was developing around this conclusion, the Gallup Organization began collecting data on life satisfaction from almost twice as many countries and the emerging consensus began to unravel. The results suggested that the levelling of life satisfaction after GDP per capita reached $10,000 was probably an artifact of the countries which participated in the World Values Survey.

Table 2: GDP Per Capita (PPPs) and SWL in the Thirty Wealthiest Nations, 2012-2014

	GDP Rank	SWL Rank	Difference in Ranks
Qatar	1	27	-26
Luxembourg	2	16	-14
Singapore	3	25	-22
Kuwait	4	36	-32
Norway	5	2	3
United Arab Emirates	6	23	-17
Switzerland	7	1	6
Hong Kong	8	64	-56
United States	9	15	-6
Saudi Arabia	10	33	-23
Ireland	11	19	-8
Netherlands	12	8	4
Austria	13	10	3
Sweden	14	7	7
Denmark	15	4	11
Germany	16	20	-4
Australia	17	9	8
Canada	18	5	13
Bahrain	19	45	-26
Belgium	20	17	3
Iceland	21	3	18
Finland	22	6	16
United Kingdom	23	15	8
France	24	28	-4
Japan	25	42	-17
Italy	26	46	-20
New Zealand	27	11	16
Israel	28	12	16
Spain	29	35	-6
Korea, Rep.	30	43	-13

Source: Income data from World Bank Statistics; SWL rankings from Helliwell, Layard and Sachs, 2014.

It also reflected the fact that larger increases were necessary in higher income countries to have the same impact on SWL than were necessary in lower income countries. An increase of ten thousand dollars in GDP per capita in a country with a GDP per capita of $20,000 will have a much larger impact on SWL than a similar increase would have in a county with a GDP per capita of $60,000. However, a ten

per cent increase in both countries will have similar impacts on well-being. By switching to the log of GDP per capita, the results of the Gallup-based analysis suggested that the positive relationship between national income and SWL continued through the higher-income nations with no sign of levelling off when the scale reflected percentage increases in GDP per capita rather than actual dollar increases (Deaton, 2007).

It is important to note that the relationship between GDP per capita and life satisfaction is not a perfect correlation. In Table 2, the richest countries in the world are ranked according to their GDP per capita for 2012-2014. These figures are purchasing power parity (PPP) adjusted to control for differences in the cost of living between the nations. The column headed SWL shows their ranking on life satisfaction based on the average of their national scores for the 2012-2014 World Gallup Surveys. A cursory look at the figures reflects the notion that the relationship between GDP per capita and well-being is somewhat complicated.

The four wealthiest countries in the world, Qatar, Luxembourg, Singapore, and Kuwait, rank 27th, 16th, 25th, and 36th in SWL. Other countries which rank substantially higher on GDP per capita than SWL are Hong Kong, Japan, Bahrain, Korea, Italy, and Saudi Arabia. Countries which showed the opposite effect and which ranked considerably higher on SWL than they did on GDP per capita included New Zealand, Finland, Iceland, Denmark, Canada, and Israel. There were also a few countries for which the two sets of ranking were relatively close: Norway, Germany, the Netherlands, France, Austria, and Belgium.

These results support the notion that factors in addition to income appear to be at work which drive SWL and its relationship to economic development. The results displayed in Table 2 suggest that these other factors may be particularly important in Canada which ranked 18th in GDP per capita but 5th in life satisfaction.

The research arising from the Gallup survey also suggested that the challenge of increasing SWL through increases in national income is a formidable task. On average, a one-point movement up a ten point scale of life satisfaction for a nation required a doubling of national income per capita (Deaton, 2010).

B. Household Income

At an individual-level, the relationship between income and life satisfaction is strong. But the strength of the relationship is not simply based on the fact that higher incomes lead to higher levels of life satisfaction. The relationship runs in both directions. DeNeve and Oswald (2012) reported that high levels of life satisfaction also contribute to the generation of higher incomes. There is a strong body of research which supports the notion that happy people are more creative, productive, and successful workers. Consequently, they are more apt to be promoted and work their way up the occupational hierarchy into better paying positions than are their more morose counterparts (De Neve *et al*., 2013).

This paper will focus on the effects of incomes on SWL. Is our desire for ever-increasing income a reflection of materialistic desires to have bigger houses, newer cars, and more “stuff”? Most of us don’t like to think about ourselves in such materialistic terms. In two community surveys in Cape Breton and Kings County, Nova Scotia, people were asked to rate the importance of different values (Pennock, Pennock and Colman, 2008). The vast majority of respondents in all three communities rated positive-social values such as generosity, friends, and family as more important than acquisitive values related to materialism. When asked to rate the same values for “most other people” the opposite was true. They saw most people as materialistic and lacking in positive social values. So they saw themselves as governed by positive social values but living in a materialist society. The irony of these results is that most other

people felt the same way. The importance of non-materialistic values in these communities was consistent with the international trends cited by Inglehart and Welzel (2005) respecting the emergence of post-materialist values among developed nations.

It is probably fortunate that most people are not primarily motivated by materialistic values. A review of the research by Konow and Early (2008) concluded that people who are dominated by materialist values tend to be less satisfied with their lives than persons who are dominated by more positive social values. Canadians are not exempt from this relationship. Survey research by Environics, summarized by Adams (2000), concluded that the unhappiest Canadians were those who harboured status-seeking values related to the importance of physical beauty and ostentatious consumption. And the results of community well-being surveys mentioned in the previous paragraph supported the notion that positive social values were related to higher levels of life satisfaction, while materialistic values were negatively related.

Taken as a whole, the existing body of research supports the following general conclusions about individual income and SWL (Lyubomirsky, 2013):

1. The impact of the acquisition of material things upon life satisfaction, even among materialists, is short-lived. It does not take long for satisfaction to return to pre-purchase levels.
2. Using income to finance new experiences, rather than more goods, has longer-lasting effects on life satisfaction.
3. Spending money on activities that address basic needs related to feelings of competence, relatedness, and a sense of mastery and control over one's life can promote SWL.
4. The impact upon happiness and life satisfaction of giving money away to help others is stronger than the impact of spending money on ourselves.
5. Spending money in ways that provides more free hours in the day promotes SWL.
6. Spending money in ways that engenders periods of waiting and the anticipation of its benefits promotes SWL.
7. Spending money on many small pleasures instead of a few big ones promotes SWL.

As with national income, it appears that life satisfaction continues to increase through all levels of income while the experience of positive affect tends to level off at a household income of about $75,000 US (Kahneman and Deaton, 2010).

Before moving on, it is important to note that there are two other economic phenomenon which are related to income and which have demonstrated impacts on our satisfaction with life: unemployment and inflation. Blanchflower *et al*. (2014) concluded that increases in either one of these factors had negative effects on our sense of well-being, but the impacts of unemployment were about four to six times greater than the impact of a similar increase in inflation. Among the full range of determinants, unemployment has one of the most substantial negative impacts upon our SWL. These effects ripple beyond the unemployed by increasing levels of economic insecurity in the broader population (Helliwell and Luang, 2011).

C. Economic Development and Well-Being

We will return to these effects later in the paper when we look at the Canadian situation with respect to life satisfaction and income but, before proceeding down that road, it is necessary to return to the main subject of this section: what is the relationship between economic development, economic growth, and well-being? And what are the important non-income determinants of well-being that cause some countries, like Canada, to have higher rates of well-being than their levels of national income would

appear to justify? This requires an examination of the broader consequences of economic development and growth.

Benjamin Freidman (2005:1) took on this task in *The Moral Consequences of Economic Growth*. He began the book with an articulation of the issues which are under consideration in this section of the paper:

> "Are we right to care so much about economic growth as we clearly do? For citizens of all too many of the world's countries, where poverty is still the norm, the answer is immediate and obvious. But the tangible improvements in the basics of life that make economic growth so important whenever living standards are low – greater life expectancy, fewer diseases, less infant mortality and malnutrition – have mostly played out long before a country's per capita income reaches the levels enjoyed in today's advanced industrialized economies. Americans are no healthier than Koreans or Portuguese, for example, and we live no longer, despite an average income more than twice what they have. Yet, whether our standard of living will continue to improve, and how fast, remain matters of acute concern for us nonetheless.
>
> At the same time, perhaps because we are never clear about why we attach so much importance to economic growth in the first place, we are often at cross-purposes – at times we seem almost embarrassed – about what we want. We not only acknowledge other values; as a matter of principle we place them on a higher plane than our material well-being."

Friedman set about a review of economic development in the United States and other nations to search for those non-material or "moral" benefits which appear to accompany economic development across a variety of national and cultural settings. He concluded that there were four central factors which seemed to flourish with economic development:

1. Increased levels of tolerance for diversity;
2. Greater opportunity and social mobility;
3. Commitment to fairness and generosity to those who have been left behind by some combination of circumstance, market forces or dumb luck; and
4. Dedication to democracy and democratic institutions.

He argued that the relationship between economic development and these moral imperatives was self-reinforcing insofar as the enhancement of these moral domains also created a supportive environment for economic development. They were both the result and cause of economic development.

The results of Friedman's analysis were consistent with another body of research that examined the effects of economic development on the evolution of personal values. This evidence comes from an extensive research program by Ingelhart and Welzel (2005) on the value changes that occurred over time within a large number of nations based on the results of the World Values Survey. They concluded that economic development in most of the developed nations was accompanied by a decrease in materialistic values and an increase in "self-expression" values, which included a greater tolerance for diversity and an emphasis on independence, autonomy, and individualism, as opposed to conformity. This shift was associated with a preference for participatory forms of democracy and an acceptance of the role of government in protecting rights and freedoms and in the provision of more equal opportunities for individual development and self-expression.

The major sweep of this transition was summarized in their Post-Materialistic Value Scale. Canada participated in the 2005-2009 wave of the World Values Survey, which included Ingelhart's 12-

item version of the scale, along with 53 other countries. The data show that Canada ranked fourth, behind Switzerland, France, and Sweden with respect to Post-Materialist Values. The analysis grouped survey respondents into six categories ranging from materialistic to post-materialistic and 23.4 per cent of Canadians were in the two groups at the post-materialist end of the scale. A majority of respondents (57.1 per cent) were in the centre of the value continuum and only 17.3 per cent occupied the two groups at the materialist end. Canada ranked 47th out of 55 with respect to the percentage of respondents who were at the materialist end of the scale. We were more materialist than Uruguay, Great Britain, the Netherlands, Germany, Switzerland, Sweden, and Norway (the least materialist at 10.3 per cent).

Canadians were therefore consistent with the general trend for countries at the advanced level of economic development to reflect a higher adherence to post-materialist values. Interestingly, adherence to post-materialistic values in the United States was about half that of Canada and approximately twice as many Americans as Canadians fell into the materialist group. This is consistent with other analyses of contrasting values between the two countries (Adams, 2003).

There was another result from Ingelhart and Wenzels investigation which is pertinent to this paper. They identified the central importance of one factor in promoting life satisfaction across cultures and countries, namely the degree of choice that people have in shaping their lives. It is this capacity which fuels the transition to the self-expression values and the higher levels of SWL that appear to be characteristic of many developed countries.

The central importance of freedom in facilitating well-being has also been found in other studies (Verme, 2009) It is important to note, however, that this is not the brand of freedom celebrated by some analysts who focus upon the freedom of markets to operate in a world of minimum government regulation, often characterized by the notion of "small government." A study of one hundred and twenty nations by Graafland and Compen (2014) found no direct relationship between economic freedom and well-being but a negative relationship between well-being and small government. Consistent with Friedman, it found that the quality of a nation's legal system was strongly related to its level of national well-being. Brule and Veenhoven's (2014) study of developed nations found a measure of perceived freedom, or a belief that people have choice in life and a degree of control over their lives, is the type of freedom most strongly associated with higher levels of national well-being. All of these results are consistent with Adams (2000:186) report on the results of polling about the determinants of happiness in Canada:

> "Is our money making us happy? Depending on the amount we have and the importance we ascribe to it, yes. In general, those with more money tend to report higher levels of happiness than those with less money. That said, there is strong evidence that it is not money itself or the things money can buy that we value, but rather the freedom that money affords us."

There is a powerful logic behind the empirical relationship between freedom and life satisfaction. People will tend to be more satisfied with their lives if they have the freedom to live their lives in ways that are meaningful to them. This requires the dimensions identified by Friedman: respect for diversity, opportunity and social mobility, a commitment to fairness and generosity for people who experience ill-fortune, and a democratic government which supports the aspirations of its citizens. It is notable that all of this research supported the conclusions of Amartya Sen's (1999) pioneering treatise, *Development and Freedom*, which argued that the primary benefits of economic development were the fostering of three interconnected freedoms: political freedom, the freedom of opportunity, and freedom from poverty.

It is the importance of this sense of freedom in fostering life satisfaction that helps to explain the ranking of nations that we observed earlier in this section. Qatar, Kuwait, the United Arab Emirates, and Saudi Arabia may have per capita incomes that place them high on the income scale, but the limited

freedoms that their governments afford their residents probably acts as a drag on their national SWL rankings.

Table 3: Effects on Life Evaluation of Each Factor as a Multiple of the Effect of a 30 Per Cent Increase in Income

Factor	Effect
Individual unemployment (versus employment)	-6.0
Unemployment rate (10 percentage point increase)	-1.3
Social support (10 percentage point extra saying yes)	4.5
Freedom (10 percentage point extra saying yes)	2.1
Free from corruption 10 percentage point extra saying yes)	1.9
Malaise 8 years earlier (1 standard deviation worse)	-10
Physical health (poor versus good self-assessed)	-15
Single versus married	-2.2
Separated versus married	-4.0
Widowed versus married	-2.9

Source: World Happiness Report (2012:89)

Thus, national income is just one of a number of determinants of national SWL and, as concluded by Friedman, these contributors are themselves interrelated. This fact helps to explain some of the conflicting results that have arisen from cross-sectional analysis. This issue was highlighted in an analysis of Gallup results in which there was a very strong relationship between life satisfaction and GDP per capita as the variance in income between the countries explained about 65 per cent of the variance across countries in SWL in regression analysis (Layard, Clark, and Senic, 2012). However, when two other measures were added to the analysis, namely social trust and trust in police, the explanatory power of GDP per capita fell to 13 per cent, while the power of the social variables was 36 per cent. When other variables, such as health, education, freedom, and control of government corruption were added, the explanatory power of GDP per capita dropped to 8 per cent.

The impact of various factors, relative to income, is described in Table 3. This reflects the notion that national well-being is driven by a number of factors: health, education, good governance, social support and trust, human rights, and protections. These factors, in turn, are interrelated with each other and with income. When income is studied alone as a correlate of SWL it becomes a proxy for these other factors and its importance is inflated.

An analysis of the pooled results of seven years of the Gallup survey (2005-2011) found strong relationships between levels of life satisfaction in 149 nations and log GDP per capita, social support, life expectancy, freedom to make life choices, generosity and perceptions of corruption. The adjusted R-squared was 0.74.

In summary, there does appear to be strong evidence in the literature that well-being among nations is related to the level of economic development, as reflected in GDP per capita. This is consistent with the strong relationship that has been found between well-being and the United Nations Human Development Index (HDI) by Hall (2013). The relationship is complex insofar as a variety of other contributors to well-being are also strengthened through broader social development which tends to accompany increases in GDP per capita.

D. What about Economic Growth?

There is a relatively strong consensus in the literature that changes in well-being are positively associated with the short-term economic fluctuations of the business cycle (Deaton, 2012). In particular, as economies slip into recession and unemployment rises, the level of well-being among the unemployed,

as well as the broader population, decreases. As recovery sets in, and growth increases, unemployment levels drop and well-being tends to rise in concert with increased growth. The primary source of controversy centres on the relationship between longer term growth and well-being.

The Deaton (2007:21) study of the relationship between the log of GDP per capita and life satisfaction that was cited earlier yielded a surprising result with respect to economic growth: "However we count it, income makes countries happy and income growth makes them unhappy." The relationship between economic growth and SWL was negative for both a short-term growth trend (2000 to 2003) and a longer-term trend (1990 to 2000).

Earlier research by Easterlin (1995) had found no relationship between GDP per capita and well-being beyond a threshold level of GDP per capita that most developed nations had already passed. These results had been used to argue that there was no relationship between economic growth and well-being. The research, however, had used GDP per capita at a point in time and was consequently a measure of economic development rather than growth. It was also this relationship that Deaton (2007) had failed to replicate when he used the log of GDP, as discussed earlier in this section.

A better analysis of the relationship between growth and well-being measures such as SWL requires a time-series analysis of concurrent changes in GDP per capita and changes in well-being. One of the first attempts at this type of analysis was by Hagerty and Veenhoven (2003) using SWL data from 21 countries across the 1973-1996 period. They calculated correlations between GDP growth and life satisfaction at the same point in time and with one-year lags in either direction. When SWL was correlated with GDP per capita one year earlier, six nations showed a significant positive relationship and one showed a significant negative relationship. The overall correlation across all countries was 0.27 for the concurrent same year measure, 0.19 when the measure of GDP per capita preceded SWL by one year and 0.23 when SWL preceded GDP per capita by one year.

The authors concluded that these results contradicted the earlier conclusion by Easterlin (1995) that changes in national happiness were independent of economic growth. Easterlin (2013) responded that the overall correlations of 0.19, 0.27, and 0.23 were quite weak and statistically insignificant. He also used the country-level results to illustrate that countries with similar levels of GDP per capita growth across the period had widely different experiences with respect to changes in well-being.

Although referred to as a time-series analysis, the fact that GDP per capita growth rates and well-being growth rates were correlated at only a one-year interval in the Hagerty and Veenhoven (2003) analysis suggests that this was more accurately described as a cross-sectional analysis repeated at various intervals across the 1973-1996 period. As already noted, the more powerful time-lag study by Deaton (2007), using data from 132 nations, reported a negative relationship between well-being in 2006 and rates of economic growth between 2002 and 2003 and between 1990 and 2003.

Another attempt to correlate changes in GDP per capita and concurrent changes in life satisfaction was by Stevenson and Wolfers (2008). They used results from the World Values Survey and the Eurobarometer to examine the relationship between longer-term growth and life satisfaction and concluded that there was a significantly positive relationship between economic growth and well-being, although the effect was stronger among WVS countries than the Eurobarometer countries. Although they did not reference the conflicting results from Deaton (2007), they argued that their analysis contradicted earlier analysis such as Easterlin (1995) which argued that economic growth and well-being were unrelated past a certain level of development.

Easterlin (2013) responded with an analysis of the relationship between long-term changes in GDP per capita and well-being in 17 Latin American nations, 17 developed countries, 11 Eastern

European countries and 9 less developed countries. All of the analyses yielded insignificant relationships between economic growth and well-being. The authors accounted for the conflicting results by arguing that the Stevenson and Wolfers (2008) analysis emphasized shorter-term trends and that significant results for longer-term trends in their sample of 17 countries relied on the values of two outliers: Hungary and South Korea. When they were removed, the relationship became insignificant.

Wolfers, Sacks and Stevenson (2013) provided an overview of their research on the topic. They presented six scattergrams and regression results pertaining to changes between SWL from the World Values Survey and changes in log GDP per capita between various waves of the WVS: 1982 and 1996; 1990 and 2000; 1996 and 2005; 1982 and 2000; 1990 and 2005; 1982 and 2005. Because different countries participated in different waves, the number of nations included in each comparison varied. They acknowledged that the slopes varied between the panels and were not always statistically significant but they estimated a "precision-weighted average" of 0.43. They concluded on the basis of their many attempts to quantify the relationship between economic growth and SWL that the task was challenging because of a lack of comprehensive data on national SWL levels over time for the quantity of nations that were required for a robust analysis. They argued, however, that their approach had been sufficiently robust to allow for quantitative comparisons rather than statistical significance.

The most recent contribution to this literature is Veenhoven and Vergunst (2014) who increased the number of nations utilized in Hagerty and Veenhoven (2003) to 67 and expanded the number of observations to 199, ranging from 10 to more than 40 years. Similar to the previous analysis, they recorded a correlation of 0.20 between average economic growth in the past year and average change in happiness. The correlation did not differ by the length of the span for which data was available for the participating nations. The relationship was substantially weaker among high income nations.

Clark, Fleche and Senik (2014) made a new contribution to the debate by analyzing the effect of economic growth on happiness inequality, which is the relative rate of happiness across income groups within nations. Using data from the World Values Survey, as well as a number of national surveys from the United States, the United Kingdom, Germany, and Australia, they concluded that economic growth had no effect on average levels of life satisfaction across time, thus supporting the Easterlin conclusion. However, growth had significant effects upon happiness inequality by reducing the proportion of persons at the highest and lowest ends of the life satisfaction continuum. Thus, higher levels of growth reduced the degree of inequality in life satisfaction across income groupings.

There was one important qualification to this general conclusion that arose from the American experience. If too much income inequality accompanies economic growth, then happiness inequality may increase rather than decrease. The incorporation of measures related to the supply of public goods into their model led them to conclude that the positive effects of economic growth upon the equality of happiness was the result of the increase in public goods that accompanied economic growth, particularly public goods related to health, control of corruption, and the protection of civil liberties. These results reflected the earlier discussion about the relationship between economic growth, economic development, and well-being. Economic growth facilitates important social institutions, which are characteristic of economic development, and these institutions support well-being, particularly among people at the lowest end of the well-being continuum.

There have been some interesting results about the relationship between trust and economic growth in a study of trends in "trust" within nations by Roth (2009). The notion of trust is important because it is a key measure of social capital, which is the dimension that becomes increasingly important to the enhancement of our well-being as our material needs become satisfied and our focus moves to other needs. It is a key factor, along with freedom, which helps to address those non-material contributors to well-being, particularly those associated with community vitality and social supports. Interestingly, it has

also been identified as a key factor in promoting economic growth because business agreements and contracts are facilitated by a sense of trust. Societies with high-levels of distrust and hostility tend to be hampered in their efforts to experience economic growth (Morrone, Tontoranelli and Ranuzzi, 2009).

The Roth (2009) analysis of 41 countries from 1980 to 2004 found that economic growth was negatively associated with changes in trust among developed countries but not among developing countries. In other words, the developed countries which experienced higher rates of growth from 1980 to 2004 were more likely to experience decreased levels of interpersonal trust than did developed countries with slower rates of economic growth. It is noteworthy that this was also the period when income disparities increased in the faster-growing developed countries and there is very strong research evidence that income disparities within a country erode interpersonal trust. Consequently, this result makes sense. Faster growing developed nations experienced increases in income disparity which eroded levels of trust over the 25 years considered.

The results of a second study by Sarracino (2010) compared the determinants of subjective well-being among high and low income countries. This study found that social capital variables such as trust were important contributors to well-being in both high- and low-income countries but the effect in high-income countries was almost twice as strong as in low-income countries. The author concluded that the greater importance in high income countries reflected a reaction to the erosion of social capital that they experienced during the course of their development. It could also reflect the shift to post-materialist values that stress the importance of trust.

Although the level of understanding continues to evolve with new research and analysis, the majority of the evidence suggests that well-being is positively associated with short-term economic growth related to the business cycle. The relationship with longer-term economic growth, however, is more complex because of a variety of confounding factors. In a recent review of the literature Pennock (2016) proposed the following conclusions:

1. At the earliest stages of economic development, nations are characterized by high birth rates and relatively short life expectancies. This results in a growing supply of young workers who move to cities, resulting in the reallocation of labour from low-productivity growth rural economic activities to high-productivity urban economic activities, subsequently increasing aggregate labour productivity. These two factors, a growing labour force and high rates of labour productivity growth, cause rates of economic growth to increase.
2. Among these developing nations economic growth is positively associated with SWL if the growth is accompanied by an investment in the institutions that support SWL, such as education, democratic institutions, courts and impartial systems of justice, which protect rights and freedoms, and health and social supports. Equally important is the development of value systems which promote a respect for diversity and tolerance. Taken together, these developments foster personal freedoms by facilitating the ability of individuals to follow a life course which is meaningful to them and which enhances their satisfaction with their lives.
3. In developing countries, in which the benefits of economic growth do not facilitate the development of these institutions and values, levels of SWL are less likely to increase across the population.
4. The maturation of these economies is also accompanied by demographic changes which are characterized by declining birth rates, longer life expectancies, and an aging population. These changes reduce the rate of labour force growth, and, perhaps, the growth rate of labour productivity, although the latter conclusion has mixed support in the literature. The rate of economic growth inevitably slows. If past economic growth has created institutional- and values-based environments which foster a sense of personal freedom more broadly, these nations maintain their higher levels of SWL despite their slower rates of economic growth. A shift to less

materialistic values among a large segment of this population, which accompanied past economic growth, helps to blunt the impact of slower growth on SWL. The impact is also mediated by the strength of the other contributors to SWL which have accompanied growth and which continue to facilitate SWL as rates of growth slow.

Consequently, not all wealthy nations have higher levels of well-being. To augment well-being, the process of economic growth needs to be accompanied by a range of co-developments which enhance well-being. These factors are probably interrelated and mutually reinforcing. These factors include but are not limited to increased levels of health and education, social trust, effective governance, increased personal and political freedoms, human rights protection, and systems of justice and social supports. The development of these public goods enhances the equitable distribution of well-being across income groups.

E. Prosperity Index

We now return to the question that arose from Table 2 earlier in this section: why do some countries, such as Canada, seem to rank consistently higher in well-being among nations than their rank in per capita income would appear to justify? Why do we "punch above our economic weight" with respect to SWL? The obvious answer is that countries like Canada have strength in other contributors to SWL which compensate for lower GDP per capita. This effect is clear in the Prosperity Index which has been developed by the Legatum Institute in the UK. Published for the past five years, the Index is an attempt to measure national progress against a broader framework which incorporates, in addition to economic growth, dimensions of entrepreneurship and opportunity, governance, education, health, safety and security, personal freedom, and social capital. A total of 89 variables are combined into these eight dimensions. Within each domain, one set of variables is comprised of those that are known to promote income, while others focus on the promotion of life satisfaction. The index is calculated for 142 nations.

In 2015, Canada ranked sixth on the index, behind Norway, Switzerland, Denmark, New Zealand and Sweden, and just ahead of Australia, Finland and the Netherlands. As reflected below, Canada ranked in the top 10 in all of the dimensions except health (11th) and entrepreneurship and opportunity (15th).

Table 4: Canada's Rank among Nations on the Prosperity Index

Canada's Rank	Prosperity Dimension	Examples of Indicators
1	Personal Freedom	Tolerance, civil liberties, satisfaction with freedom of choice
2	Education	Enrollment levels, satisfaction with quality, gender equity and educational level of workforce
8	Economy	Satisfaction with living standards, adequate food and shelter, savings, expectations, confidence in financial institutions, unemployment, five-year growth rate, capital per worker, non-performing loans, inflation
6	Social capital	Trust, volunteering, social supports
9	Safety and Security	Personal safety, freedom of expression, assaults, demographic stability, refugees, theft
7	Governance	Confidence in public institutions, efforts to address poverty, business and government corruption, rule of law, environmental protection, regulation, type of government
11	Health	Healthy life-expectancy, health expenditures, services, satisfaction with health and health service, water quality, sanitation, infant mortality and others
15	Entrepreneurship and Opportunity	Entrepreneurial attitudes, communications infrastructure, start-up support, R&D expenditures

Source: Legatum Institution (http://www.prosperity.com/#!/)

The marked importance of personal freedom is obvious in these results. Canada ranked first among the nations on this dimension which used a score for civil liberties developed by Freedom House and the results of Gallup surveys about tolerance and the degree of satisfaction with freedom of choice. In fact, most of the countries that out-performed their incomes with respect to well-being ranked very high on that index. It is also noteworthy that the "economy" dimension of the index, on which we perform quite well, is composed of a variety of indicators, of which growth-rates are only one. In the terms described in the previous section of this paper, it is a comprehensive measure of growth and development. The important conclusion from these ratings is that our relatively high rankings on SWL, relative to our ranking on GDP per capita, which was noted earlier in this section, reflects our strength across a variety of other contributors of well-being. We are, in a word, less dependent upon our national wealth to fuel our SWL than many other countries. This is consistent with the relatively low level of adherence to materialist values among Canadians that was highlighted earlier in this section in the discussion of World Values Survey results.

F. Social Progress Index

A similar profile emerges from the Social Progress Index. This is a project of the Social Project Initiative in Washington DC.[3] The index is based on 52 indicators which are categorized into three groupings:

1. Basic Human Needs: nutrition and basic care; water and sanitation; shelter; and personal safety.
2. Foundations of Well-Being: access to basic knowledge, information and communications; health and wellness; and ecosystem sustainability.
3. Opportunity: personal rights; personal freedom and choice; tolerance and inclusion; access to advanced education.

Although it does not include a measure of well-being such as life satisfaction, it does contain a variety of measures which are known to contribute to well-being. Aggregate scores have been developed for 133 nations and, in the 2015 report, Canada ranked 6th on the overall Index of Social Progress behind Norway, Sweden, Switzerland, Iceland, and New Zealand. Australia ranked 10th. The UK ranked 11th and the United States ranked 16th. The high ranking for Canada was largely due to a 1st place ranking on the Opportunity dimension, which combines the personal freedom and education dimensions of the Prosperity Index, and a 7th place ranking on Basic Human Needs. We fell to 14th on the Foundations of Well-Being Dimension, primarily due to a low ranking on environmental sustainability (48th).

Among the 133 nations, the aggregate Index of Social Progress was strongly related to GDP per capita (R^2=0.78). The relationship was particularly strong among developing nations and less strong among mature economies. Canada's ranking of 6th was particularly high given its lower ranking in GDP per capita (14th). Once again Canada's ranking on this measure of social progress was higher than would be expected from its level of national wealth because of other key factors associated with personal freedom, tolerance, and inclusion.

G. Well-Being in Canada

As described earlier, Canadians tend to score quite well on surveys of life satisfaction. Although rankings change with the type of survey, the measurements used, and the number of countries included, Canada is customarily among the top ten and often among the top five. In the survey of 104 countries by

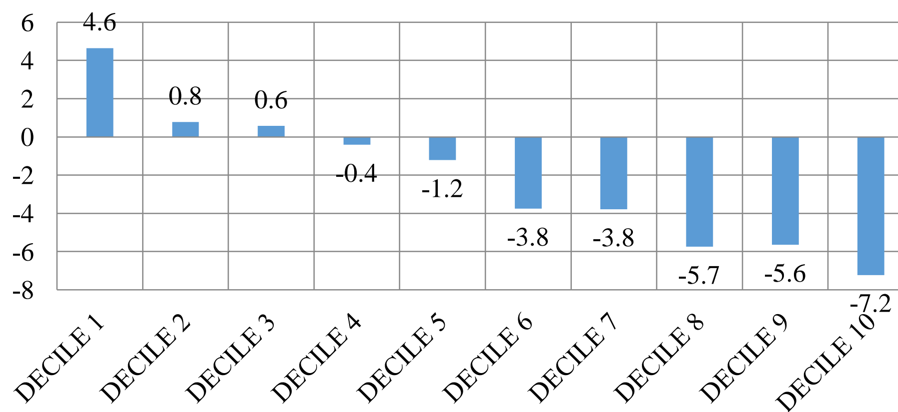
[3] See http://www.socialprogressimperative.org/data/spi for more information.

the Gallup organization in 2011, Canada ranked fifth behind (in order) Denmark, Finland, Norway, and the Netherlands, a rank that was retained in 2014.

To burrow deeper into the dynamics of well-being in Canada, we can utilize a measure of life satisfaction that is available from the Canadian Community Health Survey (CCHS). Conducted on a regular basis since 2001 by Statistics Canada, this survey includes a question on life satisfaction using a five-point response scale. Since 2009/10 it has also included the same ten-point scale as is used in the World Values Survey. The CCHS collects responses on a wide variety of issues related to the health and well-being of the Canadian population based on the responses of a random sample of 130,000 Canadians.

In the 2005 and 2007/08 issues of the CCHS, 39 per cent of Canadians reported that they were very satisfied with life. In 2009/10 this remained virtually unchanged at 38 per cent but then fell to 35 per cent in 2011/12. A similar decrease was found in the Gallup results (Helliwell and Wang, 2013). If one assumes that this drop had something to do with the protracted period of economic uncertainty that began in 2008 and 2009, the differential change in life satisfaction that occurred across the income groups is notable. As reflected in Chart 5 the highest income-decile group experienced more than a 7 percentage point reduction in reported life satisfaction between 2007/08 and 2011/12, while the lowest income group (decile 1) reported a substantial increase of 4 percentage points.

Chart 5: Change in Per Cent Very Satisfied With Life by Household Income Decile 2007/2008 to 2011/2012 in Canada



Source: Author's calculations using CCHS.

This is inconsistent with the results that would be anticipated on the basis of Clark *et al*. (2014) above, insofar as the gap in life satisfaction between the highest and lowest income groups in Canada decreased during a time of recession. Interestingly, it is consistent with national level results elsewhere whereby the lowest income nations experienced increases in life satisfaction across the period, while high-income developed nations in North America and Europe, as well as Australia and New Zealand experienced decreases (Helliwell and Wang, 2013).

It is important to note, however, that a strong income gradient continues to exist in Canada with respect to household income. In 2011/12, persons in the highest income decile were 69 per cent more likely to report that they were very satisfied with their lives than persons in the lowest income decile. As a result of the shifts discussed above, this was a decrease from 2007/08, when they were 123 per cent more likely to report high levels of life satisfaction.

What about the other correlates of well-being in Canada? In 2011/12, males and females were equally satisfied with life in Canada. Married persons are more satisfied than singles. There is a predictable relationship between life satisfaction and age among developed countries, and Canada is no exception. Rates of life satisfaction are relatively high during adolescence and then begin to fall among people in their early-twenties, typically reaching their lowest levels among people in their forties. Then they rise until people reach their mid-seventies, when they decline once again. Developing countries do not show rebounding rates of well-being among older persons (Steptoe, Deaton and Stone 2015). It appears that one of the accomplishments of developed mature nations is to provide its older members with a satisfying life.

Canadians who rate their physical or mental health as “excellent” are ten times more likely to report that they are very satisfied with their lives than persons with poor health. People with relatively stress-free lives are three times more likely to be very satisfied than persons who have extremely stressful lives. People with a strong sense of “belonging” to their community are twice as likely to be very satisfied as people reporting a “weak” sense of belonging. Interestingly, the effects of income are somewhat less dramatic. Although there is a clear gradient of increasing levels of life satisfaction moving from the lowest ten per cent of income earners to the highest ten per cent, the top group is only 69 per cent higher than the lowest group with respect to life satisfaction.

A 2011 joint report by the Centre for the Study of Living Standards and the Institute for Competitiveness and Prosperity by Sharpe *et al*. (2011) utilized the 2009/10 version of the CCHS to look at the relative effects of these factors, including income, on the well-being of Canadians, using life satisfaction as their measure. Although the CCHS did not contain measures of all of the pertinent contributors, such as governance or trust, it contained a sufficient number of pertinent variables to make the results interesting. Household income was a significant predictor of life satisfaction but, as discussed above, it was less important than perceived mental health, perceived health, stress, sense of community belonging, and unemployment. A series of analyses highlighted these relative effects:

- A one unit increase on a five-point scale of self-rated mental health which ranged from “poor” to “excellent” was equivalent to a threefold increase in household income. In other words, a person would have to triple their household income to have an improvement in well-being equivalent to one step up the five-point scale of mental health.
- A one step increase on a five-point scale of perceived health status was equivalent to a 157 per cent in household income.
- A one point decrease on a five-point life stress scale was equivalent to a 136 per cent increase in household income in terms of its effect on well-being.
- A one point increase on a four-point scale of the extent to which a person felt like they belonged to their community was equivalent to a 116 per cent increase in household income.
- The effect of becoming employed, after a period of unemployment, on a person’s sense of well-being, is equivalent to a 151 per cent increase in household income.

The geographical variation of life satisfaction in Canada also provided some interesting lessons. The CCHS reports results at the level of 139 health zones across the country. The zones with the highest percentage of persons who professed to be very satisfied with their lives in 2011/12 were (in order): Algoma District in Ontario, the Bathurst and Miramachi areas of New Brunswick, Region Abitibi in Quebec, North Bay Ontario, Colchester East in Nova Scotia, Sunrise/Kelsey in Alberta, Central Region in Nova Scotia, Elgin/St. Thomas in Ontario, and Northwest British Columbia. Larger metropolitan areas were much further down the rankings. Vancouver ranked last, behind its neighbours of Richmond and Surrey. Toronto was fourth from the bottom and Montreal was only two places higher. The 10 lowest-scoring zones include all of these metropolitan areas, plus Edmonton, Saskatoon, Victoria, Ottawa,

Waterloo, Peel Region, and York Region. Generally speaking, the higher rates of satisfaction are found in medium-sized communities and rural areas.

The most important factor related to this geographical variation in life satisfaction is the measure of community-belonging in the CCHS. It is a simple measure which asks people to rate the extent to which they feel like they belong to their communities. It is a potent measure of social capital and this finding reflects the importance of social capital as a determinant of well-being among communities. The CCHS does not include a measure of interpersonal trust.

H. A Tale of Three Communities

The importance of these factors at a community level was clear in two community well-being surveys which were conducted in Glace Bay and Kings County, Nova Scotia, which includes the communities of Wolfville and Kentville (Pennock, Pennock, and Colman, 2008). The two areas differed dramatically on key economic dimensions with Kings County reporting substantially higher household incomes and lower rates of unemployment. These differences were not reflective of short-term economic fluctuations. They represented long-standing differences between the areas. Despite the differences in economic health, respondents from the two communities reported similar levels of life satisfaction, probably due to the effects of stronger social support and spirituality scores in Glace Bay. It was notable, however, that Glace Bay residents were more likely to believe that improvements in their material circumstances would enhance their levels of life satisfaction even though their current levels were already equivalent to those of the more affluent Kings County.

The higher incomes in Kings County were partly attributable to a higher prevalence of two-income households in that area. This led to challenges with work-life balance and stress in Kings County, which detracted from their levels of well-being. Thus, the equivalence of life satisfaction in the two areas, which were so different in economic status, was due to the counterbalancing effects of positive contributors (social support and spirituality) in Cape Breton and negative contributors (work-life balance and stress) in Kings County. These factors appeared to offset the differential impacts of income.

The issue of work-life balance and stress also arose in the results of a similar survey in the Greater Victoria area in British Columbia.[4] The survey identified time-balance as the strongest challenge to life satisfaction among residents and the issue was particularly acute among younger families living in the western communities which involved long and slow commutes into Victoria for many workers. The time-balance problems were not a reflection of higher levels of materialism among these families. They were the consequence of the location of affordable housing in these communities. Importantly, the stress engendered by the time-balance problems had significant consequences for their reported levels of health and mental health.

I. Summary

Our reserves of well-being are fed by many sources: our physical, emotional and mental health; our social supports from family and friends; our sense of belonging to our communities and our ability to participate in the work and leisure opportunities that they provide for us to develop our interests and abilities; our sense of interpersonal trust; the quality of our governance; the extent to which we our free to

[4] Victoria Happiness Partnership
ttp://www.victoriafoundation.bc.ca/sites/default/files/uploads/Happiness_Index/Time%20Crunch_2010-12-02.pdf

pursue our interests and abilities; the extent of tolerance that our society accords to its many diverse populations.

With respect to the well-being of Canadians, we report levels of SWL that are higher than would be expected, based on our national wealth alone. Thus, the other factors which are associated with the promotion of SWL through economic development carry us to a higher level of well-being than our wealth alone would justify. For example, we are among the top five nations with respect to the emergence of post-materialist values. In addition, evidence from the Prosperity Index and other scales suggest that we perform well across a variety of determinants of well-being, namely, personal freedom (where we rank first), education and social capital.

Across nations, well-being is clearly associated with levels of economic development, as measured by GDP per capita at a point in time. The relationship with economic growth, however, is more complicated because nations at the highest levels of economic development and well-being tend to have lower rates of economic growth than developing nations. Even among developing nations, the relationship is moderated by the extent to which the wealth generated by economic growth is spread across the broader population and invested in the development of the institutions and programs which promote the other determinants of well-being.

The next section of the paper will examine, in more detail, the impacts of the slow growth scenarios on the major determinants of SWL in an attempt to gain insight into how Canada's enviable level of SWL could by protected and maintained in the face of declining economic growth.

IV. Living in a Slower Growth World

If economic growth fuels the economic developments that foster our sense of well-being, as defined by SWL, what is the likely impact of slowing economic growth? If our well-being is dependent upon our level of economic development, what are the implications of these scenarios for all of the interacting contributors to well-being which seem to be typical of mature nations such as Canada? The research literature is somewhat thinner on this side of the equation. There is no shortage of conjecture on the topic but solid empirical findings are harder to find.

In April 2014, TD Economics published a short report that focused on the future growth prospects of the American economy, entitled "Economic Growth after Recovery: Quantifying the New Normal." It reviewed the usual arguments about declining rates of labour force and productivity growth and deduced that, after a short period of recovery during which the growth rate of GDP in the United States will briefly return to the annual growth rates of three percent, growth in the US economy will settle at a new normal of about two per cent per annum. It highlighted a number of unpleasant consequences which are likely to follow this slow rate of growth and suggested that increasing immigration rates was the only policy response which might have a hope of returning growth rates to the higher levels of the past. Among the ill-effects of slow growth were low interest rates, lower rates of corporate profit, poorer returns on investment, unprecedented pressures on government revenues and expenditures, and increased levels of income inequality.

Benjamin Friedman followed the publication of his book, *The Moral Consequences of Economic Growth*, with a 2009 article that looked at the recessionary times and came to a conclusion which is typical of the pessimism which infuses most analyses of the implications of a slower growth future:

> "The implications are sobering. If part of what matters for tolerance and fairness and opportunity, not to mention the strength of a society's democratic political institutions, is that the broad cross section of the population have a confident sense of getting ahead economically, then no society—no matter how rich it becomes or how well-formed its institutions may be—is immune from seeing its basic democratic values at risk whenever the majority of its citizens lose their sense of forward economic progress. This risk is not just a matter of the current business downturn. If the widening inequality of recent years continues, once (presumably modest) growth resumes, experience suggests that the social, political, and ultimately moral pathologies that have emerged in prior eras of stagnating incomes and living standards, not just in the United States but in other societies as well, are very likely to reappear. If they do, they will be not just pathologies but predictable" (89).

In a 2014 article in the New York Review of Books, Friedman noted that the rise in xenophobic intolerance and extremism in Europe, evidenced in the rise of extreme rightwing political parties, was probably attributable to the stagnation of European economies. Whether this is actually a regression in European political values or an expression of values that were always present but not articulated in a small proportion of the population remains to be seen. Notably, Friedman identifies only one antidote to the problem: a return to the higher economic growth rates of the past.

A similar conclusion about the potential for a regression in values was recorded by Ingelhart and Wenzel (2005:15) in their analysis of post-materialist values.

> "Recent developments, such as relatively high unemployment, the collapse of stock markets and welfare state retrenchment, have decreased economic security; if this went

> far enough, it could undermine the prevailing sense that survival can be taken for granted and, in the long run, bring a resurgence of materialistic values."

Glen Hodgson, the Chief Economist for Forecasting and Analysis at the Conference Board of Canada described a world without growth as "… a highly unpleasant and even nasty place" (Hodgson, 2013).

To better understand the implications of slower growth for population well-being this section of the paper will review five economic issues which are often discussed in conjunction with slower economic growth: income distribution, income growth, unemployment, household debt, and government revenues. These issues will be reviewed with respect to their potential direct effects on population well-being as well as their potential impacts on the important contributors to well-being that were discussed in the previous section.

A. Income Distribution

The threat of growing income inequality has been frequently identified as an important consequence of slower growth (Gordon, 2014, Piketty, 2014, and Randers, 2012). It is also noteworthy that this may be a two-way relationship. In their review of the economic rise and fall of nations, Acemoglu and Robinson (2012) argued that the failure to equitably share the benefits of economic growth across society had been a leading contributor to the collapse of nations in the past. Their conclusions, from a survey of history, were consistent with a study from the International Monetary Fund, which conducted a quantitative analysis of nations in the present era. Income inequality appeared to be an impediment to growth among nations in the modern era (Berg and Ostry, 2011). Nations with lower rates of income inequality tended to outperform their more inequitable counterparts in the long-term.

Studies also concluded that countries with high rates of inequality, such as the United States, had lower rates of intergenerational socio-economic mobility than countries with low rates of income inequality. The IMF study suggested that the rapid increase in income inequality contributed to the collapse of 2007 because it contributed to a propensity for lower-income and middle-income earners to resort to greater borrowing and higher debt loads to finance their consumption. An OECD study by Causa, Deserres and Ruiz (2014) reported that a one per cent increase in inequality lowered GDP growth by between 0.6 and 1.1 per cent. Another OECD analysis estimated that increased income inequality reduced GDP growth by more than 10 percentage points between 1990 and 2010 in Mexico and New Zealand; nearly 9 points in the United Kingdom, Finland, and Norway; and between 6 and 7 points in the United States, Italy, and Sweden. Greater equality spurred the growth of GDP per capita in Spain, France, and Ireland. Growth in Canada was reduced by between 2 and 3 percentage points by income inequality (OECD 2014a).

Any degree of income inequality that is already in place, as growth slows, will become exacerbated for the reasons outlined by Piketty (2014) and others: slower productivity growth will reduce wage and salary growth to a level below the growth of investment income. Since investment income tends to accrue to wealthier members of society, the incomes of wealthier persons will increase at a faster rate than middle and lower income earners. Randers (2012) made the point that a large proportion of this inequality in wealth is reflected in the relatively high levels of wealth among an older generation that had the good fortune of coming to age during a period of unparalleled economic growth compared to the more limited prospects of younger cohorts who came of age during a period of reduced growth. He suggested that the escalating tensions between these groups and, in particular, the growing frustrations of the younger age group, will inevitably result in a degree of unrest and conflict which could grow into a violent revolution in mature economies before 2052. In support of this position, OECD (2014b) reported

that the young had been the primary victims of the Great Recession. Among OECD nations, the young had replaced the elderly as the age group with the highest rates of poverty in the aftermath of the 2008 collapse.

An OECD study, based on slow-growth projections similar to those of the Conference Board, expected continued increases in income inequality in Canada and most developed nations through to 2060 (Braconier and Ruiz-Valenzuela, 2014). There is a widespread belief that the relatively peaceful development of mature nations over the past century has occurred because of a burgeoning middle-class. As growing income disparities erode the notion of fairness in society, there is concern that the growing frustration could engender a wave of social unrest.

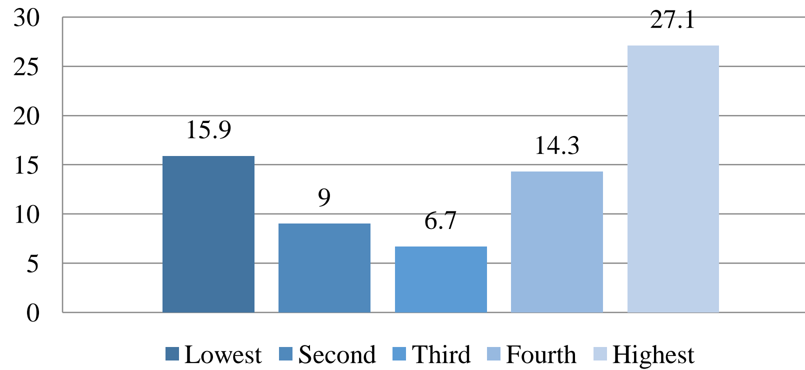
What do we know about income inequality and SWL? The relationship between income inequality and well-being is complex (Dolan *et al*., 2008). In general it appears that the impact may depend upon the underlying characteristics of the nations studied (Senik, 2009). For example, there appears to be a significant negative impact of inequality on well-being in Europe but not in the United States (Alesina *et al*., 2001). The level of "interpersonal trust" in nations appears to be a critical determinant of the nature of the relationship between inequality and well-being (Rozer and Kraaykamp, 2013). The literature suggests that the relationship between income inequality and well-being is negative in high-trust nations, where equality is valued, and positive in low-trust nations. The notion of trust is important because it is a key measure of social capital and an important contributor to well-being (Heliwell and Wang, 2011). The results reported in the Prosperity Index and Social Progress Index, discussed earlier, suggest that Canada is among the high trust/social capital nations and, consequently, rising inequality could have adverse consequences for the well-being of Canadians. There is, however, uncertainty around this empirical area and further research is required if greater clarity is to be achieved.

B. Income Inequality

The real incomes of the top 20 per cent of earners in Canada increase by 27 per cent between 1976 and 2010 (Chart 6). The group that saw the least growth were the middle twenty per cent who saw less than a seven per cent increase over the 35-year period. The lowest income group fared better at almost a 16 per cent growth, largely because of a number of government programs such as unemployment insurance, child-tax credits, and old age security programs. This places Canada within a small group of OECD nations in which income polarization appears to be occurring (Caucasa *et al*., 2014).

As we move into a slow or no- growth future, Canada needs to be particularly cautious about the effects of increasing rates of income inequality because we are beginning the transition with a higher level of income inequality than most other mature economies. We may, therefore, have a heightened vulnerability to the adverse effects of increased income inequality during a period of slow growth relative to other countries. Among OECD countries, Canada typically places in the upper quarter or third of income inequality rates, depending on the countries included. Furthermore, depending on the measure which is used, rates are less than the United States and the United Kingdom, but higher than most of continental Europe, except for Spain, Portugal, Greece, and Italy, all of which were bordering on bankruptcy in the post-2007 recession.

Chart 6: Real Growth in After-Tax Disposable Income by Income Quintile in Canada, 1976-2010



Source: Standing Committee on Finance (2013).

The Scandinavian countries have traditionally had the lowest levels of inequality although, in recent times, they have been joined by the former Soviet-controlled countries of Slovenia, the Czech Republic, and Slovakia. Interestingly, the former British colonies of Canada, Australia, New Zealand, and the United States all reside, with the United Kingdom, among the nations with the highest levels of inequality (OECD, 2011). Among the 21 OECD countries that were included in the previously referenced study of future trends in inequality, Canada ranked third in income inequality behind Hungary and the United States for the most recent year for which data was available and would continue to rank third in 2060 with a rate that would be equal to the current United States rate.

Most countries with lower rates of income inequality than Canada achieved their lower rates through their tax and transfer systems, which redistribute incomes in a much more pronounced way than does the Canadian tax system. In Sweden, for example, the rate of inequality in the distribution of before-tax market incomes is similar to the Canadian rate. The substantially lower rate of inequality in their disposable incomes arises from the redistribution of incomes which occurs through their tax system (OECD, 2011).

According to OECD figures, Canada has one of the least redistributive systems of taxation and transfers in the developed world. It is minimally better than the United States and quite a bit better than Switzerland (OECD, 2011). In Switzerland, however, there is more equitable market income than in Canada, and consequently, they end up with more equitable disposable income, despite their lower level of reallocation. The United States, on the other hand, represents the worst of both worlds: a very inequitable system of market incomes and minimal redistribution, resulting in the highest rate of inequality in disposable incomes. The United Kingdom starts with the same level of market income inequality as the United States, but redistributes more than either the United States or Canada and ends up with a more equitable distribution of disposable incomes than either country.

An analysis of Canadian trends by Heisz (2007) reported that rates of income inequality in Canada remained relatively stable during the 1980s and then increased during the 1990s before levelling off again. The increase during the 1990s was due to a failure of redistribution to keep pace with the growth of inequality in market incomes.

In their report on income inequalities, the TD Bank (2014:6) economists summarized the issue: "Canada's ranking on income equality falls from 9th place in the OECD on the basis of market income to 19th place on the basis of after-tax income."

They went on:

> "Over the 1990s, inequality as measured by after-taxes and transfers Gini coefficients rose significantly. In part, this was due to both federal and provincial government efforts to fight excessive fiscal deficits. Cuts in transfers from one level of government to the next ultimately fed through to less transfers to individuals…In effect, when governments stopped leaning against income inequality, the Gini coefficient rose sharply. What is particularly notable is that as fiscal balances were restored and governments put their surpluses to work, income inequality did not decline. Part of the reason is that transfers only stabilized and many policies put in place when surpluses occurred were more beneficial to higher income earners."

Canada also performs poorly with respect to intergenerational equity. Forty years ago, Canadian seniors suffered from a poverty rate which was two and half times higher than the rate among children. The situation is now reversed. The child poverty rate in Canada is currently more than twice the rate among seniors. The Bertelsmann Foundation in Germany funded the development of an "intergenerational justice" indicator which reflects an aggregate measure of the state of the world that the older generation was leaving to the younger generation in nineteen OECD nations.[5] It is based on intergenerational poverty rates, the distribution of government spending and the state of the environment. Canada performed badly. It was among the least intergenerationally-just nations, along with the United States, Japan, Italy, and Greece. This low ranking was largely driven by the high rates of child poverty relative to the rates of elderly poverty that we experienced when compared to other countries.

A study by the Conference Board, released in September 2014, reported growing inequality between generations in Canada. A systematic analysis of tax records between 1984 and 2010 demonstrated that the traditional gap between younger and older workers had widened. In the mid-1980s workers who were aged 50 to 54, which is the age of peak earnings, had earnings that were 47 per cent higher than the earnings of 25 to 29 year-olds. By 2010, the gap had increased to 64 per cent with most of the increase occurring in the 1990s.

There is a relatively strong consensus in the literature about the factors that are driving the increasing rates of inequality in Canada and other developed nations. Piketty argued that the escalating salaries and bonuses of senior managers was a driving factor in the growth of inequality. Other contributing factors, over the longer term, have to do with changes in the structure of families. The increase in two-income families and the tendency for people to marry persons at a similar educational level has meant that the gap in household incomes between couples with higher levels of education and couples with lower levels of education has increased over the years. At the other end of the income spectrum, the growth of the proportion of single-parents in the population has pulled down the incomes of a sizeable proportion of families.

Another driver that has received considerable attention in the literature is skill-biased technological change (SBTC). This concept refers to the fact that technology has increased the wage disparity between skilled and unskilled workers. There has always been an income continuum that follows the educational spectrum, but SBTC has augmented the gap by driving down the wages of semi-skilled and unskilled workers while driving up the wages of highly-educated workers. There is some evidence that this trend may have slowed since 2000 (Jaimovich and Sui, 2012). The OECD study

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[5] Bertlesmann Foundation. Intergenerational Justice in Aging Societies. A Crossnational Comparison of 29 OECD Countries. http://www.sgi-network.org/pdf/Intergenerational_Justice_OECD.pdf

referenced earlier, which projected an increase in inequality to 2060, argued that SBTC will be the primary driver of that increase.

Technological change has also been linked to a trend towards job polarization due to a shrinking concentration of jobs in the middle of the skills distribution which, in turn, has been linked to jobless recoveries (Beaudry, Green and Sand, 2013). This may be the driving force behind the income polarization that is occurring in Canada and was described earlier in this section of the report.

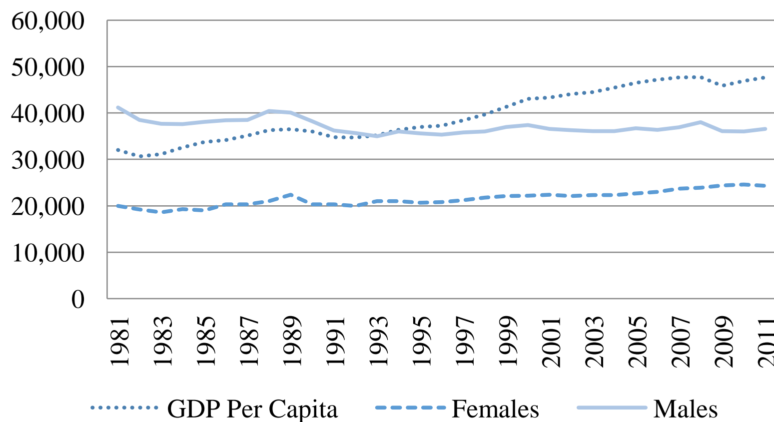
It is important to note that the OECD analysis which forecasted continuing increases in income inequality in Canada, which was discussed above, was a slow-growth forecast in line with the forecasts of the Center for the Study of Living Standards, the Canadian Conference Board, and the Federal Department of Finance. If we choose not to take meaningful action to reduce our levels of income inequality, it appears highly likely that rising rates of inequality will continue into the future and we will become more of a nation of haves and have-nots. We are in a particularly vulnerable position because we are entering this new-normal state of slow growth with higher levels of inequality than most other mature nations.

Canada appears to have room to move on all of these fronts. As discussed above, current levels of income redistribution are low by the standards of most other industrialized nations.

C. Income Growth

One of the primary concerns about a slow-growth future is the impact that it might have on income growth. Although we have become accustomed to expect that incomes will grow at a steady rate, it should not be difficult to envision a world of little real income growth. As reflected in Table 4, almost half of the population experienced less than a ten per cent increase in real incomes over the past 35 years. Another twenty per cent, the lowest income group, experienced a 16 per cent increase but very few of us would voluntarily change places with them because 16 per cent of very little is still very little. As demonstrated in Chart 7, the median market real earnings among all working males has actually decreased since 1981, despite increasing GDP per capita. Median market real earnings among females have increased slightly, since the mid-1990s, but at a much slower rate than GDP per capita.

Chart 7: Real GDP Per Capita and Median Real Earnings of Males and Females in Canada, 1981-2011



Source: Data from CANSIM Table 202-0102 and CANSIM Table 380-0106; Real GDP Figures from the CSLS.

It is important to note that national medians do not necessarily reflect the experiences of cohorts of households over time. Many households did experience increases in incomes as their members moved up their career ladders and obtained better paying jobs. Some experienced an increase in their sense of wealth as the values of their homes grew. And some experienced increases because they were employed in the oil and gas industry, which managed to support increasing wages, despite falling productivity, because of the increasing price of crude oil. And some were in the top income categories that did actually receive increases. Through various processes, individual households moved up the wage distribution but the central message from Chart 7 is that increases in GDP per capita did not translate into a corresponding upward movement of the real distribution of wages in the population.

The Conference Board's slow-growth forecast anticipated that the rate of growth in hourly wages will increase over the course of their forecast period. During the 2020-2035 period, they anticipate increases in the range of 2.7 per cent per annum against an inflation rate on 2 per cent for a real annual increase of 0.7 per cent. They argue that the upward pressure on wages will result from the reduced rate of labour force growth which will create labour force shortages and pressure for increased wages. The same force that is reducing the rate of economic growth (slower labour force growth) will increase wages through forced increases in productivity. They do not address, however, one of the headwinds included in CSLS forecast. The CSLS expects that average hours worked will decline because of a continued shift to more part-time work. This will blunt the impact of increases in hourly wages on household incomes because some household members will be working fewer hours.

The relationship between income growth and SWL appears to mirror, at an individual level, the results that were discussed earlier with respect to nations. There is a strong relationship between income, at a point in time, and levels of SWL. On average, the higher the income, the higher the level of SWL. This reflects the relationship between national SWL and GDP per capita. As with economic growth, however, the relationship between SWL and income growth is more complex. A number of studies suggest that the relationship is affected by relativities (Dolen *et al*., 2008). Most people have a comparison group of friends, colleagues, neighbours, and families that they judge their progress against. If they feel that they are lagging behind this comparison group then SWL will be negatively affected. If they are all moving ahead at about the same rate then SWL is unaffected. If their incomes are increasing more quickly than their comparison group then SWL is enhanced.

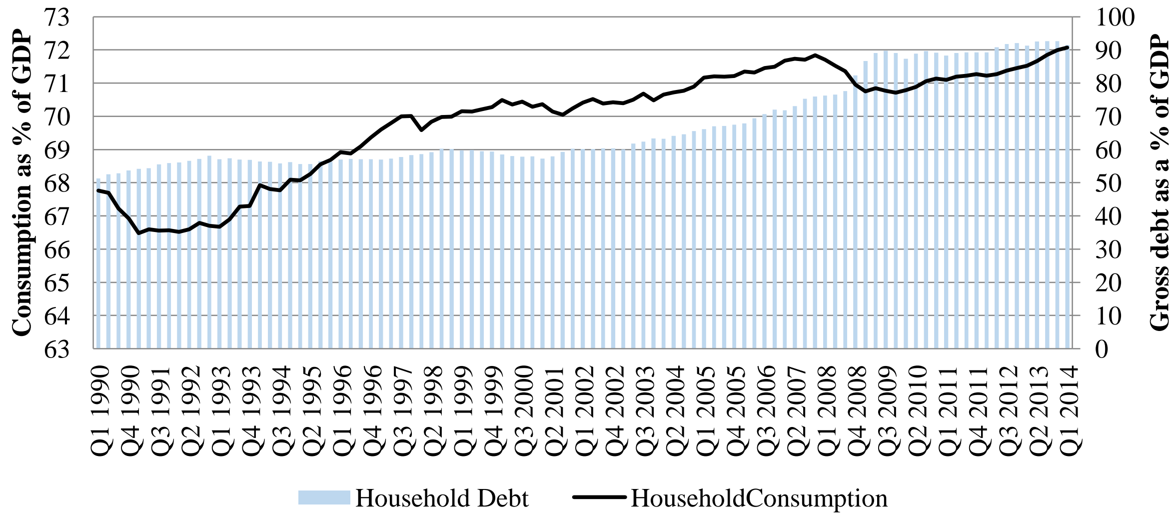
Other studies have found that aspirations are apt to increase with income. In their review of the relationship, Dolan *et al.* (2008:98) concluded: "These findings imply that additional income of those who are not at low levels of income is unlikely to increase subjective well-being in the long run if the additional income serves to increase expectations of necessary income."

The evidence suggests, therefore, that after people move out of poverty, income growth has relatively little effect on SWL if the growth is spread across an individual's reference group. In cases where income growth does increase SWL, the effects are often short-lived because of changed aspirations and, perhaps, changed reference groups. It is possible, therefore, that slower growth in incomes will not have a substantial effect on SWL if the slower growth is pervasive across the population.

D. Household Debt

In recent decades, GDP growth in Canada has been increasingly driven by household consumption. In 1991, household consumption accounted for just over 66 per cent of GDP and by 2014 this figure had risen to 72 per cent. As reflected in Chart 7, this was also a period when real wages were showing relatively little real growth. How then was household consumption increasing? As reflected in Chart 8, it has been increasingly driven by household debt since 2001.

Chart 8: Gross Household Debt and Consumption as a Per Cent of GDP



Source: Household debt figures from CANSIM 378-0122 and household consumption figures from CANSIM 380-0063.

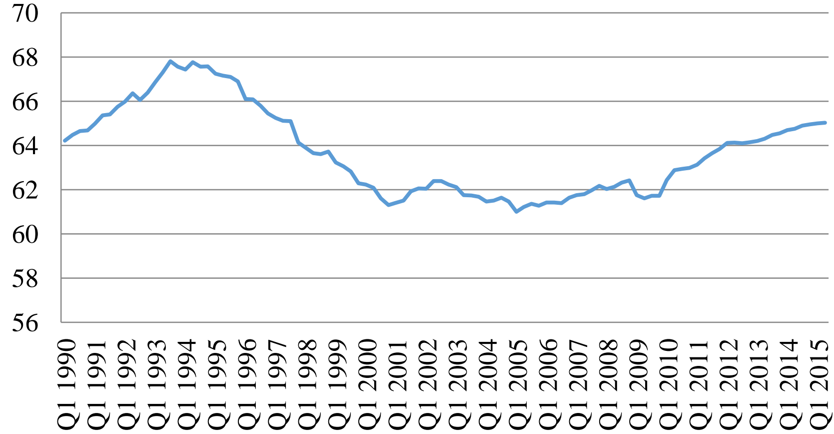
The generally accepted narrative which surrounds the dramatic jump in household debt that occurred after the advent of the 2008 recession identifies an important potential impact of slow growth. Fiscal policies designed to spur economic recovery rest on the maintenance of low interest rates. This acts to increase consumer borrowing while, at the same time driving up housing prices which, in turn, causes increased borrowing. The irony of this dynamic is that a return to growth and a subsequent increase in interest rates may create a financial crisis as a growing number of households are unable to maintain their payment schedules (Ragan, 2014).

A review of the literature by Dolan, Peasgood and White (2006) for the UK Department of Environment, Food and Rural Affairs concluded that the relationship between well-being and debt was not clear but that there was emerging evidence that growth in unsecured credit debt was associated with decreasing levels of well-being, but there was no apparent relationship with long-term debt for mortgage and investment purposes. Since that time this tentative conclusion has been reinforced by studies of Americans (Zurlo, Yoon and Kim, 2014) and residents of European welfare states (Neidzweidz, Pell and Mitchell, 2015).

There is strong evidence that financial stress arising from a failure to meet debt obligations has a substantial negative impact on well-being. An analysis of data from the British Household Panel Survey suggests that the effects of our inability to meet payments on debt had an impact on the well-being of males that was equivalent to the impact of unemployment. For females it was equivalent to the effects of divorce (Taylor, Jenkins and Sacker, 2011).

In summary it appears that growing debt levels for mortgages do not have negative implications for well-being so long as households are able to meet their debt obligations. If they enter a situation in which they are unable to meet their obligations and they subsequently fall behind in payments, there can be substantial negative impacts on SWL. The growth of unsecured debt, by contrast, appears to have negative consequences even before problems of non-payment emerge.

Chart 9: Mortgage Debt as a Per Cent of Total Household Debt

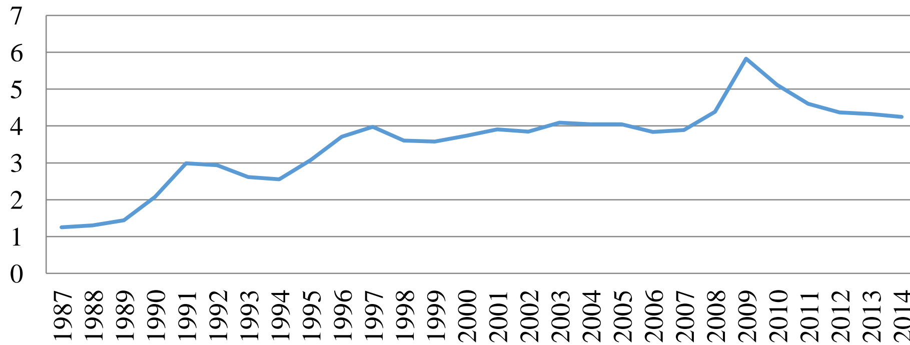


Source: Data from CANSIM 378-0122.

As reflected in Chart 9, the growth of household debt after 1995 was driven by non-mortgage debt which accounted for an increased share of household debt in Canada. By contrast, the growth in household debt that followed the short reduction after the recession of 2008 was driven by mortgage debt as its share of household debt rose back to the levels of the mid-1990s.

Has this growth in debt resulted in more insolvencies in Canada? Rates increased fourfold from just over one per thousand population in the late-1980s to four per thousand by the late 1990s (Chart 10). Rates jumped to six per thousand in the aftermath of the recession before falling back to just over four by 2014.

Chart 10: Personal Insolvency Rate Per 1,000 Population



Source: Data from the Office of the Superintendent of Bankruptcies Insolvency Statistics.

It appears, therefore, that the mortgage-fuelled increase in debt that followed the recession has not been accompanied by an increase in insolvencies after the immediate impacts of the recession were played out.

What of the future? The Conference Board's slow-growth scenario, which forecasts slightly higher rates of GDP growth than the Centre for the Study of Living Standards expects the household savings rate to be in the mid-5 per cent range during the 2020s and then rise slightly to 5.8 per cent by 2035. This is well below the rates of 12 to 16 per cent in the early 1990s but well above the rates of the

early 2000s, i.e. around 2 per cent. They are slightly higher than the rates of the past three years, which ranged between 4 and 6 per cent, but averaged out below 5.[6]

These results and trends suggest that the growth of household debt which has occurred during the post-recession years was largely driven by mortgage debt without any increase in insolvencies. The Conference Board's forecast, based on household savings rates, suggest that current rates can be carried into the future despite slowing rates of economic growth. The household savings rate is household net-debt divided by household savings. It is therefore important that the growth in net-household debt does not exceed income growth, as it did between 1990 and 2006, as this decline was accompanied by a growth in insolvencies which are known to have dramatic impacts on well-being. This period of declining saving rates was also accompanied by a growth in non-mortgage debt which probably led to the rapid escalation in insolvencies between 2007 and 2010.

If the savings rates which are forecasted by the Conference Board are realized then it is probable that debt levels can be maintained without substantial impacts on national SWL. The situation could change dramatically if there is a sudden drop in housing prices or a significant increase in interest rates. Either of these developments would increase the rates of financial distress and insolvencies in our heavily mortgaged population and the negative effects of this development on SWL could be substantial.

E. Unemployment

Most of the slower growth scenarios, such as those of the Conference Board, do not anticipate increases in unemployment because of the slowdown in labour force growth which will occur as the baby-boom cohort disengages from the labour force and moves into retirement. The greater concern is about the labour shortages that are likely to occur. In the Conference Board's projection, unemployment falls steadily from 7.3 per cent in 2012 to 5.1 per cent by 2035. Rates between 5 and 6 per cent are thought to reflect "full employment" in advanced economies. Even the Department of Finance's slower growth scenario does not anticipate an increase in unemployment because of reduced rates of labour force growth.

Taken together these scenarios suggest that we would have to move to a no-growth or negative growth (recessionary) future before unemployment is likely to become a serious issue. The economy would have to grow more slowly than the labour force before unemployment would begin to increase and, over the next 20 to 30 years, this would have to be a very slow rate of growth in order to dip below the diminishing rate of labour force expansion.

This is important because unemployment appears to have substantial detrimental impacts on well-being. These impacts on well-being travel along two routes. The first is the most obvious. People take a major hit to their sense of well-being when they become unemployed (Dolan, Peasgood and White, 2008 and Sharpe *et al*., 2011). But there is another impact which might be less obvious. When unemployment is high, the negative effects upon well-being ripple through the working population with a growing sense of insecurity and unease.

Helliwell and Huang (2011) analyzed data from two American surveys in an attempt to estimate the magnitude of these ripple effects. They found that for each percentage point increase in the local unemployment rate there was a corresponding decrease in life satisfaction across the population that was equivalent to a four per cent reduction in income. The total effects on the unemployed, plus the total spillover effects on those who were still employed, amounted to fifteen times the effects of the income loss experienced by the unemployed in terms of diminished well-being. It is also important to recognize

[6] Past rates from CANSIM Table 380-0072.

that the ill-effects of unemployment go beyond well-being. It has well-documented impacts on mental health, physical health, self-esteem, and future employability. The effects of unemployment on youth is particularly acute and long-lasting (Bell and Blanchflower, 2009).

The issue of unemployment is interrelated with income inequality. A 2009 report by Statistics Canada concluded that the most dramatic impacts of the 2008 downturn were being felt by the same groups who had felt the effects of most recessions: the young, the unskilled, workers with no post-secondary training, new immigrants, Aboriginal persons, single-parents, and young families with young children (LaRochelle-Cote and Gilmore, 2009). Of particular importance were the differential effects across the wage continuum. Persons working for less than $10 an hour experienced a 25 per cent reduction in employment between October 2008 and October 2009. Persons earning between $10 and $20 experienced a drop of only about 2 per cent. At the other end of the wage spectrum, jobs paying at least $40 an hour actually expanded by 13 per cent. It was primarily workers at the low end of the wage spectrum who lost their jobs, while workers at the higher end of the wage spectrum were still experiencing a growing job market.

The important point here, and it is true of most recessions, is that recessions tend to increase income inequality by taking away the incomes of people at the lower end of the wage scale, who didn’t have a lot to begin with, while leaving earners at the higher end relatively unaffected.

F. Government Expenditures

The long-term economic projections from the Centre for the Study of Living Standards by Drummond and Capeluck (2015) examined the impacts of slower growth on provincial revenues through to 2038. The core of the analysis reflected in three scenarios:

1. Base Case: assumed that nominal per capita spending on public programs and services would grow at the rate of inflation (2 per cent). In other words, there would be no real increase in per capita spending on programs and services; the levels of 2014 would remain fixed through to 2038.
2. Scenario A: differentiated between non-health and health spending by holding non-health spending to the same rate of growth as the base case. Health-spending per capita also remained constant but the actual rates of inflation in spending that were experienced by the provinces between 2000 and 2014 were used, rather than the rate of 2 per cent that was used in the base case. These rates ranged from 2.2 to 3.6 per cent. Importantly, the constant expenditure per capita did not allow for any increase based on the aging of the population.
3. Scenario B: allowed for a further increase in health-spending by applying the actual growth rates in per capita spending for each province between 2000 and 2014 to the future. These rates of increase range from 3.6 to 6.1 per cent per annum across the provinces and territories. These rates would allow for the expansion of health care expenditures over and above the rate of inflation.

Under the Base Case all of the provinces and territories except the Northwest Territories would be able to meet their requirements: spending would grow at a slower rate the GDP. The outlook was also generally positive under Scenario A, which allowed for a somewhat higher rate of inflation in health expenditures but no real increase in resources. Only Alberta and the Northwest Territories experienced shortfalls. The situation changed dramatically under Scenario B which allowed for an increase in per capita health expenditures at the same rate as the 2000-2014 period. All provinces except Manitoba and British Columbia would experience shortfalls between 2014 and 2026 as well as between 2026 and 2038. The study concluded (Drummond and Capeluck, 2015:7):

> "Under the realistic assumptions that non-health spending is flat in real per capita terms and health spending grows at its average pace from the past 15 years (in nominal per capita terms), then all, or almost all, provinces and territories, depending upon the economic assumptions, are projected to have insufficient revenue growth to match likely spending increases. Hence, without higher taxes or action to curtail spending growth, there will be pressure for progressively larger deficits."

The federal government faces similar but less severe issues with respect to their expenditures. They bear the full cost of the federal Old Age Security program which consumes about 16 per cent of their expenditures. The federal government also contributes to provincial health care expenditures. Beginning in 2017/18, rates of increase in federal health transfers will be calculated as a three-year average in the growth of nominal GDP with a minimum guarantee of a 3 per cent increase.

The primary challenge to well-being which arises from these scenarios is the likelihood that increased deficits will present governments with difficult choices between increasing taxes or cutting non-health program expenditures, in which case the level of spending per capita would diminish for these areas. It is from these sources that the funding for many of the non-economic contributors to SWL is supported: access to education, the courts, police, social supports, civil rights protection, effective government and democratic institutions. Government also plays a key role in addressing other economic threats to well-being such as income disparity. It is possible that the positive impacts of public institutions on well-being could diminish in the face of reduced levels of per capita funding and this could undermine the relatively high level of SWL enjoyed by Canadians. Under the CSLS scenario, a slower growth future could require increased rates of taxation if current levels of per capita funding are to be maintained for those public services which are known to contribute to population well-being.

If tax increases are a critical component of a soft-landing, how do we currently stack up against other mature economies with respect to our tax burden? If we are already a heavily-taxed nation, the implementation of new taxes may be particularly challenging.

Tax revenues to all levels of government in Canada in 2013 amounted to about 30.5 per cent of our GDP. The average among OECD nations was 34 per cent, ranging from a high of 47 per cent in Denmark to a low of 19 per cent in Mexico. The United Kingdom was 33 per cent, Germany was 36 per cent, and the United States was 25 per cent. Among the 35 nations for whom data were available, we ranked 24th from the top. Only 8 nations had tax burdens of less than 30 per cent. Our current tax burden appears to be relatively low by the standards of other mature nations.[7]

Addressing these issues from a public policy perspective requires an objective analysis of the intensely ideological debate about tax burdens, social expenditures, and the welfare state. A common assumption is that high tax levels and high rates of social expenditure are bad for the economy. This notion is not universally supported by the empirical literature.

For example, a 2000 study by the International Monetary Fund concluded, contrary to general presumptions, that there was no evidence that tax burdens or levels of welfare spending have adverse consequences on employment or growth (Disney, 2000). Other studies, however, have come to the opposite conclusion. The typical measure of "welfarism" is the size of government expenditures as a per cent of GDP. Study results tended to depend on what countries were included, the time period studied, and the type of analysis or modelling that was employed. A recent review of the literature by Bergh and Henrekson (2011) concluded that there is a negative relationship between the magnitude of government expenditures and economic growth. Countries with higher levels of government expenditure relative to

[7] http://stats.oecd.org/ Public Sector Taxation and Market Regulation/ Taxation/ Revenue Statistic/ Comparative Tables.

GDP tended to have lower rates of economic growth. The review also dismissed the possibility of reverse causation, namely that slower economic growth causes higher expenditure, although recognizing that this does occur during downturns in the business cycle. But, there is a third possibility that has received little consideration, namely that one does not cause the other, but they are both caused by some underlying force, such as demographic change.

Unfortunately, most of these studies ignore the role of demographics. As we have seen, mature economies have relatively high concentrations of older persons in their population and lower fertility rates. This leads to lower rates of economic growth because of the corresponding slowdown in labour force growth. It also leads to an increase in government spending for health care, pensions and other age-related programs. Thus, the high rates of government expenditure and slower rates of economic growth co-exist in mature economies, not because one causes the other, but because they are both caused by an aging population. Agell *et al*. (1997) did include demographic factors in the equation and found that the negative relationship between the size of government and economic growth disappeared after controlling for demographics.

More recently Ding (2014) reported that it was the magnitude of pension expenditures by government that tended to be associated with slower economic growth. This makes sense: higher pension expenditures are associated with a higher concentration of older persons in the population. The higher pension expenditures do not cause slower economic growth, it is the burgeoning elderly population that slows labour force growth, slows economic growth, and also causes higher pension spending. The important point here is that higher government expenditures and slower economic growth are not necessarily causally linked. One does not necessarily cause the other. They may coexist because of the aging populations in the mature economies. In 2011, social expenditures as a percentage of GDP had a correlation of 0.74 with the percentage of the population aged 65 and over among 32 OECD nations.

The debate about big versus small government has been waging for some time and it is frequently argued on the basis of ideology. At the same time, most of the countries which traditionally rank highest on life satisfaction tend to reflect a big government orientation. As we move into a slower growth era, it is imperative that this debate move from the ideology stage to more of an evidence-based discussion of the costs and benefits of the size of government.

G. Evidence from the 2008 Recession

Another approach to examining the implications of slower growth for well-being is to examine the impacts of the most recent recession, the duration of which has been unusual. There is some evidence from a recent analysis of the European Social Survey that nations with higher levels of social expenditures were significantly less likely than countries with low levels of social expenditures to experience reductions in the subjective experience of economic security among their citizens following the economic downturn of 2008 (Mau, Mewes and Schoneck, 2012). In a similar vein, an analysis of the Gallup data on life satisfaction found that countries with higher levels of social capital and trust were more likely to weather the Great Recession with well-being intact, when compared to countries with lower levels of social capital and trust (Helliwell, Luang and Wang, 2014).

Reeskens and van Oorschot (2014) examined the impacts of social networks on feelings of deprivation among Europeans in their experience of the Great Recession. Using data from the European Social Survey, they studied the impact of living in more advanced welfare states upon the utilization of social networks in dealing with the challenges of the recession. They found that persons living in the more advanced welfare states were less likely to rely on social networks because they had less need for them. They experienced less deprivation because of the supports they received from the state and consequently had less need to rely on their informal social supports. Citizens of countries where fewer supports were

available from the state were more reliant on their social supports. In a sense, welfare states had institutionalized some of the functions of "social capital" in the form of public programs.

In the 2013 World Happiness report, Helliwell and Wang concluded that most of the developed nations experienced a reduction in well-being in the aftermath of the 2008 recession (2-13). Some nations experienced substantial increases. The authors conducted a more detailed analysis of four European nations which were more severely impacted – Portugal, Italy, Spain and Greece. On average, these countries experienced two-thirds of a point drop on the 10-point Gallup scale on well-being. This was equivalent to a halving of their GDP per capita. The actual drop in GDP per capita was much less than this so the analysts examined the impact of other factors in an attempt to understand the magnitude of the decrease. With respect to the underlying factors for which data were available, the greatest decrease occurred in survey respondent's perceived freedom to make life choices.

Further analyses suggested that rising rates of unemployment were probably the single biggest causal factor, accounting for about one-third of the total drop in well-being. Greece showed a particularly large drop in well-being and it was the only country of the three which also experienced a substantial reduction in levels of trust for police and the judicial system, thus reflecting a deterioration in one of the critical social institutions which has been found to link economic development and well-being.

Table 5: Change in SWL, 2005/07 to 2012/14

Country	Change
Germany	0.242
Switzerland	0.114
Norway	0.107
Austria	0.078
Canada	-0.018
United kingdom	-0.019
Australia	-0.026
Netherlands	-0.08
New Zealand	-0.146
Ireland	-0.204
France	-0.238
United States	-0.245
Finland	-0.266
Belgium	-0.303
Portugal	-0.304
Japan	-0.38
Denmark	-0.399
Spain	-0.743
Greece	-1.47

Source: World Happiness Report (2015).

The 2015 World Happiness Report, also using Gallup survey results, demonstrated that these trends continued (Helliwell, Layard and Sachs, 2015). Of the 125 countries for which data were available for both time periods, 53 countries had significant increases in average SWL scores, while 41 had significant decreases between pre-recessionary 2005-2007 and post-recessionary 2012-2014 periods on a 10-point scale. Mature economies were predominantly in the latter group, with the exceptions being Germany, Switzerland, and Norway, which experienced increased scores. Canada was one of three countries which experienced a negligible change and maintained its fifth place ranking among nations. Denmark fell from its traditional first place ranking to third because of the significant reduction in its

score between the two time periods. In 2015, the top five scoring nations (in order) were Switzerland, Iceland, Denmark, Norway, and Canada.

Iceland's performance was notable, jumping from an earlier ranking of 20th to 2nd. This was particularly remarkable given the severity of the 2008 banking collapse in Iceland which played a key role in setting off the European banking crisis. Their response to this crisis is particularly interesting given the dramatic improvement in well-being that appears to have occurred across the period. Acting against the prevailing wisdom of the day, they did not bail out their banks and moved to indict many of their senior bankers for bank fraud. Then, they forgave the mortgage debt of many of their citizens and implemented capital controls which prevented investors from converting their kronas into foreign currency and withdrawing it from the country. Since then, unemployment has dropped to only 4.7 per cent and GDP growth has been in the range of 2 to 3 per cent per annum. There is still a mountain of debt that needs to be addressed, but Iceland's unorthodox response appears to have born substantial dividends in national well-being.

In general, the results related to the impact of the most recent recession on well-being are consistent with the notion that short-term economic downturns have negative impacts on SWL in developed nations, primarily through increased unemployment, and this relationship is moderated by a number of factors such as social capital and government programs. When some of the non-economic determinants are also impacted, as in the case of Greece, these impacts on SWL are magnified.

V. Conclusions

The evidence that has been reviewed in this paper suggests that our sense of well-being is embedded in our level of economic development rather than in our rate of economic growth. Theoretically, the protection afforded by the values and institutions which have grown to support our sense of well-being, through the process of economic development in the past, should allow us to maintain our current levels of well-being through periods of slow growth, so long as our level of economic development does not regress. If, however, we allow those institutions of tolerance, justice, and fairness to erode in the face of fear and uncertainty, then a regression in our economic and social development is possible with a corresponding reduction in our level of well-being. If a new approach can be devised which continues to assure a sense of economic security in the face of reduced growth, a regression might be avoided.

This new approach needs to be imbedded in a recognition of the demographic roots of the transition. Gomez and Foot (2013:55) argued that a better understanding of the importance of these demographic forces is crucial to fostering a successful transition to slower growth: "Good policy can come only from understanding that our current economic hardships are not a function of skill shortages, tweaks to training programs, tax credits for employers, or better job-matching efforts. Though these can be part of a more ambitious solution to mitigate the worst effects of slower growth, the time for seeing solutions in these microeconomic miracles is long past. Only when we recognize the following inevitable and incontrovertible demographic facts will we be able to adjust the expectations of consumers, workers, entrepreneurs, corporations, trade unions, and especially governments to the reality that in the coming years our growth potential will be substantially reduced."

The primary threats to well-being that are implicit in the slow-growth scenario appear to be the possibility of growing income inequality, pressures on government expenditure, and the need to address historically high levels of household debt if interest rates were to rise or housing prices were to fall. The issue of income inequality has emerged as particularly important. The primary concern is that continued high-levels of income inequality, exacerbated by slower future growth, could erode those institutions which appear to be critical to our sense of well-being by fostering rising rates of social unrest and conflict. Given that some, as of yet unknown, level of inequality is likely to lead to social conflict and the potential breakdown of these important social institutions, it is critical that a transition to slower growth occurs in a way that does not exacerbate current high levels of income inequality. In addition, many of the social institutions which are known to foster well-being, independent of income, require an active public and civil sector: health, the protection of human rights, an effective judicial system, protection from corruption, and a high level of trust in public institutions.

The pressures on public expenditures which will inevitably result from slowing revenue growth and an increased demand for demographically-driven health services could result in reduced financial support for sectors which are critical in supporting our sense of well-being. Social supports play a critical role in buffering the impacts of recession and the formalized supports offered through government programs appear to be more effective than informal social supports. At the same time, it will be important to avoid the generation of debt in responding to these challenges. The evidence has shown that the tax burden in Canada is modest relative to many other mature nations. Canada has the capacity to increase this revenue source, as an alternative to debt, if the political will exists.

Most importantly we need an evidence-based discussion of the role of government and the appropriate size of government in the years ahead. In past decades we have had the luxury of engaging in this argument on largely ideological grounds as our economies continued to grow for reasons that probably had little to do with the relative sizes of government among mature economies. In the era of

slow growth, however, the outcomes of these discussions might have real impacts on the well-being of Canadians. The capacity to shift to a more evidence-based discussion has been facilitated in recent decades by the dramatic growth in macroeconomic data about nations, about well-being in nations, and about the role of economic growth in facilitating well-being. The most important impact of a one per cent annual per capita growth rate is the relatively small margin of error which is afforded by the close proximity of zero growth or recession.

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