
FINANCES OF THE NATION

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THE GROWTH OF GOVERNMENT IN CANADA: A 21ST-CENTURY PERSPECTIVE

Since the fall of 2014 the Canadian Tax Journal has included a “Finances of the Nation” feature, replacing the annual monograph formerly published by the Canadian Tax Foundation under the same name. The feature presents a series of articles on topical matters related to taxation and public expenditures in Canada. Previous articles, published in issue no. 3, 2014 and issue no. 1, 2015, provided surveys of the annual provincial and territorial budgets for 2014 and 2015, respectively. The article included in this issue focuses on the growth of government. It begins by outlining several theories with respect to the growth of government, highlights a number of measurement concerns, and then presents an empirical analysis of trends in the growth of government in Canada, using available data from 1926 to 2014 and noting how trends in the data fit the different theories.

KEYWORDS: GOVERNMENT EXPENDITURES ■ TAX REVENUES ■ ECONOMIC TRENDS

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INTRODUCTION

In the 1970s and 1980s, economists developed several theories to account for the growth of government over time. Much of that scholarly activity took place in an era when government growth seemed unstoppable, given observed post-war experience. However, the Canadian experience since then has shown a break in the post-war

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pattern, with the fiscal retrenchment of the 1990s ushering in a different era for government in Canada. Still, debate over the proper size and role of government remains a running theme in public discussions.

Previous researchers have documented much of the history of the growth of government in Canada. Bird¹ provides an exhaustive and comprehensive treatment of theory and measurement, assembling data covering 1867 to 1967. He discovers a century-long pattern of steady growth, interrupted by sharp upticks at the beginning of the Depression and during the Second World War. Usher² also offers some insights into the theories of government growth, and updates the data to 1983. To explain growth, he sets out a group of demand factors and supply factors that are similar to those identified by Bird. In addition, he adds a public choice perspective, with what he refers to as conspiracy theories of the capture of government by the bureaucracy or special interest groups. More recent scholarly work on the growth of government in Canada comes from Ruggeri and Hermanutz,³ who update the data to 1993 and break down the components of government spending in greater detail. They find that growth between 1961 and 1993 was driven more by transfers than by the provision of public goods.

In this article, I provide an empirical examination of the growth of government in Canada, with two purposes in mind. First, the data presented here build on and update previous Canadian efforts at documenting the growth of government. In particular, an updated analysis allows the era following the landmark 1995 federal budget to be put into historical context. Second, the Canadian public sector experience over recent decades may provide some new insight into the merits of different theories of government growth.

The article begins with an overview of several theories of the growth of government, followed by a brief discussion of the conceptual and practical measurement challenges that must be faced before preparing an empirical analysis. I then present the data for Canada, covering an 88-year period from 1926 to 2014, and note how the trends in the data fit the different theories.

THEORIES OF GOVERNMENT GROWTH

Economists dating back to at least Adam Smith have thought about the proper scope of government and what factors might influence it. Bird provides a thorough exploration of the theory as it stood when he wrote his monograph. An updated

1 Richard M. Bird, *The Growth of Government Spending in Canada*, Canadian Tax Paper no. 51 (Toronto: Canadian Tax Foundation, 1970).

2 Dan Usher, "The Growth of the Public Sector in Canada," in David Laidler, research coordinator, *Responses to Economic Change*, Collected Research Studies of the Royal Commission on the Economic Union and Development Prospects for Canada, vol. 27 (Toronto: University of Toronto Press, 1986), 107-34.

3 G.C. Ruggeri and Derek Hermanutz, *Leviathan Revisited: The Growth of Government Spending in Canada Since 1961* (Aldershot, UK: Avebury, 1997).

treatment is offered in the more recent book by Tanzi,⁴ and in a briefer and more accessible form in Garrett and Rhine.⁵

To organize this brief overview of theory, I will borrow in part the taxonomy of Usher and break the discussion into demand and supply factors. By “demand” I mean factors that influence how much government people want, given a certain price for the bundle of government services on offer. By “supply” I mean factors that affect the price of the bundle of government services.

On the demand side, government might grow because some people want more government. The people wanting more government might be citizens who vote for increasing services and social insurance through government as incomes grow.⁶ On the other hand, the demand for more government might come not from citizens in general but from insiders such as government officials or from favoured interest groups that benefit from greater government spending. If the power of these officials or favoured groups increases over time, it could be seen as a factor in the growth of government.⁷

On the supply side, there are a multitude of theories to explain the growth of government. Baumol⁸ argues that government is becoming more costly, since the provision of personal services (like health care or education) is more predominant in government. If the productivity of labour-intensive government sectors lags through time compared to other sectors, the less productive services will grow as a share of the economy. Others argue that decreases in the cost of government are the important factor. For example, Becker and Mulligan⁹ develop a model in which more efficient forms of taxation decrease the deadweight loss of raising the revenue to finance government activity and lead citizens to choose more government because the cost went down—a movement along the demand curve. Similarly, Peacock and Wiseman¹⁰ argue a “form of the cost” explanation. They studied the UK public sector

4 Vito Tanzi, *Government Versus Markets: The Changing Economic Role of the State* (New York: Cambridge University Press, 2011).

5 Thomas A. Garrett and Russell M. Rhine, “On the Size and the Growth of Government” (2006) 88:1 *Federal Reserve Bank of St. Louis Review* 13-30.

6 This is the thrust of “Wagner’s law” of increasing state activity, posited by the German economist Adolph Wagner in the 19th century. See Bird, *supra* note 1, at 69-88, for a full description and assessment.

7 Dennis C. Mueller, “The Growth of Government: A Public Choice Perspective” (1987) 34:1 *International Monetary Fund Staff Papers* 115-49, expounds on this “public choice” approach to the growth of government.

8 William J. Baumol, *The Cost Disease: Why Computers Get Cheaper and Health Care Doesn’t* (New Haven, CT: Yale University Press, 2012).

9 Gary S. Becker and Casey B. Mulligan, “Deadweight Costs and the Size of Government” (2003) 46:2 *Journal of Law & Economics* 293-340.

10 Alan T. Peacock and Jack Wiseman, *The Growth of Public Expenditure in the United Kingdom* (Princeton, NJ: Princeton University Press, 1961).

and found a ratchet effect following events like wars, which suggested that new public spending permanently displaced private spending as people became accustomed to a higher level of taxation—which is another way of saying that the perceived cost of taxation went down.

MEASUREMENT ISSUES

Previous research on the growth of government has focused attention on how the influence of government should be measured. Any measurement involves a definition of the thing to be measured and a benchmark against which to compare it—a numerator and a denominator. I separate the discussion below into these two parts.

NUMERATOR

For the numerator, a range of conceptual definitions has been offered, but the framework suggested by Buchanan and Flowers¹¹ is most useful, with four steps on a scale from narrow to broad. At the narrow end, the dollar cost of government-provided goods and services could be determined. In a macroeconomic sense, this definition corresponds to the share of the annual productive capacity of the economy that is consumed by government. A slightly more expansive definition suggests that the value, rather than the cost, of government-provided services be included. Of course, this is harder to measure for many government services, which are not traded in markets and so do not have observed prices for output. Next, we could look at the extent to which collective decisions replace private decisions. One way to interpret this is to consider the quantity of private goods given up to government as the command over those goods switches from private to government hands. This definition suggests that the level of taxation in the economy might be the right way to measure the extent of government. Finally, the broadest definition refers to the extent to which resources are organized by the private market rather than through direct provision and regulation by government. Because, in a modern economy, few goods escape the regulatory touch of government, this definition comes close to encompassing the entire economy when taken to its extreme.

As a practical matter, in defining the numerator, economists have focused on those concepts that are easiest to observe and record. Most analysis uses government expenditures on goods and services or total taxes (or expenditures) to measure the extent of government. The difference between these measures consists of the expenditure on transfers (either to individuals or to businesses) and interest payments on public debt. One recent critic of that approach is Cross,¹² who argues that

11 James M. Buchanan and Marilyn R. Flowers, *The Public Finances: An Introductory Textbook* (Homewood, IL: Irwin, 1975), at 39.

12 Phillip Cross, *Estimating the True Size of Government: Adjusting for Regulation* (Ottawa: Macdonald-Laurier Institute, May 2014).

approximately 10 percent of the Canadian economy is subject to direct price regulation, over and above the standard definition of government's extent.

Another practical consideration is the scope of the term "government." Should Crown corporations be included? What about universities or hospitals? This matter becomes very important when trying to construct long time series, because the definition of the public sector in the official Canadian system of national accounts (SNA) has changed substantially over time. Hospital spending was considered by the national accounts to be spending by the household sector until the 1960s, while it was only in the 1990s that universities and aboriginal governments were added to the definition of the government sector. In the empirical work below, I note these differences when comparing data from different time periods.

DENOMINATOR

With some estimate of the dollar value of government in hand, an empirical analyst still requires a benchmark to compare it with. There are three considerations here, which in large part depend on what kinds of goods, services, and transfers government is providing.

The first consideration is how to adjust for the change in prices over time—in other words, inflation. Bird¹³ compares the merits of using a price index specifically for the costs of government sector spending versus a more general consumer price index (CPI). The more general CPI is theoretically more relevant for a definition of government spending that considers the opportunity cost of keeping command over the resources involved in private hands. As a practical consideration, though, Bird notes that only CPI data are available deep enough in history to allow him to develop his long time series of government spending.

The second consideration is whether to adjust for population size. If government provides only public goods with no congestion—purely non-rival in consumption—then a larger population should not necessitate more spending. In this case, government might best be measured by adjusting for inflation only, with no consideration of population size. While there are some public goods that might be considered close to non-rival in consumption (environmental protection, national defence), most goods and services provided by government do not meet this test. Demand for roads, hospital beds, and schools will increase with population, suggesting that adjusting for population size is the right way to measure government.

The third consideration is whether to compare the cost of government only with population size or to also look at total income—ability to pay. In other words, should we look at the share of gross domestic product (GDP) devoted to government? The answer depends in part on the precise question posed. If the object of interest is how much of our economy is in the realm of government, by definition we must compare against GDP. But there are also good reasons to think that the cost

13 *Supra* note 1, at 235.

of providing even a fixed basket of government goods and services would rise with income. These reasons might come from the Baumol argument about the cost of providing labour-intensive services.¹⁴ Or, if we again consider the nature of modern government spending, we will see that it is dominated by transfers—employment insurance, old age security, Canada Pension Plan, and family benefits. Over time these benefits tend to rise with income (even if some are only price-indexed in the short run) in order to match growth in market-generated incomes.

EMPIRICAL ANALYSIS

Having outlined various theoretical approaches and highlighted some of the more important measurement concerns, I now turn to the empirical analysis of the growth of government in Canada. The aim is to present long time series (as the data permit) and explore the sensitivity of the trends to different choices for how to measure government. The source of the data is Statistics Canada, both the CANSIM database and the *Historical Statistics of Canada*.¹⁵ The time period spanned by the analysis is 1926 to 2014, although much of the analysis starts in 1933 because of data constraints. All dollar values presented here are adjusted to 2014 dollars using the CPI. I show only the data for combined governments in Canada, which include those at the federal, provincial, territorial, municipal, and aboriginal levels, along with spending by the Canada Pension Plan and the Quebec Pension Plan.

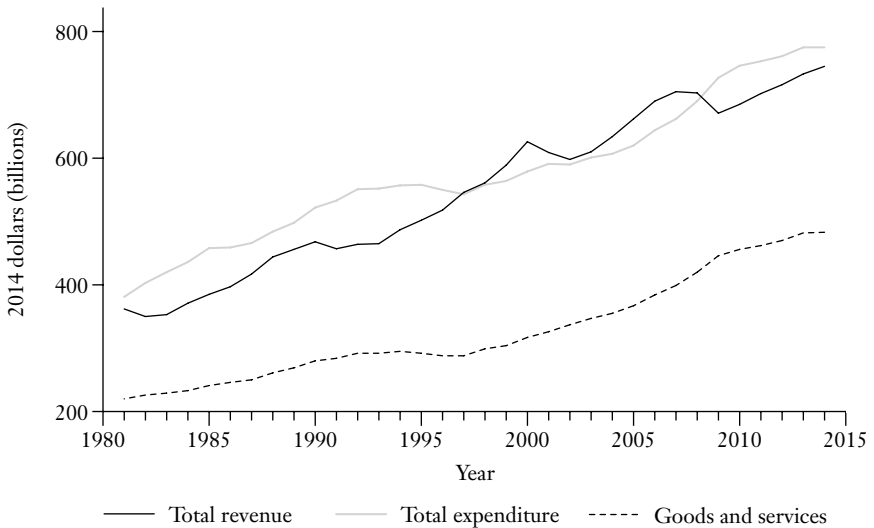
The analysis begins with a graph of total combined revenue, total expenditure, and government consumption of goods and services. I use data for the period 1981-2014 in order to stay within one consistent data series (CANSIM 380-0080).¹⁶ Figure 1 shows inflation-adjusted real values in billions of 2014 dollars. Both total revenues and expenditures increased from just under \$400 billion to nearly \$800 billion over this 33-year period, more than doubling. Expenditures exceeded revenues until 1997 when the trend reversed, with government-sector surpluses taking over until 2009. However, the overall trend is quite similar for both revenues and total expenditures over the longer time horizon. Government expenditures on goods and services also increased over the period, except for a pause between 1990 and 1997 when there was little growth. Notably, expenditures on goods and services rose by 44 percent between 2000 and 2010.

14 *Supra* note 8.

15 F.H. Leacy, ed., *Historical Statistics of Canada*, 2d ed. (Ottawa: Statistics Canada, 1983).

16 Statistics Canada, CANSIM table 380-0080 comes from the system of macroeconomic accounts. This series is on the same basis as CANSIM table 380-0032, which only goes back to 1991. Both are based on data from the financial management system. The definition of the government sector includes “all departments, agencies and funds (budgetary and non-budgetary) of the federal, provincial, territorial and local levels of government, as well as crown corporations that receive more than 50% of their revenues in grants from their parent government.” Statistics Canada, *Guide to the Income and Expenditure Accounts*, catalogue no. 13-017-XIE (Ottawa: Statistics Canada, 2008), at 29.

FIGURE 1 Total Government Revenue and Expenditure and Government Consumption of Goods and Services, Canada, 1981-2014



Note: All dollar values converted to 2014 dollars using the consumer price index.

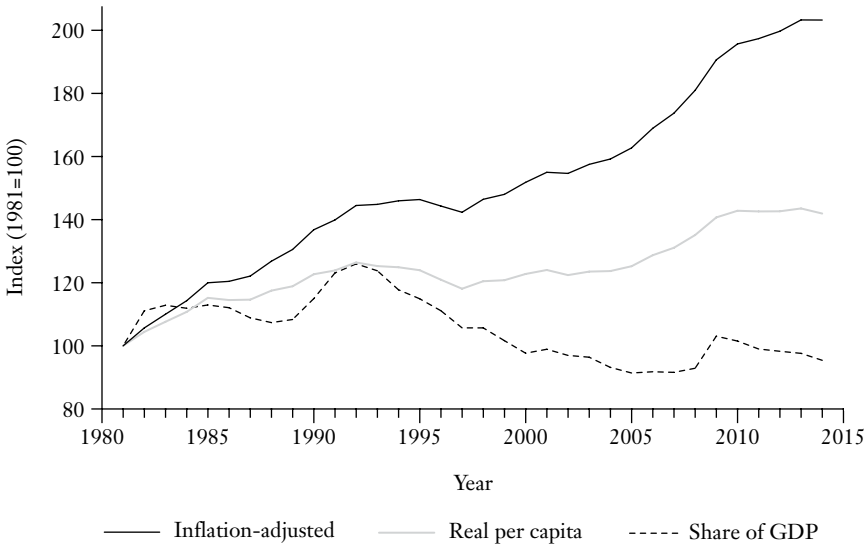
Source: Statistics Canada, CANSIM table 380-0080.

This analysis suggests that over the 33 years from 1981 to 2014, the government sector grew substantially in an absolute sense, as measured by the real value of private consumption forgone to fund total government operations or by the real value of goods and services consumed by government. However, as noted above, unless government's role is providing only non-rival public goods, measurements that include adjustments for population size and income growth may be more relevant.

Figure 2 performs this comparison, graphing total government expenditures by three measures: (1) with only an inflation adjustment (as in figure 1); (2) dividing by population; and (3) as a share of GDP. To make the basis for the three different lines comparable, I set each equal to an index level of 100 in 1981. Using these adjustments, the story from figure 1 is changed substantially. With a simple adjustment for population size, the 1992 level of government total expenditure was not attained again until 2006. In the decade between 2004 and 2014, however, growth in per capita terms resumed and reached 14.7 percent for the 10-year period. The pattern for government total expenditure as a share of GDP changes even more dramatically. After hitting an index level of 126.0 in 1992, total government spending as a share of GDP fell to 95.4 by 2014, for a decrease of 24.3 percent over those 22 years.

The first two figures provide some perspective on the differences across different measures of the extent of government. I now turn to two other data sources to create a longer time series in order to provide historical context. The first is the *Historical*

FIGURE 2 Total Government Expenditures, Canada, 1981-2014—Inflation-Adjusted, Real per Capita, and as a Share of Gross Domestic Product (GDP)



Source: Statistics Canada, CANSIM table 380-0080.

Statistics of Canada. The government finance statistics were compiled by Bird from various sources as documented by Statistics Canada.¹⁷ The years covered for the consolidated government expenditures are 1933 to 1975. The second alternative source is a different CANSIM series, 380-0506, which covers 1947 to 1996. However, only the years from 1950 to 1996 are on a comparable basis. The documentation for this CANSIM series indicates that it is based on the 1968 SNA. This is relevant because the 1968 SNA had a notably narrower definition of the public sector, excluding, for example, universities.¹⁸

17 Supra note 15.

18 See Statistics Canada, *National Income and Expenditure Accounts*, vol. 3, *A Guide to the National Income and Expenditure Accounts: Definitions-Concepts-Sources-Methods*, catalogue no. 3-1100-503 (Ottawa: Statistics Canada, 1975), at 163-66, for a discussion of what is included in the government sector in the 1968 SNA (referred to as “the green book”). The 1968 definition of the government sector replaced an older definition based in 1958 (“the brown book”). Revisions using the new green book definition were carried back to 1947 for most series, including the government expenditure series. Data under this definition were continued until 1996. A major revision of the Canadian SNA took place in 1997, following the international SNA 1993 standard. The green book government expenditure series were therefore not carried on past 1996. However, revised data under the new 1997 definition of the government sector was produced in CANSIM series 380-0080.

The trend in government growth using these three data sources is graphed for the years 1933-2014 in figure 3. In the period covered by the *Historical Statistics of Canada*, the dominant event is the Second World War, when real per capita government spending jumped from \$1,843 in 1939 to \$6,406 in 1945. From 1950 to 1992, government spending per capita increased by a factor of 6.8, at a fairly steady pace throughout the period. The top line in the graph shows the data from the most recent revision to the definition of the scope of government, which broadened it to include more entities (as one example, universities). For the period of overlap in the two series from 1981 to 1996, there is a clear difference in the level of expenditure, but the trend is very similar. Both series show a peak in 1992 and a decline through the rest of the 1990s. The final period of the data shows a leap forward during the years of the financial crisis around 2010, with spending hitting a plateau for the last five years of available data.

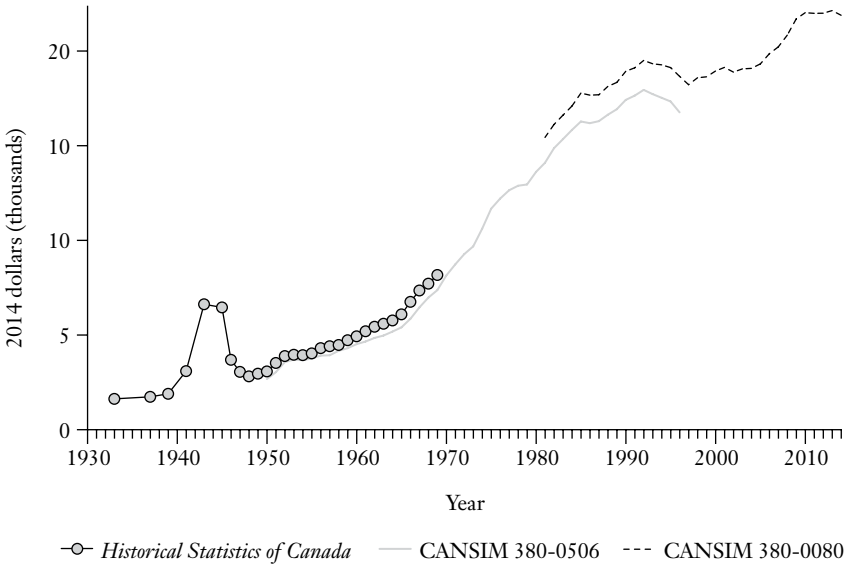
In figure 4, I graph the same total expenditure series, but now instead of adjusting for population I divide by GDP to obtain the share of total government expenditures in the whole economy.¹⁹ Here, the same upward trend after the war can be seen, but there is a plateau in the mid-1980s, followed by a spurt up to the 1992 peak. After that peak, total government expenditures as a share of GDP fell consistently until the financial crisis hit in 2009. However, as a share of GDP, even that 2009 increase took total government expenditures only to 42 percent, well below the 52 percent peak in 1992.

Finally, in figure 5, I repeat the analysis using share of GDP and, in this case, data on government consumption—direct expenditure on goods and services. This measure excludes interest payments and transfers to individuals and businesses. Data are available from 1926 to 2014, providing an 88-year time span. Looking at this narrower measure of government expenditure, the same pattern up to 1992 occurs. After 1992, however, the decline in government spending is not as sharp as that shown in figure 4. This reflects the fact that the broad measure in figure 4 incorporated a decline in interest payments from 9 percent of GDP in 1992 to 3 percent in 2014, and also a decline in the share of transfers to households from 11.7 percent in 1992 to 9.2 percent in 2014. The more moderate trend shown in figure 5 reflects the exclusion of those expenditures in the data for real government spending on goods and services.

To summarize, in the empirical analysis I find that trends are similar using total revenue and total expenditure, and somewhat similar using government expenditures on goods and services. There are big differences between inflation-adjusted, per capita, and share of GDP measures. When looked at over the long run, all measures show a fairly consistent pattern between the Second World War and 1992, after which there is a break in the trend, with lower government spending. When expenditures are looked at as a share of GDP, by 2014 we are still below that 1992 peak.

19 I use GDP measures that correspond to the three different government spending measures. For 1947 to 1996 in the 1968 SNA definitions, I use Statistics Canada, CANSIM table 380-0501. For the modern SNA definitions, I use CANSIM table 380-0064.

FIGURE 3 Total Government Expenditures, Real per Capita, Canada, 1933-2014



Notes: All values are real 2014 dollars per capita. CANSIM 380-0080 uses the modern definition of the government sector in the system of national accounts (SNA); CANSIM 380-0506 uses the narrower definition in the 1968 SNA.

Sources: Statistics Canada, CANSIM tables 380-0080 and 380-0506; and F.H. Leacy, ed., *Historical Statistics of Canada*, 2d ed. (Ottawa: Statistics Canada, 1983), at H-160.

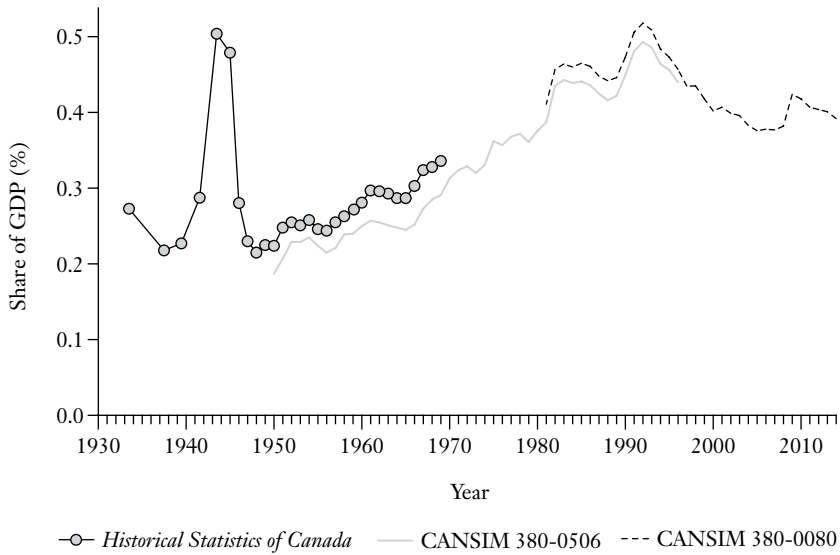
DISCUSSION

Previous research by Bird,²⁰ Usher,²¹ and Ruggeri and Hermanutz²² documented the trends in government spending up to 1992, and interpreted that evidence in the context of theories of government growth. Since the last 20 years of data look so dramatically different than the previous era studied by those authors, it is worthwhile taking a fresh look at the theories of government growth to see if the new data provide any additional insights. Three suggestions about the theory can be drawn from these new data.

First, there is not strong evidence of an inexorable drift toward greater demand for government (posited as a “law” by Adolph Wagner).²³ It is possible that the 22-year period after 1992 is just an aberration, but the observed demand for greater transfer spending has not continued in this post-1992 era.

20 Supra note 1.
 21 Supra note 2.
 22 Supra note 3.
 23 See supra note 6.

FIGURE 4 Total Government Expenditures as a Share of Gross Domestic Product (GDP), Canada, 1933-2014



Note: CANSIM 380-0080 uses the modern definition of the government sector in the system of national accounts (SNA); CANSIM 380-0506 uses the narrower definition in the 1968 SNA.

Sources: Statistics Canada, CANSIM tables 380-0080 and 380-0506; F.H. Leacy, ed., *Historical Statistics of Canada*, 2d ed. (Ottawa: Statistics Canada, 1983), at H-160; for GDP, Statistics Canada, CANSIM tables 380-0501 and 380-0064.

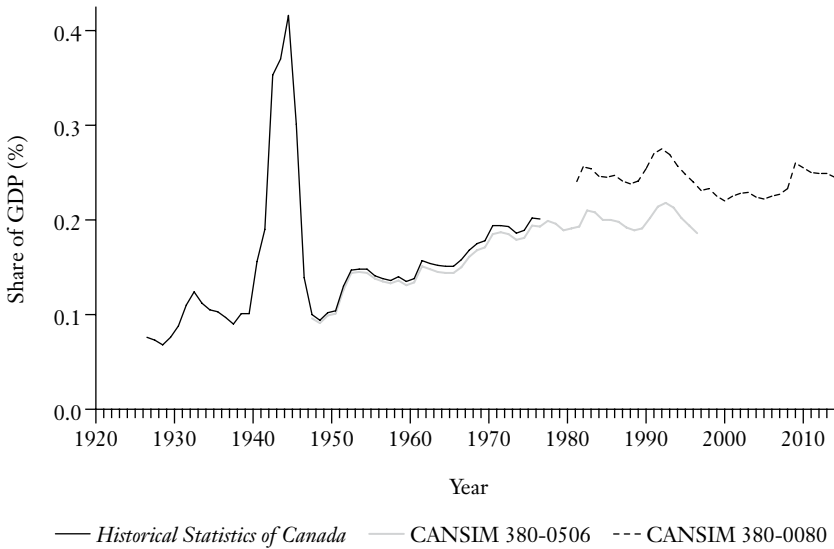
Second, the tax system in Canada has arguably become more efficient over this time period. Top personal rates have come down as the surtaxes have been removed. Corporate tax rates have fallen sharply. We moved from the manufacturers' sales tax system to a more efficient value-added tax in the goods and services tax/harmonized sales tax system. If this conjecture about efficiency is true, it refutes the Becker and Mulligan²⁴ theory that lower cost of government leads to a higher quantity demanded.

Third, interest payments on government debt declined from 9 percent of GDP to 3 percent of GDP post-1992, but government spending on goods and services dropped as well. This trend provides evidence against the ratchet-displacement theory of Peacock and Wiseman,²⁵ who argued that the tax necessary to service government debt in the United Kingdom in the 1980s and 1990s should have created greater comfort with high tax levels, leading to more spending in other areas when the interest payments abated. This did not happen.

24 Supra note 9.

25 Supra note 10.

FIGURE 5 Government Expenditures on Goods and Services as a Share of Gross Domestic Product (GDP), Canada, 1926-2014



Note: CANSIM 380-0080 uses the modern definition of the government sector in the system of national accounts (SNA); CANSIM 380-0506 uses the narrower definition in the 1968 SNA.

Sources: Statistics Canada, CANSIM tables 380-0080 and 380-0506; F.H. Leacy, ed., *Historical Statistics of Canada*, 2d ed. (Ottawa: Statistics Canada, 1983), at F-15; for GDP, Statistics Canada, CANSIM tables 380-0501 and 380-0064.

CONCLUSION

In this article, I provide an empirical update of the Canadian evidence on the growth of government. After a brief review of the theory and measurement issues, I present results that compare the growth of government using different measures and time periods. Overall, I find that the pattern since 1992 looks dramatically different from that in the preceding decades, with a shrinking of government as a share of GDP that continues to 2014, and a plateau of real per capita spending between 1992 and the onset of the financial crisis in 2009. I compare the findings over the past 20 years with the previously established theories and find three aspects of the new data that do not fit the theoretical predictions.