INTERNATIONAL CENTER FOR PUBLIC POLICY

International Center for Public Policy
Working Paper 23-09
April 2023

The Size, Growth, and Composition of Government: Analysis and Evidence for Canada and the United States

François Vaillancourt

Robert D. Ebel

This research project was funded by the Canadian Tax Foundation, and the article originally appeared in the Canadian Tax Journal *in 2022.*

Georgia State University | Andrew Young School of Policy Studies

Georgia State University | Andrew Young School of Policy Studies

International Center for Public Policy
Working Paper 23-09

The Size, Growth, and Composition of Government: Analysis and Evidence for Canada and the United States

François Vaillancourt
Robert D. Ebel

April
2023

International Center for Public Policy
Andrew Young School of Policy Studies
Georgia State University
Atlanta, Georgia 30303
United States of America

Phone: (404) 413-0235
Fax: (404) 651-4449
Email: paulbenson@gsu.edu
Website: http://icepp.gsu.edu/

International Center for Public Policy
Andrew Young School of Policy Studies

The Andrew Young School of Policy Studies was established at Georgia State University with the objective of promoting excellence in the design, implementation, and evaluation of public policy. In addition to four academic departments, including economics and public administration, the Andrew Young School houses eight leading research centers and policy programs, including the International Center for Public Policy.

The mission of the International Center for Public Policy (ICePP) at the Andrew Young School of Policy Studies is to provide academic and professional training, applied research, and technical assistance in support of sound public policy and sustainable economic growth in developing and transitional economies.

ICePP is recognized worldwide for its efforts in support of economic and public policy reforms through technical assistance and training around the world. This reputation has been built serving a diverse client base, including the World Bank, the U.S. Agency for International Development (USAID), the United Nations Development Programme (UNDP), finance ministries, government organizations, legislative bodies, and private sector institutions.

The success of ICePP reflects the breadth and depth of its in-house technical expertise. The Andrew Young School's faculty are leading experts in economics and public policy and have authored books, published in major academic and technical journals, and have extensive experience in designing and implementing technical assistance and training programs. Andrew Young School faculty have been active in policy reform in over 40 countries around the world. Our technical assistance strategy is not merely to provide technical prescriptions for policy reform, but to engage in a collaborative effort with host governments and donor agencies to identify and analyze the issues at hand, arrive at policy solutions, and implement reforms.

ICePP specializes in four broad policy areas:

- Fiscal policy (e.g., tax reforms, public expenditure reviews)
- Fiscal decentralization (e.g., reform, intergovernmental transfer systems, urban finance)
- Budgeting and fiscal management (e.g., local, performance-based, capital, and multi-year budgeting)
- Economic analysis and revenue forecasting (e.g., micro-simulation, time series forecasting)

For more information about our technical assistance activities and training programs, please visit our website at icepp.gsu.edu or contact us at paulbenson@gsu.edu.

CANADIAN TAX JOURNAL / REVUE FISCALE CANADIENNE (2022) 70 (SUPP.), 5-42
https://doi.org/10.32721/ctj.2022.70.supp.vaillancourt

The Size, Growth, and Composition of Government: Analysis and Evidence for Canada and the United States

François Vaillancourt and Robert D. Ebel*

PRÉCIS

La question de la mesure de la croissance et de la taille du gouvernement, qui fait aujourd'hui l'objet d'une abondante littérature et d'un débat d'orientation, intéressait peu les économistes aux XVIIIe et XIXe siècles et pendant une grande partie du XXe siècle. Bien qu'il soit un peu hasardeux de dater le moment où les perceptions de l'importance de ce sujet ont commencé à changer, les travaux de recherche menés par Richard Bird pour l'Association canadienne d'études fiscales en 1970 sur la croissance des dépenses publiques au Canada constituent un bon point de départ. L'objectif du présent article est de passer brièvement en revue ce que Bird a reconnu comme étant un processus évolutif, puis d'examiner comment on peut mesurer la croissance et la taille du gouvernement au Canada et aux États-Unis. Il définit et décrit les tendances suivies par quatre mesures clés après la Seconde Guerre mondiale. L'article révèle deux caractéristiques particulièrement importantes. La première est l'augmentation du rôle du secteur des gouvernements infranationaux. La seconde est que, dans les deux pays, le secteur public a tendance à abandonner les dépenses (et les taxes) pour financer les infrastructures matérielles publiques au profit des transferts aux particuliers, notamment sous la forme de programmes de santé et de sécurité du revenu.

ABSTRACT

The topic of measuring the growth and size of government, on which there is now a robust literature and policy debate, held little interest for economists in the 18th and 19th centuries and throughout much of the 20th century. Although it is a bit dangerous to date when perceptions of the importance of the topic began to shift, a good place to

* François Vaillancourt is an emeritus professor, Université de Montréal, and a fellow of Centre interuniversitaire de recherche en analyse des organisations (CIRANO) (e-mail: francois.vaillancourt@umontreal.ca); Robert D. Ebel is affiliated senior economist at the International Center for Public Policy, Georgia State University, Atlanta (e-mail: rebel@robertebel.com).
The authors would like to thank Jack Mintz for comments on a draft of this paper, and Tom Wilson and other symposium participants for their observations.

start is with Richard Bird's research for the Canadian Tax Foundation in 1970 on the growth of government spending in Canada. The purpose of this paper is to briefly review what Bird recognized is an evolutionary process, and then to examine the manner in which the growth and size of government can be measured in Canada and the United States. The trends in four key measures following the Second World War are defined and documented. The paper reveals two especially important features. The first is the increase in the role of the subnational government sector. The second is that, in both countries, the public sector is trending away from spending on (and taxing for) the public's physical infrastructure and toward transfers to individuals, particularly in the form of health and income security programs.

KEYWORDS: GOVERNMENT EXPENDITURES ■ CANADA-US ■ DECENTRALIZATION ■ GOVERNMENT FINANCE ■ MEASUREMENT ■ TRENDS

CONTENTS

Introduction: An Evolutionary Process 7
Purpose and Scope 10
Measurement of Government Size 10
What Is Being Measured? 11
G1: Government Services (National Income and Product Accounts) 11
G2: Transfers to Individuals and Businesses 12
G3: Total Outlays 12
G4: Tax Expenditures 12
G5: Receipts 14
What Are the Missing Measurements? 14
Contingent Liabilities 15
Mandates 15
Pre-Emptions 16
Nudges 17
Determinants of Government Size and Their Impact on Economic Activity 18
Microeconomics of Government Output/Size 18
Macroeconomics of Government Output/Size 19
The Government Sector in Canada: Growth, Size, and Composition 21
The Government Sector in the United States: Growth, Size, and Composition 32
Total Spending: Outlays and NIPA 34
Tax Expenditures 34
Federal Spending by Function 36
A Closer Look: US Fiscal Decentralization 38
Public Sector Employment 39
Receipts 39
Concluding Comments 40

INTRODUCTION: AN EVOLUTIONARY PROCESS

The topic of the role, and thus the size, of government was of little interest for economists in the 18th and 19th centuries, but today it is a topic for which there is a robust literature. Gone are the notions that private land, labour, capital, and entrepreneurship fully explain economic activity.[1] Now, it is recognized that publicly provided goods and services, particularly infrastructure, are a fifth factor of production.

The first economist to recognize a role for the public sector—individuals acting collectively—is generally acknowledged to be Adam Smith, who, in his *Wealth of Nations* (1776), identified four justifications for governmental activity:[2]

- protecting society from violence and invasion (police and national defence);
- establishing a system of laws so that the economy could function (justice);
- providing for some forms of public works, such as roads, which private entities cannot provide at a profit and which thus require public support to be adequately supplied (public and some quasi-public goods); and
- support for the sovereign (public administration).

Smith went on to observe that government will become increasingly involved in the first of these four functions as society "advances in civilization."[3] However, for Smith and other classical economists of the 18th and 19th centuries, the main topic of inquiry was to understand "the laws of the market." Those laws seemed pretty straightforward: the self-interest of similarly motivated individuals will lead to competition, with the result that the goods and services that are provided will be what society wants, in quantities sufficient to meet society's needs, at prices that society will be willing to pay, so that markets clear with demand and supply in equilibrium at the price set by the market. Yes, there will be ruthless profiteers ready to take advantage of their neighbours, but the regulator is competition ("the invisible hand") such that selfish motives will nevertheless lead to social harmony. Accordingly, the best way to manage the economy is to not manage it, and to intervene as little as possible in the market mechanism.

And, to a large extent, that was the laissez-faire world that the classical economists lived in. Accordingly, thoughts that the public sector had a role in matters such as ensuring workplace safety, protecting the natural environment, or establishing anti-poverty programs was simply not part of the conversation. Yes, there was poverty,

---

1 As the history of economic thought reveals, however, it took some time for economists even to recognize these four factors. See, for example, Harry Landreth and David C. Colander, *History of Economic Thought* (Boston: Houghton Mifflin, 2002); and Robert L. Heilbroner, *The Worldly Philosophers: The Lives, Times and Ideas of the Great Economic Thinkers* (New York: Touchstone, 1999).

2 Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations, Book V* (London: Routledge, 1913), at 555.

3 Ibid.; further discussed in Bernard P. Herber, *Modern Public Finance: The Study of Public Sector Economics*, 3d ed. (Homewood, IL: Irwin, 1975).

but little could be done about it and its inevitability. The "dismal science" warranted its name.

Other economists would follow to broaden the economic analysis on the role of government, but even then the focus was on topics such as how the legal framework affected the efficient allocation of private resources.[4] Yet there were some thinkers who argued that at certain times markets failed[5] and that individuals would need to organize collectively in order to provide roads, harbours, irrigation, and other public works.[6]

Classical thinking notwithstanding, during the second half of the 19th century, national economies were growing and getting more complex through a combination of industrialization, openness to trade, and urbanization. But it took Adolph Wagner[7] to develop a framework to address the relative expansion of public sector activity over time. Various empirical works, both descriptive and analytical, followed in the 20th century. One of the first of these works in the Canadian and even the North American context was Richard M. Bird's 1970 monograph for the Canadian Tax Foundation, which was the first major study of the growth of government in Canada and, incidentally, the first monograph he would write for the Canadian Tax Foundation.[8] He summarized his work in his 1971 *Public Finance* article and revisited it in his 1991 paper.[9]

Wagner's hypothesis of increasing government activity was that as industrializing economies grow, there is an absolute and relative growth of government activity. Although in his work Wagner was looking back at Great Britain's industrial transformation, the industrial revolutions in Canada, the United States, Germany, France, and Japan were ongoing at the time he wrote.[10]

Although one can argue that "Wagner's law" was too narrow in how he addressed the issue by focusing on a simple relationship, thereby neglecting matters such as the influence of war on government spending, what matters most about Wagner's contribution is that he posited the question of government growth as essentially an

4 Jean-Baptiste Say, *Traité d'économie politique, ou simple exposition de la manière dont se forment les richesses* (Paris: Déterville, 1803).

5 David Ricardo, *On the Principles of Political Economy and Taxation* (London, UK: Murray, 1817).

6 John Stuart Mill, *The Principles of Political Economy with Some of Their Applications to Social Philosophy*, 2 vols. (London, UK: Parker, 1848).

7 Adolph Wagner, *Finanzwissenschaft* (Leipzig: Winter, 1890).

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

9 Richard M. Bird, "Wagner's Law of Expanding State Activity" (1971) 26:1 *Public Finance* 1-26; and Richard M. Bird, "Tax Structure and the Growth of Government," in Lorraine Eden, ed., *Retrospectives on Public Finance: An Introduction to the Issues* (Durham, NC: Duke University Press, 1991), 263-75.

10 Herber, supra note 3, at 366-67.

evolutionary process in which there is a cause-and-effect relationship between the growth of an economy and the absolute and relative size of the government.

As for the question of whether government has, in fact, grown over the past decades, a good starting point is Richard Bird's advice to "accept as a fact that, for whatever reason, there [had] been a marked growth in . . . government activity,"[11] and move on to the analysis of the scope and nature of that growth. One relevant indicator is that, over the 1920-2020 period, government expenditures increased in "economically advanced countries" from 13 percent of gross domestic product (GDP) to an average of about 44 percent.[12]

Moreover, "government" has grown in ways that government spending does not reflect. In the last half-century, the reach of government has included the following: "bribing" taxpayers through tax expenditures to modify their behaviour; taking on contingent liabilities for government enterprises; mandating that private individuals and firms comply with government regulations of various kinds and act as tax collectors; and adjusting the distribution of income, since, as Wicksell noted, an efficient allocation of resources is not necessarily "just" because the way society allocates its spending depends on the pre-existing distribution of income.

And then there is the key matter of how the structure of the public sector has changed—namely, the *fiscal* decentralization of the nation-state. In the past half-century, the role of subnational governments (SNGs) in the delivery of "allocation branch" goods and services has grown relative to that of central governments, in significant and important ways. This is particularly true for high-income countries, though, as Martinez-Vazquez and Timofeev assert,[13] there has also been a worldwide trend toward fiscal decentralization in recent decades.[14] Note that to assert that systems of government have become more intergovernmental is not to say that the total government has grown, but rather that there have been important shifts in the composition of both central (that is, federal) and SNG spending that help to explain how the public sector has changed and is changing. As the data on both Canada and the United States will show, over the last half-century, the SNG sector has also taken on a greater role both as provider of goods and services and as an agent spending more (in the United States) or less (in Canada) on behalf of—or, perhaps better said, at the direction of—the central authority.

11 Bird, "Wagner's Law of Expanding State Activity," supra note 9, at 15.

12 Vito Tanzi and Ludger Schuknecht, *Public Spending in the 20th Century: A Global Perspective* (Cambridge, UK: Cambridge University Press, 2000).

13 Jorge Martinez-Vazquez and Andrey Timofeev, *Decentralization Measures Revisited*, International Studies Program Working Paper 09-13 (Atlanta: Georgia State University, Andrew Young School of Policy, International Studies Program, 2010).

14 Richard M. Bird, *Are There Trends in Local Finance?* (Toronto: University of Toronto, Munk School of Global Affairs, Institute on Municipal Finance and Governance, 2011), at 4.

Purpose and Scope

The purpose of this paper is to address the topic of government growth and size. Following this introduction, it is divided into five additional sections: measurement of government size; determinants and consequences of government size; Canadian evidence; American evidence; and a conclusion. We present the Canadian and American evidence separately, because integrating them would both be difficult and yield little supplementary information.

In his 2011 monograph for the Munk School, in which he poses the question whether there are trends in local finance, Richard begins with the cautionary note (one of several) that there are not only long-term trends in government growth but also cycles of growth—indeed, there may be many cycles.[15]

Our paper concludes with a look ahead at what the trends of the last half-century imply for both Canada and the United States over the next several decades. To paraphrase Shakespeare's Antonio in *The Tempest* (a title that may, for some, be appropriate to our government growth topic), what we have learned about how the Canadian and US public sectors have changed over the past half century is the prologue for coming decades.

MEASUREMENT OF GOVERNMENT SIZE

The challenge of measuring the size of government arises from two issues. The first is the nature of government services. There is no market pricing for most of what government produces because its output is not sold to its users. Thus, it has often been the case that national accounts estimates of government activity have been computed using the cost of producing these services. Sometimes only the cost of labour is used, while in other cases the cost of goods and services and of capital is also included.[16] The second issue is that the intervention of government in a given country or region is carried out through both budgetary spending and off-budget items that need to be examined.

Di Matteo reviews the relevant literature and notes the use of various measures such as (1) government output, (2) government output plus transfers, (3) public sector employment as a share of total employment, and (4) government revenues.[17] He also raises the issue of the limits of the size of government with questions about public enterprises or non-governmental organizations (NGOs)/non-profits being mainly financed but not "owned" by the government, tax expenditures, the private cost of regulatory burden including tax compliance costs, and the welfare losses associated

15 Ibid., at 5.

16 Tony Atkinson, *Atkinson Review: Final Report—Measurement of Government Output and Productivity for the National Accounts* (New York: Palgrave Macmillan, 2005), at 12, paragraph 2.7.

17 Livio Di Matteo, *Measuring Government in the Twenty-First Century: An International Overview of the Size and Efficiency of Public Spending* (Vancouver: Fraser Institute, 2013), at 7.

with taxation. The recent focus on policy nudges means that one may also want to consider these issues explicitly.[18]

What Is Being Measured?

The approach taken in this paper is to draw on time series data for government finance and funding flows. There are two practical reasons for this. The first is based on expediency—a legitimate expediency: if one wants to make sense of trends in government growth, one must turn to a systematic set of available data in order to make useful statements. The second reason is that what one wants to get out of this exercise is not to settle on "the correct" number or index, but rather how to analyze the data so that one can tell the tale of government growth. We thus examine government services that are part of GDP as such, then expand the discussion to cover transfers, with both summing to budgetary expenditures, then address tax expenditures, and finish with the revenue side, the counterpart of spending.

G1: Government Services (National Income and Product Accounts)

The use of the "output = input" convention implies by definition that there is no possible productivity growth in the provision of public services, although in some cases statistical agencies have made assumptions about productivity growth.[19]

The main push for the use of output measures came with the adoption in 1993 of a new version of the system of national accounts by the Statistics Committee of the United Nations.[20] This has led to the use of direct output measures by some countries, particularly those who are members of Eurostat, the statistical office of the European Union. One notes that the use of these measures is more feasible for public services whose individual beneficiaries are reasonably identifiable, such as education or health services, than for collective-type services, such as national defence. This is also discussed in a publication by the Organisation for Economic Co-operation and Development (OECD)[21] that flags the following four dimensions of government activity: inputs, processes, outputs, and outcomes.

18 Alice Moseley, "Nudging in Public Policy," *Oxford Research Encyclopedias*, July 30, 2020 (https://doi.org/10.1093/acrefore/9780190228637.013.949); and Monique Goyens, Daniel M. Hausman, Lucia A. Reisch, Cass R. Sunstein, Xavier Troussard, and René van Bavel, "Nudging in Public Policy: Application, Opportunities and Challenges" (2018) 53:1 *Intereconomics* 4-20.

19 Atkinson, supra note 16, at 12, paragraph 2.10.

20 Statistical Commission of the United Nations, *System of National Accounts 1993* (New York, Washington, DC, Paris, and Brussels: United Nations, International Monetary Fund, Organisation for Economic Co-operation and Development, Commission of the European Communities, and World Bank, 1993).

21 Organisation for Economic Co-operation and Development, *Measuring Government Activity* (Paris: OECD, 2009), at 7.

As noted above, the traditional measure of government activity in national accounts is the value of inputs. Iorwerth[22] discusses the use of output measures to replace them in whole or in part, noting that not only do differences in their adoption by various statistical agencies make international comparisons more difficult, but also, for a given country, changes in measurement reporting over time will frame what one can say about government size. There does not seem to be information available on the extent to which the use of the output approach to measuring government services, as opposed to the input-output approach, is used around the world or by a subset of countries such as OECD countries.[23]

G2: Transfers to Individuals and Businesses

As noted above, measures of government that are related to the output of government services do not include transfer payments to individuals, such as pensions or unemployment insurance, or subsidies to businesses. Nevertheless, transfers are part of government spending and government growth.

G3: Total Outlays

From the measures of government output discussed above, one can compute G1 + G2 = G3, a number that is often designated as "outlays" or "total expenditure," and this sum—this approach—is part of the set of numbers, along with G1 estimates, presented in the sections below on Canada and the United States.

G4: Tax Expenditures

The concept of tax expenditures was first put forward in 1967 by the US Department of the Treasury.[24] Tax expenditures are calculated for each tax measure that can be considered to be a departure from a "benchmark" tax system.[25] There are two classes of tax expenditures: those targeted at individuals and those targeted at businesses. In both cases, taxpayer behaviour as measured by its impact on tax revenues is assumed

22 Aled ab Iorwerth, "How To Measure Government Productivity: A Review Article on 'Measurement of Government Output and Productivity for the National Accounts' (The Atkinson Report)" (2006) 13 *International Productivity Monitor* 57-74 (www.csls.ca/ipm/13/IPM-13-Iorwerth-e.pdf).

23 When calculating G1 (or G2 or G3—described below) for all levels of governments, one must be careful not to count intergovernmental transfers twice—that is, as spending by both the grantor and the final spender.

24 William McBride, "A Brief History of Tax Expenditures," *Tax Foundation Fiscal Fact* no. 391, August 22, 2013 (https://files.taxfoundation.org/legacy/docs/ff391.pdf).

25 Jane G. Gravelle, "Tax Expenditures," in Joseph J. Cordes, Robert D. Ebel, and Jane G. Gravelle, eds., *The Encyclopedia of Taxation and Tax Policy* (Washington, DC: Urban Institute Press, 2005), 406-8; and United States, Senate, Committee on the Budget, *Tax Expenditures: Compendium of Background Material on Individual Provisions* (Washington, DC: Library of Congress, Congressional Research Service, 2018).

to remain unchanged, even though the intent may be to change taxpayer behaviour. Tax expenditures come in one of four forms:[26]

- exclusions, exemptions, and deductions that reduce taxable income;
- preferential (lower) tax rates that are applied to part or all of a taxpayer's income or purchases;
- credits that are subtracted from taxes as ordinarily computed; and
- deferrals of tax, which result from the delayed recognition of income or from the allowance of deductions in the current year that are attributable to a future year.

Examples of tax measures that can lead to tax expenditures linked to individuals include reduced tax rates on capital gains, deductions for charitable contributions, incentives that encourage savings for retirement, and reductions in the cost of purchases of products or services such as housing or health care. Examples of tax measures that can result in tax expenditures benefiting businesses include deductions for exploration expenses for natural resources, exclusions of interest received on certain types of government bonds, and tax credits for research and development.

The definition of a benchmark tax system will vary between countries and sometimes over time for a given country. A tax expenditure is the amount of tax revenue not collected that is associated with a given tax measure. This calculation is done separately for each tax measure and thus each tax expenditure. One consequence of this, particularly for tax expenditures that apply to progressive taxes, is that one should not sum them up to get the total tax expenditures. This is often done nonetheless.

Furthermore, in federal countries such as Canada and the United States, one should include not only the central government's tax expenditures, but also regional (provincial, state, local) tax expenditures. In countries with a shared tax base definition of income that is used both nationally and regionally, some regional tax expenditures result from national choices while others result from the choices of regional authorities.

Should one add the total tax expenditures (G4) to G1, and/or G3? First, note that some tax expenditures may not modify behaviour and thus are akin to transfers (G2), while others may modify behaviour and are thus more akin to direct spending (G1). That said, if one replaced all tax expenditures with budgetary expenditures of an amount and composition such that taxpayer behaviour was identical to the behaviour resulting from tax expenditures,[27] it is unlikely that the two total amounts would be the same. So, one would be adding, if not apples and oranges, then at least red and green apples. On the other hand, not including total tax expenditures leads to an underestimation of the size of government intervention, if not spending, in a given economy, and may make international and intertemporal comparisons less meaningful.

26 Gravelle, supra note 25; and United States, supra note 25.

27 This behaviour will be more or less different from pre-tax expenditure behaviour.

G5: Receipts

There are two key sides to the public sector budget equation: spending and receipts. This interdependency is often neglected, and thus discussions of the size of government do not always take this dimension of government into account.

This aspect of interdependency raises the question whether there is a limit to the size of government. The answer is yes: the growth of government is set by limits on the capacity and effort of states to levy taxes.[28] One sees this most clearly in subnational finance, particularly in US state and local entities. Governments tax to spend; and if they do not generate sufficient revenues to do all the spending that a legislative body may wish, then there is a cap.

While one observes that in practice a government (federal, state/provincial, and/or local) may in the short run avoid this cap by running deficits and, if allowed, taking on debt, the fact remains that debt is not a form of receipt that may be received in the form of tax, non-tax revenue, or an intergovernmental transfer, but rather is solely a mechanism to modify the timing of receipts.[29] There are other short-term actions a government may turn to in order to soften the hard budget constraint, actions that Bahl and Bird refer to as "fiscal mischief."[30] But, in the end, if the government is to be a sustainable one, the amount of receipts still constrains spending.[31]

What Are the Missing Measurements?

The expenditure measurements presented in this paper are restricted to "exhaustive expenditure" and transfers.[32] And, as noted above, there is merit to this approach. But that said—and still staying with a finance and funding perspective—there are four missing items that also merit attention, but for which systematic time series data are lacking and which therefore are not measured in this paper.

28 For a recent examination of this proposition, see Steven M. Karceski and Edgar Kiser, "Is There a Limit to the Size of the State? The Scope Conditions of Wagner's Law" (2019) 16:2 *Journal of Institutional Economics* 1-16. Montmarquette, when arguing that the size of governmental outlays in Canada should not exceed 25 percent of GDP, states that "pour réduire les dépenses gouvernementales, il faut d'abord réduire les recettes fiscales [to reduce government spending, first reduce tax revenue]." See Claude Montmarquette, *L'importance relative des gouvernements : Causes, conséquences et organisations alternatives*, CIRANO 94-c3 (Montreal: Centre interuniversitaire de recherche en analyse des organisations, 1994), at 18 (emphasis omitted).

29 Richard M. Bird and François Vaillancourt, eds., *Perspectives on Fiscal Federalism* (Washington, DC: World Bank, 2006).

30 Roy Bahl and Richard M. Bird, *Fiscal Decentralization and Local Finance in Developing Countries: Development from Below* (Cheltenham, UK: Edward Elgar, 2018), chapter 5.

31 Another option is for a government to default on its debt obligations, in which case the government may be dissolved and those who pay, albeit involuntarily, are the holders of the government debt instruments.

32 Lorraine Eden, "Theories of Growth in Government Share: Some Reflections" (1984) 5:2 *Western Tax Review* 15-31.

Contingent Liabilities

Contingent liabilities are legal obligations that require governments to make payments only if particular events occur. Even though the cost of contingent liabilities is "off-the-budget" books until they come due, they represent a hidden subsidy and a drain on future government finances. In the United States, the federal government supports some private activities by offering credit assistance to individuals and businesses. Examples of *explicit* contingencies include student loans, federal insurance programs and loan guarantees, activities of government-sponsored housing enterprises, and state and local unfunded pension liabilities. Other schemes cover uninsurable risks of infrequent but potentially enormous losses (such as losses caused by floods or resulting from crop damage). These schemes tend to be self-financed, through fees, but rely on government financing if needed. And these are just the explicit types of liabilities. There are also *implicit* contingencies, including environmental recovery, disaster relief, bank failures, and activities of government-sponsored housing enterprises. In Canada, the federal government also supports some private activities by offering, for example, export insurance; the federal government is also present in the mortgage insurance market through the loan guarantees of the Canada Mortgage and Housing Corporation, and is present in the nuclear industry. And of course there are provincial- and state-level contingent liabilities.

Mandates

In both Canada and the United States, the past quarter-century has seen a growing trend toward expenditure and regulatory mandates that have been imposed by all levels of government—federal, provincial/state, and local. There are two types of mandates: intergovernmental and governmental-private. In both instances, one can say that the institution of government has grown in the sense that it is imposing a requirement with financial implications on another institution, either public or private (or quasi-public/private). For the imposed-upon entity, the problem is that the mandate is often unfunded—the money to perform an activity does not accompany the requirement.

An intergovernmental mandate occurs when one type of government exercises its constitutional or legal authority to have another government entity perform certain actions. A related mandate, though not as much as a "must accept" requirement, occurs when one type of government "bribes" (incentivizes, nudges) another type of government to perform an activity through partial payment of the costs of the activity (linked to the degree of intergovernmental grant conditionality). The impact of such mandates may well appear in the expenditures of the entity that is subject to the mandate. In both Canada and the United States, local, general-purpose, and special-purpose authorities can be subject to such mandates.

In the United States, the most prominent examples of federal mandates are environmental actions that require a subnational government to enforce certain prescribed standards, and child nutrition rules that require schools that receive federal aid to comply with certain school meal standards. In Canada, there are few such mandating federal-provincial schemes.

To be clear, most of these mandates are intended to accomplish worthy goals. Further, that such mandates are merited suggests a consistency with Wagner: the more complex an economy is, the more important will be the role of government. But, in the end, the issue is who pays.[33]

Private sector mandates are typically associated with a government-imposed set of regulations. The resulting unfunded costs may be either directly related to some activity (for example, food safety rules that begin with manufacturing and packaging and that extend to grocery stores and restaurants, or motor vehicle fuel economy standards) or indirectly related to an activity (such as the administrative costs of reporting to a regulator or the cost of complying with a regulation).

Measuring expenditures associated with government mandates is far from a simple matter, which helps to explain why most of the numbers that one can obtain are drawn from ad hoc studies. We could not find any reliable time series data that track the total costs of mandates. And if one did find such numbers, one would still wonder whether they could be aggregated with G1 as a substitute for direct government spending.

Pre-Emptions

A practice that is closely related to the unfunded mandate is pre-emption, whereby a "higher" level of government limits the authority of a "lower" level government to levy an "own revenue." Again, there are good ad hoc studies of and numbers on this activity, but no reliable time series data such as one sees for G1, G2, and thus G3.[34] Examples of federal pre-emptions in the United States include restrictions on an SNG's ability to tax federally established national health programs or certain forms of retirement income.[35] No such limit exists in Canada, but paying out a benefit as a refundable tax credit rather than a direct payment is one way to put transfer payments by one government out of reach of taxation by another. Similarly, a province or state may limit the taxing authority of a local (say, municipal) government to levy certain types of taxes and/or fees. In Canada, section 125 of the Constitution states that "[n]o Lands or Property belonging to Canada or any Province shall be liable to Taxation."[36] As a consequence, federal and some provincial grants-in-lieu programs have been instituted. In the United States, the tax exemption of federal property is a result of an 1819 court decision.[37]

33 Another way of thinking about this is that even though it is well established in a federal system that one type of government cannot explicitly levy a tax on another type of government, the unfunded mandate is an implicit tax.

34 James R. Eads, "Federal Pre-Emption of Revenue Authority," in Robert D. Ebel and John E. Petersen, eds., *The Oxford Handbook of State and Local Government Finance* (New York: Oxford University Press, 2012), 198-213.

35 See Eads, ibid.

36 Constitution Act, 1867 (UK), 30 & 31 Vict., c. 3, section 125.

37 William Korns, "Federal Payments in Lieu of Taxes," in *Editorial Research Reports 1957*, vol. 1 (Washington, DC: CQ Press, 1957), 263-82. For the United States, see Advisory Commission

With respect to mandates and pre-emptions, while the exercise of such authority by one government over another government vis-à-vis private sector activity can certainly be understood as an expansion—growth—of government, it does not follow that the mandate or pre-emption is unmerited or in some manner reduces economic efficiency. Indeed, in many cases (environmental, product safety, transparency in financial reporting), rules and regulations reduce or even eliminate net negative externalities, thereby enhancing the efficient allocation of resources. Moreover, the mandate or pre-emption may even reduce the contingent liabilities of both the imposing and the imposed-upon governments. It is a complicated web and thus hard to measure.[38]

Nudges

One type of budgetary spending can be due to nudges that may not be very costly but may modify the behaviour of economic agents in a cost-efficient fashion.[39] Currently, they appear as part of budgetary expenditures under G1 or G2, but if one includes the private cost of behaviour imposed by regulations, should one not add to this budgetary expenditure the private expenditures, or subtract the drop in public spending generated by nudging?

To wrap up this discussion on measuring the size of government, two last points are merited. First, to be able to bring all the government growth trends together in order to tell a sensible and systematic story, one must adopt a common denominator. In this as well as in most studies of government, that denominator is GDP. However, as useful and appropriate as GDP is, one should be aware that the denominator could be incorrectly measured. For example, including the underground economy would increase GDP and thus reduce the relative size of government in the economy. This can matter for both international and intertemporal comparisons.

---

on Intergovernmental Relations, *Payments in Lieu of Taxes on Federal Real Property: A Commission Report* (Washington, DC: ACIR, 1981) (https://library.unt.edu/gpo/ACIR/Reports/policy/A-90.pdf). For Canada, see Harry M. Kitchen and François Vaillancourt, "The Federal Grant-in-Lieu of Property Taxes Program: An Assessment" (1990) 38:4 *Canadian Tax Journal* 928-36.

38 In 2014, using an approach that aggregates individual benefit and cost estimates produced by US government agencies, the annual report to Congress from the Office of Management and Budget (OMB) estimated the total cost of federal regulations to range between $68.5 billion and $110.9 billion and the total benefits to be between $261.7 billion and $1,042.1 billion. See Maeve P. Carey, *Methods of Estimating the Total Cost of Federal Regulations* (Washington, DC: Library of Congress, Congressional Research Service, January 2016), for these amounts and for a review of the OMB methods. For criticism and further comments, see Patrick A. McLaughlin and Robert Greene, "The Unintended Consequences of Federal Regulatory Accumulation," Mercatus Center, George Mason University, May 8, 2014 (www.mercatus.org/publications/regulation/unintended-consequences-federal-regulatory-accumulation).

39 John Beshears and Katherine L. Milkman, "Behavioral 'Nudges' Offer a Cost-Effective Policy Tool," Association for Psychological Science, June 8, 2017 (www.psychologicalscience.org/news/releases/behavioral-nudges-offer-a-cost-effective-policy-tool.html).

Second, there is, as acknowledged above, the question of the extent to which one can add together different types of "G" and associated costs to get an estimate of the size of government. For example, Cross indicates that, for Canada, the standard measure of total outlays (G3) shows that "government accounts for about 44 percent of the economy, based on its share of spending in GDP."[40] Adding the sum of all tax expenditures raises the share of GDP associated with government to 54 percent. Adding the 10 percent of the economy where government regulates either prices or output boosts government control of all spending to more than 64 percent.[41] That the Canadian government in some sense controls two-thirds of the Canadian economy appears to us to be somewhat exaggerated.

DETERMINANTS OF GOVERNMENT SIZE AND THEIR IMPACT ON ECONOMIC ACTIVITY

While the literature often focuses on the growth of the government of a specific entity over time, the fundamental question is what explains the size of government at a point in time. Once the answer to this question is known, one can examine how the values of the determinants of the size of government have changed over time and link this to the change in the size of government. One approach to explaining the size of government is the microeconomic one; the other is the macroeconomic one.

Microeconomics of Government Output/Size

Economists have put forward a classification of goods and services that allows one to justify (or not) a role of government in the provision of a specific item. This can be presented as a continuum of goods and services that includes public goods, private goods, and in between these two extremes semi-public goods; the latter include merit goods and goods with moral hazard and adverse selection issues.

Public goods are characterized by an absence of rivalry between users and an absence of the possibility of excluding users. Absence of rivalry means that the use of a public good by one person does not preclude another person from also using the good, while absence of exclusion means that the provider of the public good cannot control access to its use. The classic example is the beam of light or sound (such as a foghorn) produced by a lighthouse. Any boat within range can use the outputs of the warning to avoid shoals and none can be prevented from doing so. Such goods cannot be provided efficiently by the private sector because their funding on the basis

40 Philip Cross, *Estimating the True Size of Government: Adjusting for Regulation* (Ottawa: Macdonald-Laurier Institute, 2014), at 5.

41 Using the total value of regulated output seems incorrect. For example, in Canada the milk-producing sector has both pricing and quantity rules that make milk more expensive. If one assumes that the price is 25 percent higher than that expected in a free market, then 20 percent of the total value of output may be deemed to be government-driven, but is not the total value of milk production.

of price is undermined by free riders—that is, non-paying users. Law and order (policing and courts), national defence, foreign affairs, and environmental protection are akin to public goods. One should further note the existence of global public goods, which are paid for by a government directly or through supranational agencies and which have positive spillovers beyond the boundaries of the government that pays for them.

Private goods are characterized by rivalry and exclusion. An automobile can be purchased by only one person and that person can legally and easily refuse to share it. Similarly, many forms of educational and health services are private goods. Thus, a medical doctor treats one patient at a time and a school desk is occupied by one student at a time. Some private goods are seen as merit goods—that is, goods that society as a whole wants to see individuals consume. Cultural goods are often subsidized for this reason; compulsory elementary and secondary schooling can also be seen as merit goods. Insurance-type goods, such as health services, unemployment insurance, disability (temporary or permanent, work-related or not) income support, and old age pensions (which insure longevity risk), are also items that are often provided by the government, even though such programs could be provided by private insurers. Government takes on this role because of moral hazard—that is, cheating to obtain undeserved benefits—and adverse selection—that is, low-risk individuals (healthy, low odds of losing a job) not enrolling in a private insurance scheme, thus making it actuarially unsustainable. Moral hazard is reduced by cross-examining various data files available to government, while adverse selection is solved by mandating participation in these insurance schemes, which often leads to these insurance programs being operated by government.

Semi-public goods have a status in between public and private goods. For example, highways are sometimes rivalry-free (in the very early morning hours) and sometimes congested with rival users (during rush hours).

Regulations or tax expenditures are not easily used to produce pure public goods; they can, however, affect the production of private goods—for example, by subsidizing donations to museums or mandating participation in private insurance schemes.

Using a microeconomic analysis of the nature of government-provided goods and services leads us to conclude that in advanced economies government often plays the role of the private sector by producing the goods that it wants to see provided, particularly in the areas of education and health. This is often explained by historical decisions, with the state acting ab novo in some cases while in other cases it replaces previous actors, often religious institutions or other NGOs.

Macroeconomics of Government Output/Size

There are two major strands of literature examining the size and growth of government from a macroeconomic perspective. One of them examines the determinants of the size of government, and the other studies the impact of that size on the level and growth of economic activity. This latter strand of research sometimes examines the impact of specific public spending or of the importance of decentralization on this level of activity.

Nyasha and Odhiambo provide a recent and interesting review of this literature and conclude that it can be grouped under four headings:

> The first category is the government size-led growth, which consists of studies that support the Keynesian view. According to this group, it is the government size that propels the real sector. The second category is the growth-led government size, which is based on the premise that it is economic growth that leads to government size increase. This category supports the famous Wagner's Law. Then, there is the third view, which is a middle ground. This category consists of studies that validate both the Keynesian view and Wagner's Law, and therefore concluded that government size and economic growth are mutually causal—thereby confirming the bidirectional causality between the two variables. The fourth and less popular category is made up of studies that support the neutrality or the independent view, where government size and economic growth are independent of each other and, therefore, do not cause each other. [A review of the literature reveals] that all views have found empirical support. . . . The study, therefore, concludes that the causal relationship between government size and economic growth is not clear-cut.[42]

The literature on the determinants of the size of government extant in the late 1960s was summarized in Bird.[43] It is still true that, when trying to explain empirically the size of government, one finds two main theories: (1) "Wagner's Law, which is a demand-side explanation," and (2) "ratchet effect hypotheses, which emphasize either larger crises (wars and other social upheavals) or shorter crises (recessions and economic downturns) in claiming that relative government spending ratchets upward during a crisis and stays at a higher level [than previously observed] when the economy recovers."[44] We would be remiss, however, if we did not note—though we do not discuss here—four other explanations for the size of government, which are (3) Baumol's lack of productivity growth in the public sector (no technological progress), (4) Niskanen's growth of bureaucracy for its own goals, (5) Beck's rising cost of production factors, and (6) Shoup's jointness in the use of publicly provided goods.[45] One can analyze these six explanations in terms of demand (1 and 2) and supply (3, 5, and 6), while bureaucratic growth (4) is more of a political explanation.

Wagner's law of expanding state activity was one of the first economic theoretical assertions to be examined empirically. It states that an increase in real per capita income will result in a greater share of economic activity being carried out by the public sector in a given country. This happens because "a substantial number of public

42 Sheilla Nyasha and Nicholas M. Odhiambo, "Government Size and Economic Growth: A Review of International Literature" (2019) 9:3 *Sage Open* 1-12, at 10.

43 Bird, supra note 8.

44 Dick Durevall and Magnus Henrekson, *The Futile Quest for a Grand Explanation of Long-Run Government Expenditure*, IFN Working Paper no. 818 (Stockholm: Research Institute of Industrial Economics, 2010), at 25-26.

45 Eden, supra note 32.

goods are luxuries, so that public spending in total is income-elastic; and . . . an increasing amount of market failure is to be expected as development proceeds."[46]

Using keywords such as "Wagner's law" or "growth of government" in search engines yields numerous empirical studies published in the last few decades (1990-2020) examining the growth of government over time for a country or a panel of countries or regions or differences in size at a given point in time between countries or regions. A brief comparison between these studies and those cited by Bird shows that the econometric analysis has become more sophisticated, with more recent research now addressing issues of stationarity and co-integration in both time series and panel models not noted in earlier work.

That said, what one finds is that answers to questions about the determinants of the size or growth of government are still largely unknown. After reviewing 10 studies, Maluleke concludes:

> The existing literature provides conflicting results concerning the determinants of government expenditure. The findings of the study indicate that the government expenditure relationship with its determinants is significantly positive and negative. The results differ based on the country, methodology used, and proxy of the variables used.[47]

With regard to the impact that the size of government has on economic growth, Bergh and Henrekson, after a review of 13 studies, conclude:

> We have shown that most recent studies published in scientific journals tend to find a negative relationship between total government size and economic growth in rich countries. This stands in stark contrast to scholars . . . who have argued in book length treatments that there is no tradeoff between economic growth and government size. Studies that disaggregate taxes and expenditure typically seem to find that if the policy objective is economic growth there are two consequences: (i) direct taxes on income are worse than indirect taxes, and (ii) social transfers are worse than public expenditure on investment including human capital, which, if anything, increases growth.[48]

THE GOVERNMENT SECTOR IN CANADA: GROWTH, SIZE, AND COMPOSITION

We start this section by presenting information on G1, government spending on goods and services. We then turn to G3, total outlays, and G4, tax expenditures and regulatory costs. Next, we address the composition of spending by type and level,

46 Bird, supra note 8, at 72.

47 Glenda Maluleke, "The Determinants of Government Expenditure: Analysis of the Empirical Literature from 1995 to 2016" (2017) 13:2 *Acta Universitatis Danubius. Œconomica* 212-19, at 218.

48 Andreas Bergh and Magnus Henrekson, *Government Size and Growth: A Survey and Interpretation of the Evidence*, IFN Working Paper no. 858 (Stockholm: Research Institute of Industrial Economics, 2011), at 18.

and conclude with some information on public employment and public revenue. Before starting, let us note that we found only one official time series on the size of government in Canada; it is produced by Finance Canada, uses International Monetary Fund calculations, and starts in 1981.[49]

Figure 1 presents the evolution of government spending on goods and services in Canada over the 1981-2020 period.

Figure 1 shows that, over time, government expenditures on goods and services as a share of GDP declined over the 1981-2020 period in both nominal and real (2012) dollars. The choice of using real or nominal dollars yields somewhat different ratios, although they move in the same way over time. One finds more important differences when computing the share of investment spending over total government spending. This raises the issue of deflators. In the remainder of our work, we will use current dollars for convenience and because this is what is usually discussed when the issue of the size of government is raised in both popular and policy discourses.

Figure 2A presents information on government outlays (G3), the sum of expenditures and transfers. Over the 1981-2020 period, the average ratio of government outlays to GDP was 43.6 percent. Higher ratios are associated with recessions or with COVID-19-related spending. There were no major new public spending programs introduced in this period at the national level, either as a federal program or as an aggregate of provincial spending decisions. The ratio of total government outlays to gross national product (GNP) calculated by Bird was 34.1 percent for 1967.[50] This was before the beginning of the generalization of provincial medicare programs[51] and before changes in federal pensions, with both more generous old age security and the creation of the Canada and Quebec pension plans, were fully implemented.

Comparing indicators of the size of government over time is fraught with issues. With respect to the numerator, data have been revised and data conventions have changed. Smart and Mahoney[52] indicate that Statistics Canada data on government outlays from 1966 onward come from three sources.[53]

Smart and Mahoney flag a key problem with respect to expenditures—namely, under the financial management system (FMS), which was retired in 2009, Statistics

49 See www.canada.ca/en/department-finance/services/publications/fiscal-reference-tables/2021.html.

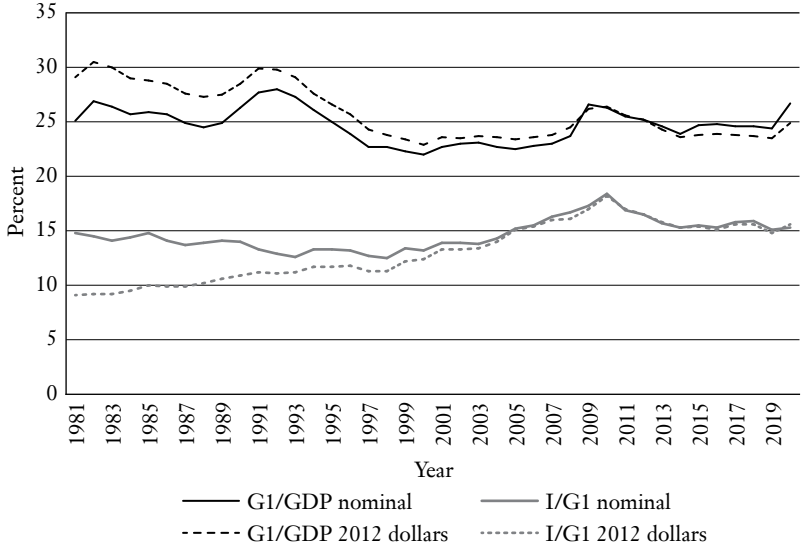
50 Bird, supra note 8, at 279, table 33.

51 Gregory P. Marchildon, "Guest Editor's Preface: The Policy History of Canadian Medicare" (2009) 26:2 *Canadian Bulletin of Medical History* 247-60 (www.utpjournals.press/doi/pdf/10.3138/cbmh.26.2.247).

52 Michael Smart and Nicholas Mahoney, "User Guide to the Finances of the Nation REAL Data" (November 2020) (https://financesofthenation.ca/real-fedprov).

53 Ibid., at 2. See Statistics Canada, *Public Finance, Historical Data 1965/66-1991/92, Financial Management System*, catalogue no. 68-512 (Ottawa: Ministry of Industry, Science and Technology, 1992); Statistics Canada table 10-10-0039-01 (formerly CANSIM 385-0001), "Consolidated Federal, Provincial, Territorial and Local Government Revenue and Expenditures," for years 1989-2009; Statistics Canada table 10-10-0040-01 (formerly CANSIM 385-0002), "Federal, Provincial and Territorial General Government Revenue and

FIGURE 1 Comparison of Government Spending on Goods and Services as a Share of GDP and Investment Spending as a Share of Total Government Spending, Nominal and Real (2012) Dollars, Canada, 1981-2020



GDP = gross domestic product; G1 = government spending on goods and services; I = investment spending.

Source: Authors' calculations using Statistics Canada table 36-10-0222-01 (formerly CANSIM table 384-0038), "Gross Domestic Product, Expenditure-Based, Provincial and Territorial, Annual."

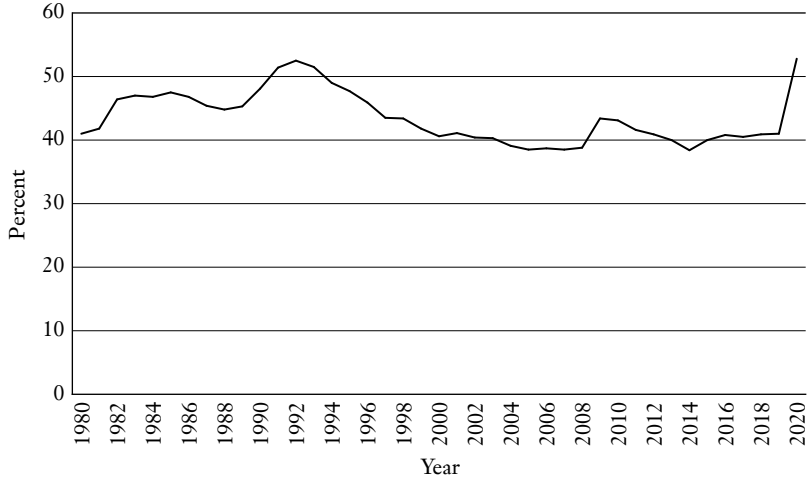
Canada released a functional classification of total expenditure, including such categories as health, education, social services, and so on. Since 2009, Statistics Canada has released functional spending data under the classification of functions of government (COFOG). Unlike FMS, COFOG does not attempt to functionalize the acquisition or amortization of capital assets, which thus renders the two series fundamentally inconsistent.

With respect to the denominator, over time, data in both Canada and the United States have been revised, and the indicator used has changed from GNP to GDP.[54]

Expenditures, for Fiscal Year Ending March 31," for years 1989-2009; Statistics Canada table 10-10-0016-01 (formerly CANSIM 385-0033), "Canadian Government Finance Statistics for the Federal Government (x 1,000,000)," for years 2009-present; and Statistics Canada table 10-10-0017-01 (formerly CANSIM 385-0034), "Canadian Government Finance Statistics for the Provincial and Territorial Governments (x 1,000,000)," for years 2009-present.

54 GDP measures the value of goods and services produced within a country's borders, by citizens and non-citizens alike. GNP measures the value of goods and services produced only by a country's citizens, but both domestically and abroad. On average for Canada over the 1926-1986

FIGURE 2A Total Government Outlays (G3) as a Percentage of GDP, Canada, 1980-2020



GDP = gross domestic product.

Source: Canada, Department of Finance, *Fiscal Reference Tables 2021* (Ottawa: Department of Finance, 2021), at 56, table 52 (www.canada.ca/content/dam/fin/publications/frt-trf/2021/frt-trf-21-eng.pdf).

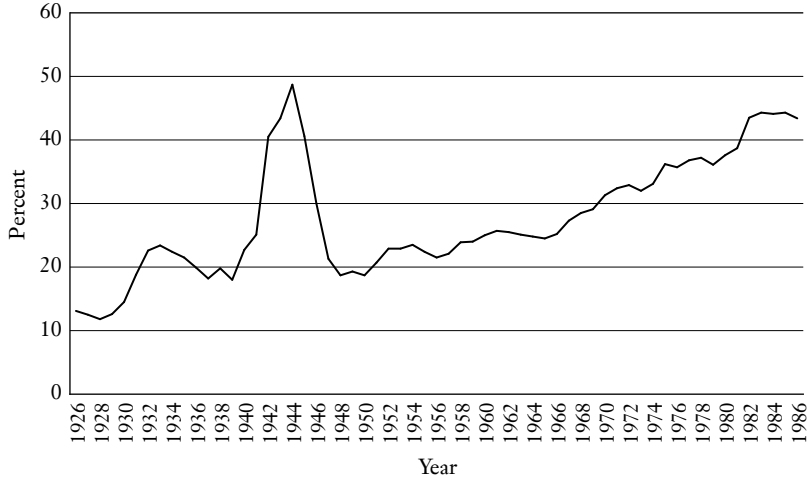
Figure 2B presents the ratio of total government outlays (G3) to GDP for the 1926-1986 period, which encompasses the period covered by Bird[55] (1926-1967) and overlaps somewhat with the period covered in figure 1 (1981-2020). The ratio is a bit lower than that reported by Bird for the 1926-1967 period, but it shows the same trend of growth. There is no evidence of a displacement effect immediately after the Second World War (1940-1945), but there are some small jumps associated with the introduction of various cost-shared programs by the federal government.

Figure 3 presents information on the importance of federal tax expenditures as a share of GDP; years reported are dictated by available results using existing information on the sum of federal tax expenditures; such a sum is not produced by governmental authorities since it is most likely an overestimation of total tax expenditures. The figure shows that these tax expenditures have been at least 10 percent of GDP since 1996. Given that Canada is a federal country where a substantial share of tax revenues

period, GDP is 2.7 percent higher than GNP. Data from Statistics Canada table 36-10-0150-01 (formerly CANSIM 380-0515), "Historical: Relation Between Gross Domestic Product (GDP) at Market Prices, Gross National Product (GNP) at Market Prices, Net National Income at Factor Cost and Gross Domestic Product at Factor Cost, 1968 System of National Accounts (SNA), Annual, 1926-1986 (x 1,000,000)."

55 Bird, supra note 8.

FIGURE 2B Total Government Outlays (G3) as a Percentage of GDP, Nominal Dollars, Canada, 1926-1986



GDP = gross domestic product.

Source: Statistics Canada table 36-10-0150-01 (formerly CANSIM 380-0515), "Historical: Relation Between Gross Domestic Product (GDP) at Market Prices, Gross National Product (GNP) at Market Prices, Net National Income at Factor Cost and Gross Domestic Product at Factor Cost, 1968 System of National Accounts (SNA), Annual, 1926-1986 (x 1,000,000)."

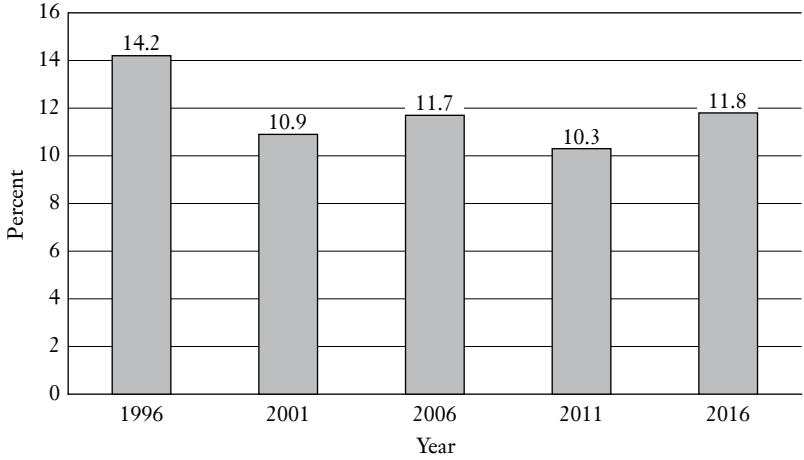
is collected by provinces, provincial tax expenditures should also be considered. An online search shows that only some provinces produce estimates of tax expenditures, not always for every year, and that the estimates produced vary methodologically between provinces. That said, estimates are available for the three most populous provinces (Ontario, Quebec, and British Columbia) for 2016;[56] by adding them up and taking into account their share of GDP, one can estimate that total provincial tax expenditures were about 4-5 percent of GDP that year. These results are similar to if slightly larger than those reported by Sheik.[57]

We also noted above that government mandates/regulations could be seen as complementing or substituting for direct government spending, and thus that they

56 For Ontario, see Ontario, Ministry of Finance, Fall Economic Statement, November 14, 2016 (our sum rounded). For Quebec, see Québec, Ministère des Finances et Revenu Québec, *Dépenses fiscales édition 2016* (Québec: Ministère des Finances et Revenu Québec, 2017), section A, tableau A.1; and for British Columbia, see Office of the Auditor General of British Columbia, *Understanding Tax Expenditures* (Victoria, BC: Office of the Auditor General of British Columbia, October 2018), at 3.

57 Munir A. Sheik, *Estimating the True Size of Government Adjusting for Tax Expenditures* (Ottawa: Macdonald-Laurier Institute, February 2014).

FIGURE 3 Federal Tax Expenditures Measured at Five-Year Intervals as a Percentage of GDP, Canada, 1996-2016



GDP = gross domestic product.

Sources: François Vaillancourt, Marylène Roy, and Charles Lammam, "Measuring Tax Complexity in Canada" (April 2015) *Fraser Research Bulletin* 1-10, at 5, figures 3a and 3b; Finn Poschmann, François Vaillancourt, and Jake Fuss, *Tax Complexity in 2019: Can It Be Tamed?* (Vancouver: Fraser Institute, 2019), at 9-10, figures 2a, 3b, and 3c; and Statistics Canada table 36-10-0222-01 (formerly CANSIM table 384-0038), "Gross Domestic Product, Expenditure-Based, Provincial and Territorial, Annual."

should be included in the measure of the size of government. Using information reported by firms, we estimate that the cost of government regulations in 2016 was 1.8 percent.[58] Little is known about the time trend of such costs, but at least with respect to the compliance costs of taxation, they are likely to be increasing through time because the measurement of tax complexity has increased over time.[59] Cross[60] reports a higher number, but this is explained in part by the fact that he includes the output of publicly owned enterprises such as provincial electric utilities or liquor boards and municipal water boards. Including these data would increase the size of government if we did the same here.

Government spending can be on various items. We can break down government spending in Canada in 10 functions for the 2008-2020 period. Figure 4A presents

58 Calculated using data from Marvin Cruz, Keyli Kosiorek, Laura Jones, and Taylor Matchett, *Canada's Red Tape Report: The Cost of Regulation to Small Business*, 6th ed. (North York, ON: Canadian Federation of Independent Business, 2021), table C.2, and GDP data as described in the sources of table C.1.

59 François Vaillancourt and Richard Bird, "Tax Simplification in Canada: A Journey Not Yet Mapped," in Simon James, Adrian Sawyer, and Tamer Budak, eds., *The Complexity of Tax Simplification: Experiences from Around the World* (New York: Palgrave Macmillan, 2016), 70-94.

60 Cross, supra note 40.

the average share of total government spending for that period, while figure 4B presents information of a similar nature, but for 15 functions, for the 1989-2009 period. One can see that the classification of functions is not the same and, in particular, that debt charges appear as an explicit spending item in the earlier period.

Figure 4A shows that health and social protection each account for about 25 percent of total public spending in Canada, while general spending and education are each about 15 percent of total public spending. Figure 4B also shows the importance of health and social protection, but for the 1989-2009 period.

We attempt a comparison of government spending between these two periods in figure 4C. The figure shows an increase in the importance of health spending over time as a share of total spending. This is not surprising, given the aging of the population and the role that provincial medicare programs play in providing health care in Canada.[61]

In a federal country such as Canada (or the United States), it is relevant to examine which level of government carries out the spending. Figure 5A shows the share of SNG spending as a percentage of total government spending, and figure 5B shows this for the three major types of specific spending (health, education, and social protection). One notes:

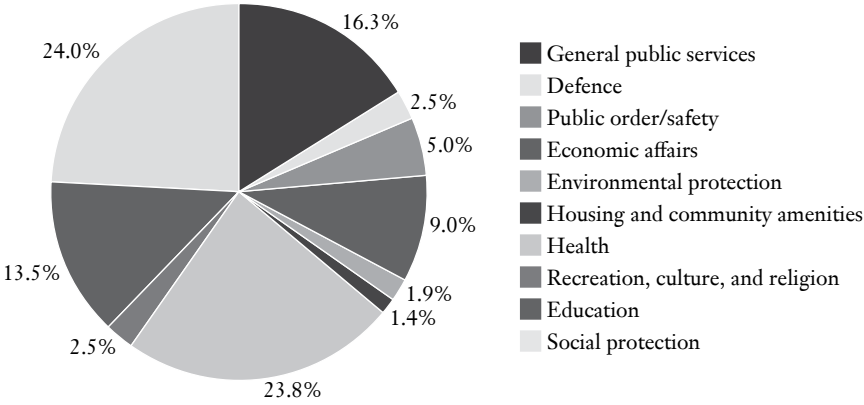
- a slow rise overall in the share of SNG spending—by provinces/territories and local governments and entities—relative to total government spending in Canada;
- a sharp change in the share of SNG spending in 2009 owing to the introduction of a new data source;
- a sharp drop in 2020 in the share of SNG spending as a result of one-off, extremely large federal transfers to individuals in response to the COVID-19 pandemic;
- the predominant role of SNGs in health (provinces) and education (provinces and school boards), with about 95 percent of spending in both cases; and
- the dominant role of the federal government in social protection through its provision of old age security[62] (as noted above, the drop in the SNG share in 2020 was due to temporary income support offered by the federal government to workers laid off during the pandemic).[63]

61 For more information, see Government of Canada, "Canada's Health Care System" (www.canada.ca/en/health-canada/services/health-care-system/reports-publications/health-care-system/canada.html); or Roosa Tikkanen, Robin Osborn, Elias Mossialos, Ana Djordjevic, and George Wharton, "International Health Care System Profiles: Canada," *Commonwealth Fund*, June 5, 2020 (www.commonwealthfund.org/international-health-policy-center/countries/canada).

62 For details, see Service Canada, "The Old Age Security Program Toolkit" (2018) (https://publications.gc.ca/collections/collection_2018/servcan/SG5-97-2018-2-eng.pdf).

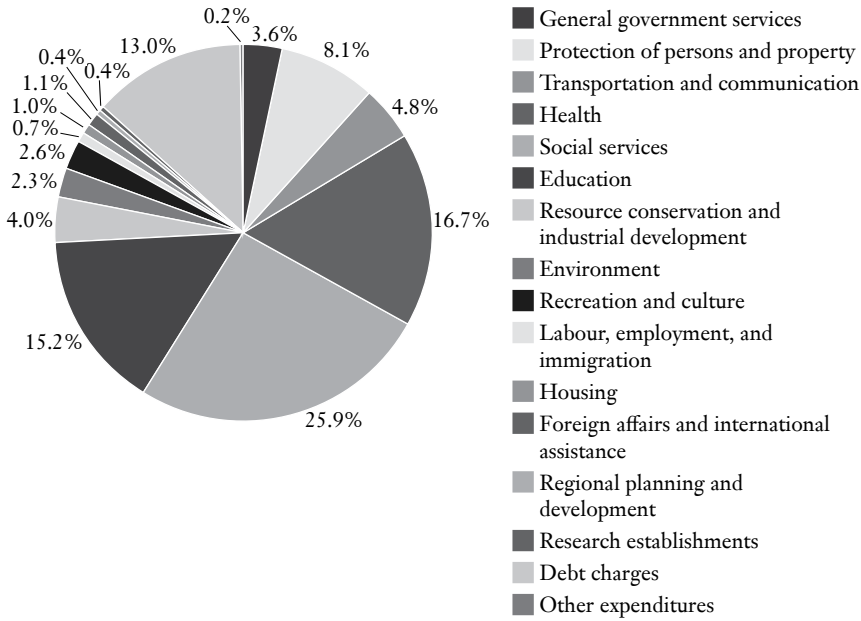
63 Canada, Department of Finance, Fall Economic Statement, November 30, 2020, chapter 2.

FIGURE 4A Average Share of Total Government Spending in 10 Functions, Canada, 2008-2020



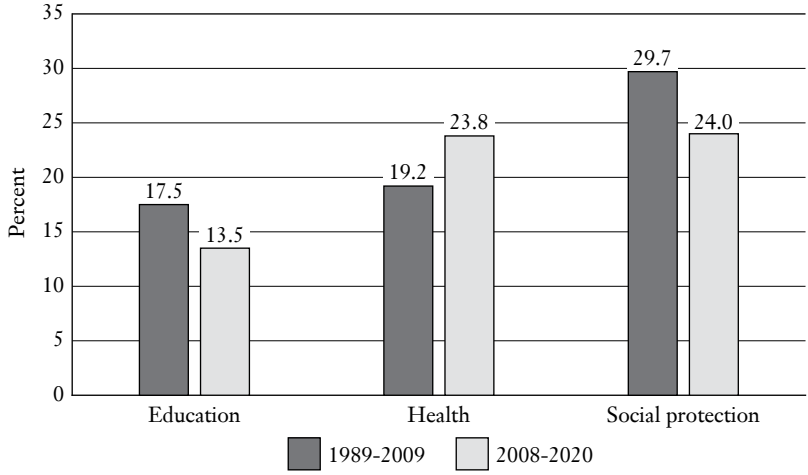
Source: Authors' calculations using Statistics Canada table 10-10-0005-01 (formerly CANSIM 385-0041), "Canadian Classification of Functions of Government (CCOFOG) by Consolidated Government Component (x 1,000,000)."

FIGURE 4B Average Share of Total Government Spending in 15 Functions, Canada, 1989-2009



Source: Authors' calculations using data from Statistics Canada table 10-10-0039-01 (formerly CANSIM 385-0001), "Consolidated Federal, Provincial, Territorial and Local Government Revenue and Expenditures," for years 1989-2009.

FIGURE 4C Comparison of the Average Shares of the Top Three Spending Items as a Percentage of Total Government Spending, Canada, 1989-2009 and 2008-2020



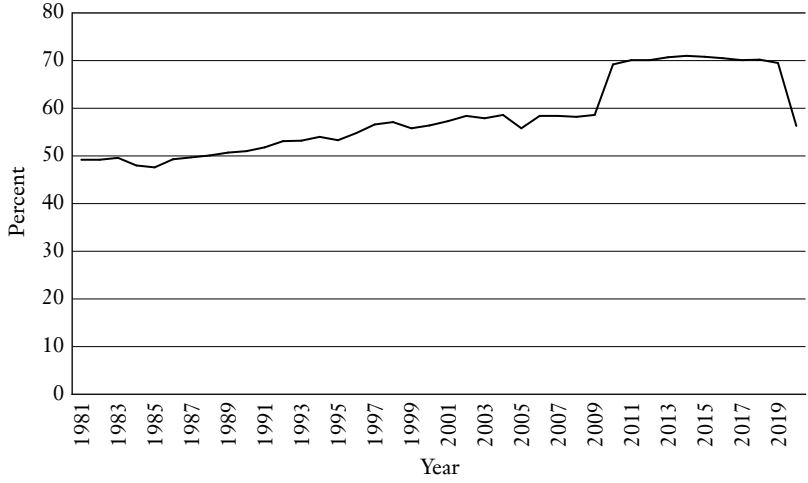
Note: The 1989-2009 data are corrected by removing the debt charges from the calculations (denominator) and recomputing the functional percentages.

Sources: For 1989-2009, authors' calculations using Statistics Canada table 10-10-0005-01 (formerly CANSIM 385-0041), "Canadian Classification of Functions of Government (CCOFOG) by Consolidated Government Component (x 1,000,000)"; for 2008-2020, authors' calculations using Statistics Canada table 10-10-0005-01 (formerly CANSIM 385-0041), "Canadian Classification of Functions of Government (CCOFOG) by Consolidated Government Component (x 1,000,000)."

Another possible measure of the size of government is the importance of public sector employment in total employment. The key issue is the size of the public sector. We present in figure 6 three estimates of the size of public employment in Canada. The lowest estimate (Min G) counts only workers directly employed by the three levels of government (federal, provincial/territorial, municipal/local); the highest (Max G) also includes all workers in the education and health sectors; the midpoint (Mid G) includes only education and health workers employed by governmental non-profit institutions such as universities and hospitals. In Canada, most doctors work in privately owned clinics but their work is paid for almost exclusively by the medicare plan (with fee-setting power) of the province they work in, which muddies the distinction between private or public sector employment. The real share of public employment is thus most likely somewhere between Mid G and Max G.

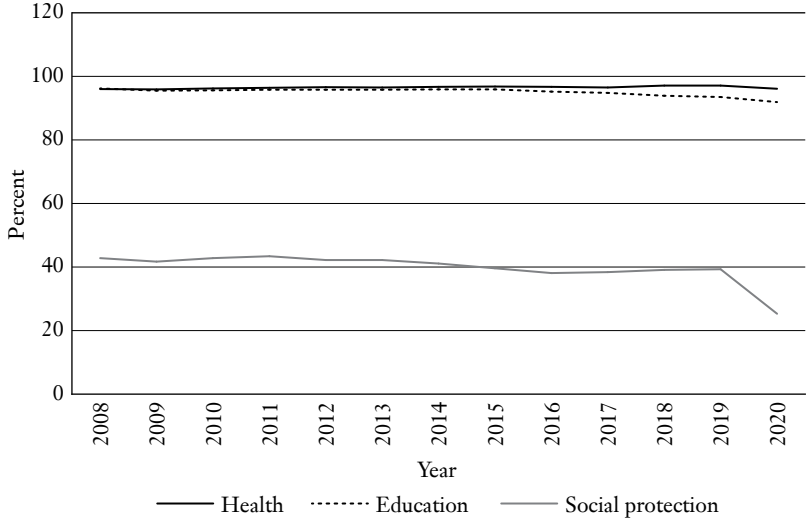
In our final look at Canadian government size, figure 7 presents evidence on the growth of government revenue in Canada as a share of GDP; it shows a decline and then an increase over the 1991-2019 period.

FIGURE 5A Subnational Government Spending as a Percentage of Total Government Spending, Canada, 1981-2020



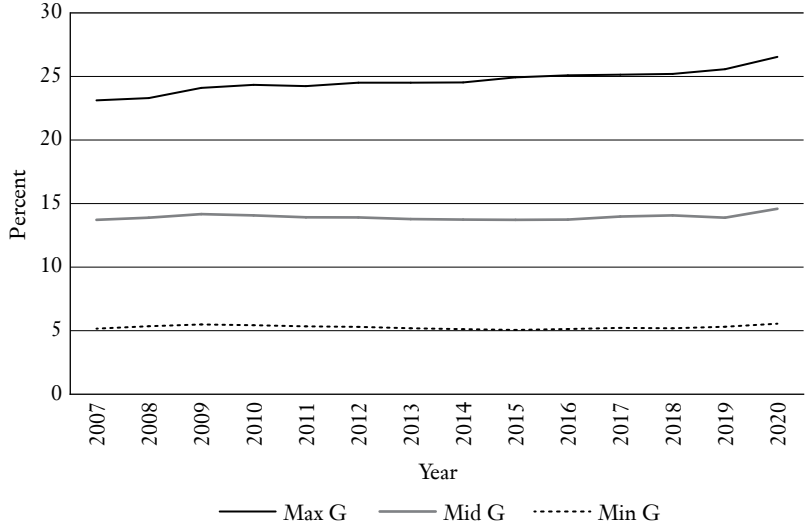
Sources: For 1981-2007, authors' calculations using Statistics Canada table 36-10-0314-01 (formerly CANSIM 384-0004), "Government Sector Revenue and Expenditure, Provincial Economic Accounts, Annual, 1981-2009 (x 1,000,000)"; for 2008-2020, Statistics Canada table 10-10-0005-01 (formerly CANSIM 385-0041), "Canadian Classification of Functions of Government (CCOFOG) by Consolidated Government Component (x 1,000,000)."

FIGURE 5B Subnational Government Percentage Share of Spending for Education, Health, and Social Protection, Canada, 2008-2020



Source: Authors' calculations using Statistics Canada table 10-10-0005-01 (formerly CANSIM 385-0041), "Canadian Classification of Functions of Government (CCOFOG) by Consolidated Government Component (x 1,000,000)."

FIGURE 6 Public Sector Employment as a Percentage of Total Employment, Three Definitions, Canada, 2007-2020



Sources: Statistics Canada table 36-10-0617-01, "Employment in Non-Profit Institutions by Sub-Sector (x 1,000)"; and Statistics Canada table 14-10-0092-01 (formerly CANSIM 282-0125), "Employment by Industry, Annual, Provinces and Economic Regions, Inactive (x 1,000)."

FIGURE 7 All Government Revenues as a Percentage of GDP, Canada, 1991-2019

GDP = gross domestic product.

Source: Canada, Department of Finance, *Fiscal Reference Tables 2021* (Ottawa: Department of Finance, 2021), at 39, table 33 (www.canada.ca/content/dam/fin/publications/frt-trf/2021/frt-trf-21-eng.pdf).

THE GOVERNMENT SECTOR IN THE UNITED STATES: GROWTH, SIZE, AND COMPOSITION

We turn in this section to an analysis of government spending in the United States. As with our work on Canada, we first discuss the available data, then present the relevant information.

There are three primary sources of government finance and funding trend data available for the United States:[64]

- *Budget data.* For the US federal government, the Budget and Accounting Act of 1921 requires the president, through the Office of Management and Budget (OMB), to submit the budget to Congress by the first Monday in February. The budget then sets the stage for congressional review and approvals. Although timelines have been established for all steps in the budget process, things do not always go according to plan.[65] What does happen is that once there is a budget, the OMB pulls together—standardizes—the numbers. There are two key OMB sources: the annual *Economic Report of the President* (which includes an extensive set of appendix tables relating to income, employment, production, and government) and a continually updated set of OMB historical tables.[66]
- *US Bureau of Economic Analysis (BEA)/GDP accounting.* The BEA produces the US national income and product accounts (NIPA). To accomplish this, the BEA draws most of the data from standardized and ongoing surveys, other federal office and statistical agencies, and private trade sources.
- *US Census Bureau data.* Each of the 50 states and the federal District of Columbia prepare budgets (some annual, others biannual).[67] However, unlike for the federal government, there is not a uniform budget format. Accordingly, the Census Bureau has established a systematic set of criteria that the states voluntarily conform to for reporting their financial data, which allows the Census Bureau to periodically publish the census of government finances.[68] This then becomes the data set that analysts turn to for tasks ranging from measuring different state/local systems to making fiscal comparisons among the states. The census state/local data further reflect that SNGs are a system

64 The authors acknowledge the assistance of Riley Stec with the US data collection and presentation.

65 John Haughey, "The Federal Budget Timeline & Process," *FiscalNote*, October 5, 2020 (https://fiscalnote.com/blog/14-steps-to-the-federal-budget-timeline).

66 United States, White House, Council of Economic Advisers, *Economic Report of the President, Together with The Annual Report of the Council of Economic Advisers 2021* (Washington, DC: Council of Economic Advisers, January 2021); and White House, Office of Management and Budget, "Historical Tables" (www.whitehouse.gov/omb/budget/historical-tables).

67 There are also 16 US territories. The data for them are not addressed in this paper.

68 United States, Census Bureau, *Annual Survey of State Government Finances Summary* (Washington, DC: US Census Bureau, various years).

of governments: 50 states plus DC, and 89,004 local governments/counties, municipalities, townships, special districts, and school districts.

For the purposes of this paper, we present US federal government expenditure data in terms of both outlays and GDP accounting—that is, NIPA data. As a general rule, state and local governments are reported as a system of SNGs. That said, there are circumstances when it is useful to present state and local data separately. To summarize:

- *Federal outlay spending* to pay an obligation is a broader measure of spending than that reported as expenditures in GDP/NIPA accounting. Outlays are the sum of "on-budget" and "off-budget" data, which together constitute the unified federal budget (a concept the US federal government has used or included in its reporting since the 1969 federal budget).[69] "Off-budget" practice is a sleight-of-hand process whereby the US Congress "protects" federal activities from the normal budget process.[70] As a result, off-budget government spending is excluded from budget caps, sequestration, and pay-as-you-go requirements. Key components are the two Social Security trust funds (the Old-Age and Survivors Insurance Trust Fund and Disability Insurance Trust Fund) and the Postal Service Fund. Although there is a legal distinction between on-budget and off-budget entities, there is not conceptual difference between the two. Off-budget federal entities engage in the same kinds of public sector activities as on-budget entities, and the programs of both types of entities result in spending and receipts.

  The US federal government budget data also break down expenditures between *mandatory spending*, which is spending that is required by current law, and *discretionary spending*, which must be authorized by the government each year. Mandatory spending makes up roughly two-thirds of the total US federal budget (though this number is constantly in flux).[71] Making the mandatory-discretionary distinction for analytical purposes is not key to understanding the trends data in this report; however, the total of what is spent on these "entitlement" programs is included in the data.[72]

69 United States, Bureau of the Budget, *The Budget of the United States Government: Fiscal Year 1969* (Washington, DC: US Government Printing Office, 1969).

70 The argument that is typically set forth for the off-budget treatment of Social Security is that it blocks a future US Congress from using a surplus in the trust fund to pay for general budget items.

71 United States, Congressional Budget Office, *The 2022 Long-Term Budget Outlook* (Washington, DC: Congressional Budget Office, July 2022).

72 The three largest mandatory outlays are for Social Security, Medicare, and Medicaid. Other entitlements included outlays for unemployment compensation, retirement programs for federal employees, and deposit insurance for certain US commercial banks, savings institutions, and credit unions.

- *OMB historical trends*. The OMB routinely updates its historical tables. The data are provided mainly by the BEA, which makes annual revisions to the NIPA data. The most recent change in the numbers, which is reflected in the data used for this paper, was made in July 2020.[73]
- *State and local government consumption and state and local government gross investment* are the measures of government spending on goods and services that are included in GDP. Consumption spending is what can be thought of as spending for general government, its workforce, and goods and services, such as military equipment and rent for government buildings and other structures. Gross investment includes amounts that governments spend on structures and equipment such as schools, computer hardware and software, and various types of fiscal infrastructure.[74]

Total Spending: Outlays and NIPA

Figure 8, which defines expenditures as outlays, shows a clear trend of growth of government in the United States. These are the numbers that are typically quoted in references to how US government spending compares to that of other countries (for example, 41 percent of GDP in 2020).

Tax Expenditures

There is a companion type of spending—personal and business income tax expenditures. These are special provisions that allow a departure from "normal, ordinary, and necessary" business expenses needed to measure net income and/or make adjustments to personal or household incomes.[75] Examples include special tax credits, deductions, exclusions, exemptions, deferrals, and preferential tax rates.[76] Although tax expenditures are appropriately viewed as a type of spending—it is sleight-of-hand spending—there can be a high degree of arbitrariness in their measurement. Thus, it is incorrect to add these numbers together with the direct expenditures that are reported in a typical budget document.[77] There are two key reasons for this. The first is that a change in one tax expenditure can affect the size of another. For example, the number used for the largest business tax expenditure, depreciation,

73 White House, Office of Management and Budget, "Introduction to the Historical Tables: Structure, Coverage, and Concepts" (www.whitehouse.gov/wp-content/uploads/2022/03/hist_intro_fy2023.pdf).

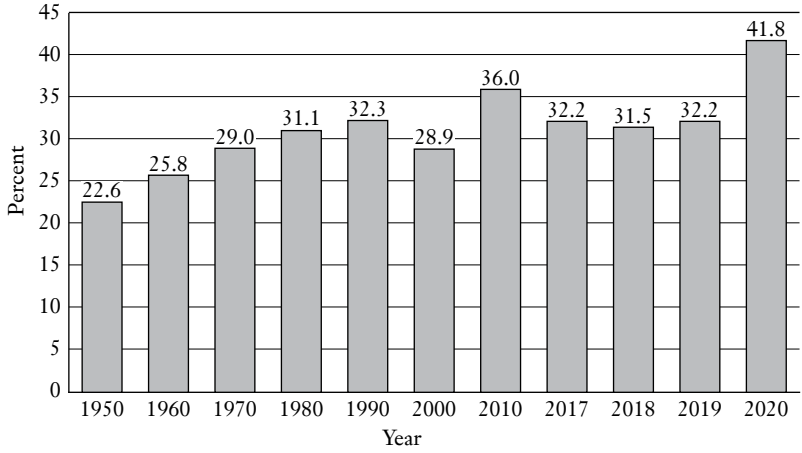
74 Bruce E. Baker and Pamela A. Kelly, *A Primer on BEA's Government Accounts* (Washington, DC: Bureau of Economic Analysis, March 2008), 29-38 (https://apps.bea.gov/scb/pdf/2008/03%20March/0308_primer.pdf).

75 See the sources cited in note 25, supra.

76 Accordingly, tax expenditures do not cover all departures from the economist's concept of income. See Gravelle, supra note 25; and Sarah Calame and Eric Toder, *Trends in Tax Expenditures: An Update* (Washington, DC: Urban-Brookings Tax Policy Center, April 2021).

77 Gravelle, supra note 25.

FIGURE 8 Total Government Spending as a Percentage of GDP, United States, 1950-2020



GDP = gross domestic product.

Source: White House, Office of Management and Budget, "Historical Tables," table 14.3 (www.whitehouse.gov/omb/budget/historical-tables).

will vary by the timing of cash flows. The second is that a "tax reform" package that raises (cuts) tax rates may have the effect of increasing (decreasing) the measured value of a tax expenditure.

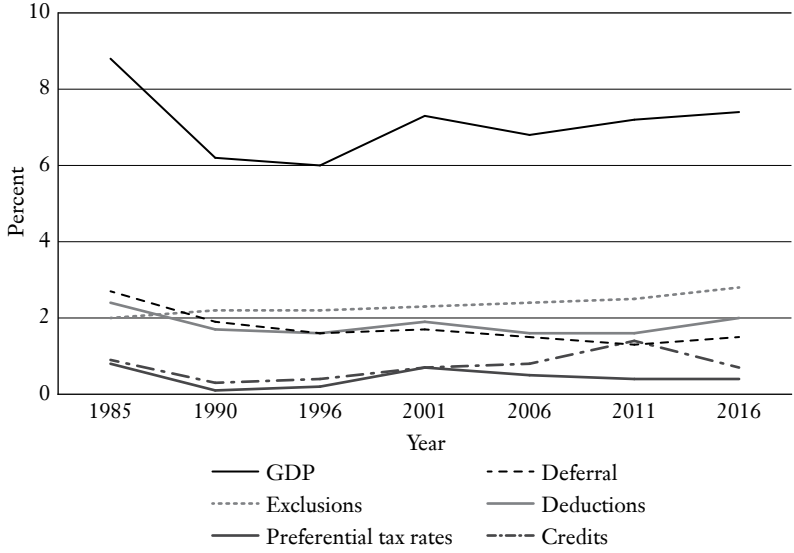
As shown in figure 9, total US federal tax expenditures (which are predominantly for individuals, not corporations) have been relatively unchanged over the past three decades: beginning in 1985 at 8.8 percent of GDP, they declined after the passage of the Tax Reform Act of 1986, and over the 1996-2016 period experienced gradual but not dramatic growth.[78] In short, although a number in the range of 6 to 8 percent of GDP is far from trivial—indeed, it is on par with federal discretionary spending as a percentage of GDP—this is not a source of change in the size of the federal government.[79]

But citing just the federal tax data understates the total amount of tax expenditures, because several states make (to varying degrees) their income tax code conform to the federal code's definition of taxable income. Thus, when the US Congress enacts a change in tax expenditures, this change is automatically incorporated in these tax codes. States may also enact "own" tax preferences. However, it is difficult to get a good "all-state" tax expenditure number because (1) tax expenditure reporting varies by state; (2) even many of the states that carry out a tax expenditure report do so only

78 The number of federal tax expenditures did not significantly change with the Tax Reform Act of 1986. What did change was a reduction in the total dollar cost. See McBride, supra note 24.

79 United States, Congressional Budget Office, supra note 71, at 7, table 1-1.

FIGURE 9 Federal Tax Expenditures, Total and by Type, United States, 1985-2016



GDP = gross domestic product.

Sources: Allison Rogers and Eric Toder, *Trends in Tax Expenditures, 1985-2016* (Washington, DC: Urban-Brookings Tax Policy Center, September 2011); and Sarah Calame and Eric Toder, *Trends in Tax Expenditures: An Update* (Washington, DC: Urban-Brookings Tax Policy Center, 2021). Data drawn from United States, Congress, Joint Committee on Taxation (www.jct.gov); and Joint Committee on Taxation, *Estimates of Federal Tax Expenditures* (Washington, DC: Joint Committee on Taxation, various years), selected fiscal years.

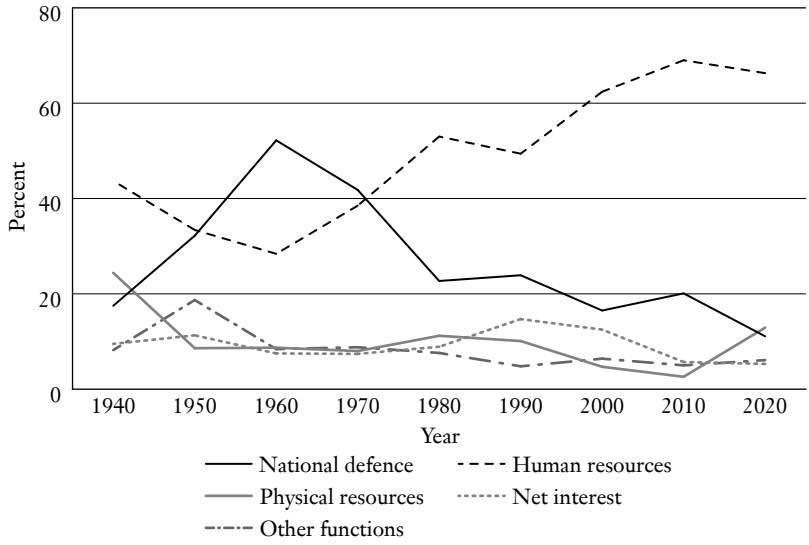
periodically; and (3) what counts as a special provision for one state may differ from other state practices.[80]

Federal Spending by Function

Beginning with the late 1950s, there has been a shift in US federal spending toward human resources; these outlays as a percentage of total outlays more than doubled

80 Allison Rogers and Eric Toder, *Trends in Tax Expenditures, 1985-2016* (Washington, DC: Urban-Brookings Tax Policy Center, September 2011); and Michael Leachman, Dylan Grundman, and Nicholas Johnson, *Promoting State Budget Accountability Through Tax Expenditure Reporting* (Washington, DC: Center on Budget and Policy Priorities, May 2011). Aravind Boddupalli, Frank Sammartino, and Eric Toder, *State Income Tax Expenditures* (Washington, DC: Urban-Brookings Tax Policy Center, January 2020) (www.urban.org/sites/default/files/publication/101574/state_income_tax_expenditures_2.pdf), note that in some states tax expenditures exceed 50 percent of total income and tax expenditures. In comparison, estimated federal and corporate tax expenditures equal about 70 percent of total federal and corporate income tax revenues in 2020.

FIGURE 10 Federal Outlays by Function as a Percentage of Total Government Spending, United States, 1940-2020



Note: Owing to the decade-by-decade format of the data, the figure does not reveal the spikes in national defence spending as a percentage of outlays in the 1943-1946 period: 1943 (84.9 percent), 1944 (86.7 percent), 1945 (89.5 percent), and 1946 (77.3 percent).

Source: White House, Office of Management and Budget, "Historical Tables," table 3.1 (www.whitehouse.gov/omb/budget/historical-tables).

between 1960 and 2020 (as shown in figure 10). There are two main spending drivers for this category of outlays: social insurance (Social Security, 1935) and federally funded health care (Medicare and Medicaid, 1965).[81] The relative share of human resources spending is in sharp contrast to the decline in spending on national defence.

Figure 10 also suggests a Peacock-Wiseman displacement effect resulting from the Second World War. During the 1943-1946 period, US national defence spending accounted for an average of 84.6 percent of federal outlays (peaking at 89.5 percent in 1945). That share dropped off dramatically by the 1950s (to 32.2 percent), and was 11.1 percent in 2020. The other component of spending that trended downward

81 Medicare is a US federal health insurance program for people aged 65 years and older and people with certain disabilities. Medicaid is a public insurance program that provides health coverage to low-income families and individuals and is funded jointly by the federal government and the states. There is another federal transfer payment for income security, Temporary Assistance for Needy Families (TANF). States use TANF to fund monthly cash assistance payments to low-income families with children, as well as a wide range of services. See Allison Orris, Laura Harker, and Gideon Lukens, *Failure To Close Coverage Gap Would Leave Millions Uninsured and Facing Worse Health Outcomes* (Washington, DC: Center on Budget and Policy Priorities, July 2022).

over the last half-century (1970-2020) was that of physical resources, which includes natural resources and environment plus energy, which accounts for 45 percent of the physical resources category (the other being commerce and housing credits).

A Closer Look: US Fiscal Decentralization

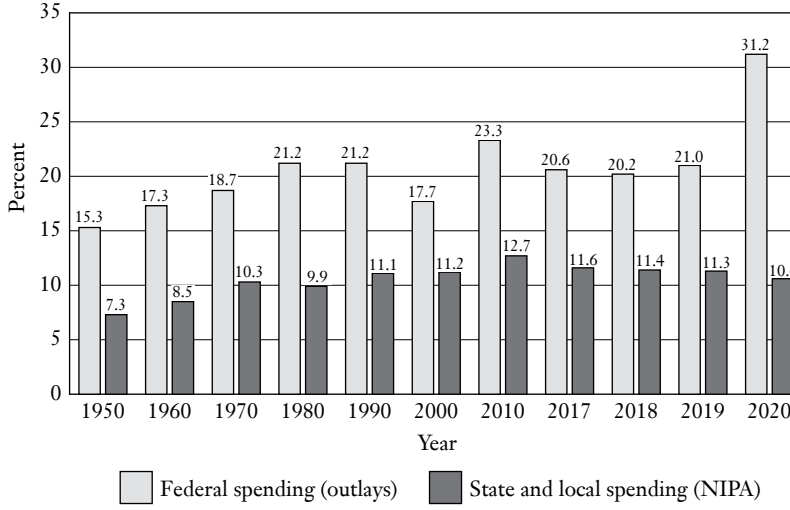
When looking at the trends of total spending by bringing together federal outlays with state/local sector spending (as seen in figure 11), one may readily conclude that the post-war trend in the growth of government is largely attributable to growth in the US federal government. This view, that the federal sector is the senior partner in US fiscal federalism, is reinforced when one looks at federal, state, and local shares of total government outlays (as seen in the figure).

However, when one turns to the NIPA data, which measure spending on goods and services ("exhaustive spending"), while omitting transfer payments over the last half-century, two important stories emerge.[82] The first is that when total government spending (G) is measured as public sector expenditures plus gross investment, the G-to-GDP ratio declines from 23.5 percent in 1969 to 17.5 percent in 2019. The second is that this decline is a "relative-to-which sector" shift: the federal government has been in a spending decline while the state and local sector, with some up and down years, has been growing. Indeed, whereas from the post-war 1940s to the 1960s, "the government" referred to the federal (central) government, this is no longer the case. Indeed, figure 12 shows that the state and local sector has become the lead partner in the federal system—not just in its role of providing non-defence outputs, but also when measured as a percentage of GDP, including spending for national defence.

A key to explaining the changing relationship between the federal government and state and local governments over the past half-century is the growth in federal transfer payments, which are largely in the form of direct federal payments to individuals (for example, Social Security and health support to low-income households) and the spending of federal infrastructure funds (as seen in figure 13). At present, Medicaid accounts for more than half of all US federal grant money. The other major transfer payment is for welfare (income security) through the Temporary Assistance for Needy Families (TANF) assistance program. As figure 13 shows, payments to individuals as a percentage of intergovernmental transfers more than doubled (from 34 percent to 73 percent) over the 1940-2020 period. Capital grant money, which has fallen dramatically since the late 1950s, is directed primarily to education (which is then largely passed through to local governments) and transportation.

82 Eden, supra note 32; and William F. Fox and Enid Slack, "North America," in Jorge Martínez-Vázquez and Paul Smoke, eds., *Local Government Finance: The Challenges of the 21st Century—Second Global Report on Decentralization and Local Democracy* (Cheltenham, UK: Elgar, 2011), 255-82.

FIGURE 11 Federal and State and Local Government Spending as a Percentage of GDP, United States, 1950-2020



GDP = gross domestic product; NIPA = US national income and product accounts.

Source: White House, Office of Management and Budget, "Historical Tables," table 14.3 (www.whitehouse.gov/omb/budget/historical-tables).

Public Sector Employment

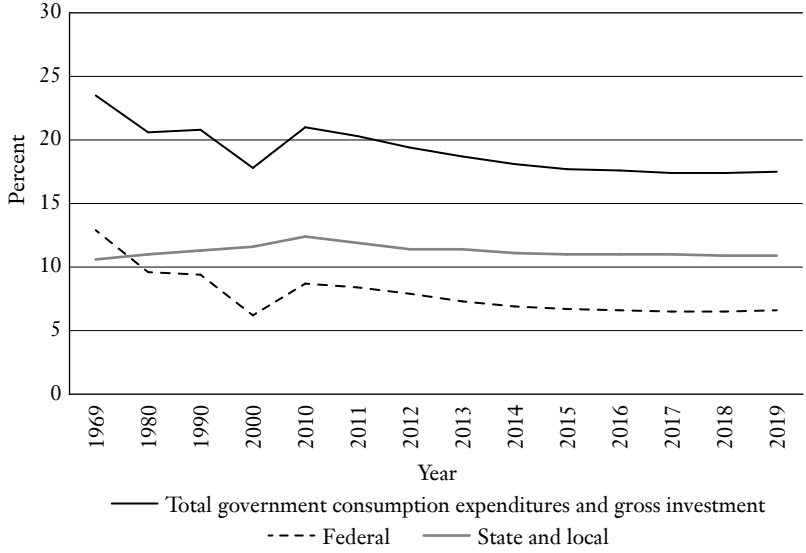
Turning to public employment, we find, as shown in figure 14, that over the last half-century relative to the total civilian workforce (employed), the private sector is increasing over time, from 80 percent to 85 percent, and thus the "bureaucracy" is declining over time. The three bars show that the decline is occurring in the federal system, not the state/local system.

Receipts

Finally, in figure 15, we provide a glance at the trends in government receipts. What is important is that, over time, receipts serve as a cap on government growth. This is particularly true of US state and local governments, which, in practice, must balance their operating budgets as well as manage and pay for their capital spending. The enforcer of this hard budget constraint is the state and local capital ("municipal bond") market. In contrast, the federal government engages in borrowing for current and capital spending alike. The question whether the level of federal debt becomes unsustainable or unsafe is a topic that, though beyond the scope of this paper, is adequately discussed elsewhere.[83]

83 Olivier Blanchard, "Deciding When Debt Becomes Unsafe" (March 2022) *Finance and Development* 8-9.

FIGURE 12 US Government Expenditures by Type of Government as a Percentage of Nominal GDP, NIPA Accounting, United States, 1969-2019



GDP = gross domestic product; NIPA = US national income and product accounts.

Sources: United States, Department of Commerce, Bureau of Economic Analysis (www.commerce.gov/bureaus-and-offices/bea); United States, White House, Council of Economic Advisers, *Economic Report of the President, Together with the Annual Report of the Council of Economic Advisers 2021* (Washington, DC: Council of Economic Advisers, January 2021), at 460-61, table B-4.

CONCLUDING COMMENTS

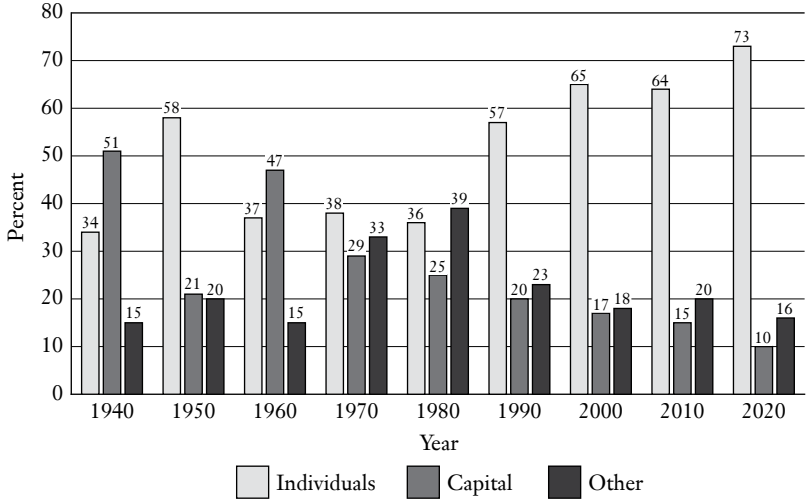
Richard Bird examined the growth of government spending in Canada at a time when the concept of tax expenditures had just been formalized, with no measurement for Canada available, and when the cost of government regulation was not really an item examined by economists.[84] In this paper we examined the growth and the composition by type of spending and level of government in Canada and the United States, but put this in the context of the debate about the size of the total government presence.

There are six key messages that one can draw from our paper:

1. The proper way for an economist to understand—to get a handle on—the topic of the size of government is to approach it as an evolutionary matter. To do this, one must turn to existing trends data while noting missing information.

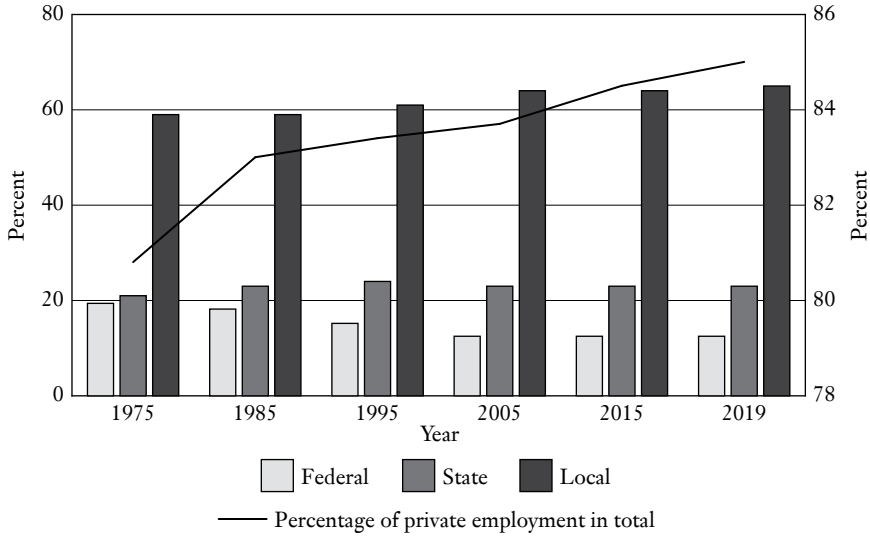
84 The measurement of the compliance costs of taxation, perhaps the most obvious item in such costs, was barely started in the 1960s. For further discussion of the early literature, see François Vaillancourt, "The Compliance Costs of Taxes on Businesses and Individuals: A Review of the Evidence" (1987) 42:3 *Public Finance* 395-414.

FIGURE 13 Federal Transfers by Type as a Percentage of Total Transfers, United States, 1940-2020



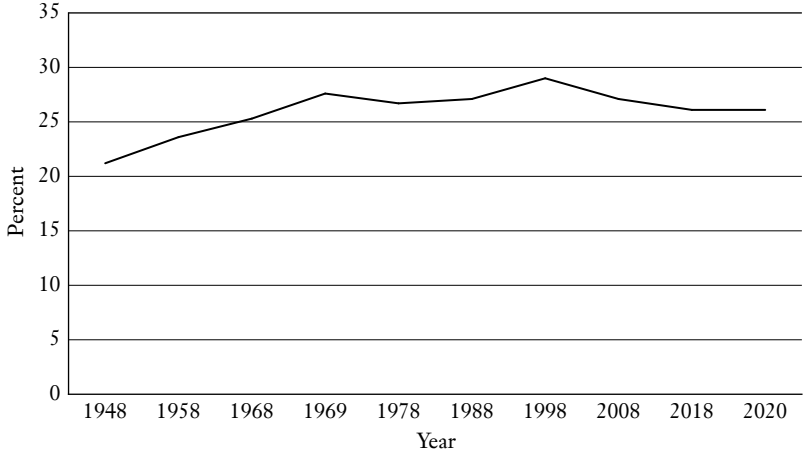
Source: White House, Office of Management and Budget, "Historical Tables," table 12.1 (www.whitehouse.gov/omb/budget/historical-tables).

FIGURE 14 Percentage of Private Employment in Total (Right Scale) and Shares of Public Employment by Level (Left Scale), United States, 1975-2019



Sources: United States, Bureau of Labor Statistics (www.bls.gov); and United States, White House, Council of Economic Advisers, *Economic Report of the President, Together with the Annual Report of the Council of Economic Advisers 2021* (Washington, DC: Council of Economic Advisers, January 2021).

FIGURE 15 Receipts as a Percentage of GDP, Federal Plus State and Local Governments, United States, 1948-2020



GDP = gross domestic product.

Source: White House, Office of Management and Budget, "Historical Tables," table 14.1 (www.whitehouse.gov/omb/budget/historical-tables).

2. There is no single "correct" measure of government size and thus growth, but interpolating and comparing various measures may provide some useful information.
3. Asserting that there is no single "correct" measure is not to say that measurement does not matter; indeed, it serves to emphasize that different measurements matter very much. Having the measurement allows one to take the next step and carry out an analysis of the role of government.
4. With respect to what one can learn from this paper regarding the last half-century of the evolving public sector in Canada and the United States, two especially important features show up. The first is the increase in the importance of the spending of the SNG (provincial/state and local) sector. The second is that both Canada and the United States are trending away from spending on capital (infrastructure) and toward consumption, particularly in the form of health and income security programs.
5. Citizens organize through their governments to tax in order to spend. Over time, the receipts side of the public budget serves as a hard budget constraint—a cap—on spending.
6. As to the question that many may ask, whether or not government in Canada and the United States has grown and why it has or has not grown, we can confidently provide an answer: it depends.