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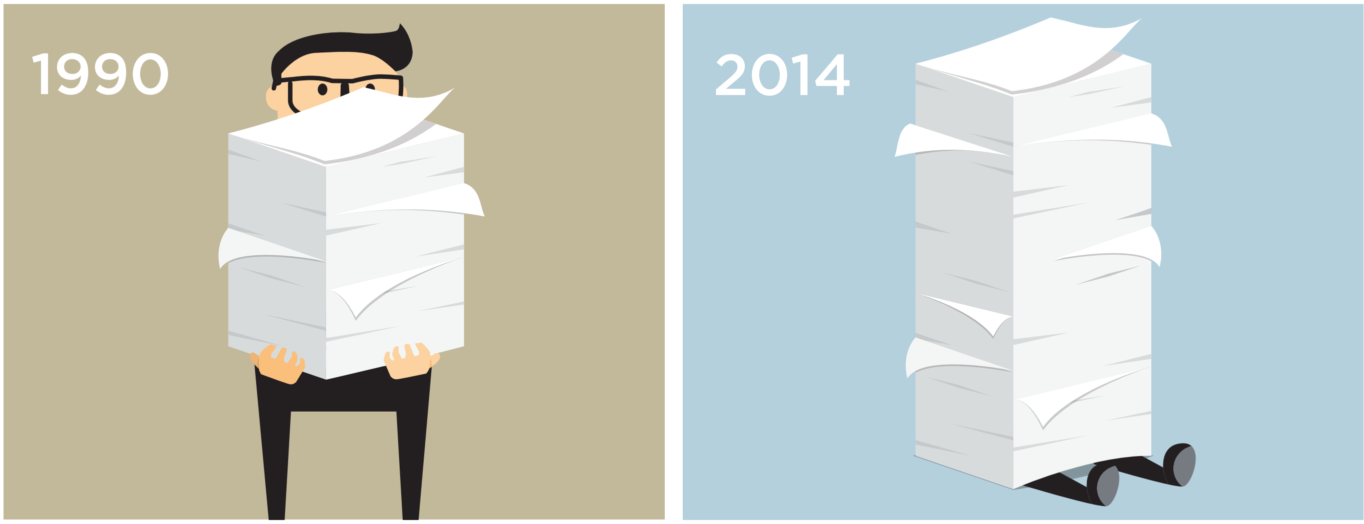


Measuring Tax Complexity in Canada

by François Vaillancourt, Marylène Roy, and Charles Lammam

Summary

- Canadian families and businesses incur significant costs complying with the tax system. Those costs include direct spending on items such as accountants, lawyers, and computer software, as well as the financial cost of the time it takes to compile the materials and complete the forms. Governments also incur costs to administer and collect taxes.

- These costs are driven in part by the complexity of the tax system. This study measures the evolution of tax complexity and finds that, according to various empirical measurements, the federal tax system in Canada has generally become more complex over time.

- The study uses three broad categories of indicators for the empirical measurements: tax expenditures, tax legislation, and tax guides. Each indicator measures a different aspect of tax complexity.

- Between 1990 and 2014, the text area occupied by the Income Tax Act and regulations increased 62%, from 974,050 cm² to 1,575,537 cm². It is important to measure text area because while the number of pages declined by 4%, page size increased 69% over the same period.

- Regardless of the indicator used, all show an increase in federal tax complexity over a 20-year period. Of particular note is the similar increase in all the indicators in recent years. From 2000 (or 2001) to 2011 (or 2014), the number of credits, deductions, exemptions, exclusions, and other preferences (otherwise known as federal income tax expenditures) increased 22%, the text area of tax legislation increased 19%, and the size of the federal personal income tax guide increased 25%.

Introduction

The Canadian tax system is often described as complex. For example, the Canadian Council of Chief Executives (CCCE) states that: "The Canadian tax system is complex and costly for business to comply with, mainly due to the complexity of Canadian tax legislation, the number of taxes companies are subject to, and the multi-jurisdictional tax system" (PWC, 2014: 16). The title of a recent report by Canada's Certified General Accountants (CGA) says it all: *The Need for Tax Simplification—A Challenge and an Opportunity*. Finally, the Canadian Chamber of Commerce (CCC) argues that "Canada's tax system is in urgent need of reform. It has become increasingly complex, multi-layered, and a costly challenge for Canadian businesses of all sizes" (CCC, 2015: 1). Despite these pronouncements, none of these studies present actual measures of tax complexity.

We agree that the complexity of the tax system (broadly defined) imposes significant costs on Canadian families and businesses as they expend considerable resources and time on compliance. These costs include direct spending on items such as accountants, lawyers, and computer software, as well as the financial cost of the time it takes to compile the materials and complete the forms. In fact, a recent Fraser Institute study estimated that in 2012, the total cost of complying with the personal income tax system alone ranged from $5.84 billion to $6.96 billion (Speer et al., 2014). But compliance costs extend beyond personal taxes to business and property taxes. Governments also incur costs to administer and collect taxes. Altogether, these costs in 2011 (the latest year for which a comprehensive estimate is available) were estimated at between $25.8 billion and $31.4 billion (Vaillancourt et al., 2013).

What drives these costs? While the Fraser Institute has over the years published studies on measuring the compliance and administrative costs of taxation in Canada, this study examines the distinct but related issue of tax complexity using quantitative indicators identified through a review of the relevant literature. Specifically, this study first briefly reviews the literature on measuring tax complexity and then examines different empirical measurements of tax complexity for Canada to see how they have evolved. It focuses on the federal level given its dominant share of tax revenues, its agency role in collecting provincial tax revenues, and the ease of access to information. The study finds that, using various empirical measurements, Canada's federal tax system has generally become more complex over time.

Background on measuring tax complexity

The literature on measuring tax complexity was recently summarized by Lugo and Vaillancourt (2015). This section draws upon that work. While there are general theoretical contributions on the topic of tax complexity (see Kopczuk, 2006, and Barton, 2008), this paper primarily focuses on empirical measurement. The contributing factors to tax complexity can be ranked by their degree of sophistication in ascertaining what complexity is, what the costs are, and how they are linked.

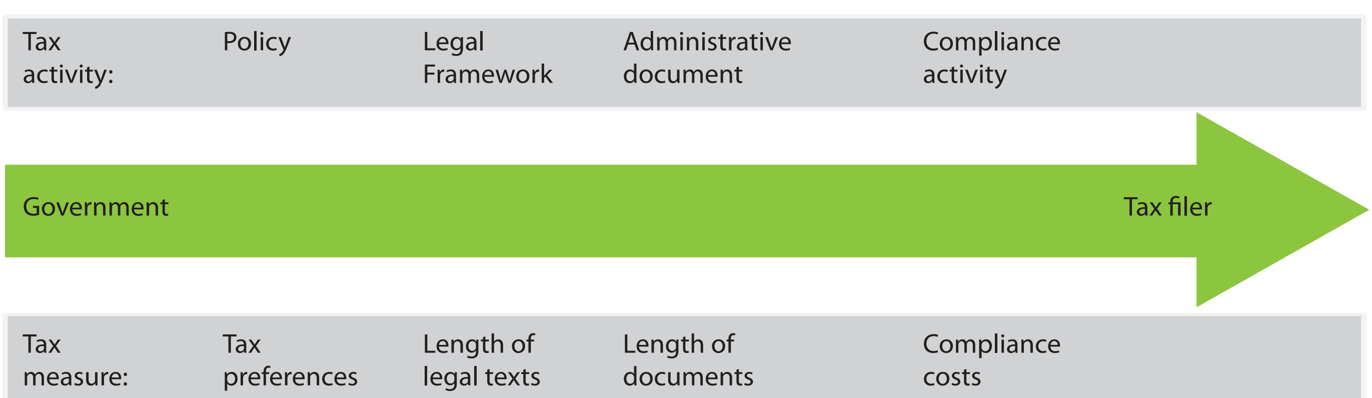
Laffer et al. (2011) simply argue that since it is very costly to comply with the tax code, the tax code itself is too complex. They use an extensive definition of costs including the sum of administrative costs, compliance costs, deadweight loss, and revenue collected. But they do not offer a definition of tax complexity; it is assumed to be directly linked to costs through some unknown functional relationship. Ulph warns against such an approach:

> In thinking about the complexity of the tax system per se it would seem to be really quite important to separately measure tax design complexity from operational complexity, and to measure the costs of tax complexity separately from the measure of tax complexity per se. That way one can tell not just whether tax complexity is high but also whether this is imposing a considerable cost, and whether to direct efforts to reforming the design of the tax system or the guidance/information that is given to taxpayers. (2013: 10)

In chronological order, the Tax Foundation (see Moody et al., 2005), Slemrod (2005), and the Progressive Policy Institute (see Weinstein, 2014) each use a different measure of tax complexity. The Tax Foundation measures complexity by the number of words in the US federal tax code and the volume of income tax regulations. The Tax Foundation found that, over a 45-year period, "the number of words detailing income tax law has grown from 172,000 in 1955 to 1,286,000 in 2005, a staggering 648% increase. Income tax regulations, which provide taxpayers with the guidance in calculating taxable income, have grown at an even faster pace. Federal income tax regulations have grown from 547,000 words in 1955 to 5,778,000 words by 2005, an increase of 956%" (Moody et al., 2005: 5). Slemrod (2005) measures tax complexity by the number of lines on the income tax form and the number of pages in the instruction booklet (in both cases, the measures are modified slightly to ensure comparability between states). Meanwhile, the Progressive Policy Institute uses the number of tax expenditures (which includes credits, deductions, exemptions, exclusions, and other tax preferences) by state as an indicator of tax complexity (Weinstein, 2014). For the 43 states for which information is available, this number ranges from 550-600 for Washington State to 0-50 for Alaska, with the most common range being 100-150 (11 states).

Are these three measures good indicators of tax complexity? Both Slemrod (2005) and Turnbull-Hall and Thomas (2012) note that longer legislation or text in an information booklet may reduce complexity if, for example, it allows the use of plain English (i.e., simpler language) or covers various possible types of taxpayers. In

Figure 1: Tax Activity-Complexity Measurement Continuum

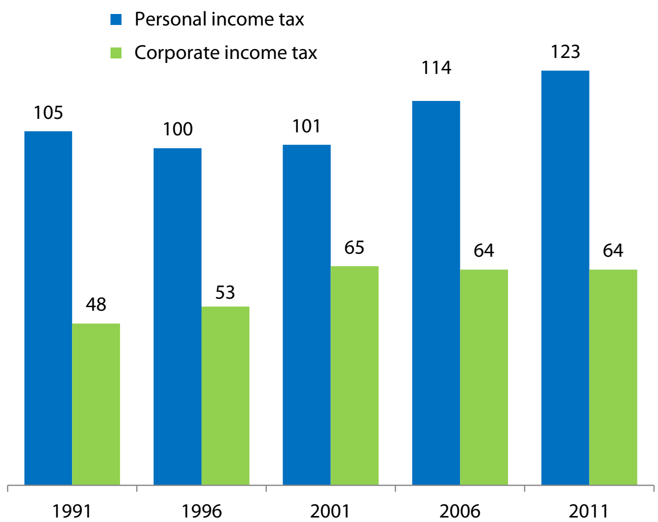


addition, it is important to carefully distinguish and separate out non-tax related aspects from the documents (such as income support delivered through the tax system) to truly gauge tax complexity.

Figure 1 presents the three measures of tax complexity along a continuum from government policy to tax filer. Governments choose to favour a specific behaviour by introducing (or removing) a tax preference in a policy declaration such as a budget speech, which in turn will result in an expected tax expenditure. That tax preference must then be transformed into a law or regulation in order for it to be implemented. Tax filers interact with the law and legal framework through lines in the tax form and instructions in the tax booklet (administrative documents). Their efforts ultimately lead to tax compliance activities which then manifest in the form of tax compliance costs.[1] The relationship between these various indicators can be influenced by government decisions that can shift costs between administrative costs and compliance costs.

In addition, we would argue that, for a given level of deadweight loss,[2] one can examine tax complexity from two perspectives: that of the users of the tax system (i.e., individuals and firms) and that of the government. In the case of users, more time spent on tax-related activities may not indicate more complexity; it may simply be an outcome of their quest to reduce their taxes through more tax planning activities, for example. However, less complexity in the taxation system reduces the compliance costs that tax filers incur to achieve a given reduction in the taxes they pay.

Figure 2: Number of Federal Personal Income Tax and Corporate Income Tax Expenditures in Canada, selected years, 1991-2011



Source: Canada, Department of Finance (various years).
Note: The number of GST tax expenditures is not shown since it is almost unchanged over the period going from 33 to 35.

Tax complexity: measurement for Canada

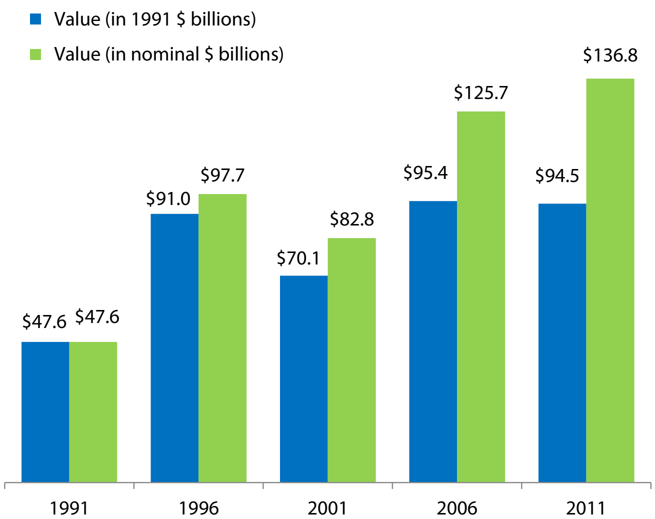
This section moves away from theory and the conceptual framework and presents data for Canada (federally) on the three measures of tax complexity discussed above.[3]

[1] Readers interested in the measurement of tax compliance costs are encouraged to see Speer et al. (2014) and Vaillancourt et al. (2013).

[2] The deadweight loss of taxation is the loss in welfare to society (or economic well-being). The loss occurs because taxation changes people's behaviour (i.e., their consumption habits, willingness to supply labour, etc) which results in lower levels of economic activity. The deadweight loss is over and above the tax revenue received and the administrative and compliance costs caused by taxation.

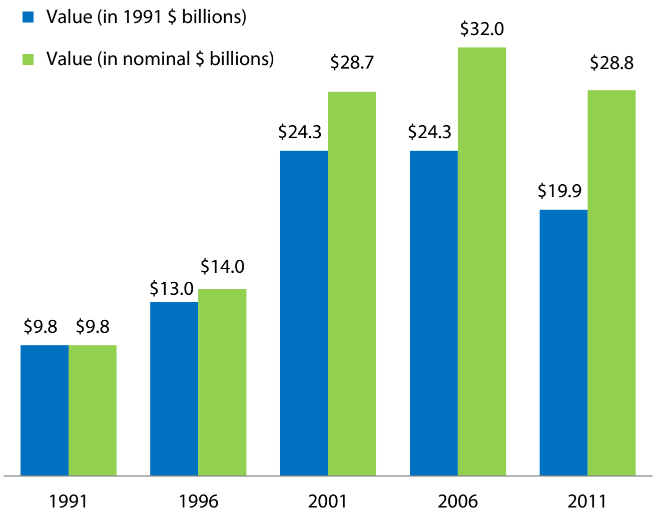
[3] There are several additional measures of tax complexity not used in the paper that the authors considered but ultimately excluded. The paper fo-

Figure 3a: Value of Federal Personal Income Tax Expenditures in Canada (in billions of $), selected years, 1991-2011



Source: Canada, Department of Finance (various years); Statistics Canada (2015).
Note: The deflator used is the Canada-wide consumer price index (CPI).

Figure 3b: Value of Federal Corporate Income Tax Expenditures in Canada (in billions of $), selected years, 1991-2011



Source: Canada, Department of Finance (various years); Statistics Canada (2015).
Note: The deflator used is the Canada-wide consumer price index (CPI).

Canadian tax expenditures

Figures 2, 3a, 3b, and 4 present a series of data for Canada on federal tax expenditures (credits, deductions, exemptions, exclusions, and other preferences) for select years since 1991. (The starting year is dictated by the availability of data as prior to that, tax expenditures were not reported in a systematic and comparable fashion).

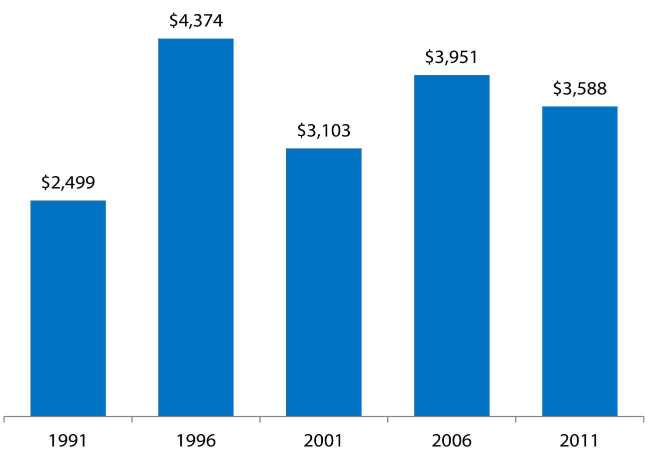
Figure 2 shows that, from 1991 to 2011, the number of federal personal income tax (PIT) tax expenditures increased from 105 to 123, representing a 17% total growth. The figure also shows that the number of federal corporate income tax (CIT) tax expenditures increased from 48 to 64, representing a total growth of 33%. Although not shown in figure 2, the number of goods and services tax (GST) expenditures increased as well, albeit to much lesser degree at 6%.

Figure 3a examines the value of federal PIT tax expenditures over the same period, both in nominal terms and after adjusting for inflation. In just 20 years, the value of PIT expenditures grew by 187% in nominal terms and 98% in real terms. Figure 3b displays data on the value of corporate income tax expenditures, which grew 195% nominally and 104% after adjusting for inflation.

Since the value of personal income tax expenditures could increase simply by virtue of a growing number of tax filers, and thus potential tax expenditure *users*, in figure 4 we present the inflation-adjusted value of federal PIT tax expenditures per tax filer. Over the period,

cuses on the most robust measures and those used in published studies.

Figure 4: Federal Personal Income Tax Expenditures Per Tax Filer in Canada (inflation-adjusted), selected years, 1991-2011



Sources: Figure 3; CRA (2008 and 2013).

Table 1: Page Count, Page Size, and Text Area of Federal Income Tax Act and Regulations, Canada, selected years, 1990-2014

Year	Number of pages	Page size (cm²)	Text area (cm²)
1990	2,750	354	974,050
1994	2,386	456	1,088,732
2000	2,909	456	1,327,377
2004	2,997	458	1,373,375
2009	2,997	582	1,743,355
2014	2,636	598	1,575,537

Source: CCH (2014); calculations by authors.

Note: Text area is simply number of pages multiplied by page size. The years used represent a choice that takes into account availability of information and the use of a five year span.

the number of tax filers went from 19.1 million to 26.3 million. This translates into an increase of 44% in the inflation-adjusted value of PIT tax expenditures per tax filer. It seems reasonable to conclude that based on basic tax expenditure indicators (their sheer number and two complementary measures) the complexity of the federal tax system increased in Canada from 1991 to 2011.

Canadian tax legislation

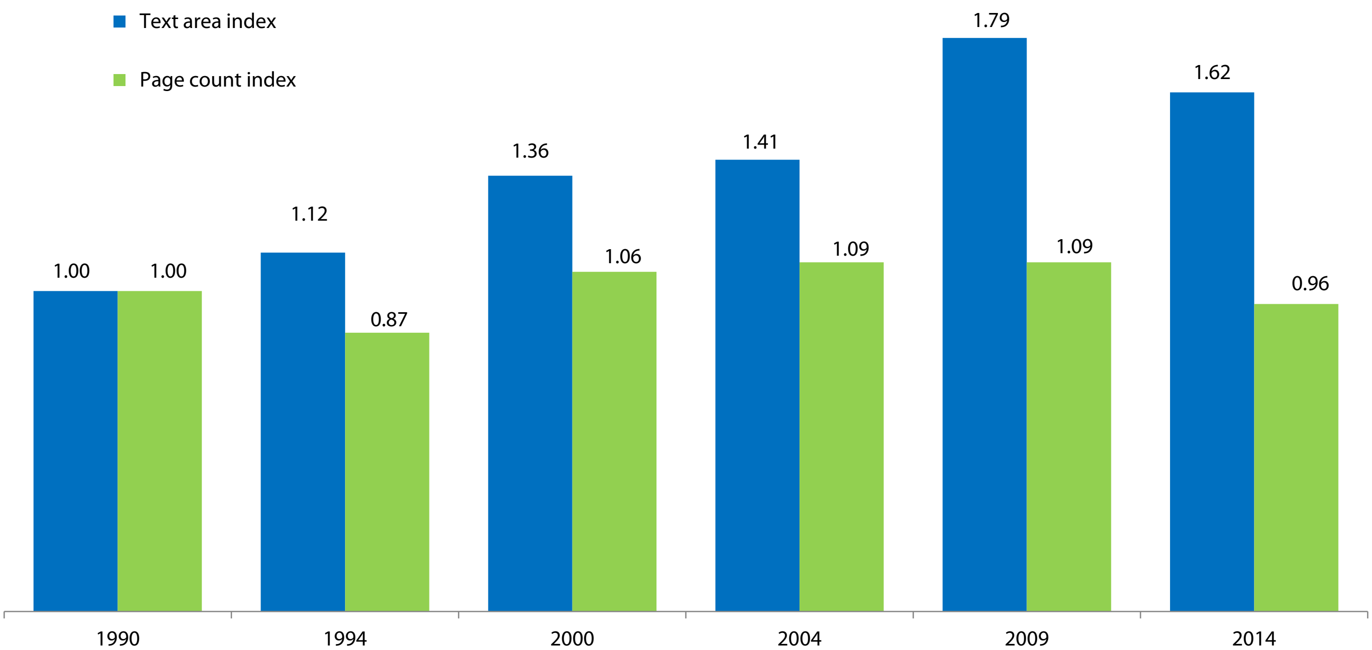
Table 1 presents data on the evolution of the size of the English language federal Income Tax Act (including regulations). This covers both personal and corporate income taxes. Specifically, the table presents data over the period 1990 to 2014 on the number of pages, the book's page size in square centimetres,[4] and the area the text takes up, also in square centimetres.[5] (The text area measures the area that the legislation would take up were we to lay out all the pages side by side.) Figure 5 presents this same data as an index, which captures comparative changes in each variable. By giving each variable an index value of 1.0 in the starting year (1990), we can more clearly see subsequent changes in relation to the initial year's value.

From 1990 to 2014, the text area, or overall space occupied by the Income Tax Act and regulations increased 62%. Specifically, the text area grew from 974,050 cm² to 1,575,537 cm². We can see the importance of measuring text area and not the number of pages because the overall text area increased even as the number of pages declined by 4%. Over the same period, page size increased by 69% from 354 cm² to 598 cm².

[4] It is important to adjust page counts for size since the same publisher (Commerce Clearing House) changed the book's format over time.

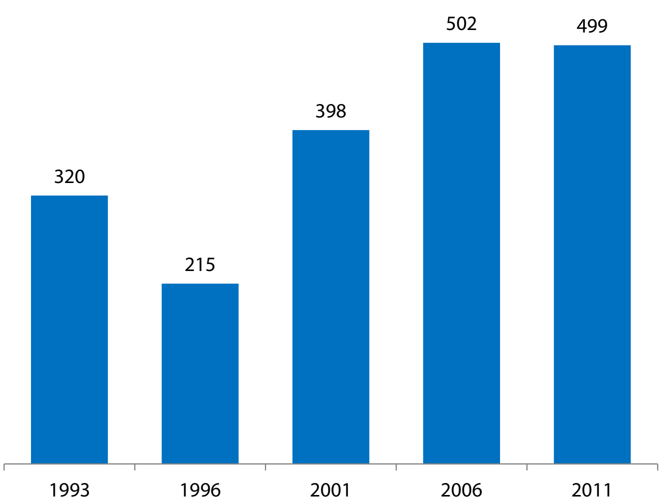
[5] Text area is simply page count multiplied by the page size.

Figure 5: Index of Page Count and Text Area of Federal Income Tax Act and Regulations (where 1.0 = index value in 1990), Canada, selected years, 1990-2014



Source: Commerce Clearing House (various years); calculations by authors.
Note: The years used take into account availability of information.

Figure 6: Number of GST Court Cases in Canada, selected years, 1993-2011



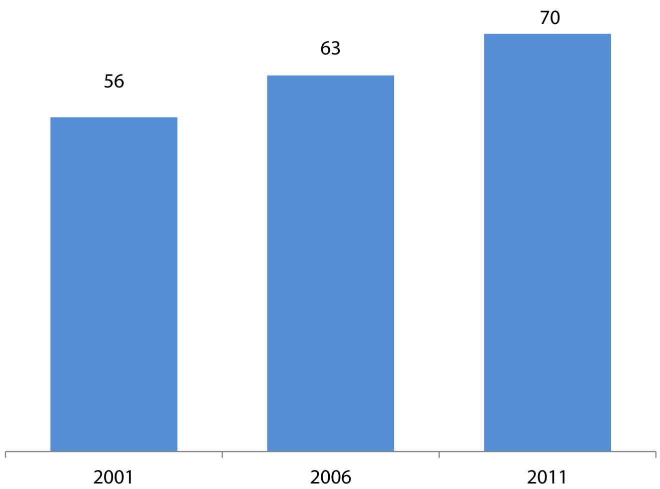
Source: Commerce Clearing House (2014); calculations by authors.

Figure 6 presents a separate measure of tax complexity for GST-related legislation: the number of court cases. In 2011, there were 499 court cases on GST-related legislation, a 56% increase over the 320 court cases in 1993.

Administrative documents

Figure 7 shows the length of the federal personal income tax guide (for Ontario) in select years from 2001 to 2011 (this period is determined by the availability of comparably formatted documents online in PDF format). The number of pages (unchanged in size) in this federal administrative document increased from 56 to 70, representing a 25% growth over the period.

Figure 7: Number of Pages in the Federal Personal Income Tax Guide (for Ontario), selected years, 2001-2011



Source: Canada Revenue Agency (2001, 2006, 2011); calculation by authors.

Conclusion

This paper briefly summarized the literature on measuring tax complexity and used three broad indicators to provide empirical measurements for Canada: tax expenditures, tax legislation, and tax guides. Each indicator measures a different aspect of tax complexity, which means each indicator has its weaknesses and strengths. But all indicators clearly point to an increase in federal tax complexity from 1991 to 2011. Of particular note is the similar increase in all the indicators in recent years. From 2000 (or 2001) to 2011 (or 2014), the number of federal personal income tax expenditures increased 22%, the text area of tax legislation increased 19%, and the size of the federal PIT guide increased 25%.

Canada does not have the equivalent of the United Kingdom's Office of Tax Simplification (either federally or provincially) (United Kingdom, 2015a). That means there is no systematic work underway to measure, let alone reduce, tax complexity in Canada.[6] This study is a first step in quantifying this complexity for Canada.

References

Barton, Benjamin H. (2008). *Judges, Lawyers, and a Predictive Theory of Legal Complexity*. University of Tennessee Legal Studies Research Paper No. 31, 8. University of Tennessee.

Canada Revenue Agency [CRA] (2001). *General income tax and benefit-2001, General income tax and benefit package for 2001*. Government of Canada, Canada Revenue Agency.

Canada Revenue Agency [CRA] (2006). *General Income Tax and Benefit Guide—2006*. Government of Canada, Canada Revenue Agency. <http://www.cra-arc.gc.ca/formspubs/prioryear/t1/2006/5000-g-2006/5000-g-06e.pdf>, as of February 2015.

Canada Revenue Agency [CRA] (2008). Historical Table 1: Tax Years 1968 to 2006. Yearly Record of Returns Filed. *Final Statistics—Sample Data 2008 Edition (2006 tax year)*. Government of Canada, Canada Revenue Agency. <http://www.cra-arc.gc.ca/gncy/stts/gb06/pst/fnl/pdf/htbl1-eng.pdf>, as of February 2015.

Canada Revenue Agency [CRA] (2011). *General Income Tax and Benefit Guide—2011*. Government of Canada, Canada Revenue Agency. <http://www.cra-arc.gc.ca/formspubs/prioryear/t1/2011/5000-g-2011/5000g-11e.pdf>, as of February 2015.

Canada Revenue Agency [CRA] (2013). Final Table 1: General statement by province and territory of taxation. *Income Statistics 2013 (2011 tax year)*. Government of Canada, Canada Revenue Agency.

[6] For an example of such work, see United Kingdom (2015b).

<http://www.cra-arc.gc.ca/gncy/stts/gb11/pst/fnl/pdf/tbl1-eng.pdf>, as of February 2015.

Canadian Chamber of Commerce [CCC] (2015). *Barrier V: Canada's Tax System is Too Complex and Costly*. Top 10 Barriers to Competitiveness. The Canadian Chamber of Commerce. <http://www.chamber.ca/advocacy/top-10-barriers-to-competitiveness/150205_Barrier_5.pdf>, as of March 11, 2015.

Clark, C. Scott, and Len Farber (2011). *The Need for Tax Simplification—A Challenge and an Opportunity*. Issue in Focus. CGA Canada. <http://www.cga-canada.org/en-ca/ResearchReports/ca_rep_2011-08_tax_simplification.pdf>, as of March 11, 2015.

Commerce Clearing House [CCH] (various years). *Canadian Income Tax Act with Regulations*. Wolters Kluwer.

Canada, Department of Finance (various years). *Government of Canada Tax Expenditures*. Web page. Government of Canada. <http://www.fin.gc.ca/purl/taxexp-eng.asp>, as of March 11, 2015.

Kopczuk, Wojciech (2007). *Tax Simplification and Tax Compliance: An Economic Perspective*. Research Paper. Columbia University. <http://www.columbia.edu/~wk2110/bin/epi.pdf>, as of March 11, 2015.

Laffer, Arthur B., Wayne H. Winegarden, and John Childs (2011). *The Economic Burden Caused by Tax Code Complexity*. The Laffer Center for Supply-Side Economics. <http://www.laffercenter.com/wp-content/uploads/2011/06/2011-Laffer-TaxCodeComplexity.pdf>, as of March 11, 2015.

Lugo, Marco, and François Vaillancourt (2015, forthcoming). Measuring Tax Complexity: Analytical Framework and Evidence for Individual Income Tax Preferences for Canada. In C. Evans and R. Krever (eds.). *Tax Simplification* (Kluwer Law International).

Moody, J. Scott, Wendy P. Warcholik, and Scott A. Hodge (2005). *The Rising Cost of Complying with the Federal Income Tax*. Special Report 138 (December). Tax Foundation. <http://taxfoundation.org/sites/default/files/docs/sr138.pdf>, as of March 11, 2015.

PWC (2014). *Total Tax Contribution: Surveying the Canadian Council of Chief Executives*. PWC. <http://www.ceocouncil.ca/wp-content/uploads/2014/04/TTC-Final-April-2014.pdf>, as of March 11, 2015.

Sawicky, Max B., Robert S. Mcintyre, and Joseph H. Guttentag (2006). *Bridging the Tax Gap: Addressing the Crisis in Tax Administration*. Economic Policy Institute.

Slemrod, Joel (2005). The Etiology of Tax Complexity: Evidence from US State Income Tax Systems. *Public Finance Review* 33 (3): 279-299.

Speer, Sean, Milagros Palacios, Marco Lugo, and François Vaillancourt (2014). *The Cost to Canadians of Complying with Personal Income Taxes*. The Fraser Institute. <http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/cost-to-canadians-of-complying-with-personal-income-taxes.pdf>, as of March 11, 2015.

Statistics Canada (2015). *Consumer price index (CPI), 2011 basket, annual (2002 = 100 unless otherwise noted)*. Table 326-0021. Statistics Canada. <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=3260021&paSer=&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=>, as of March 11, 2015.

Turnbull-Hall, Caroline, and Richard Thomas (2012). *Length of legislation as a measure of complexity*. Office of Tax Simplification, Government of United Kingdom. <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/193496/ots_length_legislation_paper.pdf>, as of March 11, 2015.

Ulph, David (2013). *Measuring Tax Complexity*. Government of United Kingdom. <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/193497/ots_david_ulph_measuring_tax_complexity.pdf>, as of March 11, 2015.

United Kingdom, HM Treasury, Office of Tax Simplification (2015a). Web home page. Government of the United Kingdom. <https://www.gov.uk/government/organisations/office-of-tax-simplification>, as of March 30, 2015.

United Kingdom, HM Treasury, Office of Tax Simplification (2015b). *The OTS Complexity Index – version 2*. Government of the United Kingdom. <https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/250995/ots_complexity_index_version2.pdf>, as of March 30, 2015.

Vaillancourt, François, Édison Roy-César, and Maria Silvia Barros (2013). *The Compliance and Administrative Costs of Taxation in Canada*. The Fraser Institute. <http://www.fraserinstitute.org/uploadedFiles/fraser-ca/Content/research-news/research/publications/compliance-and-administrative-costs-of-taxation-in-canada-2013.pdf>, as of March 11, 2015.

Weinstein, Paul, Jr. (2014). *The State Tax Complexity Index: A New Tool for Tax Reform and Simplification*. Policy Memo. Progressive Policy Institute. <http://www.progressivepolicy.org/wp-content/uploads/2014/04/2014.04-Weinstein_The-State-Tax-Complexity-Index_A-New-Tool-For-Tax-Reform-and-Simplification1.pdf>, as of March 11, 2015.

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