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THE EFFECTS OF REPLACING INCOME TAX WITH CONSUMPTION TAX ON THE STATE AND THE INDIVIDUAL: A CANADIAN EXAMPLE

Abstract:

Consumption tax has been lauded as an alternative to income tax, in that it promotes savings and investment, and enables increased consumption over time. Despite these claims, no state has opted to replace income tax with consumption tax as the prime source of revenue. It is proposed that when consumption tax replaces income tax as the means of financing the state, investment increases, individuals are able to consume more over a lifetime, and levels of government revenue can be maintained. This study compares an average Canadian taxpayer in Canada's current hybrid tax regime with a taxpayer in a hypothetical consumption tax regime. The rate of consumption tax is calculated to provide the equivalent amount of revenue the Canadian government currently receives. Comparisons are made between the two regimes in three scenarios to reflect different taxpayer behavior: holding investment steady, holding consumption steady, and maximizing the use of current tax shelters. The study concludes that in any scenario, individuals are able to enjoy more total consumption and purchasing power over time, adjusted for inflation, when a consumption tax substitutes for income tax. On the other hand, government revenue received from the average taxpayer in some scenarios is less when consumption tax replaces income tax, and is more in others. Government revenue was more when comparisons were made between taxpayers in the income tax regime who made use of current tax shelters, and those in the consumption tax regime who maximized their investment. This is the ideal behavior one would expect of taxpayers who are left with more disposable income. Opportunities for further study are suggested.

Keywords:

consumption tax, income tax, government revenue, tax policy

JEL Classification: H27, E21, D31

Introduction

Most states generate the bulk of their revenue through income taxes. Consumption taxes often supplement income taxes, but have never replaced income taxes as the sole revenue source for any state. Claims have been made that consumption tax encourages investment and increases consumption (Gordon, Kalambokidis, Rohaly, & Slemrod, 2004). This paper examines the possibility of replacing income tax with a consumption tax to determine the benefits to the state and individuals. In particular, it examines the effects of this change on investment, individual consumption, and government revenue. It is proposed that when consumption tax replaces income tax as the means of financing the state, investment increases, individuals are able to consume more over a lifetime, and levels of government revenue can be maintained. This study focuses on one type of consumption tax known as a retail sales tax (RST) placed on final sales and services.

How much consumption tax?

To ascertain the amount of consumption tax required to provide the same revenue provided by income tax, it is necessary to determine current government spending.

In 2015, taxes on income, profits, and capital gains from the federal and provincial/territorial levels of government amounted to \$305.210 billion (Government of Canada (1), 2016). Taxes on payroll and workforce added another \$12.780 billion. Taxes on goods and services from these levels of government amounted to \$145.837 billion. The total amount of revenue received by these government levels for 2015 from income and consumption taxes was \$463.827 billion. The aim of this study is to consider the replacement of income tax by consumption tax, therefore property and other taxes are not included here.

By examining how much Canadians spent in 2015, it is possible to determine what rate of consumption tax would have to be applied to raise \$463.827 billion in government revenue. To arrive at this figure, the GDP (expenditure-based) for 2015 is used. This includes expenditures on final goods and services by individuals, investment, government spending, and net exports. It does not refer to intermediate goods, which are purchased by businesses to produce other goods. The final consumption expenditure figure of \$1,560.153 billion will be used, which represents final sales to consumers (Government of Canada (2), 2016). It also includes sales to non-profit and government agencies which then transfer the goods to consumers.

Personal expenditure on consumer goods includes durable, semi-durable and non-durable goods. While there may be some debate as to whether items such as food and clothing should be subject to the tax, they are included in this example. What should be included or excluded can be the subject of a normative-based discussion held outside the scope of this paper.

The final consumption expenditure and its breakdown appear in Table 1.

Table 1: Final consumption expenditure, based on gross domestic product, expenditure-based

	2015
	\$ millions
Household final consumption expenditure	1,112,636
Goods	484,692
Durable goods	139,649
Semi-durable goods	78,995
Non-durable goods	266,048
Services	672,944
Non-profit institutions serving households final consumption expenditure	28,315
General governments final consumption expenditure	419,202
Final consumption expenditure	1,560,153

Source: (Government of Canada (2), 2016)

As computed earlier, the 2015 amount raised by all levels of government in Canada through income and existing consumption taxes was \$463.827 billion. This is the amount that must be replaced by consumption tax. Dividing this amount by the final consumption expenditure figure of \$1,560.153 billion gives a rate of 29.73%.

Comparing the income tax regime to the consumption tax regime

Current tax policy in Canada is a hybrid. Most revenues for the federal and provincial/territorial governments are collected through income taxes. Rates are progressive, with marginal tax rates rising at specified increments of income. In 2015, the average Canadian earned \$49,508.68 (Government of Canada (3), 2016). In 2015, the average income tax rate for a taxpayer earning \$49,508.68 among the 13 jurisdictions in Canada ranged from 15.63% in Nunavut to 22.23% in Quebec, with an average of 19.35% (Ernst and Young, 2015). The median rate was 19.99%, found in both Saskatchewan and Newfoundland. Capital gains, when realized, are added to existing income but taxed at half the marginal rate the taxpayer falls into. The marginal tax rate in 2015 for income above \$49,000 but less than \$60,000 ranges from 38.37% in Quebec to 29.00% in Nunavut. The average marginal rate for a Canadian with income falling between \$49,000 and \$60,000 was 33.60%. The median marginal rate for this range was 34.50%. The federal government also imposes a 5% goods and services tax (GST). Some provinces also add their own provincial sales tax (PST). Some jurisdictions have

blended these two taxes into the harmonized sales tax (HST). Each of these, the GST, PST, or HST, should be considered as consumption taxes. The average existing consumption tax among the 13 jurisdictions was 10.61%.

To determine how much government and individuals stand to gain or lose should a consumption tax regime (CTR) replace the existing hybrid of income tax and consumption tax, consider the case of an average Canadian taxpayer in the current income tax regime (ITR), subject to an average income tax rate commensurate with their income. How much the taxpayer would pay in taxes and consume in 2015 will be deduced. Consideration will be given to the return on an investment made in 2015 when it is realized 25 years later in 2040, and the taxes and consumption that result at that time. This will be compared to the same Canadian earning \$49,509 in a regime where a 29.73% consumption tax has replaced the current income and sales taxes. In this scenario, assume the taxpayer follows the advice of a prudent financial planner and invests 10% of their after-tax income. They do this by investing in the S&P/TSX Composite Index, which historically returns 7% annualized, to which they will be subject to capital gains when they realize their return in 25 years. Assume returns from the stock market during this time are all capital gains and not dividends. Assume income, average and marginal tax rates, and current capital gains taxation policy all remain the same over the next 25 years. At first, assume the investment is not made in a Tax Free Savings Account (TFSA) or a Registered Retirement Savings Plan (RRSP). In a later scenario, we will consider that the taxpayer takes advantage of current Canadian tax avoidance strategies and invests within a TSFA.

Table 2 illustrates the effect of the two tax regimes on the average Canadian taxpayer. The first column considers the current ITR. With an average income tax rate of 19.35% our first taxpayer will pay \$9,580 with \$39,929 remaining in after-tax income. If the individual follows the advice of a financial planner and saves 10% of after-tax income, the individual will invest \$3,993 for 25 years in the S&P/TSX Composite Index which provides an average annual rate of return of 7% over each of those years. In 2040 the gains are realized and the appropriate capital gains tax is paid, leaving an after-tax savings of \$18,702.¹ The taxpayer spends \$16,908 and pays 10.61% of this in combined provincial and federal sales taxes, or \$1,794. In total, the taxpayer has consumed \$49,397 in goods and services and paid \$17,791 in taxes.

¹ This first investor had a capital gain of \$17,679, given proceeds of \$21,672 minus an original investment of \$3,993. The current tax treatment of capital gains in Canada takes half of this gain of \$17,679, which is \$8,840, and adds this to other taxable income for the year. Given the progressive income tax system in Canada, this additional income would be taxed at the marginal tax rate that the taxpayer was now in, considering the jurisdiction in which the taxpayer lived. In the case of someone earning \$49,509 before this gain, and now making over \$58,000, the average marginal tax rate would be 33.60%, and the taxpayer would pay \$2,970 (33.60% of \$15,191) on this capital gain.

Table 2: Effect of income vs. consumption tax regime on a Canadian taxpayer

	ITR	ITR, Savings in TFSA	CTR, Savings Held Steady	CTR, Consumption Held Steady
a. 2015 income	\$49,509	\$49,509	\$49,509	\$49,509
b. 2015 income tax paid	\$9,580	\$9,580	\$0	\$0
c. 2015 Income after taxes (b – c)	\$39,929	\$39,929	\$49,509	\$49,509
d. Savings invested at 7%	\$3,993	\$3,993	\$3,993	\$7,361
e. 2015 income available for personal consumption (c – d)	\$35,936	\$35,936	\$45,516	\$42,148
f. 2015 personal consumption (e – g)	\$32,489	\$32,489	\$35,085	\$32,489
g. 2015 consumption tax paid	\$3,447	\$3,447	\$10,431	\$9,659
h. Savings in 2040	\$21,672	\$21,672	\$21,672	\$39,951
i. 2040 capital gain tax	\$2,970	\$0	\$0	\$0
j. 2040 savings available for personal consumption (h – i)	\$18,702	\$21,672	\$21,672	\$39,951
k. 2040 personal consumption (j – l)	\$16,908	\$19,593	\$16,705	\$30,795
l. 2040 consumption tax paid	\$1,794	\$2,079	\$4,967	\$9,156
m. Total personal consumption (f + k)	\$49,397	\$52,082	\$51,790	\$63,284
n. Total taxes paid (b + g + i + l)	\$17,791	\$15,106	\$15,398	\$18,815
o. 2040 personal consumption in 2015 dollars	\$10,306	\$11,943	\$10,182	\$18,771
p. Government purchasing power of 2040 taxes in 2015 dollars	\$2,904	\$1,267	\$3,028	\$5,581

q.	Total personal consumption in 2015 dollars (f + o)	\$42,795	\$44,432	\$45,267	\$51,260
r.	Total government purchasing power in 2015 dollars (b + g + p)	\$15,931	\$14,294	\$13,459	\$15,240

However, one must consider the impact of inflation on the purchasing power of both government and the taxpayer. Total government purchasing power in 2015 dollars is \$15,931. This is calculated using a 2% annualized inflation figure, consistent with the monetary policy of the Bank of Canada to keep inflation at 2%, the midpoint of an inflation-control target range of 1 to 3% (Bank of Canada, 2013).¹ The taxpayer's total consumption in 2015 dollars is \$42,795.

The third column of Table 2 considers the same Canadian taxpayer earning \$49,509, but in a tax regime where current income and sales taxes have been replaced by a 29.73% consumption tax. It is assumed the taxpayer makes the same savings investment of \$3,993, and then spends the remaining income, which is subject to consumption tax. In 2040 there is no capital gains tax paid on the investment return, but consumption tax is paid on goods and services bought with the proceeds of the investment. Total taxes paid by the taxpayer in the CTR decrease from \$17,791 in the ITR to \$15,398, a decrease of 13.45%. In the CTR, the taxpayer has consumed \$51,790 compared to \$49,397 in the ITR, an increase of 4.84%. Purchasing power of the government in 2015 dollars decreased by 15.52% in the CTR, whereas total taxpayer consumption in 2015 dollars increased by 5.78%.

If a CTR encourages savings rather than spending as anticipated, then it is necessary to consider the effects this change would have assuming taxpayers spend the same amount in 2015 in either regime. Holding spending steady would allow increased after-tax income earned in the CTR to be invested. This is demonstrated in column four of Table 2, where spending is held to the same level as in column one, the ITR. In this case the taxpayer would have \$7,361 available for investment. Total consumption for the taxpayer would jump to \$63,284 compared to \$49,397 in the ITR, an increase of 28.11%. Total taxes collected would increase from \$17,791 to \$18,815, an increase of 5.76%. While this insinuates that both government revenue and taxpayer consumption can increase in an ITR where taxpayers are encouraged to save, the purchasing power of the government in 2015 dollars decreases by 4.34% when inflation is considered, whereas the purchasing power of the taxpayer has increased by 19.78%.

¹ Actual CPI figures have demonstrated the success of this policy. From 1991-2016, the average rate of inflation in Canada was 1.78% (Bank of Canada, 2016).

It has been assumed that the taxpayer in the ITR would have invested 10% of after-tax income outside of a TFSA or RRSP. Each of these accounts allows investment to grow untaxed. In the case of the TFSA, every Canadian is allowed to invest \$5,500 in the account each year. They are not taxed on the growth, nor on later withdrawals. In the case of the RRSP, individuals are allowed annual contributions based on their income and the amount they may have placed into a Registered Pension Plan (RPP). Amounts taken out in the future are taxed as income at the taxpayer's marginal tax rate. In retirement this rate is foreseeably less than in peak earning years. Since it would be hard to deduce if our average taxpayer had any RRSP contribution room, continue to assume this particular tax-deferral strategy is not used. However, every Canadian has the TFSA annual contribution amount of \$5,500 available, regardless of their income or pension situation. In this third scenario, assume that the taxpayer uses the TFSA benefit and invests \$3,993 in the account where it avoids taxation on growth.

In this scenario, demonstrated in column 2 of Table 2, total taxes paid by the average taxpayer increased by 24.55% when spending was held steady in the CTR and investment was increased. Taxpayer consumption increased by 21.51%. When inflation is considered, government purchasing power increased in the CTR by 6.61%, while purchasing power of the consumer increased by 15.37%.

Conclusions

This study examined the effects of replacing an ITR with a CTR on investment, individual consumption, and government revenue. It was proposed that when consumption tax replaces income tax as the means of financing the state, investment increases, individuals consume more over a lifetime, and government revenue can be maintained.

In all scenarios, the taxpayer was able to invest and consume more in the CTR, even after adjustments for inflation.

In one scenario government revenue and purchasing power decreased in the CTR. In another, revenue increased but purchasing power was down when adjusted for inflation. In the third, government revenue and purchasing power increased.

In the first scenario the taxpayer saves the same amount in both regimes, despite having more after-tax income in the CTR. They do not take advantage of having increased after-tax income by investing more. The government received less revenue in the CTR in this scenario, whereas individual consumption increased.

In the second scenario, the taxpayer in the CTR did not spend any more than they would have in the ITR, despite having more after-tax income. They chose to invest more. Total government revenue increased by 5.76% in the CTR but, when adjusted for inflation, the purchasing power of the government in 2015 dollars decreased by 4.34%. Total consumption and purchasing power for the taxpayer increased.

In the final scenario the taxpayer in the income-tax regime made use of a tax-sheltering provision currently available. The taxpayer in the CTR maximized investment and spent no more than they would have in the ITR. Government taxes collected increased by 24.55% in the CTR and government purchasing power increased by 6.61%. Taxpayer consumption increased by 21.51%. Purchasing power of the consumer increased by 15.37%. This scenario may be the most significant, in that it portrays the taxpayer rationally taking advantage of all incentives to save in both regimes.

In all scenarios, the taxpayer was able to increase total consumption and purchasing power when consumption in later years was adjusted for inflation. Increases were most notable in the last scenario which contrasted a taxpayer in the ITR who had made use of tax shelters with one who maximized investment in the CTR, while initially consuming the same in both.

These findings suggest that the replacement of income tax with consumption tax does lead to greater purchasing power for the individual over a lifetime. Purchasing power increases whether the taxpayer saves or spends. It increases more when they save more and spend the same amount they would have in the ITR.

The results regarding government revenue were mixed. When the taxpayer did not save any more in the CTR than he would have in the ITR, total taxes and government purchasing power were less than in the ITR. If the taxpayer spent the same as they would have in the ITR but invested more, total tax collected was higher, although government purchasing power was down slightly when adjusted for inflation. When comparing taxpayers who took full advantage of tax shelters or increased investment opportunities in their respective regimes, as one might expect a rational individual to do, total government revenue and purchasing power increased in the CTR.

Opportunities for further study

This case study examined an average Canadian tax payer. It would be useful to conduct a similar comparison for Canadian taxpayers in specific jurisdictions of Canada to see the relative changes in individual consumption and government revenue. For example, scenarios examined for taxpayers in Quebec, the most highly taxed jurisdiction, and Nunavut, the least-taxed jurisdiction, may yield very different results.

Also, this study has used a taxpayer earning the average Canadian wage of \$49,509 annually. Comparing taxpayers with higher and lower than average salaries in both tax regimes would also be useful. For example, it may determine whether the CTR might be regressive for lower income taxpayers.

In this study, it was assumed that maintaining current government revenue was desirable. In some cases total tax taken and government purchasing power were less in the CTR, but only slightly so. If public policy allowed for slightly less government revenue than currently required, the CTR may seem more desirable for its ability to meet new

government revenue needs while also providing more consumption capacity for individuals. Such an assumption depends on the outcome of normative debates about the role and size of the state, which are beyond the scope of this study.

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