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Piling On – How Provincial Taxation of Insurance Premiums Costs Consumers

Most consumers don't know that provinces levy a tax on their insurance premiums – making insurance more expensive and lowering demand. This insurance premium tax, once meant as an alternative to the corporate income tax for insurers, has long been obsolete. The provinces should rethink their approach to insurance taxation to make it more equitable and less costly for consumers.

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Daniel Schwanen Vice President, Research

The Study In Brief

Insurance premiums have been taxed by Canadian governments for so long – some provinces and municipalities collected small levies as early as the late 1800s – that they've become a fixture rarely discussed in the literature and the financial press. For many years, insurance premium taxes were collected from insurers as an alternative to taxing their profits. But this practice is now long gone since all Canadian governments tax the corporate income of insurance companies, in addition to premium taxes and other taxes and levies.

Most insurance consumers do not know that a provincial insurance premium tax (IPT) ranging from 2 percent to 5 percent is levied on their premiums. In addition, five provinces charge a retail sales tax (RST) ranging from 6 to 15 percent on top of the premium taxes for certain types of insurance. In Quebec and Ontario, the RST rates of respectively 9 and 8 percent generally apply to group life and health insurance, and property and casualty insurance (although Ontario excludes auto insurance). Saskatchewan is the latest province to introduce an RST. Since insurance is a financial service, premiums are exempt from GST/HST.

So why do provinces still tax insurance premiums? While IPTs and RSTs on premiums are largely invisible to customers on whom the burden ultimately falls, they generate more than \$7 billion of stable and growing provincial government revenues – representing about 7 percent of all provincial taxes collected on goods and services.

Premium-based taxes increase the price of insurance products and lower the demand for them. We find that an increase of one percentage point in the provincial IPT rate leads to a 10 percent decrease in the number of life insurance contracts sold. Reduced insurance coverage for natural disasters such as floods and earthquakes, other catastrophes, relief to a deceased's family, or relief of the financial burden of illness and disability may lead to increased cost pressures on government budgets down the road.

Canadian governments should revisit and reassess the taxes imposed on insurance products. At a minimum, IPT liabilities should be made creditable against corporate income tax liabilities, partly restoring their original role as a substitute for taxing profits. And provinces that impose an RST on IPT-inclusive premiums should lead the way and eliminate this form of double taxation. A more ambitious reform would remodel the patchwork of transaction taxes for insurance services to a comprehensive and broad-based, value-added system, bringing down the insurance industry's high transaction tax burden and ensuring greater comparability with other industries.

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Taxes on insurance premiums have been a fixture of the Canadian tax system since the early 1900s when insurance companies were subject to very little other tax.

Now, provinces collect about \$7.3 billion in excise and retail sale taxes on these premiums, in addition to \$4.4 billion in corporate income and other taxes on insurers. Even with such a long history and high tax yield, there has been little study on the taxation of insurance premiums. In general, tax policy analysts have not paid much attention.

Bringing new policy attention to this important but ignored topic is the primary motivation for this *Commentary*. As we demonstrate, the insurance premium taxes combined with multiple sales taxes paid or remitted by insurers increase the cost of insurance for consumers but bring in considerable revenues for provincial governments in particular. Hidden in the premiums paid, these tax costs reduce the demand for insurance.

For many individuals and businesses, insurance provides financial protection against uncertain events and, as such, can be likened to a form of precautionary savings. Insurance creates value by pooling similar individual and business risk exposures. It is a financial intermediation product to the extent that premiums create a financial claim on the insurance pool, with regulated insurance companies managing the pool and acting as the intermediary with policyholders while assuming the residual risk.

Although the federal government does not tax insurance premiums, provincial governments do.

Most insurance consumers do not know that a provincial insurance premium tax (IPT) ranging from 2 percent to 5 percent is levied on their premiums. In addition, five provinces (including Ontario and Quebec) charge a retail sales tax on top of the premium taxes for certain types of insurance.

In this *Commentary*, we first provide a broad lay of the land for insurance premium taxation – its origins, its role as consumption and wealth accumulation taxes, and as a revenue source for governments. Next, we explore policy issues, including a discussion of how the tax system for insurance has evolved beyond its original policy motivations, how multiple transaction taxes lead to high and arbitrary effective tax rates on insurance consumption, the impact of potential wealth taxation on tax fairness and how premium taxes can lead to fewer people purchasing insurance coverage with the potential to increase cost pressures on government budgets.

Finally, we discuss policy options, including the elimination of provincial IPTs and/or the elimination of retail sales taxes on tax-inclusive premiums. Because the provincial fiscal losses would be large, we propose a reshaping of the transaction tax system that would make insurance services subject to value-added taxation.

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TAXES ON INSURANCE PREMIUMS-Lay of the Land

The purpose of insurance is financial protection for a loss and/or cost. Even without insurance products per se, individuals can insure themselves from unexpected occurrences through personal savings. For example, a person may want to save to cover liabilities and expenses that are anticipated to arise upon his/her death. Assuming they have disposable income, people can always self-insure, and every instance of self-insurance involves the accumulation of savings. At its roots, insuring against potential and real outcomes is a form of precautionary savings.

Self-insurance, however, can be very inefficient for those who over save and those who under save. By acting as the intermediary for individuals exposed to a similar risk, an insurer pools individual risks and reduces individual costs (the premiums) of insuring against an uncertain outcome. Insurance products create cost certainty for the insured persons: they determine how much they need to cover a risk, an amount that is often much lower than self-protection (precautionary savings) would require. Moreover, insurance allows for the transfer of risk from risk-averse consumers to insurance companies.

No GST/HST is charged on the sale of insurance policies. Indeed, most financial services are exempt from GST/HST since it is often difficult to distinguish the value-added provided by the financial intermediation activity (which we would like to tax) from simple financial flows and compensation for underwriting risk (Firth and McKenzie 2012). Being exempt, the insurer is unable to claim input tax credits for the GST/HST it incurs on operational expenses and claims, and effectively stands in the shoes of the end consumers, paying those taxes on their behalf and embedding their cost in the premiums themselves.

However, all provinces and territories impose IPTs, varying in amount by province and by insurance product. In addition, five provinces levy retail sales taxes (RST) on some insurance premiums: Ontario, Manitoba, Quebec and, most recently, Saskatchewan along with Newfoundland and Labrador (Table 1).

In this *Commentary*, we focus on provincial premium taxes on insurance policies sold by domestic licensed insurers to Canadian residents.¹ Recently, these tax rates have been rising.

Life Insurance

Three-quarters of all life insurance policies in force provide coverage up to an agreed upon date. Labelled "term insurance," these products are primarily intended to protect families against the risk of one member dying prematurely and leaving debts and an income to replace. About one-half of all term insurance products are purchased by individuals, with the rest bought on a group basis (and priced according to the characteristics of the group as a whole) through an association or an employer.

The remaining one-quarter of all life insurance policies are permanent and purchased on an individual or corporate basis. Premiums may be paid over a set number of years or for life. It

¹ When a Canadian resident purchases insurance from an unlicensed insurer or an unlicensed intermediary (broker), which is typically a foreign insurance provider, the tax treatment differs. Under the *Excise Tax Act*, net premiums of such insurance products are subject to a 10 percent federal excise tax (FET). However, the FET does not apply to reinsurance, life, personal accident, sickness and marine-risk insurance (Canada Revenue Agency 2014). In addition, the resident is required to self-assess and pay the provincial insurance premium tax (Albrecht and Rukavina 2016). It will also be necessary for the broker – or if unavailable, the resident – to collect and remit any applicable sales tax. Some provinces have specified different premium tax rates for these cases. For example, BC imposes a 7 percent tax on the insured if insurance is purchased from an unlicenced insurer.

| Table 1: Provincial Insurance Pre | mum Tax Kates (t | o incensed insurer | s) and Ketall Sales | Tax Kates, 2017 |
|-----------------------------------|--------------------------------|--------------------------|--------------------------------|------------------|
| Province | Life, Accident and Sickness | Property and Casualty | Additional Fire Premium Tax | Retail Sales Tax |
| | | (per | cent) | |
| Newfoundland and Labrador | 5.00 | 5.00 | | 15.00 (1) |
| Prince Edward Island | 3.50 | 3.50 | 1.00 | |
| Nova Scotia | 3.00 | 4.00 | 1.25 | |
| New Brunswick | 2.00 | 3.00 | 1.00 | |
| Quebec* | 3.48 | 3.48 | | 9.00 (2) |
| Ontario* | 2.00 | 3.50 | | 8.00 (3) |
| Manitoba | 2.00 | 3.00 | 1.25 | 8.00 (4) |
| Saskatchewan | 3.00 | 4.00 | 1.00 | 6.00 (5) |
| Alberta | 3.00 | 4.00 | | |
| British Columbia* | 2.00 | 4.40 | | |
| Yukon | 2.00 | 2.00 | 1.00 | |
| Northwest Territories | 3.00 | 3.00 | 1.00 | |
| Nunavut | 3.00 | 3.00 | 1.00 | |

Notes: (1) On P&C only. (2) Group life and health, and P&C. (3) Group life and health, and P&C. Auto insurance exempt. (4) Group life and P&C. (5) P&C.

*Quebec has an additional 0.48% compensation tax, which was originally planned to decrease to 0.3% after March 31, 2017 and to be phased out after March 31, 2019, but which has been extended until 2020. Ontario and BC IPT rates on P&C vary. They are 3.5% (ON) and 4.4% (BC) on property, and 3% (ON) and 4% (BC) on all other P&C products.

Sources: Albrecht and Rukavina (2016), PWC (2017), and authors' compilation from publicly available sources.

provides protection for premature death while allowing reserves to accumulate within the policy. As the permanent life insurance contract ages, these reserves can be used to fund future premiums, and extracted to supplement retirement income or fund emergencies. Many permanent life insurance contracts, therefore, resemble savings products in which the insurer guarantees a death benefit to a survivor, but in which an accessible cash value grows

as a result of the returns on invested premiums (which may be guaranteed as well).

The Income Tax Act (ITA) regulates the taxation of the investment income earned on the savings in a life insurance policy as well as on gains from the disposition of an interest in a policy. An exemption test is applied to determine whether a life insurance policy is more protection oriented or savings oriented and, in turn, if it is an exempt or nonexempt policy.² If the policy qualifies as exempt, the investment income is not subject to accrual taxation for the policyholder, unless it is withdrawn rather than paid out due to death or disability. Instead, the ITA imposes a 15 percent investment income tax, payable by the insurers on deemed net-investment income earned within the policy.

So if the policy is non-exempt, annual policy gains are taxed on an accrual basis in a similar manner to interest income.³ And if there is a disposition of an exempt policy prior to the death of the insured, any policy gain (defined as the difference between the proceeds of the disposition and the adjusted cost basis of the policy) is subject to tax.⁴

There are currently some 90 active life insurers and annuity providers in the Canadian marketplace. In 2016, they paid \$12 billion in life insurance benefits to Canadians. In the same year, they accrued \$8.3 billion for estimated future claims and received \$20.3 billion in life insurance premiums on in-force and new policies. More than three-quarters (79 percent) of premiums were generated from individual policies, while the remaining 21 percent came from group policies.

Overall, some 22 million Canadians own about \$4.5 trillion in life-insurance coverage, with an average protection of \$404,000 per insured household. Individual insurance forms the majority of life-insurance coverage, with individual term life insurance accounting for more than half such insurance (CLHIA 2017).

IPT rates on life insurance range from 2 percent to 5 percent (Table 1). Ontario, Manitoba and Quebec apply RSTs of 8 percent, 8 percent and 9 percent, respectively, on group life insurance premiums. Saskatchewan briefly charged RST on both individual and group life insurance, effective on Aug. 1, 2017 – making it the only jurisdiction to tax individual life insurance – but retroactively repealed the tax a few months later.⁵

Health Insurance

Health insurance is purchased to fund the cost of medical expenses not covered by government plans and/or to provide protection against income loss due to disability, serious accidental injuries, longterm care and critical illness. Health insurance protects against unexpected expenses related to health conditions. These costs are for the most part non-discretionary and can run very high.

There are some 130 health insurance providers in Canada, with 70 of them simultaneously providing life insurance. In 2016, they provided more than 25 million Canadians with supplementary health insurance, and about 86 percent of total health insurance premiums collected were paid out as benefits. Since health insurance has a less significant long-term savings element than life insurance, it shows a high annual turnover of premiums to benefits (CLHIA 2017).

About three-quarters of all health benefits were paid out as medical-expense reimbursements such as prescription drugs, dental and hospital expenses; about one-fifth were for disability insurance plans. Almost all (90 percent) health insurance is sold on a group (employers, unions, professional associations) basis.

² Currently, nearly all life insurance policies available in Canada are exempt (Wark and O'Connor 2016).

³ See https://www.fin.gc.ca/drleg-apl/lip-pav-n-eng.pdf.

⁴ See https://www.fin.gc.ca/drleg-apl/lip-pav-n-eng.pdf.

⁵ This change came after Saskatchewan Party leader Scott Moe, who had made restoring the exemption part of his campaign, became the province's premier on Feb. 2, 2018. Quebec implemented a 9 percent sales tax on all individual life and health insurance in 1985 but narrowed its scope the following year to only group life and health coverage.

The premium tax treatment of health insurance is similar to that of life insurance. The same IPT rates, which differ across provinces, are levied on health insurance. Ontario and Quebec also levy the same RST on group health insurance. For its part, Manitoba exempts group healthcare plans from the RST. BC is a special case, as it exempts premiums paid for approved medical services or healthcare plans.

Property and Casualty Insurance

Property and Casualty (P&C) insurers cover the loss or damage to automobiles, homes, businesses and other properties. In some instances, the purchase of P&C insurance is mandated by lenders or by government policy. Lenders, for example, often require insurance on mortgaged properties or car loans, while a minimum level of auto insurance coverage is compulsory in all provinces.

In 2016, there were more than 200 P&C insurance providers in Canada. Of the almost \$50 billion paid in P&C premiums, almost half was for vehicle insurance. In addition, BC, Saskatchewan, Manitoba and Quebec operate their own public insurance schemes covering the compulsory component of auto insurance (IBC 2017).

In addition to IPT on P&C premiums, Ontario, Manitoba, Quebec, Saskatchewan and Newfoundland and Labrador impose RST on the sale of those insurance contracts, with auto insurance exempt in Ontario (Table 1). Some provinces, including Manitoba, New Brunswick, Nova Scotia, Prince Edward Island and Saskatchewan, levy additional or higher premium taxes on fire insurance and/or certain property insurance.

International Experience

Canada is not the only country that charges transaction taxes on insurance premiums. Indirect taxes on insurance premiums, or stamp duties, are common in most jurisdictions around the world.

In the US, every state levies an insurance premium tax on insurers. The tax rates differ by state, but also between domestic or out-of-state insurers. Some states also levy a retaliatory tax, which is the percentage difference between the tax rate of the domicile state and the foreign tax rate of the jurisdiction in which the premium is written. This means that the insurer pays the higher of the two rates.⁶

In several states, state corporate income tax liabilities may be credited against insurance premium taxes, but more frequently (in 40 states) the premium tax is in lieu of the corporation income tax. For instance, in California all insurers pay a premium tax in lieu of all other taxes. In Florida, insurers are subject to both premium and corporate income taxes, but income taxes may be credited against premium taxes. Furthermore, to encourage jobs to locate in the state, Florida provides for a salary credit against the insurance premium tax.

In Europe, taxation of insurance premiums and contracts is common and takes various forms. Table A1 in Appendix A summarizes this tax treatment in 27 European countries that have some form of indirect taxation on insurance contracts. Most countries exempt life insurance, and a few others exempt health insurance as well. In almost all cases, the insurer is liable to pay the tax if they are licensed to operate in the jurisdiction; otherwise the tax still applies and the policyholder is responsible. Some European countries are required by law, or

6 See Metropolitan Life Ins. Co. v. Ward, 470 U.S. 869, 105 S.Ct. 1676, 84 L.Ed.2d 751 (1985).

it is common practice, to inform the policyholder of the tax separately from the premium. Over the past two years, some countries, including Colombia, Malta, Portugal, Slovenia, Italy and the UK, increased their insurance premium taxes on insurance products (EY 2015, 2016). Estonia, Latvia, Norway and Turkey are the only European countries included in Appendix A that have no indirect taxation on insurance contracts (Insurance Europe 2017).

WHY TAX INSURANCE PREMIUMS?

Little literature exists specifically on the rationale for provincial taxation of insurance premiums. Originally, IPTs were seen as an alternative to taxing the earnings of insurers. They can also be seen as an attempt to tax consumption, or as an indirect attempt to tax increases of net worth. But the most compelling reason seems to be simply that these provincial taxes provide significant revenues while being largely invisible to consumers and savers.

Origins: In Lieu of Taxing Insurers' Earnings

In the late 1800s and early 1900s, some provinces and municipalities collected small levies on items such as corporate capital, railway track mileage, bank reserves and insurance premiums (Whaley 1970). For its part, the federal government first enacted an insurance premium tax in the 1915 *Special War Revenue Act* (renamed the *Excise Tax Act* in 1947) to help finance the First World War. A number of commodity taxes were also introduced in this act, including the general manufacturer's sales tax that was replaced by the GST in 1991. The insurance premium tax applied only to non-life, non-marine insurance premiums at a rate of 1 percent. Given the introduction of this premium tax at a time when P&C and health insurance were in their fledgling stages of development, it did not raise significant tax revenues in the early years.

When the federal government implemented a corporate income tax in the 1917 *Income War Tax Act* (renamed *Income Tax Act* in 1948), life insurance companies and all mutual insurance companies were mostly exempted.⁷ In effect, insurance premium taxes were collected as a minimum tax, in lieu of the corporate income tax. This practice continued for decades, even for a few years after the federal government vacated this field in 1957 for provinces to resume their own premium taxes (provinces had vacated the field in 1941 for the first wartime tax rental agreement; see Provincial Budget Round-Up 1957).

Clearly, Canadian governments originally regarded IPTs as an alternative means of taxing the earnings of insurance activities. And, indeed, the same logic still applies today in American states where premium taxes are viewed as a substitute for corporate income tax.

When provinces regained the corporate taxation field in 1962 following the end of a series of federal-provincial tax rental agreements (except Quebec, which had opted out in 1952, and Ontario in 1957), they did not reactivate their earlier suspended corporate income tax legislation that contained either exemption for insurance companies' profits or else a credit against other forms of provincial income tax. Instead, out of administrative convenience, corporate provincial taxable income was defined by direct reference to the federal *Income Tax Act* – which at this time only excluded profits of mutual life insurance companies.

⁷ Only the income of non-life stock insurance companies, and the portion of net earnings of a stock life insurance company allocated to the shareholders' fund, whether distributed as share dividends or not, were subject to corporate income tax. However, premium taxes were credited against insurers' income tax liability, such that only income tax liability in excess of premium taxes was payable.

These profits became taxable for the first time in 1969.

Attempting to Tax Consumption

Another possible justification for taxing insurance premiums would be to view IPTs as an attempt to tax consumption. Even though the tax is paid by the insurance provider, it is triggered by a purchase and one might expect this cost to be passed on to consumers – just as excise taxes on alcohol, tobacco and fuel are, for the most part, ultimately borne by the final customers. Moreover, sales taxes on premiums collected on certain types of insurance in Ontario, Quebec, Manitoba, Saskatchewan and in Newfoundland and Labrador are straightforward attempts to tax consumption.

Firth and McKenzie (2012) review the literature around the taxation of financial services consumption in general and provide a theoretical case for taxing the value-added component of the financial intermediation service when purchased by, or on behalf of, individuals. Insurance companies are regulated financial intermediaries providing value added by pooling risks in a cost-effective way. In practice, it is difficult to accurately measure the value added by financial intermediation services, especially for deposit taking institutions, which explains why Canada and other countries exempt most financial services from their value-added consumption taxes.

The value added by the insurance service is the difference between the premium revenue received by the provider and the risk-adjusted present value of the amount expected to be paid out to the insured. Insurance services use up real resources without a compensating increase in otherwise taxable consumption. Therefore, the portion of the premiums used to pay for the service should be taxed under a broad-based, value-added tax. Under this approach, a value-added consumption tax, such as the GST/HST, should apply to the consumption value of the financial intermediation services, but not to the entire premium as is currently the case provincially (Barham et al. 1987).

Attempting to Tax Increases in Net Worth

Not only can all insurance be viewed as providing consumption value, some types can also be viewed as providing investment value. Insurance providers must accumulate reserves to securely cover the uncertain timing and extent of claims. The reserves earn investment income on behalf of insurance purchasers, indirectly, who are wealthier with the insurance protection than without. Under the Haig-Simons principle of individual income taxation, an influential tax policy benchmark in Canada and around the world, all accretion to one's economic power should be taxed, regardless of its source. Since taxing individuals on the implicit net-wealth accretion within individual insurance policies is largely impractical in most situations, premium taxes may also be viewed as an indirect attempt to tax this positive change in net worth at the provincial level.8

Generating Government Revenues

Tax systems in advanced economies seek to achieve multiple objectives. One goal is to provide distributional fairness, such that tax filers in comparable situations pay relatively the same taxes and those better able to afford it effectively pay more. Another objective is to be neutral with respect to economic decisions, such that the tax system does not create unwanted distortions. Although advanced tax systems are complicated,

⁸ As mentioned earlier, this is accomplished federally via the investment income tax for life insurance policies, even though most such policies are exempt.

simplicity of administration and compliance often figure in government goals. But of course the most obvious purpose of the tax system is to raise sufficient and stable tax revenues that grow with expenditure needs. On that score, insurance premium taxes are a strong generator of stable provincial government revenues.

IPTs are paid by the insurance providers and are thus largely invisible to customers on whom the burden ultimately falls. However, even though it should make no difference in theory whether premium taxes are imposed on the insurance suppliers rather than on the customers, the fact that the tax is invisible to customers may influence their responses to it – people tend to be subjectively more favourable to invisible (or less salient) taxes (Weber and Schram 2013).

Plus, on the P&C side, demand for home and vehicle insurance is relatively unresponsive to small price changes since minimum coverage is mandated by either government regulations or lenders. Admittedly, relatively low price elasticity of demand for certain products also means tax revenues generated from their indirect taxation induces lower economic distortions than would be generated by corporate income taxes, for instance. All this makes insurance premiums a prime target to raise government revenues.

Indeed, in 2016 provincial governments raised more than \$3.2 billion in IPTs and some \$4 billion in related sales taxes, for a total of \$7.2 billion (Table 3). This is a substantial amount of tax revenues, representing about 7 percent of all provincial taxes collected on goods and services. Canadian households indirectly support most of this burden because taxes paid by insurers, businesses and employers are ultimately passed on through higher premiums, prices and lower benefits.

However, this state of affairs raises fairness issues. Households with children pay a highly disproportionate share of IPTs and sales taxes on premiums – in 2017, they represented one-quarter of all households but directly or implicitly paid about half of all premiums. Also, higher-income households (which also tend to be families with children) support a greater share of the premium tax burden but to a much lesser degree than for personal income tax (Table 2).

POLICY ISSUES

Premium-based taxes, therefore, clearly raise a number of policy issues. Conceived at a time when income taxes and value-added taxes either did not exist or were in early development, they might be considered largely obsolete in a modern tax system, particularly as insurance companies now generally pay income tax. Second, in some cases the same premiums or their proceeds are effectively taxed multiple times in multiple transactions. Third, they resemble a tax on the capital savings of policyholders. And lastly, higher insurance prices induced by taxes can lead to lower demand and less take up of insurance.

An Obsolete Tax

As pointed out earlier, Canadian governments originally regarded IPTs as an alternative to taxing the earnings of insurance companies, or as a minimum tax since premium tax liabilities were creditable against other tax liabilities. As well, premium taxes were regarded as easier to apply. This same logic still prevails today in American states.

But now all Canadian governments tax the corporate income of insurance companies, in addition to premium taxes and other taxes and levies. In fact, the insurance industry is now one of the most heavily taxed industries in Canada as a share of its value added. Indeed, life and health insurers contributed \$2.5 billion to federal, provincial and local governments in 2016 through

| Household Income Quintile | Share of All Households | Share of All Premium and Sales Taxes | Share of All Personal Income Taxes |
|---------------------------|----------------------------|---|---------------------------------------|
| | | (percent) | |
| Q1 - Low | 20 | 6 | 1 |
| Q2 – Low-to-middle | 20 | 11 | 4 |
| Q3 – Middle | 20 | 18 | 11 |
| Q4 – Middle-to-high | 20 | 27 | 21 |
| Q5 – High | 20 | 39 | 62 |
| Household Type | | | |
| With children | 25 | 48 | 34 |
| No children | 45 | 34 | 49 |
| Elderly no children | 30 | 18 | 17 |
| | | | |

Table 2: Percentage Distribution of IPTs and Sales Taxes on Premiums, Directly or Implicitly Paid, by Income Quintiles and Household Types (2017)

Source: Authors' simulations using Statistics Canada's Social Policy Simulation Database and Model, version 26.

taxes on their corporate income, capital, property, investment income, operating expenses and payroll,⁹ on top of \$1.4 billion paid in IPTs and \$2.3 billion collected in provincial RSTs on certain premiums (Table 3). In fact, governments collected as much in corporate income and capital taxes (\$1.4 billion) from life and health insurers as they collected in insurance premium taxes.

P&C insurers contributed even more to federal and provincial tax coffers, if we account for the sales taxes they paid on insurance claims – \$1.9 billion in 2016 (Table 3). They also paid \$600 million in corporate income taxes, plus \$1.1 billion in taxes on business realty, payroll and operating expenses, as well as on provincial health levies. They remitted \$1.7 billion in provincial sales taxes collected on premiums and paid \$1.8 billion in insurance premium taxes – much more than in corporate income taxes (although the difference between the two was much less in 2015).

Canada's tax regime has evolved considerably since insurance premium taxes were first introduced, moving beyond its original purpose when governments derived a substantial share of their revenues from customs and excise taxes. Since then, reliance on customs duties and excise taxes has greatly diminished, the general manufacturer's sales tax has been eliminated and replaced with the GST/HST, most capital taxes have been eliminated or reduced, and governments rely considerably

| Table 3: Total Taxes Paid by Insu | rance Industry, \$ 1 | Millions | | |
|------------------------------------|----------------------|----------|---------|---------|
| | L&H I | ndustry | P&C I | ndustry |
| Туре | 2015 | 2016 | 2015 | 2016 |
| | | (\$Mil | llions) | |
| Corporate income taxes | 789 | 1,096 | 1,268 | 635 |
| Insurance premium taxes | 1,305 | 1,433 | 1,662 | 1,787 |
| Provincial sales taxes on premiums | 2,222 | 2,332 | 1,594 | 1,723 |
| Sales taxes on claims | - | - | 2,174 | 1,866 |
| Sales taxes on operating expenses | 276 | 302 | 458 | 385 |
| Payroll taxes (employers') | 289 | 311 | 290 | 326 |
| Health levies | - | - | 323 | 341 |
| Property and business taxes | 414 | 412 | 34 | 30 |
| Capital taxes | 271 | 290 | - | - |
| Investment income taxes | 131 | 121 | - | - |
| Total tax contribution | 5,697 | 6,297 | 7,803 | 7,093 |

Source: Canadian Health and Life Insurance Association (CHLIA) and Insurance Bureau of Canada (IBC) industry publications.

more on income taxes and value-added taxes, which better apply taxes to income. Premium taxes are considered by some to be a "blunt instrument" and may be viewed as obsolete in a modern tax system.

Multiple Transaction Taxes Compound the Burden on Insurance Consumption

Providing insurance involves many sales transactions. An insurance product is first purchased by an individual, a group of individuals or a business through the payment of insurance premiums. These premiums are subject to taxes, which are hidden in the prices purchasers pay. In some provinces, the premiums are also subject to additional sales taxes. Then, insurance providers will incur operating expenses in the pursuit of their financial intermediation activities, some of which will also be subject to sales taxes. Finally, the insurers issue claims payments on which they may also pay sales taxes (e.g., automobile or residential repairs, or physiotherapy treatments).

Since insurance premiums are GST/HST exempt, insurance providers cannot claim the GST/ HST they paid on operational expenses as input tax credits to reduce their tax liability. All GST/HST and retail sales taxes paid on intermediate inputs are passed on to consumers in higher premiums. GST/ HST and retail sales taxes paid on claims, as well as IPTs, have the same effect: they inflate premiums charged. Similarly, retail sales taxes are charged on the inflated premium values, which are inclusive of the other taxes – a tax on top of the other ones. This cascading makes the total effective consumption tax



Source: Authors' calculations. Value added is the sum of profits plus depreciation and total employee compensation. Value-added for the Life, Health and P&C sectors is computed from Statistics Canada's *Financial and Taxation Statistics for Enterprises*, along with data from the CLHIA and IBC. Banking activity data are from annual financial reports of Canada's big banks (when available). Data on taxes paid come from CLHIA (Life and Health), IBC (P&C) and Canadian Bankers Association (top six banks).

rate on premiums arbitrarily and confusingly higher than the upfront tax rates.

A good basis for taxing the consumer value of financial intermediation can be found in the literature on value-added taxation. In essence, business value added is what is left once the cost of all production capital inputs has been deducted from the sales of goods and services. It would be difficult in practice to identify and tax the value added of an insurance service since value added is conceptually the margin between premiums received and risk-adjusted claims paid out – both transactions may be spread out over a number of years, and most claims are not subject to sales tax. But the current system certainly does not limit itself to produce a tax on the value added. Two methods exist to tax business value added:

- the traditional invoice-based tax on sales, with credits provided to businesses for tax paid on inputs, like Canada's GST/HST; and
- the addition-based method, which is a tax on the sum of profits and wages, which also corresponds to business value added.

The International Monetary Fund (IMF 2010) recently suggested using the addition-based method to implement value-added consumption taxes on financial services. Branded the Financial Activities Tax (FAT), this addition-based VAT was presented as a possible additional measure beyond a new levy proposed to help meet the cost of future financial crises. In the insurance industry, transaction taxes – provincial insurance premium taxes, retail sales taxes on premiums and GST/HST/RST on claims and operating expenses – represent about 51percent of value added for the P&C sector, about 59 percent for health insurance and about 17 percent for life insurance (Figure 1). The burden of transaction taxes is high and much higher for P&C and health insurance than the highest HST rate (15 percent) found in five provinces. It is also much higher than the burden faced on banking activities (about 3 percent), which is limited to irrecoverable sales taxes paid on operating expenses.

A Tax on Individual Wealth

All insurance products are fundamentally a form of investment. Insurers pool the premiums from all insureds, creating a pool of financial resources accumulating income that will eventually flow out as future claims (minus the value added). Since individuals use after-tax income to purchase insurance, the additional taxes on the premiums are akin to a tax on wealth.¹⁰ Other savings instruments such as bank deposits and bonds are not taxed this way. Insurance purchasers are thus taxed more heavily for the same lifetime consumption.

Higher Insurance Prices Negatively Impact Consumer Demand

IPTs and retail sales taxes on premiums increase the consumer price of insurance. Higher tax-inclusive insurance premiums in turn worsen the problem of adverse selection in insurance markets, increasing the pressure on premiums as lower-risk consumers are driven out of the market.

In our modern tax system, commodity excise taxes are usually reserved for products such as

carbon-intensive fuel, alcohol and tobacco – all products for which more consumption yields social problems. But financial protection against the risks of large financial losses, health-related expenditures, morbidity or mortality, on the contrary, makes insurance generally socially beneficial.

The extent to which higher tax-inclusive premiums reduce consumer demand is an empirical question difficult to resolve due to lack of reliable historical data. The market for individual life insurance may be a good one to explore since we would expect prices to impact consumer demand: purchase decisions are made on an individual basis, are typically funded with after-tax dollars and are free from regulatory or institutional requirements.

Using a regression analysis (see Appendix B), we isolate the impact of provincial IPTs on individual life insurance purchases by controlling for the potential impact of household income, mortality, population aging, number of dependents at home, inflation and real interest rates, as well as for province- and year-fixed effects. We find that higher IPT rates are indeed associated with lower demand for new individual life insurance policies.

However, little provincial and annual variation among IPT rates, along with data limitations, restricts the extent to which we can model the underlying relationship in our data. But the results are nonetheless statistically significant. As it stands, the model indicates that a one-percentage-point increase (decrease) in the IPT rate would lead to a more than a 10 percent national¹¹ decrease (increase) in sales of individual life insurance contracts. Using 2016 data, that decrease represents about 77,000 policies, or \$27 billion of potential benefit coverage.

11 Excluding the territories.

¹⁰ Note that various types of insurance purchases by business entities are deductible in many business-related situations.

POLICY OPTIONS

Provinces need to think hard about the tax burden they are imposing on insurance and its impact on people. So, what should governments do?

Quebec, Ontario, Manitoba and Newfoundland and Labrador, for example, should lead the way by eliminating their punitive RST on premiums (Chen and Mintz 2001). In addition, all provinces should eliminate their insurance premium taxes or, at a minimum, make them creditable against downstream insurers' corporate tax liability on capital and income.

Premium taxes, however, generate so much revenue that any attempt to eliminate or lower the tax burden will be met with resistance. Some of that could be alleviated by making the elimination of premium taxes part of a more ambitious reform of the current patchwork of transaction taxes for insurance services.

Fiscal losses could be partly offset by charging a tax on the value-added portion embedded in the premiums (through, for instance, the additionbased method), with a credit for sales taxes paid by insurance providers on operating expenses and claims. Essentially, this would translate into a provincial VAT for the insurance industry. But such a system would come with its own set of hurdles to overcome.

In particular, the federal government does not impose GST on financial services, so the HST rate would not be the most appropriate rate to apply. Each province would need to legislate its own insurance value-added tax rate. In addition, assuming that provinces tax value added in the insurance industry, there is no obvious reason for leaving out value added from other – currently untaxed – financial services, including deposit and credit intermediation, and for the federal government to imitate the provinces. A comprehensive and broad-based, value-added tax system for the financial services sector would nonetheless bring down the insurance sector's total transaction tax burden from its current range of 17 percent to 59 percent of value added to levels more comparable to that of other services subject to the HST– and a more equal sharing of the total transaction tax burden among financial service sector participants.

CONCLUSION

Insurance is one of the most heavily taxed financial services in Canada, with multiple taxes charged on its profits, investment income and capital, as well as on transactions such as premiums and claim payments. These transaction taxes on money going in (premiums) and on money going out (operational expenses and claims) compound to reach nearly 60 percent of insurance value added, which is on top of the taxes the insurance industry pays on corporate income and capital.

Premium-based taxes increase the price of insurance products for consumers and lower the demand for them. More specifically, we find that an increase of one percentage point in the provincial IPT rate leads to a 10 percent decrease in the number of life insurance contracts sold. It is reasonable to assume that higher prices would also negatively impact the demand for other insurance products. Reduced insurance coverage for natural disasters such as floods and earthquakes, other catastrophes, relief to a deceased's family, or relief of the financial burden of illness and disability may lead to increased cost pressures on government budgets down the road.

Canadian governments should revisit and reassess the taxes imposed on insurance products. At a minimum, IPT liabilities should be made creditable against corporate income tax liabilities, partly restoring their original role as a substitute for taxing profits. And provinces that impose an RST on IPT-inclusive premiums should lead the way and eliminate this form of double taxation. A more ambitious reform would remodel the patchwork of transaction taxes for insurance services to a comprehensive and broad-based, value-added system, bringing down the insurance industry's

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high transaction tax burden and ensuring greater comparability with other industries.

The tax system has evolved considerably since IPTs were first introduced in the early 1900s. Now is the time to bring the obsolete taxation of insurance premiums into the 21st century.

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| T able A1: 1 | | Isulatice Contracts Person Li | able to Tax | | | |
|---------------------------|--|---|--|---|---|---|
| Country | Tax Basis | Established in Country | Not Established | Informing the Policyholder | Premium Tax | Parafiscal Tax |
| Austria | Total amount of premium paid. | Insurer, if he nominated insurer has not nominate | an agent. Policyholder, if ed an agent. | Taxes not shown separately from the premium. | Yes | Fire insurance |
| Belgium | Total amount of premium plus commission and collection charges. Base for parafiscal taxes does not include premium taxes. | Insurer | Policyholder in absence of intermediary residing in Belgium. | Taxes shown separately in motor vehicle insurance – no provision for other classes. | Accidents at work are exempt. | All but life insurance |
| Bulgaria | Total amount of premium paid. | Insurer and tax represent working under the freed | tatives of insurers om-to-provide services. | Mandatory to specify tax separately from the insurance premium. | Life and rent insurance exempt. All else is 2%. | No |
| Croatia | Total amount of premium paid. | Insurer | | Shown separately from the premium. | Only motor insurance. | All |
| Cyprus ^a | Total amount of gross premiums for life insurance. | Insurer | | Not shown on insurance policy. | Life insurance only. | No |
| Czech Republic | Yearly premium income. | Insurer | | Parafiscal tax not shown separately. | No premium tax. | Motor liability |
| Denmark | Does not include broker's or agent's commission. Parafiscal tax base does not include premium tax. | Insurer liable, but the insured jointly and severally responsible for payment. | Tax representative | Shown separately from the premium. | 1.1% premium tax on all contracts except life insurance and work-accident insurance. | Fire insurance |
| Finland | Includes broker's and agent's commission unless broker's commission billed separately. | Insurer | Policyholder | Premiums inclusive of premium tax. | Life, accident and health are exempt. | Fire insurance |
| France | Stipulated sums benefiting the insurer. | Insurer, but the insurer, i policyholder jointly and payment of tax when ap | ntermediary or severally liable for propriate. | No provisions on indicating parafiscal tax separately. | Life exempt. | Motor insurance |
| Germany | Total amount of the premium plus advances, additional payments, etc. | Policyholder (declared and remitted b paying-in agent) | y the insurer or | Obligation to show the tax rate, tax amount and tax number on the invoice. | Life and health are exempt. | Fire, residential- building and home-contents insurance. |
| Greece | Premiums and policy duties. | Insurer. If non-payment, no one else is liable. | No provisions for non- established insurers. | Insured knows amount of tax. | Life >10 years is exempt. | Life and motor insurance. |
| Note: a Cvprus also ch | arges stamp duty on all new policies. | | | | | |

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| Table A1: Q | Continued | | | | | |
|--|---|---|---|--|---|---|
| | | Person Lia | the to Tax | | | |
| Country | Tax Basis | Established in Country | Not Established | Informing the Policyholder | Premium Tax | Parafiscal Tax |
| Hungary | Insurance premiums | Premium tax paid by insu Accident (motor tax) paid | rrance companies. d by policyholder. | No information provided to insured about tax. | Life and health are exempt | Motor liability |
| Iceland ^b | No premium tax. Only parafiscal, broker's and agent's commission included. | Insurer | | Taxes indicated separately from the amount of the premium. | No | Fire insurance |
| Ireland ^c | On assessable amount of premium income. ^d | Insurer | | Tax deductions notified separately. | Additional 2% tax over premium tax on non-life. | None |
| Italy | Premium, w/out deductions, and all additional amounts paid to insurer. | Insurer | Insured | Must be indicated separately from taxable premium. | Life is exempt after January 2001. | None for life, health and personal accident. |
| Liechtenstein | Stamp duty calculated on net premium. | Insurer -if failure of payment, no other person is jointly and severally responsible for the payment. | If insurer not subject to Liechtenstein or Swiss control, the insured pays. If insurance purchased from representative under Liechtenstein or Swiss control, representative pays. | Tax not shown separately from premium in liability and multi-risk motor insurance. It is separate for other insurances. | None – only stamp duty on specific classes of life insurance. | None |
| Luxembourg | Tax basis includes costs and commissions. For parafiscal tax, basis does not include premium tax. | Insurer | If insurer not available, the tax representative and the policyholder are liable. For fire insurance, only the tax representative is. ^e Insurer liable for fire-brigade tax; policyholder liable for premium tax. | Tax is shown specifically on written proposals and renewal notices. | Life, pension, disability, capitalization and motor third- party liability (MPTL) are exempt. | Fire and MPTL |
| Notes: b In 2014, Icelar c Ireland has a s d Assessable am e Some insurers | nd abolished all previously applicable stamp d tamp duty per new contract on non-life insur iount is the gross amount of premiums receive are required to designate a tax representative | uties on insurance policies. ance contracts ed in respect of business in 1 in their territory to supervi | Ireland, excluding pensions ise the collection of the taxe | business. s and the method of recovery. | | |

| lable A1: 0 | Jontinued | | | | | |
|--|--|---|---|---|--|------------------|
| | | Person Lia | able to Tax | | | |
| Country | Tax Basis | Established in Country | Not Established | Informing the Policyholder | Premium Tax | Parafiscal Tax |
| Malta | Long-term life policies not renewed annually: 0.1% on sum insured. Life policies renewed annually: 10% on annual premium. Non-life policies: 11% on the annual premium. | Insurer's liability of document duty on behalf of policyholder. | Same taxation regime applies only for policies covering risk within Malta. | Insured is informed of document duty by note on the receipt. | None, Malta levies a stamp duty rate instead, from which health insurance is exempt. | None |
| The Netherlands | Total premium amount charged to insured, including the remuneration for services associated with insurance. | Underwriting agent/ intermediary involved in contract. If neither involved, then insurer. If none of them pays, then tax is levied from the policyholder. | The insurer's legal representative, underwriting agent or intermediary involved in concluding the contract. If none involved, the insurer is liable, or he can assign a tax representative to be liable. | Tax can be shown separately from the premium, but it is not legally required. | Life, vehicle registered in another EU country, health and individual accident are exempt. | None |
| Poland | Poland does not charge IPT. There is only companies excluded. | general income taxation (| 19%) for legal persons, wh | ich include insurance companies and | l intermediaries – m | iutual insurance |
| Portugal | Stamp duty: gross premium. Parafiscal taxes: differs based on specific tax. | At the insured expense: stamp duty, FAT, ANPC, INEM and FGA. ^f At the insurer expense: ASF and FAT. ^g | Tax representative | Tax indicated separately from premium. | No IPT, only stamp duty and parafiscal taxes. | Yes |
| Romania | Total cashed premiums. | Insurer | | No provisions reported. | Yes | None |
| Slovakia | Premium received previous year – valid for new contracts signed after 2016. | Insurer | | Taxes not shown separately from the premium. Contracts don't include any information. | On non-life insurance (except MTPL). | MTPL |
| Slovenia | Total premium to be paid by the insured. | Insurer | | Premium tax is shown separately from the premium. | Co-payment health and compulsory social insurance are exempt. ^h | Fire insurance |
| Note: f FAT: Workers' g ASF: Portugue h Premium tax i | compensation fund. ANPC: National authori se insurance supervisory authority. is on contracts that are of a maximum duratio | ity for civil protection. INE) on of fewer than 10 years. If | M: National institute of med more than 10 years, they an | dical emergency. FGA: Motor guarante e tax free. | ee fund. | |

| I able A1: | Continuea | |] | | | |
|--|--|--|--|---|---|---|
| Country | Tax Basis | Person Lia Fetablishad in | uble to Tax | Informing the Policyholder | Premium Tax | Parafiscal Tax |
| | | Country Country | Not Established | | | |
| Spain | Total premium to be paid by the insured. | Insurer | | Premium tax is shown separately from the premium. | Life, group pensions, health, compulsory social insurance are exempt. | None on life, group pensions, compulsory social insurance. |
| Sweden | Group life: 95% of total premium by employer to insurer. Motor: premium. | insurer | Group life: employer. Motor: insurer/tax representative. | Group life: must inform policyholder of related principal tax features. Motor: no obligations to inform. | Only on group life and motor insurance. | None |
| Switzerland | Stamp duty base is premium. | Insurer only | If insurer not subject to Swiss control, the insured. Otherwise, tax representative. | If policyholder charged with stamp duty, premium bill must bear the remark "stamp duty included." | None – only stamp duty. ¹ | None |
| United kingdom ^j | Includes the risk insured, administration costs charged to policyholders, broker's and agent's commissions and any charge for credit. | Insurer/taxable intermediary | Insurer (or taxable intermediary) and tax representative (who the insurer may, but not required to, appoint) jointly and severally responsible for payment. | Premiums are inclusive of premium tax – no obligation to identify amount separately to policyholder. | Life and pensions, marine, aviation and transport (MAT) are exempt. | Exempt |
| Notes: i Stamp duty on j The standard r Source: Insuran | ly on specific classes of life insurance. If the pc ate of insurance premium tax in the UK incre ice Europe, Indirect Taxation on Insurance Co | blicyholder is located outsi ased to 12% in effect from ntracts in Europe, May 201 | de of Switzerland, then the J 1 June 2017. 17. | policy is exempt from stamp duty. | | |

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APPENDIX B: ESTIMATING THE IMPACT OF IPT ON SALES OF NEW INDIVIDUAL LIFE INSURANCE CONTRACTS

In our analysis, we test the hypothesis that higher IPT rates lead to lower sales of individual life insurance contracts.

Our database consists of annual provincial individual life insurance sales and provincial insurance premium tax (IPT) rates from 1994 to 2016 for all 10 provinces. We also use additional data to control for other determinants such as income levels, provincial inflation, mortality, real interest rates, population aging and number of dependents. In total, we have 220 observations.¹²

Table B1 shows the results of estimating the following Fixed-Effects OLS model:

IndLifeSoldPC_it = $\alpha + \beta_1 * IPT_{it} + \beta_2 * LIncPC_{it} + \beta_3 * Inflation_{it} + \beta_4 * rrb_t + \beta_5$ * mortality_{it} + β_6 * depratio15_{it} + β_7 * depratio65_{it} + $\mu_i + \theta_t + u_{it}$

where *IndLifeSoldPC* is the number of individual life insurance contracts sold per capita in province *i* at time *t*; *IPT* is the insurance premium tax rate; *IncPC* is real household disposable income per capita; *Inflation* is the inflation rate; *rrb* is the federal real return bond rate; *mortality* is the mortality rate for those older than 30; *depratio*15 is the young dependency ratio for those under 15; *depratio*65 is the old dependency ratio for those above 65; μ is province fixed effects; θ is year fixed effects and u is an error term.

These determinants are widely used in studies such as Yaari (1965) and Hakansson (1969) who were first to develop a model to explain demand for life insurance, as well as Fortune (1973), Lewis (1989), Browne and Kim (1993), Outreville (1996), Hwang and Gao (2003), Beck and Webb (2003), Li et al (2007) and Mapharing, Otuteye and Radikoko (2016). In cross-country studies, other variables are sometimes included, such as education, civil rights, religion and corruption.

Our results are consistent with our expectations based on previous studies, with the addition of the IPT rates. The explanation for our positive coefficient on income should be straightforward (Table B1). It is consistent with the literature – higher income increases affordability of life insurance and the need to absorb surplus wealth (Campbell 1980, Lewis 1989, Beenstock et al 1986, Truett and Truett 1990, Browne and Kim 1993, Outreville1996, Beck and Webb 2003).

The negative coefficient on inflation is also widely agreed upon, as it dampens the demand for life insurance products (Lenten and Rulli 2006, Li et al 2007, Beck and Webb 2003, Outreville 1996, Mapharing, Otuteye and Radikoko 2016). While the literature shows that the effect of interest rates has been more ambiguous, our positive coefficient corresponds with the general view that higher rates decrease the cost of new insurance policies and increase their consumption (Beck and Webb 2003).

¹² One outlier data point was dropped due to its very large departure from the mean, as is standard statistical practice. Still, its inclusion would not result in any significant change to our results.

Previous studies have shown that mortality has been mostly found to be positively correlated with demand for insurance, as it is in our results. A higher mortality rate and lower life expectancy, which are used as proxies for probabilities of death, increase the perceived need for mortality coverage (Lewis 1989, Levy et al 1988, Beck and Webb 2003, Lim and Haberman 2004, Mapharing et al 2016).

As for the dependency ratios, the relationships are not as clear. Some studies show that the demand for life insurance increases with the number of dependents (Lewis 1989, Campbell 1980, Li et al 2007). However, other studies support our negative coefficients. When we consider the young dependency ratio, a higher number indicates a younger population, which needs less salary protection against early death and often cannot afford insurance products (Beck and Webb 2003, Kjosevski 2012). As for the old dependency ratio, the older you are, the higher the price, leading to lower demand.

The data for this analysis consists of the Canadian Life and Health Insurance Association's annual panel data from 1994 to 2016. Most of our control variables are significant at the 95 percent confidence level or higher, including our main variable of interest, the IPT rate.

Table B1: Individual Life Insurance per Capita

| | Fixed Effects Panel Regression | P-Values |
|---|---|----------|
| Insurance Premium Tax | -0.00212** | [0.041] |
| Income Per Capita | 0.00965 | [0.230] |
| Inflation | -0.000387 | [0.103] |
| Real Bond Rate | 0.00916** | [0.011] |
| Rate of Mortality >30 | 0.00317*** | [0.003] |
| Dependency Ratio <15 | -0.132** | [0.011] |
| Dependency Ratio >65 | -0.126*** | [0.002] |
| Observations | 219 | |
| Adjusted R2 | 0.749 | |
| Standard errors in bracket * p < 0.10, ** p < 0.05, *** Note: Constant, province coefficients not reported h | s p < 0.01 fixed effect, and year fixed effere. | fect |

As it stands, the model indicates that a one-percentage-point increase in the IPT rate leads to a decrease in the number of insurance contracts sold of 0.00212 per capita. Nationally,¹³ this would imply a 76,797 reduction in 2016 sales of individual life insurance contracts, representing more than 10 percent of total individual life insurance contracts sold that year.

Due to low variation in some of our variables, mainly and most importantly in the IPT rates across provinces and over the time horizon of our data, along with other data limitations, we believe that including too many controls (including province- and year-fixed effects) reduces the impact of our main explanatory variable.

Over the time horizon of our data (1994-2016), some provinces never changed their tax rate (BC and New Brunswick, for example). In other cases, some provinces only raised it once, such as Alberta.

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