

A TAX SHIFT THAT BENEFITS THE VAST MAJORITY:

THE CASE FOR MORE ANNUAL (DEFERRABLE) TAXATION OF
HOUSING WEALTH TO REBALANCE THE MIX OF REVENUE
GENERATION TOOLS USED BY CANADIAN GOVERNMENTS

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GENERATION

squeeze **Suit up,
Spread out,
Squeeze back.**

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A TAX SHIFT THAT BENEFITS THE VAST MAJORITY: THE CASE FOR MORE ANNUAL (DEFERRABLE) TAXATION OF HOUSING WEALTH TO REBALANCE THE MIX OF REVENUE GENERATION TOOLS USED BY CANADIAN GOVERNMENTS

EXECUTIVE SUMMARY

This paper proposes a tax shift: less tax on local income, more tax on unhealthy housing gains and better investments in young and old alike.

The tax shift will:

- Keep hard-earned income in local residents' pockets to help us cope with unaffordability.
- Help cool housing markets and rein in costs.
- Generate revenue to help sustain services for our aging population like medical care, which could eliminate the need for recently announced payroll tax increases; and invest in priorities for young people too, like child care, transit and housing.

There are at least three reasons why we need a tax shift.

1. *The growing gap between incomes and home prices.*

Housing costs have left behind incomes across Canada, especially in B.C. and Ontario. While housing prices have more than doubled, incomes have not kept pace, and they have fallen for those of us under 45.

Less tax on local income can make our earnings stretch further.

Shifting taxes *towards* housing wealth will help reduce treatment of homes as commodities, cooling the market and reining in costs.

2. *Inequality driven by rising home prices*

Inequality is rising, because wealth is growing faster than income, especially housing wealth due to skyrocketing prices.

Surprisingly, annual property taxes are down across Canada. For example, **B.C. collects \$2.5 billion LESS in property taxes today** than in 1981, even while the value of real estate has catapulted many homeowners into the global one percent. The tax shift will restore better balance in revenue collection to reduce inequality.

3. *Violations of the intergenerational golden rule*

The intergenerational golden rule implies do unto your elders what you would have younger generations do unto you when elderly. This means today's aging population can reasonably expect their children to pay as much for them in taxes during retirement as they paid for their own elderly parents.

However, the tax bill now paid from younger to older Canadians is substantially higher than four decades ago, even though windfalls from rising home prices have disproportionately made many older citizens wealthier. The **tax shift will ensure older generations do not inadvertently pass on unpaid medical care bills to those who walk in their footsteps**, while also sheltering from additional taxation retirees who did not gain from unhealthy increases in housing prices.

In sum, rebalancing our tax system to **ensure we all pay our fair share**, including owners of the most expensive 20% of homes, could reduce taxes on income to stretch our earnings; eliminate the need to increase payroll taxes to replace the MSP; and/or raise revenue for programs for which there is urgent need like medical care, child care and transit.

10 KEY CONSIDERATIONS FOR THE TAX SHIFT

1. Design the tax shift so that the large majority of citizens come out ahead as result of tax cuts and new spending.
For example, this study proposes a 1% surtax on home value above \$1 million – aka the Million Dollar Homes Tax – which would apply to the most expensive 20% of homes. Revenue would pay to cut other taxes for everybody, and new investment for young and old alike.
2. Organize the shift so that new taxes on housing leave older citizens who reside in homes that have skyrocketed in value with most of their wealth windfall, while ensuring housing wealth tax liabilities drop if home prices fall.
3. Make any new annual housing wealth tax *totally deferrable* until the sale of the property, to protect “house-rich, cash-poor” residents, so nobody has to move before they want. Charge modest interest rates that are the same for all age groups.
4. Make income tax cuts available to all B.C. households, including all renters.
5. Aim for a return to property taxation levels that are on par with when today’s aging population started out as young adults, while protecting revenue sources for municipalities.
6. Design the tax shift so that regions which haven’t witnessed skyrocketing home prices generally do not pay new housing wealth taxes, but benefit from the other tax cuts.
7. Exempt purpose built rental buildings from new annual taxes on housing wealth to encourage building new supply, and to protect renters from having the tax passed down from landlords.
8. Exempt all properties that are demonstrably under development from new annual taxes on housing wealth to stimulate new supply, and to ensure developers do not have to pass on the cost of the levy to new buyers.
9. In addition to cutting other taxes, prioritize some revenue generated from the tax shift to invest in urgent needs, like child care, below-market housing and medical care.
10. Commit to the goal of a tax shift, but take sufficient time to engage the B.C. public and a range of experts to minimize unintended consequences.

THE TAX SHIFT: THE CASE FOR MORE ANNUAL (DEFERRABLE) TAXATION OF HOUSING WEALTH TO REBALANCE THE MIX OF REVENUE GENERATION TOOLS USED BY CANADIAN GOVERNMENTS.

In recent years, several governments, scholars, political parties and organizations have recommended higher taxation of residential real estate in Canada, especially in British Columbia where prices have left behind earnings more than in other provinces. Some of the tax proposals target foreign buyers.¹ Some target owners of empty homes or units used for short-term rentals.² Some target owners of real estate who pay limited income taxes.³ Others propose changes to property transfer taxes or the treatment of capital gains.⁴ Still others recommend that provincial or federal governments add progressive surtaxes to existing recurrent property taxes collected primarily by municipalities.⁵

Conceptually, each of these proposals target one of the three roles associated with home ownership: a tax paid by: (a) the buyer at time of purchase, (b) the seller at time of sale, or (c) the owner on a recurrent, generally annual, basis. All proposals share one or more of the following goals: to close the gap between earnings and home prices; to raise revenue in order to reduce other taxes or pay for other policy priorities, including by reducing legal tax avoidance or illegal evasion; and/or to redistribute wealth in response to concerns about growing inequality. This study examines evidence in support of additional, recurrent taxation of some property owners (option c) as part of a broader project reviewing the interaction of all three types of housing wealth taxation in Canada, and proposing policy adaptations.⁶

In this article, I argue that provincial and/or federal governments should shift the balance of revenue generation to rely more heavily on annual (deferrable) taxation of housing wealth. Canada already has a strong tradition of taxing housing wealth annually via our property tax system, which residents primarily associate with municipal taxes. The proposal in this paper is to adapt the property tax system slightly so that provincial or federal governments add modest surtaxes on high-value homes in order to cut other taxes, and invest in priority areas like below-market housing, child care and medical care. The surtax would be deferrable, meaning that its payment by the homeowner could be delayed until the sale of the home, with modest interest rates charged on any deferred tax bills.

In section one, I quickly summarize why rebalancing the tax treatment of housing wealth and other taxes is an important response to concerns about inequality that align with age patterns in housing prices, wealth and taxation over the last four decades.

In section two, I examine two new annual housing wealth tax changes introduced in the 2018 budget of the Government of British Columbia: one targets satellite families that evade income taxation and empty homes; the other adds surtaxes to high value homes. The analysis shows that linking new housing wealth taxes to income taxes paid by households can yield regressive tax rates. I therefore argue against governments relying primarily on this design of additional housing wealth taxation. Instead, I encourage expansion of approaches that apply surtaxes to high value homes beyond what the 2018 B.C. budget so far proposes.

In section three, I explore three rate options that are alternatives to those proposed by the B.C. government, investigating their incidence, and the revenue they could generate for the provincial coffer. In light of this review, I propose a surtax of 1% on home value over \$1 million dollars – or what I call the Million Dollars Home Tax.

Section four briefly considers how additional revenue from the Million Dollars Home Tax could be used to pay for other income and payroll tax cuts or spending priorities like medical care, child care and housing. The final section concludes by considering the political challenges associated with new tax proposals in order to anticipate and address critique.

1. WHY WE SHOULD CONSIDER REBALANCING TAXATION OF HOUSING WEALTH AND OTHER TAXES

There are three at least three reasons to support this rebalancing. The first identifies additional annual taxation of housing wealth as a tool that can contribute to a multi-prong approach to slow down home price escalation. The second focuses on returns to capital as a primary factor driving inequality in Canada, observing that housing wealth is the most prevalent kind of capital owned by Canadians. The third features inequalities that result from violations of the intergenerational golden rule in government budgeting. I examine each of these issues below.

1.1 A tool to address the gap between home prices and young people's earnings

The gap between home prices and earnings has grown substantially over the last four decades in Canada (Kershaw 2017a, b, 2018), the UK (Searle and McCollum 2014), Australia (Wood, Ong, and Cigdem 2016), and elsewhere. Canadian Real Estate Association data show that average home prices have more than doubled after adjusting for inflation over the last four decades. Whereas an average home cost \$210,089 in 1976 (inflation adjusted), the price reached \$510,179 by 2017.⁷ Over the same period, median earnings for younger Canadians are down \$3,840 after inflation (Statistics Canada n.d.-j), while retirees report substantial gains to median earnings (Statistics Canada n.d.-j, d). The implications for younger generations are dramatic when it comes to the labour required to pay for their major cost of living – housing.

A 25-34 year-old with median full-time earnings must now work 13 years to save a 20% down payment on an average home, 8 years more than in 1976-80 (Kershaw 2018). Even more work is required in Ontario and B.C., where it now takes 16 and 19 years respectively (Kershaw 2017a, b). This is true despite the fact that many more young people now purchase homes in condominiums or apartments without yards, or in suburbs that require longer commutes. Whereas half a million dollars (after inflation) would have bought two entire homes in Metro Vancouver in 1976, now only 2% of homes cost less than half a million dollars and provide access to more than two bedrooms in the region where more than half of British Columbians live. Similarly, only 2% of homes meet these criteria in Victoria, and just 14% of homes in Kelowna.⁸

Given the dramatic escalation in home prices, it is not surprising that home ownership is down 12%-14% for Canadians under 45 today by comparison with four decades earlier, and down 35% for 25-34 year olds in B.C. with the result that now just one in four B.C. adults in this age group are home owners.⁹ As more young people compete for rental homes, average rents have increased, and now require nearly an extra month of

pre-tax earnings to cover annual rent on a three-bedroom home in large urban centres (Kershaw 2017a, b). By contrast, home ownership is up 7%-10% for Canadians age 55 and older, and rates are 11%-17% higher in B.C. Approximately three-quarters of Canadians over age 55 own their principal residence.¹⁰

Since home prices reflect the interaction of supply and demand forces in the real estate market, additional taxation of home values represents one tool available to policy makers to slow down the growing gap between housing costs and earnings for younger generations, along with renters of all ages. An extensive international literature observes that residential property often enjoys favourable tax treatment (Freebairn 2016, O'Sullivan and Gibb 2012, Cho and Francis 2011), including in Canada (Boadway 2015, p. 261). Several commentators speak to the value of recurrent taxation of property wealth for efficiency reasons (Wood, Ong, and Cigdem 2016, Eerola and Maattanen 2013, Evans 2012), observing that sheltering housing wealth accelerates investment in real estate at the expense of capital investment in more productive sectors. This line of argument in support of additional recurrent property taxation is especially important in B.C. and Ontario given that real estate, rental and leasing represent 18% and 14% of the Gross Domestic Product (GDP) of those provinces, respectively (Statistics Canada n.d.-f), while just 2% of employment is found in that industrial sector (Statistics Canada n.d.-e).

As part of a multi-prong approach to rein in home prices,¹¹ additional recurrent taxation of housing wealth should be evaluated in part by how it contributes to recoupling home prices to earnings. Governments in B.C. and Ontario would be well advised to monitor metrics like (a) the number of three-bedroom apartments available at a monthly rent of less than \$1,675. This monthly figure represents 30% of median household income in large urban regions like Metro Vancouver (Statistics Canada n.d.-b); and Statistics Canada identifies housing costs above 30% as crossing a threshold into insecurity (Rea et al. 2008). Similarly, governments should monitor (b) the number of homes that are valued at less than half a million dollars, and provide access to more than two bedrooms. In 1976, the ratio of average home prices relative to young people's median full-time earnings was less than 4:1. Today, home prices of \$500,000 put the ratio at 10:1, which already requires major adaptations on the part of younger earners in terms of their labour, spending, saving and debt. Average prices in Ontario and B.C. currently make the ratio 11:1 and 14:1 respectively, and those average prices reflect many small homes that have two or fewer bedrooms that are often unsuitable for families with multiple children (Kershaw 2017a, b).

1.2 A tool to address inequality driven by returns to capital

While escalating home prices require more work from younger generations (and all renters), they shift housing wealth from younger to older Canadians. Price escalation increased net wealth in owner-occupied principal residences by \$2.6 trillion since 1976. One-twentieth of the additional wealth is owned by households under age 35, who represent 29% of the adult population. One-third of the additional wealth is owned by Canadians age 65+, who make up 21% of the adult population (Kershaw 2018). As home ownership rates fall for younger Canadians, the typical household headed by an adult under 35 faces higher rents without reaping wealth gains from rising prices. By contrast, the typical senior household reports an increase of \$277,903 in net housing wealth by comparison with the same age group in 1977 (Kershaw 2018).

These trends reinforce observations from Piketty (2014) about factors driving inequality in the 21st century. In developed countries experiencing lower growth rates than in the decades immediately following World War II, the returns to capital investments generally increase at higher rates than do the returns people earn from

labour investments. Lemieux and Riddell (2016) report that the share of national income in Canada received by workers has dropped when compared to income received by owners of capital. Whereas approximately two-thirds of national income consistently went to Canadian workers until the mid-1990s, that figure dropped to 60% by 2008. The drop was more dramatic still (from 62% to 54%) when the earnings of the top 1% were removed from the analysis. On an annual basis, Lemieux and Riddell report that an additional \$3.2 billion is paid to owners of capital, rather than workers, by comparison with what the distribution would have been had labour's share of national income remained constant.

Residential property ownership is a particularly common form of capital for which we are witnessing the high rates of return that Piketty, Lemieux and Riddell describe. With capital expected to generate larger economic returns than labour so long as economic growth remains at rates witnessed in recent decades, there is good reason to judge that wealth increases achieved via home ownership should be included in our assessment of people's ability to pay for public benefits and services. Consistent with the international literature that observes residential property often enjoys favourable tax treatment (Freebairn 2016, O'Sullivan and Gibb 2012, Cho and Francis 2011), capital gains earned from the sale of principal residences in Canada are not counted as income for tax purposes (Boadway 2015, p. 261). The federal government reports this tax expenditure costs nearly \$7 billion annually (Government of Canada 2017, p. 39), along with corresponding reductions to provincial coffers. Simultaneously, annual revenue from municipal property taxation is down \$4.4 billion (measured as a share of GDP) by comparison with 1976,¹² despite the \$2.6 trillion in additional net wealth held by owners of principal residences.

Additional annual (deferrable) taxation of housing wealth is an appropriate response to wealth windfalls won from real estate price escalation. Some windfalls reflect wealth accumulation over the last decades whether (a) the person has been in the same home purchased decades ago, or (b) she purchased her current home very recently by drawing (partly) on capital acquired from price escalation that accrued in homes she previously owned. Additional annual (deferrable) taxation of housing wealth treats fairly the asset accumulation of both owners. By contrast, capital gains taxation imposed retroactively would tax scenario (a) far more heavily than scenario (b). Different tax treatment is unwarranted, because the purchase date of the current home is arbitrary in regards to the wealth accumulation forces at play as a result of rising home prices.

Adapting annual housing wealth taxes can also capture *for* the public some of the property-value increases generated *by* the public when municipal governments revise zoning to add density in efforts to increase supply. Zoning changes are only going to grow more common as governments aim to moderate local home prices, and stimulate the development of new affordable housing.

The added revenue generated from taxing housing wealth windfalls (accumulated over recent decades or as a result of new zoning changes) could be used to reduce major expenses in the lives of younger generations who are less likely to have lucked out in the lottery of housing price escalation. Revenue can be used to bring down child care costs, etc. and/or stretch further people's earnings by paying for income tax cuts on those earnings. Tax deferral provisions would accommodate "home-rich but income-poor" citizens by postponing collection of new annual housing wealth taxes until the sale of the property.

1.3 A tool to address violation of the intergenerational golden rule

A third reason to favour additional annual taxation of housing wealth is to address looming violations of the intergenerational golden rule. We all know the golden rule – do unto others as you would have them do unto you. From an intergenerational perspective, the golden rule implies do unto your elders what you would have younger generations do unto you when elderly. In government budgets, this golden rule means that today's aging population can expect their children to pay as much for them during retirement as they paid for their own elderly parents.

This is not the current practice in Canada. While total income taxes are lower today, the amount paid for medical care used by citizens over age 65 by a typical young British Columbian is 46% to 62% more than members of the aging population paid for the same program when they were young adults. The additional tax burden is even larger in Ontario.¹³ This intergenerational inequality reflects the interaction of the baby boom demographic bulge, and Canada's limited reliance on social security contributions by which governments legislate that citizens prepay for public expenditures they will draw down during retirement.

Expecting younger generations to pay additional taxes for retirees' medical bills might be appropriate if their financial circumstances were markedly better than those of their parents. However, the additional taxes for seniors' medical care come on top of the lower earnings and higher home costs faced by younger Canadians. Since data also show that older Canadians have disproportionately benefited from housing wealth windfalls over the last four decades, additional annual (deferrable) taxation of housing wealth is a viable and fair way to collect revenue to minimize violations of the intergenerational golden rule. Support for including home wealth in calculations of taxes owed or fees required to pay for the costs of population aging is also growing in Australia (Ong 2016) and the UK (Searle and McCollum 2014, O'Sullivan and Gibb 2012) given the substantial escalation in home prices experienced in those countries in recent decades.

Talk of any tax changes will invariably have Canadians revisit views about whether we already pay a lot in tax. Many Canadians judge our tax levels by comparison with our American neighbours. From this perspective, Canada appears to be a high-tax jurisdiction, because our governments collect 32% of our economy in taxes according to Organization for Economic Cooperation and Development (OECD n.d.) data, whereas U.S. governments collect 26%. The difference is \$117 billion in additional taxes collected in Canada,¹⁴ which represents nearly three-quarters of the annual cost of Canadian medical care (Canadian Institute for Health Information 2017) – the social program by which many Canadians define ourselves as different from our neighbours to the south.

When we look beyond the United States, it is clear that Canada is actually a lower-tax jurisdiction. Governments of OECD member states collect on average 34% of their national economies in tax revenue (OECD n.d.). This means Canadian governments collect \$40 billion less in taxes than they would if they raised revenue at the OECD average.¹⁵ To put that dollar value in context, \$40 billion would cover one-quarter of our medical care system (Canadian Institute for Health Information 2017), over 80% of old age security or postsecondary (Statistics Canada n.d.-g), or the incremental cost for a national child care program four times over (Kershaw and Anderson 2009).

Canada achieves this below-average tax status by keeping two kinds of taxes very low by international standards. The first is sales taxes, where we collect \$70 billion less per year than the OECD average.¹⁶ The second, and a key concern of this study, is social security contributions by which people contribute to employment insurance

during their working careers, while also prepaying for benefits they will use in their later decades of life. In Canada, our social security contributions are \$78 billion lower than the OECD average, and even \$28 billion lower than in the U.S., when measured as a share of GDP.¹⁷ This difference partly reflects that Canadians pay social security contributions for retirement income via our Canada and Quebec Pension Plans (C/QPP), but do not pre-pay for medical care during our retirement.

Canadian governments compensate for limited collection of sales tax and social security contributions, while maintaining our below-average levels of taxation, by relying more on a few other kinds of taxes. First, our governments draw slightly more on taxation of companies via corporate income taxes and payroll taxes, which are, respectively, \$7.5 billion and \$5 billion higher than the OECD average.¹⁸ Second, while housing wealth is sheltered from taxation in Canada as it is in many other countries per the evidence shared above, Canadian governments shelter it less than some countries. As a result, we generate \$40 billion more revenue from property taxation than the OECD average.¹⁹ This added revenue reflects how our country has built strong infrastructure with which to assess the evolving market value of properties on an annual basis. Such infrastructure is key to my recommendation that Canadian governments rely even more on recurrent housing wealth taxation to fill the gap left by lower sales taxes and social security contributions. Finally, the primary way by which Canadian governments compensate for limited sales taxes and social security contributions is via taxation of individual income. Government revenue from this source is \$68 billion higher than the OECD average.²⁰

The trade-off between low social security contributions and high individual income taxation may sound like an academic distinction. But the distinction is very important when these two alternative approaches to revenue generation interact with the baby boom demographic bulge.

In anticipation of the retirement income needs of an aging population, social security contributions for the Canada and Quebec Public Pensions (C/QPP) increased by \$36.5 billion (Kershaw 2018). This increase signals that Canada's aging population has prepaid substantially for these benefits by means of contributions to a specific revenue stream managed by designated investment boards that operate at arms-length to parliament. These boards are responsible for investing the payments made by Canadian workers to generate additional revenue to close the gap between contributions and expenditures – the latter of which are currently \$48.5 billion higher than in 1976 (Kershaw 2018). The Canada Public Pension Investment Board reports that it is on track to generate returns from investment of previous social security contributions that will fund the payouts expected by today's aging population, and future retirees for at least the next 75 years (CPP Investment Board 2017, p. 11).

By contrast, in preparation for the medical care needs of an aging population, today federal and provincial governments only collect an extra \$11 billion in general taxation revenue compared to 1976 when measured as a share of the economy. Governments now spend an additional \$36 billion on medical care for Canadians age 65+, leaving a gap of \$25 billion for which no additional taxes are collected. This shortfall is covered in part by spending around \$19 billion less on programs for younger Canadians, and by growing government debts (Kershaw 2018).

The distinction between social security contributions and individual income taxation signals that Canadians do not prepay for medical care used in retirement as we do for C/QPP. Instead, each province pays for the medical care consumed in any given year according to demand, which relates to demographics. Whereas 31

cents of every health care dollar went to Canadians age 65+ in 1976 when seniors represented 8.4% of the population, now nearly 50 cents of every medical care dollar goes to this age group which represents 17% of the population (Kershaw 2018). This difference means fewer tax dollars had to be collected to pay for retirees' medical care at a time when there were nearly seven workers for every retiree. There are now fewer than four workers per retiree, and in the coming decades there will be fewer than three (Statistics Canada 2014).

The result is that working-age Canadians today must pay higher taxes for retiree's medical care than was expected when members of the aging population were younger adults in 1976, even as overall income taxes are down. Whereas 5% of total government revenue went to medical care for seniors in 1976, now 9.2% does (Kershaw 2018). Given these changes, a 35-year-old with earnings at the 25th income-percentile now annually pays \$72 more per year toward medical care for seniors in B.C., and \$122 more in Ontario.²¹ These represent increases of 62% and 107% respectively. A median earner pays \$184 more in B.C., and \$226 more in Ontario (up 46% and 56% respectively); an earner at the 75th percentile contributes an extra \$420 in B.C. and \$514 in Ontario (up 51% and 63%); and a young person in the top one-percent pays an extra \$2,295 in B.C. and \$2,872 in Ontario (up 59% and 74%). Over many decades of a working career, larger annual tax payments for the medical care of retirees represent thousands of dollars in additional tax bills for the children and grandchildren of the aging population, regardless of where they are located in the income spectrum.

In sum, Canadian government budgets have diverged from the intergenerational golden rule since 1976. In an era when the share of seniors doubled, policy makers reduced income tax rates, while legislating younger people to make larger income tax payments for seniors. The result is seniors in the contemporary context are expecting their kids to contribute more individually to them than they contributed to their parents when elderly. In addition, lower average tax rates today permit many citizens over age 65 to pay lower taxes for their children than their elderly parents contributed for them in 1976. The two trends erode government revenue, leaving less in public coffers to adapt for younger generations today for whom the standard of living declined because home prices ballooned beyond earnings.

Since this transgression of the intergenerational golden rule reflects limited reliance decades ago on social security contributions for medical care in retirement despite familiarity with what the baby boom bulge would mean for future government expenditures,²² questions now arise as to possible remedies. As it turns out, Canada's historical reliance on property taxation as a somewhat less sheltered source of revenue by comparison with most OECD countries means we have well-developed infrastructure to monitor annually the wealth windfalls generated by skyrocketing home prices and include them in measurements of citizens' abilities to pay for social programs and benefits. Since those windfalls have been gained disproportionately by older Canadians, this infrastructure creates a unique opportunity to ensure that retirees with substantial wealth do not inadvertently pass on unpaid medical care bills to generations that follow, while also sheltering from additional taxation retirees who did not luck out in the lottery of housing price escalation.

2. ADDITIONAL RECURRENT PROPERTY TAX PROPOSALS: B.C. EXAMPLES

There are several new developments in recurrent property taxation in B.C., and the two most notable occurred in the 2018 budget (Government of British Columbia 2018a). One is labeled a speculation tax and the other a school tax, although neither label accurately describes their design. I summarize both briefly below, and consider their capacity to address the three objectives that motivate adaptations to the tax treatment of housing wealth: to slow down home prices; mitigate inequalities driven by returns to capital; and address violation of the intergenerational golden rule in government budgeting.

The speculation tax has already had two versions, with the first presented in the 2018 budget tabled in February; and an alternative developed six weeks later in response to public outcry. The initial conception proposed to raise additional revenue from the residential housing wealth of people who have empty homes, and/or so-called satellite families who own substantial real estate wealth in the province while contributing limited, or no, provincial income tax. The idea had been popularized by UBC economist Dr. Tom Davidoff and other colleagues who proposed a flat 1.5% surtax on home values with exemptions for most British Columbians (BC Housing Affordability Fund n.d.), as well as Dr. Rhys Kesselman (2016a), who proposed a progressive property surtax with rates that could vary by region, which could be credited against provincial income taxes paid. The province borrowed from both to propose initially a new 2% speculation tax that will apply to Metro Vancouver, the Fraser Valley, the Capital and Nanaimo Regional Districts, along with the municipalities of Kelowna and West Kelowna. Properties in these regions that are used for short-term rentals (rented for less than six months/year in minimum intervals of one month leases), left empty, or claimed as principal residences by people with high world incomes who pay low provincial income taxes, would have been subject to a 2% charge on the total value of the home. Any provincial income taxes paid by that owner could have been used as a credit to offset the amount owed as a result of the new speculation tax. The province estimated it would collect \$200 million in revenue from this tax in 2019 (Government of British Columbia 2018a, p. 8).

As with most new tax proposals, the initial version of the speculation tax was unpopular. People with second homes that are cottages or cabins were among the loudest critics, and in some cases with good reason. The initial design of the tax would have required more taxation by some British Columbians who have cabins and cottages that are modest in value by comparison with much higher valued principal residences that would not be subject to any additional taxation. Consider, for example, a person who owns a small condo in Metro Vancouver worth \$500,000 (for which B.C. Assessment data show only 2% of units have more than two bedrooms). In search of additional space on weekends, imagine this person has a small home on a gulf island or near a lake some hours away, etc. The second home is valued at \$300,000. Under the initial version of the speculation tax, this person would have owed 2% of \$300,000, or \$6,000 against which she can credit her income taxes. Suppose she is a relatively high earner in the province, with an income of \$72,000 that puts her in the top 20% of earners. She will therefore pay around \$3,800 in income taxes.²³ The result would have been that her home wealth tax bill increased by \$2,200 (\$6,000 minus \$3,800). Although her total residential wealth is \$800,000, the initial version of the speculation tax expected her to contribute more in new annual housing wealth taxation than people who reside in multi-million dollar homes. Not surprisingly, a number of British Columbians with modest second homes indicated their frustration.

More generally, any strategy that links the calculation of new property wealth taxes owed to income taxes paid will regularly generate regressive results that require those with less to pay more. Reconsider the taxpayer who has \$800,000 in housing wealth spread across a half million dollar condo, and a second home valued

at \$300,000. She would have owed approximately \$2,200 under the new speculation tax if her income is around \$72,000. By contrast, someone with the exact same housing wealth who earns \$45,000 would have paid approximately \$4,100 in speculation tax, because she only has \$1,900 in income taxes paid from which to offset the new housing wealth charge.²⁴ Similarly, someone who earns around \$25,000 annually would have paid closer to \$5,600 in speculation tax because s/he pays around \$400 in income taxes.²⁵ For this reason, I recommend that governments generally avoid tax designs that link wealth taxes owed to income taxes paid. The one exception is the utility in linking income taxes paid to residential wealth held when *identifying* so-called satellite families.

The Government of B.C. (2018b) announced a second version of the speculation tax in March 2018 in response to public concern. The second version exempts over 99% of British Columbian residents from the levy by excluding the Gulf Islands from the regions to which the speculation tax applies, featuring an automatic \$2,000 speculation tax credit, and revising the tax rates as follows: 2% for foreign investors and satellite families; 1% for Canadian citizens and permanent residents who do not live in British Columbia; and 0.5% for citizens or permanent residents of B.C. who are not members of a satellite family. The combination of these rates means that additional homes owned by British Columbians that are valued at less than \$400,000 automatically incur no speculation tax regardless of their rental status. The value of additional homes above \$400,000 will be subject to the 0.5% rate. Canadians who have principal residences outside of B.C. and who do not rent out their additional homes located in B.C. for at least six months of the year will incur an additional recurrent tax of 1% on the home value over \$200,000. Foreign investors and/or satellite families will pay a tax of 2% on home wealth above \$100,000. The government provides no revised revenue projections.

The addition of the \$2,000 tax credit replaces the design feature in the initial version that would have credited income taxes paid against the speculation tax owed, and thereby eliminates the risk of creating regressive, higher tax rates for lower-income home-owners. As such, this measure is in principle well designed to target two very specific cases of “harmful” demand: (i) demand that takes available stock out of the long-term rental/owner supply in regions facing major affordability challenges, and/or (ii) demand for available stock by people with substantial international wealth who evade income taxes in B.C. There remains ongoing controversy as to whether the tax has adequately distinguished between a speculator and vacationer, and whether it adequately excludes properties under development. Refinements may therefore remain warranted while still addressing the two cases of “harmful” demand. Ultimately, the degree to which this new tax will actually ease price pressures will depend on, first, the manner in which it can be enforced in practice and, second, the degree to which average prices in residential real estate are influenced by the marginal purchaser with high global, or out-of-province, income.

While the revised speculation tax has a role to play in slowing down home price escalation, the fact its design excludes over 99% of British Columbians means it has limited capacity to address the second and third factors motivating additional recurrent taxation of housing wealth. To address rising inequality driven by returns to capital as well as violations of the intergenerational golden rule, the revenue generated by a tax change must well surpass the less-than-\$200-million budget projection for the speculation tax.

By contrast, the second tax innovation introduced in the 2018 B.C. budget has more potential to address all three factors that motivate additional recurrent taxation of housing wealth. While dubbed a ‘school tax’, it actually is an annual property tax that goes to provincial general revenue (not necessarily schools). It is levied regardless of whether the home is a principal residence, and regardless of income taxes paid by the property

owner. Starting 2019, the province will add a tax of 0.2% on residential property value above \$3 million, and 0.4% on value above \$4 million. A \$4 million dollar home will incur an additional \$2,000 annual tax bill. A \$6 million dollar home will be expected to pay an additional \$10,000.

This second tax innovation has potential, but does not deliver on it sufficiently, because it is not bold enough. To begin with, the tax applies to approximately 37,000 homes, which represents just 2% of residential properties.²⁶ As a result, the new measure misses the point that average home prices have left behind the earnings of generations of younger residents (and most newcomers and renters). By focusing on the very top-end of the distribution, the measure has less potential to shift the demand curve at the *population* level. In addition, by ignoring wealth windfalls realized on high-value properties priced below \$3 million, the new measure does not mitigate many inequalities driven by returns to the kind of capital that is most commonly held by Canadians – homes. By targeting such a small portion of households, the measure also raises too little revenue to be of much use to address violations of the intergenerational golden rule. For example, the province estimates this tax change will raise \$200 million annually (Government of British Columbia 2018a, p. 8). In contrast, the 2018 budget projects that annual spending on medical care will increase \$887 million in the first year, \$1.5 billion in the second year, and continue to rise thereafter for the foreseeable future (Government of British Columbia 2018a, p. 142). In the following section, I explore alternate rate options to address these limitations.

The new school tax also piggybacks on the current system of residential property taxation, and suffers from flaws that result from inconsistent policies regarding deferment of payment integrated in that system. Presently, those over age 55 can defer payment of the tax until the sale of the home, paying interest at a rate of 0.7%. Home owners with children can also defer, but must pay a higher interest rate of 2.7%. By contrast people under age 55 without children cannot defer the tax at all (Government of British Columbia n.d.). There is little reason to justify deferral for some, but not all, owners, nor varying rates of interest that privilege older residents. As a matter of practice, any additional wealth taxation should occur only on the condition that *all owners can defer the additional tax until the sale of the property, regardless of age or family status*, in order to reduce unintended consequences for “house-rich but cash-poor” residents. The interest rate for deferral should be consistent across groups.²⁷ These deferral characteristics are part of the options considered in the following section.

3. ALTERNATE APPROACHES TO ADDITIONAL RECURRENT PROPERTY TAXATION IN B.C.

One of the most cleverly branded housing wealth tax proposals in recent years is the “Mansion Tax” encouraged by Jean Swanson (2017) who ran for Council in a City of Vancouver 2017 By-Election. Her proposal would add a 1% tax on home values between \$5 and \$10 million, and 2% tax on home value over \$10 million. While she was talking just about Vancouver, I examine the application of these rates at the provincial level. There are approximately 9,500 B.C. homes over \$5 million, or 0.5% of residential properties.²⁸ The average annual amount of Mansion Tax that would be paid by a home owner in the \$5-\$10 million bracket would be \$15,000. A \$15 million property would be subject to \$150,000 in additional annual taxation. Applying Ms. Swanson’s tax rates province-wide would generate roughly \$124-\$367 million annually²⁹ – less than 0.6% of provincial revenue in 2019 (Government of British Columbia 2018b, p. 140). This reveals there is limited revenue potential from taxing housing wealth of a minute fraction of total households, even if they are very high value properties.

Kesselman (2016a) encourages additional taxation of residential housing wealth on homes valued well below the Mansion Tax’s \$5 million starting point. He suggests a rate of 0.5% on value between \$1 million and \$1.5 million; 1.0% between \$1.5 million and \$2 million; 1.5% between \$2 million and \$3 million; and 2.0% on all value in excess of \$3 million. B.C. Assessment data indicate there are approximately 380,000 residential properties that are valued at \$1 million dollars or more.³⁰ This represents approximately 20% of households. A \$1.5 million home would incur surtax of \$2,500 ($0.005 \times \$500,000$), and a \$2 million home would incur a \$7,500 surtax. Higher surtaxes would apply to still higher-valued properties. For example, for the 8,300 properties valued between \$5 and \$10 million in B.C., the average annual tax owed under Kesselman’s rates would be \$79,000 – a levy that would be markedly higher than the Mansion Tax.³¹

Recall, however, that Kesselman also proposed that British Columbians should be allowed to offset the new property wealth tax against the income taxes they already pay. Someone earning around \$72,000 as part of the top 20% of earners who pays around \$3,800 in income taxes would not incur additional taxes until her home value approaches \$2,000,000. This makes it challenging to calculate the revenue potential of his approach, because it requires linked data between income tax records and B.C. Assessment records, which currently are not available to academic researchers. In the absence of the opportunity to offset wealth surtaxes owed against income taxes paid, his rates would generate approximately \$2.7 billion in annual revenue.

Since Kesselman proposes to offset new property wealth taxes against income taxes paid, he also runs into the same regressive consequences discussed earlier. Consider, for example, someone who earns \$25,000. She pays approximately \$425 in provincial taxes.³² Accordingly, she would incur additional housing wealth taxes under the Kesselman approach when her home value is not even \$1.1 million, well below her counterpart who earns \$72,000. In sum, Kesselman’s progressive rates, when combined with the condition that they be offset by income taxes paid, result in complex, sometimes regressive, surtax outcomes. It therefore remains more appropriate to consider what rates to apply to home wealth independently, and then contemplate what level of other tax reductions and/or spending across the entire population can be paid for by the revenue raised from the new recurrent (deferrable) tax on housing wealth.

Whereas Swanson proposes Mansion Taxes that will apply to 0.5% of B.C. households above \$5 million in value, and Kesselman proposes new taxes for 20% of homes worth more than a million dollars (with complex offsetting rules that risk the progressivity of his plan), I propose a third option that is a hybrid of the two –

what I label the Million Dollar Homes Tax. The Million Dollar Homes Tax would be an annual (deferrable) housing wealth surtax that applies to home values above \$1 million at a rate of 1%. I propose this property value threshold for several reasons. First, data reveal that \$1 million in Canadian assets positions somebody in the global 1% (Kersley and Stierli 2015). Second, \$1 million in home value represents four times the price of an average home in B.C. four decades ago (adjusting for inflation) when today's aging population started out as young adults.³³ Thus, \$1 million remains a sign of substantial affluence in the provincial context by recent historical standards. Third, 80% of B.C. households would be exempt from the Million Dollar Homes Tax, and stand to gain from the tax cuts and/or spending increases that would be made possible by its revenue, including a majority of homes in Greater Vancouver.³⁴ Finally, Statistics Canada data show that annual property taxation in B.C. is down by \$2.5 billion when measured as a share of the economy by comparison with 1981 (the earliest year for which provincial data are available),³⁵ even though the net value of principal residences is over half a billion dollars higher after adjusting for inflation.³⁶ The Million Dollar Homes Tax would raise approximately \$3.0 billion annually,³⁷ returning B.C. to a level of property taxation that is on par with what existed when today's aging population came of age as young adults.

It is not possible to calculate as precisely the revenue potential from the Million Dollar Homes Tax for Ontario. The Municipal Property Assessment Corporation that assesses the value of all homes in that province does not make its data publicly available at no cost to university researchers in the manner that B.C. Assessment does. In the absence of precise data, I make some rough estimates of the revenue potential for Ontario by extrapolating from the British Columbia calculations in the light of relative population, and relative average home prices. Since Ontario has a population that is three times larger than in B.C., but an average home price that is 83% of the B.C. average, one can project that the Million Dollar Homes Tax would raise approximately \$7.3 billion in Ontario.³⁸ The same extrapolations can be made for Canada as a whole. The nation has a population that is 7.6 times larger than in B.C., and average home prices that are 72% of the B.C. average.³⁹ Given these ratios, one can estimate that a Million Dollar Homes Tax would generate roughly \$16 billion across Canada, with nearly two-thirds of that revenue generated in B.C. and Ontario where average home prices are higher than in other parts of the country.

Under the proposed Million Dollar Homes Tax, \$2,200 would be the average additional (deferrable) annual tax incurred by owners of the 200,000 B.C. homes in the \$1 million to \$1.5 million price range. For the 91,000 homes valued between \$1.5 million to \$2 million, the average additional tax would be \$7,000. These values are well below the \$13,550 income tax bill incurred by someone earning around the top twentieth percentile.⁴⁰ For the 8,300 homes valued between \$5 million and \$10 million (less than 0.5% of all households), the additional wealth tax owed would be \$55,000. This figure is also considerably below the \$67,000 in annual income taxes paid by someone earning around \$200,000, which locates them close to the top 1% of earners in the province.⁴¹

It is not possible to calculate the average tax for 1,317 properties valued above \$10 million, because these B.C. Assessment data include residential properties in the process of development for future renters or owners. Since windfall gains on sites owned by developers are already subject to corporate income taxation, additional recurrent residential housing wealth taxation should be applied to the new homes once they are built if they meet the criteria; but not before. Development sites would therefore be exempted from the proposed Million Dollar Homes Tax on the condition they provide evidence of applications to local governments or permits. Properties not associated with such applications/permits would be charged the Million Dollar Homes Tax as speculators.

Properties valued above \$10 million also include many purpose-built rental properties in the province. The Million Dollar Homes Tax would not apply to properties that operate purpose-built rental homes. Exemption from the tax would be presented as an incentive for developers to build more purpose-built rental for which there presently are supply shortages, while ensuring existing operators do not pass down the Million Dollar Homes Tax to their tenants in the form of higher rents. The new school tax introduced in the 2018 B.C. Budget includes the same exemption.

An exemption from the tax would also be made available to any owner of residential land who contracts to contribute their property to community land banks after its sale or via their estate. This exemption would be provided because one policy mechanism to adapt to the problem of commercial land prices growing out of reach of local earnings is to consider how to grow the amount of land that is sheltered from market influences as part of a community asset or land bank. There are examples of this in Canada where governments lease lands for long periods onto which buildings for rent or ownership have been developed.⁴² As the National Housing Strategy makes available increasing amounts of public land for new housing, there is an option for local, provincial and federal governments to retain public ownership of the land via long-term leases that create opportunities to separate building prices from land costs in order to promote housing affordability. In addition, exemptions from the Million Dollars Homes Tax could be used as incentives to encourage private property owners to transfer their property to sheltered markets upon the sale or inheritance of their estate. Although most Canadians are unlikely to use this exemption because it would mean forgoing substantial sums of equity from the sale of the property in the commercial market, some committed to the “cause” of affordability may elect this option as a charitable donation. Therefore, the role of additional tax incentives to encourage such transfers merits ongoing exploration.

Finally, it is also worth noting that the Million Dollar Homes Tax proposal does not anticipate that taxpayers who own multiple properties in B.C. will be required to add together their total holdings for the purpose of applying the 1% rate on value above \$1 million. Someone could therefore own four units valued at \$500,000 without being subject to the tax, even though they own \$2 million in residential real estate. There are two reasons for this. First, the three homes that are not the taxpayer’s principal residence are already subject to capital gains taxation. Second, if those three homes are not being used for long-term rental purposes, they are captured by the new speculation tax discussed above, and/or could be made subject to commercial tax rates under municipal property taxation, as is the case with the City of Vancouver’s Empty Homes Tax. However, treatment of people’s total property wealth across multiple homes merits further consideration if it appears to tolerate arbitrary inequities in residents’ tax liabilities over time.

4. PAYING FOR OTHER TAX CUTS AND SOCIAL SPENDING

The \$3.0 billion in revenue from a Million Dollar Homes Tax could pay for other tax cuts and/or cover social expenditure increases anticipated by the Government of B.C. in its 2018 budget. I consider several examples of tax cuts and social investments below, which are intended to be illustrative, and stimulate creative suggestions from others. All revenue implications for the tax changes that I explore are calculated using version 26.1 of Statistics Canada's Social Policy Simulation Database and Model (SPSD/M).⁴³

4.1. Eliminate all Income Tax on the First \$30,000 of Earnings

The cost of eliminating all provincial income tax on the first \$30,000 of earnings would be approximately \$2.9 billion. Given that making a home in B.C. is particularly challenging for low-income households, some may argue in favour of exempting modest earning levels from provincial income taxation entirely. Targeting tax reductions to the first \$30,000 of income may appear to achieve this objective. Someone who earns around \$25,000 would save between \$0 and \$600 annually depending on the other tax credits/deductions they currently claim. However, the majority of the tax cut would be enjoyed by middle and higher income earners. For example, individuals earning above \$45,000 would see their annual income tax bill drop by around \$1,500.

4.2. Cut Income Tax Rates by One-Third on Income between \$40,000 and \$80,000

Presently, British Columbians pay income tax at a rate of 5.06% on the first \$39,676 of earned income, followed by a rate of 7.7% on the next \$39,677. These rates mean residents of B.C. pay the lowest rates of income tax on the first \$80,000 of earnings in any province, especially now that Medical Services Premiums (MSP) are phasing out (Government of British Columbia 2018a). If the provincial government wants to improve its competitive tax status still further, it could eliminate the second rate altogether, so that 5.06% would be the rate paid on a person's first \$80,000 in earnings. This tax cut would cost provincial coffers approximately \$1 billion – something the Million Dollar Homes Tax could cover – with funds left over to cut other taxes and/or contribute to new spending on medical care, child care or housing. While less expensive than the first tax cut option, the savings would again skew toward higher earners. For example, a person who earns \$25,000 would not see any change to income taxes. Annual income taxes would fall around \$170 for someone earning around \$45,000; \$850 for a resident who earns around \$72,000; and around a \$1,000 for someone earning just over \$200,000 – near the top 1% of B.C. earners.

4.3. Cut Income Tax Rates by One-Third on Income between \$40,000 and \$50,000

A variation on the above theme would reduce the personal income tax rate from 7.7% to 5.06% on income earned between \$39,676 and \$50,000. This would cost the provincial coffer approximately \$414 million per year. Again, someone earning \$25,000 would not see any change to income taxes. Annual income taxes would fall around \$170 for someone earning around \$45,000, and they would drop approximately \$300 for earners making \$72,000 and over \$200,000.

4.4. Eliminate the employer health tax introduced in the 2018 budget

In the run up to the 2017 B.C. election, multiple parties were campaigning for votes with the promise to eliminate the Medical Service Premiums (MSP) that cost up to \$900 annually per person (with reductions for low-earners that made the cost closer the \$132 for someone earning around \$25,000). At its peak, the

MSP raised around \$2.5 billion annually (Government of British Columbia 2018a, p. 140). The latest budget proposes to eliminate the MSP entirely, and recoup much of the revenue (approximately \$1.9 billion) by way of a new employer payroll tax. Small business with payrolls less than \$500,000 will be exempt, with the rate phasing in to reach 1.95% when payrolls surpass \$1.5 million. At that payroll level, the annual tax will be \$29,250 (Government of British Columbia 2018a, p. 74). The proposed Million Dollar Homes Tax could pay to eliminate this new payroll tax, with funds remaining to support new social spending.

4.5. Reduce the provincial sales tax from 7% to 5%

Although Canadians already have low sales taxes by international standards, some may prefer for additional recurrent housing wealth taxation to pay for cuts to sales taxes. The 7% provincial sales tax presently raises \$7.7 billion annually. This means each percentage point of sales tax raises approximately \$1.1 billion *before accounting for any changes in purchasing behaviour due to higher or lower sales tax rates*. Given this cost-breakdown, the Million Dollar Homes Tax could pay to reduce the sales tax rate from 7% to 6%, and possibly down to 5%, equal to more than a 25% reduction.

4.6. Increase spending on medical care, child care and housing.

The 2018 provincial budget continued the decade-long practice of increasing medical care spending faster than any other budget item, and annual spending is scheduled to grow an additional \$1.5 billion every two years (Government of British Columbia 2018a, p. 142). As discussed in the opening sections of the article, a Million Dollar Homes Tax could be an important tax revenue tool to raise funds to cover growing expenditures for a demographic that did not entirely prepay for the medical care needed when elderly. A Million Dollar Homes Tax is well suited to ensure that members of the elderly population who most benefited from the wealth accumulation associated with rising home prices contribute a fair share to their generation's medical care expenses, while sheltering those who have less, or no, housing wealth.

Simultaneously, the Million Dollar Homes Tax also provides potential revenue to bring down major costs in the lives of younger generations who have lost out in the lottery of timing by coming of age as adults during a period when annual full-time earnings are down thousands while home prices have skyrocketed by hundreds of thousands. The 2018 provincial budget identified child care as a major cost burden for younger British Columbian families, and prioritized in response historical investments to grow an affordable, high quality system. The additional \$1 billion annual investment that is still required to make B.C.'s new child care plans a reality could be paid for from just one-third of Million Dollar Homes Tax revenue (Kershaw and Anderson 2009).

The province also identified housing affordability as a top priority in its 2018 budget (Government of British Columbia 2018a), with around 30 different proposals to change policy to transform the supply and demand factors that drive home prices. While further spending alone cannot solve the housing unaffordability problem, public spending on rental assistance for the working poor, shelter for the homeless, and investment in other social housing are important parts of the solution. Some of the requisite funds could again come from a Million Dollar Homes Tax.

5. THE POLITICS OF NEW RECURRENT HOUSING WEALTH TAXES: ANTICIPATING RESISTANCE

The proposed Million Dollar Homes Tax will increase property tax bills for approximately 20% of British Columbians (and this author is among the taxpayers who will pay over \$7,000 more annually). Since revenue from the proposal will benefit the population of British Columbians either via tax reductions and/or new spending, it has potential to be a winning idea with the vast majority of the electorate if it is effectively communicated. Still, for the one in five households that incur additional housing wealth taxes, there will be resistance.

Scenario 1: The retired home owner with a fixed pension income

Take for example, anger at the very small rate increases of 0.2% to 0.4% added to property tax for homes valued over \$3 million. Shortly after the 2018 budget was released, the *Vancouver Sun* featured the circumstances of a retired economics professor who lives with his wife in a Point Grey home they bought 31 years ago for \$370,000 (Shaw and Saltman 2018). Now B.C. Assessment estimates the house is worth almost \$6.5 million. The retired professor calculated that his home will soon be charged \$12,000 in additional 'school taxes' each year, which he observes is beyond the budget he and his wife, a retired school teacher, have as pensioners. According to the retiree, "I'm beside myself because I'm looking at maybe another 20 years here and I don't know how I'm going to be able to afford that tax. We're going to be taxed to death and we'll be forced to move. My whole standard of living is shrivelling before my eyes and it's all a result, in my mind, of inept political decisions."

While one can sympathize with the task involved in adapting to additional taxation of housing wealth, the retired economist compromises the credibility of his profession when he claims his "whole standard of living is shrivelling before my eyes" and that "we'll be forced to move." First, his entire property tax bill is deferrable until the sale of the home, including the new surtax. Second, the math involved in his circumstances does not add up to a shrivelling standard of living. The 20 years that the retired professor intends to be in the home multiplied by \$12,000 a year equals \$240,000. The interest charged on deferring the new tax at a rate of 1% (higher than the current rate charged seniors by the Government of B.C.) is an additional \$24,228. By his own account, the equity in the retired professor's home has grown by \$6.13 million, even after consuming his home for 31 years. Imagining his home never increases in value again, the retiree will still net \$5.87 million after paying the new property wealth surtax for 20 years with interest. There are hundreds of thousands of younger British Columbians who can no longer afford to buy homes, and many renters of any age, who would love to see their standard of living "shriveled" before their eyes by accumulating \$5.87 million while they make a home for themselves.

In fact, this scenario gives good reason to conclude that the annual property surtax rates selected by the new B.C. government to date are too low. Under the Million Dollar Homes Tax, the retired professor will incur additional recurrent housing wealth tax bills of \$55,000 annually, which equals \$1.1 million when multiplied by 20 years. If the resident chooses to defer the taxes owed until the sale of the home, he will incur interest payments of approximately \$111,000 over that period, bringing the total tax bill under the Million Dollar Homes Tax to \$1.21 million. When this figure is subtracted from the \$6.13 million in value that has accrued in his home over the last 31 years, the retired professor will still enjoy a wealth windfall of over \$4.9 million.

As reflected above, a Million Dollar Homes Tax would still allow many British Columbians to keep the large majority of their home wealth windfall for their estate, even as they are asked to contribute more to provincial coffers to pay for medical care, child care, housing, and tax cuts for others. It is hard not to view that as a win-win, although the retired professor may still require some convincing.

Scenario 2: The young recent home purchasers

Some may think the more complicated case for the Million Dollar Homes Tax is a successful young couple who bought into the housing market for the first time in 2017, making them particularly vulnerable to market corrections. Imagine that this couple purchased a single detached house or large townhome at a price of \$1.25 million in 2017 after saving \$250,000 as a 20% down payment. What would the Million Dollar Homes Tax mean for them, and what might be the implications if there is a drop in the average home price as a result of the range of housing measures being introduced by all levels of government to recouple housing costs to earnings?

At current lending rates, this couple would need to be able to pay a \$5,000 monthly mortgage, which requires an annual household income of approximately \$200,000.⁴⁴ For the sake of simplicity, I assume two people each earning \$100,000 annually. The annual Million Dollar Homes Tax for this household would be \$2,500. This annual levy is just one-quarter to one-half of the approximately \$5,000 to \$10,000 reduction in federal and provincial income taxes paid by someone earning \$100,000 today by comparison with someone in the mid-1970s to mid-1990s earning the same amount (after adjusting for inflation).⁴⁵ In sum, income taxes for this household are down \$10,000 to \$20,000 by comparison with previous decades. So even after a \$2,500 annual Million Dollar Homes Tax, this household would enjoy considerable tax savings by comparison with previous years. If they choose, the entire Million Dollar Homes Tax could be deferred until the sale of the home.

If \$1 billion of the \$3.2 billion in revenue from the Million Dollar Homes Tax were used to eliminate the second B.C. income tax rate so that the first \$80,000 of individual earnings are taxed at 5.06%, then this couple would incur almost no net change in their total tax burden.⁴⁶ Similarly, if another billion dollars of the Million Dollar Homes Tax revenue is used to pay for the full implementation of the BC Child Care Plan announced in the 2018 budget, then this household will accrue tens of thousands in additional savings if they (choose to) have children. Covering the costs of the income tax cut and the BC Child Care Plan would still leave \$1 billion in annual revenue from the Million Dollar Homes Tax to contribute to medical care for the aging population.

Now imagine that there is a 20% reduction in average prices for residential real estate, returning B.C. and Metro Vancouver to home prices as they were in 2014.⁴⁷ This reduction would drop the value of the couple's home from \$1.25 million to \$1 million, at which point they would no longer be subject to the Million Dollar Homes Tax. Imagine this price drop occurred abruptly after five years. At that point, they would have incurred a deferrable tax liability of \$12,753 dollars (assuming a 1% interest rate on taxes owed), which would still not be due until the sale of the home. Over that five year period, the couple would have made mortgage payments of \$300,000, of which \$146,838 is paid in interest.⁴⁸ As such, their equity in their home over the five year period would increase from \$250,000 (the down payment) to over \$390,000 even after the Million Dollar Homes Tax liability, and before considering their savings from income tax reductions and/or public investments in priority services like child care or medical care. Their outstanding mortgage debt would be approximately \$846,838, down from the \$1 million dollar mortgage where they started on the date of purchase. Whereas their equity/debt ratio began at 25% on the date of purchase, it would improve to 46% even under this price-reduction scenario.

Scenario 3. Taxing housing wealth below \$1 million

Given that \$1.25 million dollar home owners with annual household earnings of \$200,000 might not incur additional net taxation as a result of the implementation of a Million Dollar Homes Tax, some may critique the proposal for being too timid in addressing growing inequalities in Canada that result from returns to capital. Some may also remark that the Million Dollar Homes Tax is not sufficiently aggressive at sending a signal in the market for developers to build stock that is closer to \$500,000, which is more in range for local earnings in cities in B.C., Ontario and elsewhere in Canada than are current average prices.

I therefore conclude by exploring political considerations associated with variations on the Million Dollar Homes Tax that imagine a new annual housing wealth levy starting at home values of \$500,000. For discussion purposes, consider three rate options for home value between \$0.5-\$1 million dollars: 1%, as in the Million Dollar Homes proposal, or lower rates of 0.5% or 0.25%. For homes that fall in this value-range, average wealth taxes owed would be \$2,070, \$1,035 and \$518 respectively. Depending on the earnings of homeowners, some or all of these additional wealth taxes could be offset by the income tax cuts considered above. For owners of homes worth more than \$1 million, the annual tax bills already calculated for the Million Dollar Homes Tax would rise by \$5,000, \$2,500 and \$1,250 respectively for each of the three rate options applied to home value between half a million and a million dollars. The total annual revenue collected by these variations would be \$4.9 billion, \$4.0 billion, and \$3.5 billion respectively. These estimates are \$1.9 billion, \$950 million and \$475 million higher than the Million Dollar Homes Tax proposal.

From a political standpoint, I would NOT suggest that the options of adding annual wealth taxes on home value starting at \$500,000 are politically expedient *if rates are set low* at 0.5% or 0.25%. Those rates increase the total revenue of the proposal by less than one-third of the Million Dollar Homes Tax, while increasing dramatically the population that will incur the tax.⁴⁹ Starting housing wealth taxes at half a million dollars would position one in two B.C. households to be subject to the recurrent wealth tax, by comparison with just one in five households that would be subject to the Million Dollar Homes Tax.

Some may judge that the additional \$1.9 billion in revenue generated via applying a 1% levy on home value over half a million dollars makes this proposal merit attention, because it would permit income tax cuts in the order of \$3 billion (or 30% of current provincial income tax revenue), while still leaving a billion to invest in child care, and another billion in medical care, etc. However, it would do so by levying the largest tax bills of any of the options on nearly half the population, which is likely to present a major political hurdle. For this practical reason, I encourage decision-makers and the general public to prioritize new recurrent housing wealth proposals that would be incurred by less than one-quarter of B.C. households, so that the electoral arithmetic is more likely to generate the political cover required for governments to make courageous changes to housing taxation.

The tax shift that would be paid for by the Million Dollar Homes tax satisfies this criterion. It arms 80% of B.C. households, including all renters, with a combination of policy adaptations from which they will clearly win financially due to the corresponding tax cuts and/or new social spending. Almost everyone in Northern B.C., the Kootenay/Columbia region, Okanagan and Vancouver Island region will not be subject to the tax, which could make it popular for parties wanting to grow support in those regions by offering them concrete savings from income tax cuts. The Million Dollar Homes Tax proposal augments its political 'saleability' still further by protecting homeowners who have lucked out in the lottery of skyrocketing home prices to retain the large

majority of their wealth windfall, while safeguarding affluent young people who have recently bought million dollar homes and who may be at risk of price reductions in the future. By exempting purpose-built rental properties, the Million Dollar Homes Tax protects tenants in those units from having the surtax passed down to them in the form of higher rents, while incentivizing the construction of new purpose-built rental supply to grow the vacancy rate to a level necessary to recouple rents to earnings.

Simultaneously, tenants sharing space in single detached homes or condos valued above \$1 million should be shielded from the risk that the Million Dollar Homes Tax is passed down in the form of higher rents via existing legislation that limits annual rent increases to inflation plus 2%. Even if this protection is insufficient, those renters will often come out ahead with more money in their pockets as a result of the income tax cuts that are recommended to go hand in hand with the Million Dollar Homes Tax proposal. As more rental stock gets built, they can look for purpose-built rental options that are exempted from the tax.

While addressing these political sensitivities, the new Million Dollar Homes Tax would accomplish the three important, substantive policy goals that motivate this paper: (i) contribute another policy signal to slow the escalation in home prices; (ii) contribute a new opportunity to mitigate rising inequality due to returns to capital that outpace returns to labour; and (iii) raise revenue with which to address past violations of the intergenerational golden rule. For all of these reasons, it is time for the public and decision makers to engage with the proposed tax shift in search of refinements and common ground around which Canadians can launch a journey toward restoring housing affordability, forever, and promoting tax fairness. Join us in this search for common ground, and our efforts to build on it. Get involved at www.gensqueeze.ca.

ENDNOTES

- 1 For example, the Government of BC introduced the Foreign Buyer's Tax in 2016 under Liberal Premier Christy Clark, which NDP Premier John Horgan has since expanded as of 2018 both in terms of its geographic scope and rate. The geographic expansion had been recommended by Generation Squeeze (2017). In Ontario, the provincial government introduced a similar Non-Resident Speculation Tax in 2017 for the GTA as part of its Ontario Fair Housing Plan (Government of Ontario 2017a). Since then, following similar changes in New Zealand, the Green Party of BC (2018) has proposed a ban on non-residents purchasing some kinds of residential real estate. Restrictions on foreign flows of capital are also considered by Lee (2016) at the Canadian Centre for Policy Alternatives.
- 2 For example, supported by Generation Squeeze, the City of Vancouver (n.d.) introduced the first Empty Homes Tax in North America at the end of 2016 which levies the equivalent of commercial tax rates on residential homes that are not rented out for a minimum six months. The City has since introduced new regulations for Airbnb and other short-term rental platforms limiting this practice to use of rooms within owners' principal residences (City of Vancouver 2018), and did so in response to advocacy by the Fairbnb coalition of which Generation Squeeze was part. The City of Toronto (2017) has also introduced new regulations of short-term rentals, and is currently in the process of designing its own Vacant Homes Tax partly in response to a Gen Squeeze petition that received thousands of signatures. In addition, provincial governments in Quebec, Ontario and B.C. have all made adaptations to support regulation and taxation of short-term rentals.
- 3 For example, Tom Davidoff and colleagues introduced the B.C. Housing Affordability Fund (n.d.) to address this issue, as did Rhys Kesselman (2016a) who proposed in a Vancouver Sun Op Ed a progressive property surtax against which income taxes could be credited. Versions of their ideas were adopted by the BCGEU (2017) in its policy recommendations. The B.C. government adapted the recommendations of Davidoff and Kesselman when introducing its speculation tax in the 2018 budget.
- 4 Liberal and NDP governments in B.C. have adjusted property transfer tax policy since 2016 (Government of British Columbia 2017, 2018a), as has the Government of Ontario (2017b). The B.C. Green Party (2017) campaigned on the promise to augment the progressivity of property transfer taxation in the province, proposing a rate as high as 12% on homes over \$3 million. In addition, the B.C. Green Party proposes life-time limits to capital gains exclusions for principal residences. Gen Squeeze has proposed capital gains taxation on principal residences to capture value from homes that are "flipped" within 2-3 years of the previous purchase (Kershaw 2016, 2017a, 2017b, 2018). A related idea was also proposed by Kesselman (2016b) in a media Op Ed.
- 5 Generation Squeeze published several studies recommending additional recurrent property taxation (Kershaw 2017a, b, 2018, Kershaw and Minh 2016). So too did Kesselman (2016a), the BCGEU (2017) and Lee (2016) of the Canadian Centre for Policy Alternatives. In its 2018 budget, the Government of B.C. (2018a) added property surtaxes to homes over \$3 million in value.

- 6 In related work that is underway, the Gen Squeeze Lab is reviewing evidence about taxation of (a) and (b) as part of a project to explore revisions to capital gains taxation paid by sellers. The goal is to identify tax changes that will reduce policy incentives that currently encourage the “flipping” of homes, along with the associated adaptations required to extant property transfer taxation paid by purchasers.
- 7 Author calculations based on Canadian Real Estate Association data provided by Janet Lemoine (jlemoine@crea.ca) January 15, 2018.
- 8 Author calculations based on custom data provided by B.C. Assessment on March 26, 2018. The analysis and interpretation reflects the view of the author, not B.C. Assessment. These data update figures presented in Kershaw and Minh (2016).
- 9 Changes in home ownership rates based on author calculations of housing wealth data in 1977 and 2016 available from Statistics Canada (n.d.-i) Survey of Consumer Finance and Statistics Canada (n.d.-c) Survey of Financial Security.
- 10 Changes in home ownership rates based on author calculations of housing wealth data in 1977 and 2016 available from Statistics Canada (n.d.-i) Survey of Consumer Finance and Statistics Canada (n.d.-c)> Survey of Financial Security.
- 11 A comprehensive approach must include measures that change zoning to permit additional supply, incentives for purpose-built rental construction, discouraging/restricting foreign demand, taxing empty homes, restricting short-term rentals, enforcing current regulations to prevent unreported “flipping” of homes or money laundering, growing community land banks, etc.
- 12 Property tax data from Statistics Canada n.d. g: CANSIM Table 380-0080. GDP data from Statistics Canada n.d. h: CANSIM Table 380-0063.
- 13 All income tax calculations use Statistics Canada’s Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author.
- 14 Author calculations based on revenue data from OECD (n.d.), and GDP data from Statistics Canada n.d. h: CANSIM Table 380-0063.
- 15 Author calculations based on revenue data from OECD (n.d.), and GDP data from Statistics Canada n.d. h: CANSIM Table 380-0063.
- 16 Author calculations based on revenue data from OECD (n.d.), and GDP data from Statistics Canada n.d. h: CANSIM Table 380-0063.

- 17 Author calculations based on revenue data from OECD (n.d.), and GDP data from Statistics Canada n.d. h: CANSIM Table 380-0063.
- 18 Author calculations based on revenue data from OECD (n.d.), and GDP data from Statistics Canada n.d. h: CANSIM Table 380-0063.
- 19 Author calculations based on revenue data from OECD (n.d.), and GDP data from Statistics Canada n.d. h: CANSIM Table 380-0063.
- 20 Author calculations based on revenue data from OECD (n.d.), and GDP data from Statistics Canada n.d. h: CANSIM Table 380-0063.
- 21 All income tax calculations use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSPD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author.
- 22 Funding for the Canada and Quebec Public Pensions (C/QPP) factored prominently in public debate in the 1990s in response to work by Oreopoulos and Kotlikoff (1996), who estimated that total government spending in 1995 required taxes of future generations that were twice what current generations were paying. Thereafter, Canada Public Pension contribution rates were increased to address this concern. However, no policy changes were made in regards to collecting funds for future medical care expenditures that are driven by similar considerations about the demographic bulge associated with the aging of the Baby Boom generation.
- 23 All income tax calculations use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSPD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author. Income percentile data are from Statistics Canada (n.d.-h).
- 24 All income tax calculations use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSPD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and

provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author. Income percentile data are from Statistics Canada (n.d.-h).

- 25 All income tax calculations use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSPD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author. Income percentile data are from Statistics Canada (n.d.-h).
- 26 Author calculations based on custom data provided by B.C. Assessment on March 26, 2018. The analysis and interpretation reflects the view of the author, not B.C. Assessment.
- 27 Since some tax planners already encourage high-asset individuals over age 55 to defer payment of property taxes because of the inexpensive cost of borrowing from government, the rate should be set in consideration of this practice and with the intention to minimize it.
- 28 Author calculations based on custom data provided by B.C. Assessment on March 26, 2018. The analysis and interpretation reflects the view of the author, not B.C. Assessment.
- 29 Author calculations based on custom data provided by B.C. Assessment on March 26, 2018. The analysis and interpretation reflects the view of the author, not B.C. Assessment. Note that the \$367 million estimate includes over \$243 million in revenue that would be collected from 1,317 properties over \$10 million in value. I recommend below excluding these properties from the estimate because it is not possible to identify which are under development or are purpose-built rental properties.
- 30 Author calculations based on custom data provided by B.C. Assessment on March 26, 2018. The analysis and interpretation reflects the view of the author, not B.C. Assessment.
- 31 Author calculations based on custom data provided by B.C. Assessment on March 26, 2018. The analysis and interpretation reflects the view of the author, not B.C. Assessment.
- 32 All income tax calculations use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSPD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author. Income percentile data are from Statistics Canada (n.d.-h).

- 33 Author calculations based on Canadian Real Estate Association data provided by Janet Lemoine (jlemoine@crea.ca) January 15, 2018.
- 34 It is worth noting that 61% of the homes that would be subject to the Million Dollar Homes Tax (including my own) are located in Greater Vancouver, followed by 30% in the Fraser Valley, 6% on Vancouver Island, 2% in the Thompson Okanagan, and almost 0% in both the Kootenays and North. (These data are from author calculations based on custom data provided by B.C. Assessment on March 26, 2018. The analysis and interpretation reflects the view of the author, not B.C. Assessment). For political parties that aim to grow support in electoral districts outside of the major population centres, the Million Dollar Homes Tax proposal will be appealing because it prioritizes additional revenue generation specifically in the regions where home prices have risen the most.
- 35 Custom property tax data provided by Stephen West of Statistics Canada (stephen.west@canada.ca) by email on March 9, 2018. The data are drawn from datasets that support CANSIM Table 384-0047: Revenue, expenditure and budgetary balance - General governments, provincial and territorial economic accounts. Statistics Canada is currently working on a project to extend this Table back to 1981. However, these data are not yet separately published and are subject to change once officially released.
- 36 Changes in total net housing wealth in B.C. for 1977 and 2016 are drawn from data available from Statistics Canada (n.d.-i) Survey of Consumer Finance and Statistics Canada (n.d.-c) Survey of Financial Security.
- 37 Author calculations based on custom data provided by B.C. Assessment on March 26, 2018. The analysis and interpretation reflects the view of the author, not B.C. Assessment. Note that the \$3.0 billion estimate excludes over \$207 million in revenue that would be associated with 1,317 properties over \$10 million in value because it is not possible to identify which of these properties are under development or are purpose-built rental properties.
- 38 Population data are from Statistics Canada (n.d.-a). Housing price data are from Canadian Real Estate Association data provided by Janet Lemoine (jlemoine@crea.ca) January 15, 2018.
- 39 Population data are from Statistics Canada (n.d.-a). Housing price data are from Canadian Real Estate Association data provided by Janet Lemoine (jlemoine@crea.ca) January 15, 2018.
- 40 All income tax calculations use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSPD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author. Income percentile data are from Statistics Canada (n.d.-h).

- 41 All income tax calculations use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSPD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author. Income percentile data are from Statistics Canada (n.d.-h).
- 42 For example, see <http://www.chf.bc.ca/partner/the-land-trusts>
- 43 This analysis is based on Statistics Canada's Social Policy Simulation Database and Model (SPSD/M). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author.
- 44 This annual income assumes that housing costs do not surpass 30% of household income.
- 45 All income tax calculations use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSPD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author. Income percentile data are from Statistics Canada (n.d.-h).
- 46 All income tax calculations use Statistics Canada's Social Policy Simulation Database and Model (SPSD/M), which is a widely used tool designed to analyze the financial interactions of governments and individuals in Canada. 2016 tax calculations rely on SPSPD/M version 26.1 and 1976 calculations rely on version 8.1. Since the released version of the latter only included years 1984 to 2005, Statistics Canada staff updated the parameters for this study to reflect the 1976 tax structure for federal and provincial taxes. Those updates were provided by Laurie Plager (laurie.plager@canada.ca) on January 19, 2018 (Ontario) and February 13, 2018 (B.C.). The assumptions and calculations underlying the simulations were prepared by the author, and the responsibility for the use and interpretation of these data is entirely that of the author. Income percentile data are from Statistics Canada (n.d.-h).
- 47 Housing price data are from Canadian Real Estate Association data provided by Janet Lemoine (jlemoine@crea.ca) January 15, 2018.
- 48 Author calculations using Vancity Credit Union Mortgage Calculator during the month of April 2018. See <https://www.vancity.com/Mortgages/MortgageCalculators/>
- 49 Author calculations based on custom data provided by B.C. Assessment on March 26, 2018. The analysis and interpretation reflects the view of the author, not B.C. Assessment.

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