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A NEW APPROACH TO IMPROVING SMALL-BUSINESS TAX COMPETITIVENESS

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SUMMARY

Governments, including Canada's, offer tax benefits to small businesses, such as lower rates, in the belief that these benefits encourage growth, but these attempts can easily have the opposite effect. Small businesses that face steep "tax walls," meaning a sudden and sharp increase in tax rates once they grow past a certain size, are discouraged to grow rather than incur significantly greater tax expenses.

Canada's tax wall is steeper than that of any other G7 country or Australia. With a tax wall representing a 27-point increase in taxes after the small-business threshold is reached, it is far higher than even the second-highest walls of 18 points in Germany and the U.S., and drastically higher than the least steep wall, of three points, in Japan.

The result is that Canada encourages investors to keep companies small and less efficient. Growing companies will choose to break up into smaller, more inefficient units, before they get too big, or they may simply look to sell out to foreign buyers after reaching a certain size. This hurts Canada's economic growth, economic efficiency and productivity, and it depresses Canadian workers' wages.

Further, once considering both corporate and personal income taxes, Canadian small business are taxed more highly on their investments compared to S-corporations in the United States once they grow beyond $13 million in asset size (based on specific assumptions used for modelling). The higher tax in Canada encourages small business owners to migrate or sell out to US companies.

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The steepness of Canada's tax wall is affected by the jump in corporate tax rates once a business grows larger, but it is most affected by the sharp increase in the personal income taxes paid by the owners of that business. If innovators and inventors are successful in growing a business in Canada, they will face one of the highest personal income tax rates in the world, beginning at a relatively low level of income. The system therefore encourages them to take their business elsewhere.

With a few reforms, the government could ensure the small-business tax system actually promotes small-business growth, as intended. Among them are a flat tax on corporate profits for all businesses, regardless of size, but with an annual 100-per-cent write off on capital expenditures. In addition, income averaging for small businesses would put owners, who will have lean earning years and fat earning years, on a more equal footing with salaried taxpayers. Targeted small-business dividend taxes, for owners with a large interest in an active business, and a capital-gains exemption for purchasers of initial public offerings in qualifying small corporations would also help reorient Canada's small-business tax system towards its goal of helping businesses grow. After all, there seems little point in Canada having a small-business tax regime at all, if its effect in reality is to discourage business growth.

INTRODUCTION

With the 2020 COVID-induced recession, many small businesses, especially in the service sector, have struggled to stay open. Temporary government support and credit facilities have been provided to help cover wage and rent costs. However more than 58,000 Canadian small business nevertheless became inactive in 2020 and more than 200,000 small business could close during the COVID pandemic.[1]

After economies recover from the pandemic recession, it will be useful to revisit taxation on small-business growth and productivity, as small business can play a vital role in the economic recovery. In most countries, if a corporation grows large enough, the owner pays more corporate and personal taxes. To analyze the impact of taxes on business growth, we construct "tax walls" reflecting the marginal effective tax rate on capital as the business grows. The rate rises since some corporate tax benefits may be lost and the owner will pay more personal income tax.

This study is an update of the 2013 University of Calgary School of Public Policy report titled "Small Business Taxation Revamping Incentives to Encourage Growth." Since 2013, small- and medium-enterprise (SME) taxation has changed significantly, including the 2018 federal provisions limiting income splitting for family-business owners and increasing the tax on passive income (by grinding down the small-business deduction). This report aims to evaluate Canada's taxation as of Dec. 31, 2020 (ignoring COVID-related temporary support) compared to that of other G7 countries and Australia (the latter being similar to Canada in its industrial structure and rule of law). Canadian competitiveness, especially with the United States, is important, since small-business owners can decide to move to the U.S., or Canadian small businesses can be sold off, with their functions moved to foreign jurisdictions.

The rationale for providing preferential tax treatment for small businesses has been to compensate for their limited access to capital financing.[2] In the past, tax incentives have been adopted to alleviate excessive compliance costs and address small-business cash-flow concerns. In recent years, federal and provincial governments have lowered small-business tax rates as well as provided a number of incentives and concessions to aid Canadian small businesses.

Contrary to the widely held view that small-business tax concessions encourage growth, the very same tax relief can have the opposite effect. One notable problem is that incentives could have a perverse effect of creating a "tax wall" that impedes rather than encourages growth. This can not only discourage new investment, but can also affect an individual's decision to become an entrepreneur or a company's decision to remain in a country altogether. Tax benefits given to startups at the early stage of growth will not provide long-term benefits if the company grows sufficiently large that the owners decide to move it to another country for regulatory and tax reasons.

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1 CBC, "COVID-19 could shutter more than 200,000 Canadian businesses forever, CFIB says," January 21, 2021, https://www.cbc.ca/news/business/cfib-survey-1.5882059.

2 The argument that there is a lack of access for capital finance is based the claim that small firms find it difficult to obtain financing due to high transaction and informational costs when borrowing from banks and other lenders (Schultz 1983).

Regardless of the criteria defining small business (asset size, revenue, taxable income, number of employees or annual aggregate turnover), firms may choose to stay small rather than undergo expansion if the additional after-tax income does not compensate for the entrepreneur's time and effort (Keen and Mintz 2004). Dachis and Lester (2015) focus on small-business corporate taxes in Canada, while this paper takes a broader approach, looking at both corporate- and personal-tax impacts on small-business growth.

Canada has the steepest tax wall among the countries we compare, reflecting not just corporate taxes but also personal taxes on dividends and capital gains. For startups with little income, Canada's tax on capital is quite favourable for small-business investment compared to most countries. However, once the firm grows larger, beyond $15 million in asset size, its tax on capital is above that of many other G7 countries including the United States.

One of the consequences associated with the creation of tax walls is that they lead to less-efficient companies operating in the economy. Companies may break up into smaller sizes to take advantage of tax benefits while foregoing the economic gains from continued growth and economies of scale. In the past, this phenomenon has been attributed as one of the many factors explaining Canada's low productivity rate compared to that of other G7 nations (Leung, Meh and Terajima 2008). It can also lead to what is called the "threshold effect," whereby a small business is effectively held back from growing beyond the taxation definition of "small." This does not necessarily imply that small-business taxes are too low. Instead, it may imply that taxes become too high as the firm grows.

While small-business tax incentives have complicated the tax system in the past, the policy can still be used to shift the focus on growth, rather than creating barriers to growth. As this paper later illustrates, tax incentives today undermine the neutrality of the tax system and have hindered efforts to simplify taxation and achieve increased economic efficiency and fairness. At the same time, however, there are a variety of policy alternatives that can help address this area of ongoing concern.

In particular, we provide several approaches to small-business taxation to encourage growth. In particular, we emphasize the need to focus on personal income taxes in affecting small-business growth. We specifically consider the following reforms, of which the third one is perhaps the most novel.

- *Flat tax on corporate profits:* Canadian governments should levy a uniform corporate income tax rate on all businesses and provide an annual 100-per-cent write-off for the first $1 million of capital expenditures for all businesses, regardless of size.
- *Income averaging for small business:* Given the risk faced by small businesses, manager-owners holding a minimum of 25 per cent of shares in a small corporation (or unincorporated business) should be given the option to average personal taxes for a period of years on income derived from their businesses, to reduce personal taxes on lumpy income.
- *Targeted small-business special dividend tax:* Instead of providing corporate-tax-rate reductions, small-business owners with at least 25-per-cent share

ownership would qualify for a special dividend tax regime, whereby a final withholding tax rate on dividends roughly equal to the capital-gains tax rate would apply.

- *Targeted capital-gains tax incentives:* Investors in an initial public offering of a small private corporation should be taxed on half of the taxable gains from selling the shares held for a minimum of three years. The lifetime capital-gains exemption used in Canada and some other countries would also apply to these shares.

The remainder of this paper will expand on these issues. The next section focuses on small-business taxation in Canada. In that section, we outline the tax system as it applies to small business and the model used for estimating the effective corporate and personal tax rates that vary according to the size of the firm. We construct the tax walls faced by small businesses in each of the provinces and for Canada as a whole. Following this section, we then compare small-business taxation to other G7 countries and Australia (the latter chosen due to its economic similarity to Canada). The final section discusses options for business tax reform.

SMALL-BUSINESS TAXATION IN CANADA

Small business plays an important role in the Canadian economy,[3] accounting for 97.9 per cent of Canadian companies and over two-thirds of the workforce, and contributing 42 per cent to Canada's gross domestic product (GDP).[4] At the provincial level, small business contributes 33 per cent to British Columbia's GDP and 32 per cent to Alberta's GDP. In the Atlantic provinces, the small-business contribution is 25 per cent to GDP, while in Ontario it is 28 per cent, and in Quebec it is 30 per cent.[5]

Small-business growth experience

Although small business plays a significant role in generating output and employment, its growth in employment has been slower than that of larger companies (Table 1). Exceptions where employee growth rates have been faster for small firms compared to medium-sized firms include: business, building and support services; accommodation and food; and education and health services. While tax walls might be one explanation for typically slower employment growth in smaller firms, other factors influence firm growth, including economies of scale and regulation.

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3 "Small Business is a diverse group of companies, differing in terms of size from micro-enterprises to medium sized companies." There is no agreed-upon definition of small business (OECD, Secretary General Report to the G20 Finance Ministers and Central Bank Governors, September 2015, Ankara, Turkey, p. 43). In the rest of this paper, the term "small business" means enterprises of less than $50 million in asset size or with fewer than 100 employees.

4 Innovation, Science and Economic Development, Key Small Business Statistics, 2020.

5 Luke Rispoli and Danny Leung, "The contribution of small and medium-sized businesses to gross domestic product: A Canada-United States comparison," Economic Analysis Research Paper Series 070, Statistic Canada (2011).

Table 1: Average Annual Growth Rates in Employment According to Size of Firm: 2014–19

	Small firms (1–99 employees)	Medium-sized firms (100–499 employees)	Large firms (500+ employees)	Total
Goods-producing	-0.2	0.8	3.4	0.5
Services	0.9	2.1	5.6	1.6
Total	0.7	1.7	4.9	1.3

Source: Innovation, Science and Economic Development, Key Small Business Statistics, 2020, Table 8.

The environment in which small business operates in Canada is very dynamic and challenging. Every year, many small businesses are formed, but many more end up leaving the marketplace. The recently available data point to fewer closures than startups. From 2013–17, there were annually 96,500 business startups with fewer than 100 employees (90 per cent with one to four employees). Small-business closures in the same period were annually 90,600 (91.6 per cent were firms with one to four employees).[6] The smallest businesses have the lowest survival rates. After 16 years, 30.2 per cent of firms survive that start with one to four employees, compared to 33.2 per cent for firms starting with five to 19 employees and 40.1 per cent for those starting with 20 to 99 employees.

As Dachis and Lester (2015) state, 91.1 per cent of small corporations benefiting from a reduction in corporate income tax rates have less than $1 million in assets, and a further 8.6 per cent have assets between $1 million to $8 million. Thus, few companies actually grow into larger companies. The preponderance of very small business corporations reflects in part that many owners do not plan to create a larger business (Finance Canada 2014). Instead, they choose to incorporate their business for limited liability reasons or to reduce income taxes. Some do grow into medium-sized companies, and those are the ones of most interest to this study, given their impact on productivity.

Why small businesses are provided tax incentives

Many factors, including regulations, influence small-business profitability, but tax policy has a major bearing on small-business investments. Taxes affect entrepreneurial work effort, financing and risk-taking. With capital and labour mobility in federations and internationally, governments may be concerned whether their tax system is competitive enough to attract small-business startups or funding.

Taxation of small businesses has been the focus of tax-reform debate in many countries for the past several decades.[7] Some policy-makers argue that the preferential tax treatment for small businesses is to compensate for their lack of access to finance

6 Ministry of Innovation Science and Economic Development, "Key Small Business Statistics," November 2020. https://www.ic.gc.ca/eic/site/061.nsf/eng/h_03114.html#1.2. Cary, Lester and Luong (2016) suggest that entry and exit rates among small businesses have been declining in Canada, which suggests a decline in Schumpeterian "creative destruction."

7 The Mintz committee pointed out the distortion created by taxing small business at preferential rate, as "it creates tax-planning incentive around small business deduction and reduces the investment by the small business sector." See Technical Committee on Business Taxation, Report; and Finance Canada (1997).

and the compliance costs borne by small businesses. Many governments contend that special treatment for small businesses fosters investment, employment, and economic growth among small businesses. Taxes also discourage risk-taking if the government shares the profits but not the losses incurred by entrepreneurial firms (Mintz 1988). Others argue that reform is needed, as the low tax-rate incentive impedes businesses from growing into larger firms (Chen and Mintz 2011). It could also lead to owners moving to other competing jurisdictions or selling their companies to foreign competitors rather than growing (Lortie 2019).

Further, the administrative and compliance costs associated with the tax and regulatory system are a greater burden on smaller businesses compared to larger companies. Certainly, there is conclusive evidence to suggest that the cost of compliance relative to asset or revenue size declines (Vaillancourt and Clemens 2008 and Tu 2020). However, costs are substantial for both large and small firms, suggesting that broad reforms to simplify the tax system would certainly benefit all firms.

Probably, the most important argument in favour of small-business support is with respect to information asymmetries in financial markets, whereby smaller firms, more reliant on funds from external sources, face higher financing costs, even if they have good-quality projects (Akerlof 1970). Research on this subject has spawned a rich literature on imperfect information, which showed that markets could work in the presence of imperfect information if people trust signals about credit quality, such as financial leverage, entrepreneurial stake in investments, dividend policy, etc. Signals work if good suppliers can separate themselves from the lemons; a minimal condition needed for separation is that the signal is more expensive for the lemons to adopt than for the higher-quality companies. Nonetheless, even with the separation of the good from the bad, inefficiency is present, since bad-quality companies operating in the market make it more expensive for good-quality ones to issue securities to less-informed investors.

In the past several years, several disparate papers on policy applications to models with imperfect information have provided a reasoned approach to improve the functioning of markets (see Mintz 1997). The key role of regulations or fiscal policies is that they should make it harder for bad players to mimic good players. In other words, it is important to "tax," not "subsidize," signals, so that good players are less squeezed out of the market by lemons. For example, new equity-financing subsidies could actually worsen information asymmetries, since they make it easier for bad firms to copy good firms (the good firms need less new equity financing since they have stronger cash flows and signal this strength through greater use of retained earnings). On the other hand, investment credits or other corporate tax reductions make it easier for good firms with better internal resources to separate themselves from poorer-quality companies.

Table A2.1 in Appendix 2 provides a summary of various studies on the impact of taxes on small-business decisions in Canada. While some studies show that tax effects may be little or none (see the survey by Bruce et al. 2020), overall, several important conclusions have been drawn from the most significant studies:

- Corporate-income and capital-gains taxes discourage investment by small businesses (e.g., Poterba 1989 and Becker, Becker and Jacob 2013).
- A higher personal tax rate deters individuals from starting new business ventures (e.g., Djankov et al. 2010).
- Higher personal taxes discourage self-employment (e.g., Ferede 2013).
- Most small businesses fund investment with retained earnings and savings provided by owners, as opposed to large firms that issue equity and debt (Gentry and Hubbard 2003). Small businesses do not have access to the international capital market, so both personal taxes on dividends and capital gains can impact investment decisions as well.
- When the corporate income tax rate is below top personal income tax rates, owners will have an incentive to incorporate to avoid paying personal taxes on unincorporated income (e.g., Gordon 1997). However, this conclusion assumes that the income generated is not needed by owners for personal consumption, so that profits can be retained by the company.
- Tax incentives for small businesses can have the perverse effect of discouraging growth (e.g., Holtz-Eakin 1995).

RELEVANT CANADIAN TAX PROVISIONS

In our empirical analysis, described further below, we focus on incorporated small-business investment decisions. For this purpose, we elaborate upon four primary tax provisions related to income derived from small and medium-sized corporations: corporate tax rates, personal taxation of dividends, personal taxation of capital gains, and progressivity of the personal income tax. Canada also provides other tax preferences for small firms under the corporate income tax, personal income tax, payroll tax and sales taxes (these provisions are summarized in Table A3.1 in Appendix 3).

Corporate taxation

Since 1972, Canada's special tax framework has relieved small business of corporate taxes on reinvested profits. Under the current Federal Income Tax Act, a Canadian-controlled private corporation is eligible to receive a small-business deduction (SBD) to reduce the corporate tax rate on its first $500,000 of profits from active business income, when taxable capital (gross assets) is below $10 million. As taxable capital increases from $10 million to $15 million, the SBD is progressively reduced on a straight-line basis. No SBD is available for firms whose taxable capital exceeds a threshold of $15 million. Similar tax incentives are provided by provincial governments, albeit at varying rates and thresholds. Table A3.2 in Appendix 3 provides a summary of small-business tax rates over the years, illustrating the ongoing efforts by the government to provide a more favourable business environment. In recent years, both federal and provincial governments have adopted increasingly generous reductions in small-business tax rates. In late 2017, the federal government announced increases in the SBD reduction, lowering tax rates from 10.5 per cent prior to 2018, 10 per cent in 2018, and nine per cent in 2019. Most provinces levy small-business taxes at rates less than three per cent.

Dividend taxation

Personal income taxes apply to the income derived by an owner from a small business. Employment and investment income received by small-business owners are fully taxed as ordinary income. Since profits have already been taxed at the corporate level, distributed profits (dividends) are taxed at a concessionary rate, as explained below. Capital gains arising from the sale of assets are also taxed at a preferential rate (currently, 50 per cent of capital gains are included in income).

Canada avoids double taxation of dividends at the corporate and personal levels by providing a dividend tax credit intended to offset the corporate tax paid before the distribution of profit. The credit, however, is not equal to the actual corporate tax paid (as it is in Australia, for example), but instead is based on the presumption that profits have been taxed at the statutory corporate income tax rate prior to the distribution of profits. Dividends are grossed up by a factor to measure profits before the payment of corporate taxes (in principle, the factor is one divided by the difference of one minus the statutory tax rate). The personal income tax is applied to grossed-up dividends, and then a credit rate (equal to the corporate income tax rate) is multiplied by grossed-up profits and deducted from personal tax payments. The net effect is to provide a credit equal to the corporate income tax paid on pre-tax profits distributed to investors.

The dividend tax credit, however, varies by province, reflecting different provincial corporate income tax rates. The gross-up factor in Canada is set at a rate to approximate the total (weighted average) corporate tax paid by corporations at both the federal and provincial levels. The credit typically differs from the actual corporate tax paid for this and other reasons. Accelerated cost deductions and investment tax credits reduce corporate taxes as a share of book profits below the statutory tax rate. Similarly, disallowed cost deductions can drive the average corporate income tax rate above the statutory tax rate. This results in the dividend tax credit over- or under-integrating corporate and personal income taxes on distributed profits.

Since Canada has two corporate income tax rates (small and large), it provides two separate dividend tax credits for eligible dividends (profits distributed from high-tax corporate income) and non-eligible dividends (profits distributed from profits subject to the small-business deduction). As of 2020, the eligible dividend gross-up is 38 per cent, and the federal dividend tax credit is 15 per cent. For non-eligible dividends, the gross-up is 15 per cent, and the tax credit is nine per cent. Provincial credits are added to federal credits (see Table A3.2 in Appendix 3).

Small-business owners are able to deduct contributions to registered retirement savings plans (RRSPs) up to the lesser of 18 per cent of their income (e.g., wages and bonuses) or $27,230 in 2020. Since dividends are not earned income, owners typically pay out employment income from corporate profits to have sufficient room to claim RRSP deductions.

Capital-gains taxation

Since 1972, when the capital-gains tax was introduced in Canada, a preferential tax rate has applied to realizations from the sale of assets, including shares held by owners of

a business. While often argued for as a relief for inflation, the preferential rate reduces double taxation of profits reinvested in the company (reinvested earnings, net of corporate taxes, result in higher share values held by the owner).[8] Further, tax-planning arbitrage is minimized when the capital-gains tax rate on realizations for the highest income bracket is set roughly equal to the top dividend rate. As discussed below, the top dividend tax rates (net of credits) are higher than the top capital-gains tax rates for the highest income bracket for all provinces.

Since capital-gains tax is only paid when shares are sold, owners can defer the payment of tax by holding shares for longer periods. If the capital-gains tax were applied to "accrued" capital gains each year, whether shares are sold or not, the accrual-equivalent capital-gains tax rate will therefore be below the capital-gains tax rate on realizations. In our model, we use the accrual-equivalent capital-gains tax rate taking into account a 20-year deferral based on the average years left until the owner retires.

Besides the host of tax benefits at the business level, small-business owners also benefit from lifetime capital-gains exemption for the sale of farmland, fishing property, qualified small-business corporation shares and shares in Canadian-controlled private corporations (CCPCs). In 2019, the maximum lifetime capital-gain exemption indexed to inflation is $883,912. Since most CCPCs are small, this key exemption allows the small-business owner to pay zero tax on the sale of qualified small-business stock. The owner realizes his cumulative capital gain without tax in order to finance retirement (Technical Committee on Business Taxation 1997). This enables owners of smaller businesses to be exempt from capital-gains tax.

Progressivity of the personal tax

The progressivity of the personal income tax results in small-business owners paying increasingly higher rates of personal income tax on the income they derive from their business corporation. Thus, as the small business earns more profit, the owner will face a step up in marginal personal tax rates on additional income drawn from the corporation, which is incorporated in the analysis below.

For the top bracket, dividends are taxed more heavily than capital-gain realizations, while both are taxed at rates less than employment, interest and other ordinary income. For example, in 2020, the top Alberta personal income tax rate on ordinary income in excess of $315,928 is 48 per cent, while on non-eligible dividends the rate is 42.31 per cent, on eligible dividends (from profits not qualifying for the SBD) it is 31.71 per cent, and on capital-gains realizations is it 24 per cent. At lower levels of income, capital-gains realizations are at times taxed more heavily than dividends. At the income bracket $48,585 to $97,069, the marginal tax rate on ordinary income is 30.5 per cent, on non-eligible dividends it is 22.18 per cent, on eligible dividends it is 7.56 per cent and on capital gains it is 15.25 per cent.

These differences in marginal tax rates result in two observations. First, if capital gains are preferentially treated compared to dividends, owners will prefer capital-

[8] ibid., Chapter 7. A typical assumption that we use for our analysis is that one extra dollar of retained earnings results in an increase in the firm's value by one dollar.

gain realizations (such as share buybacks) rather than dividend payments. Second, from a personal-tax perspective, dividends and capital gains are preferred as a source of income compared to employment income. However, unlike employment income, dividends and capital-gains realizations have already been taxed at the corporate level since they are not deductible expenses from profits. Thus, the combined effective corporate and personal income tax on dividend and capital-gain income should be compared to the personal tax rate on interest and employment income to determine which are preferable as sources of income. As will be discussed below, these issues affect both the financing and investment decisions of companies, as well as the compensation paid to the small-business owner.

A TAX-WALLS MODEL FOR SMALL-BUSINESS GROWTH

Entrepreneurs and close associates are typically the major sources of equity finance for small businesses, with debt typically obtained from lending institutions. Thus, corporate taxes are not the only relevant factor influencing small-business decision-making. Personal taxes on entrepreneurial income also play a role. Statistics Canada reports that 5.8 per cent of immigrants own a private corporation after four to 10 years of immigrating, somewhat higher than the rate of Canadian-born small-business ownership (4.8 per cent).[9] The model used here focuses on corporate income taxes and personal taxes on dividends and capital-gains income received by the small-business owner. However, as discussed further below, a small-business owner will find it advantageous to take employment income (salaries and bonuses) or lend debt to the company.

Why measure the tax wall?

We are explicitly interested in developing a tax wall to understand how taxes on investment change as the firm grows. As each dollar of capital is invested in the firm, it generates income — and taxes — to be paid by the company and owner.

The tax-wall comparisons across countries are of interest for three reasons:

- *Distortions:* The tax wall provides an indication of economic distortions. When small firms are taxed at low effective tax rates compared to larger firms, the tax system encourages companies to break up to reduce their tax burden. This can be a loss in productivity, as noted above.
- *Growth:* Companies that become larger lose tax benefits aimed at small firms — a steeper wall suggests that the tax penalty on growth is greater.
- *Tax competitiveness:* Comparing across countries, the tax wall provides information on tax competitiveness for small businesses at different investment levels. A country that imposes higher taxes on capital is less attractive for entrepreneurial immigrants and could lose entrepreneurs who move elsewhere. A recent study suggests that migration is particularly sensitive to personal

9 About 10.8 per cent of longer-term immigrants are unincorporated self-employed, compared to 7.5 per cent of the Canadian-born population. See Y. Ostrovsky and G Picot (2018), https://www.statcan.gc.ca/eng/blog/cs/immigrant-entrepreneurs.

income, payroll and consumption taxes, especially for high-income individuals, inventors and professional sports and entertainment professionals (Kleven, Landais, Muñoz and Stancheva 2020). The authors also found that a one-point increase in the top personal tax rate results in a percentage loss of 1.6 immigrants based on an analysis of a Danish tax scheme providing partial tax exemptions for immigrants with incomes above a certain threshold.[10]

We estimate a marginal effective tax rate on capital, which is the corporate and personal taxes paid as a share of the income payable to the equity and debt holders for each level of assets or of income earned by the firm[11] (see Appendix 1 for a more detailed discussion of the model). The METR takes into account corporate and personal income tax rates, deductions for capital-cost allowances, investment tax credits or allowances, and sales taxes on capital purchases and asset-based taxes.[12] Accelerated depreciation and investment tax credits can drive down the average corporate tax rate on book profits, resulting in the combined corporate and personal tax on dividends and accrued capital gains being less than the tax on employment income.

The entrepreneur will invest in capital until the after-tax rate of return on marginal investment is equal to the risk-adjusted cost of capital. The cost of capital is the weighted average of the cost of equity and debt finance in the absence of corporate and entrepreneurial personal taxes on equity income. The cost of debt finance is the interest rate charged in the market for debt as provided by banks and other lenders, and the cost of equity finance is equal to the after-tax rate of return (net of risk)[13] that compensates the owner for giving up his consumption to invest in the firm.

For example, ignoring debt finance, if the pre-tax rate of return on capital is six per cent and the corporate income tax rate is 25 per cent, the firm pays a return to the equity investor equal to 4.5 per cent. If the personal tax rate is 33 per cent, the return paid to the entrepreneur, net of personal tax payments, is three per cent. The combined corporate and personal tax rate as a share of pre-tax profit is 50 per cent (six per cent minus three per cent as a proportion of the pre-tax return). If the three-per-cent net-of-tax return on equity is sufficiently high to reward the entrepreneur for investing in the business rather than in other opportunities (after netting out risk), the firm will expand its investment. The bank charges interest at 4.5 per cent on its loan to the small business, with the profits used to pay off its depositors and owners.

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10 Only limited studies have looked at tax effects on international mobile skilled and entrepreneurial workers. Such work would require data on two sides of a border, which is difficult to obtain. In Canada, one could at least look at personal income tax returns of taxpayers leaving Canada. We have not seen this type of study conducted for Canada.

11 We use the METR, as we are interested in the impact of taxation on investment. The average tax rate is also useful for international mobility questions, since a person will compare after-tax incomes when moving. However, as Kleven et al. (2020) point out, there is strong correlation with top marginal tax rates and average tax rates for high-income earners.

12 Several countries impose asset-based taxes on fixed assets. Due to lack of effective tax-rate data, municipal property taxes are excluded from our analysis, although they can be a significant cost to many small businesses.

13 For simplicity, it is assumed that the firm faces "income" risk with the government sharing fully gains and losses through carry-back and carry-forward loss provisions. Realistically, governments limit deductions for losses — for example, losses carried forward are not indexed at an interest rate. See Mintz (1988).

The marginal effective tax rate on entrepreneurial investments in small businesses is estimated as a business grows in asset size. For example, with a given pre-tax profit rate and a given dividend payout ratio, the personal tax rate on dividends rises as dividends increase along with capital size and revenue. When either the firm crosses the taxable profit (or corresponding asset) threshold that leads to higher personal or corporate income tax rates, the METR will change.

In calculating METR for small businesses, compared to that for large firms, several assumptions warrant special attention.

1. It is assumed the debt-to-asset ratio for small businesses is much lower than that used for large firms. Based on statistics for non-financial firms with annual revenue under $5 million, the debt-to-asset ratio assumed for small firms is about 30 per cent, lower than the 40-per-cent debt-to-asset ratio used for large firms (Chen and Mintz 2011).

2. It is further assumed that the dividend payouts are 40 per cent of profit (Chen and Mintz 2011).

3. To develop a growth model, a pre-tax profit rate is needed to determine how the entrepreneur's income will grow. Based on data available to us, it is assumed the average pre-tax profit rate for non-financial firms with revenue under $5 million is five per cent of capital.[14]

4. The industrial distribution by capital size for small firms can be distinctly different from that for large firms. Small firms (compared to large firms) are more concentrated in construction, trade (both wholesale and retail) and other service sectors (in aggregate, 73 per cent for small firms versus 37 per cent for large firms), and less concentrated in forestry, manufacturing and transportation (in aggregate, 14 per cent versus 31 per cent).[15]

5. Capital gains are only taxed when assets are sold. This enables the owner to defer personal income taxes on dividends by reinvesting the after-tax profits in the business. To calculate a capital-gains tax rate that would be applicable each year, we calculate the "accrual-equivalent" tax rate, which is based on a holding period for equity held by the owner. Assuming the remaining years of ownership is 20 years, the accrual equivalent capital-gains tax rate is estimated to be about roughly two-thirds of the capital-gains tax rate on realizations.

6. It is assumed that a dollar increase in reinvested profits causes share values to increase by one dollar. We estimate that the lifetime capital-gains exemption is exhausted at the point the firm grows sufficiently large that accumulated retained earnings is in excess of the limit. For example, a company that grows by $1 million in assets each year uses up the lifetime capital-gains exemption within 10 years, with a five-per-cent profit rate on assets.

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14 Profits are income net of interest expense. Smaller firms are less profitable, with a profit margin about 80 per cent that of large firms from 2000–12, https://www.ic.gc.ca/eic/site/061.nsf/eng/h_02941.html#toc-03.01.

15 Based on the latest information available, we updated this capital distribution of small firms by industry and by asset type for the current study.

Probably the most important assumption is with respect to the pre-tax profit rate. The assumption of a five-per-cent profit rate on capital implies that a $10-million investment in a small business will yield $500,000 in profit to be distributed or reinvested in the firm. However, those companies that earn a higher rate of return, say 10 per cent, would earn $1 million in profits. As the amount of income available to the owner increases substantially for each asset level, the tax rates need not stay constant, but rise due to progressivity in corporate and personal income tax rates.

TAX WALLS IN CANADA

As discussed earlier, both corporate and personal tax affects the small-business owner's return on capital. Figure 1 shows the tax wall faced by a small business for Canada (see Table 2 for exact data). For a capital investment of $1 million, the METR for the small-business owner is 19.1 per cent. As the business grows, the METR rises as the income from the business is taxed at a higher personal progressive rate. At $3 million in assets, the METR jumps to over 23.7 per cent, due to a higher personal income tax rate. It then jumps to close to 26.4 per cent at $9 million in assets, and takes a further jump to 34 per cent when assets pass the SBD threshold beyond $10 million. The highest METR is 45.9 per cent when the firm reaches $39 million in assets (and the owner is in the top personal tax bracket).

The shifts in the METR reflect not only changes in corporate and personal income tax rates, but also the impact the corporate tax rates have on the value of cost deductions, such as capital cost allowances and nominal interest deductibility. Since accelerated depreciation was introduced in 2018 for all companies, those companies with low corporate income tax rates perversely claim fewer tax savings from accelerated depreciation, especially those with short-lived assets and those in the manufacturing or clean-energy sectors where expensing has been provided. While the overall impact of a corporate-rate reduction is to reduce the METR, the impact of reducing the corporate income tax rate is softened for those firms that are more machinery-intensive in their capital structure.

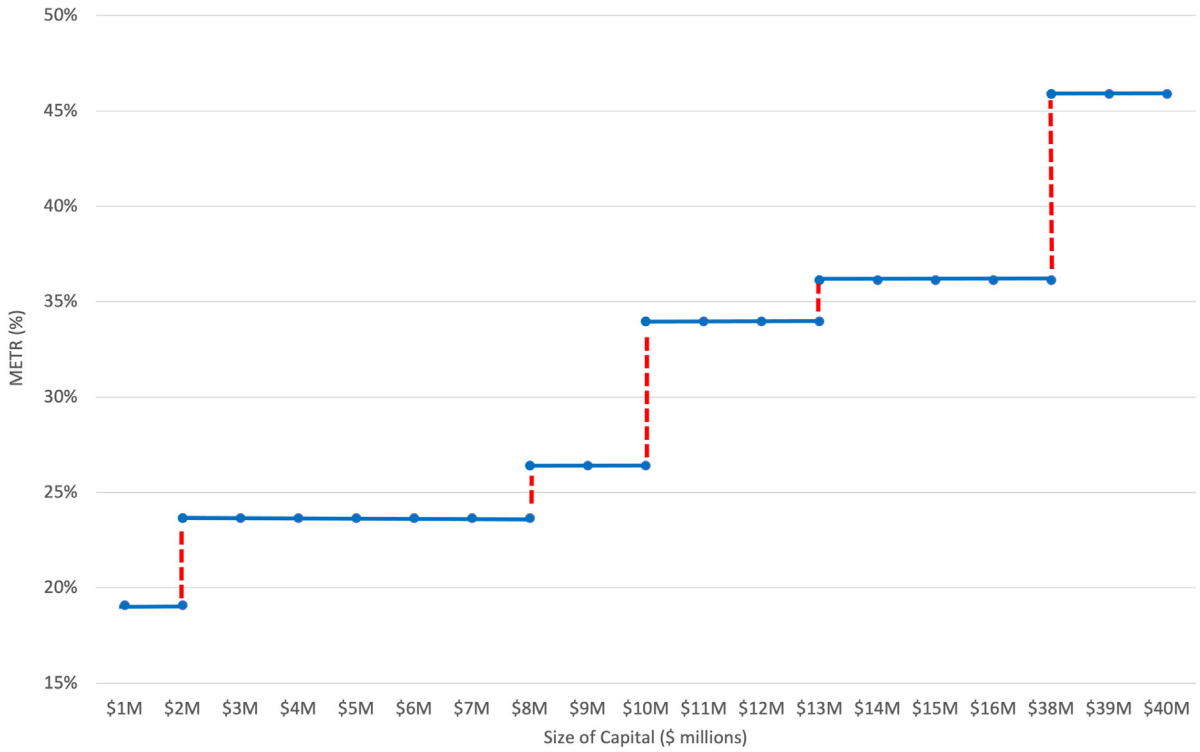
Overall, the Canada-wide METR rises 27 points as firms get larger. The SBD is responsible for less than a third of this increase. The rest is due to rising personal income tax rates on dividends and capital gains. The tax wall encourages small businesses to create separate, less efficient small-business units to avoid taxes,[16] encourages individuals to create a small corporate business to avoid personal tax liabilities and, last but not least, discourages small businesses from growing beyond the official definition of a small business.

At the provincial level, the tax rate on capital investment by the small-business owner varies across Canada (see Table 2). The lowest METRs at a $1-million asset size are found in Newfoundland (8.3 per cent) and New Brunswick (8.5 per cent), in part reflecting the federal Atlantic Investment Tax Credit for manufacturing and primary

[16] Small business in Canada has used partnership and corporate structure to multiply access to the SBD. The recent Canadian 2016 federal budget addresses this issue by limiting use of the deduction by associated corporations and partnerships.

industries and low small-business tax rates. The highest METR at $1 million in assets are in Manitoba (31 per cent) and British Columbia (29.5 per cent), largely due to the retail sales tax on capital purchases. At $40 million in asset size, Manitoba and British Columbia have the highest METR on capital, while New Brunswick has the lowest (30.4 per cent). Leaving aside the Atlantic provinces, Alberta has the lowest METR on capital at $40 million in assets, due to its relatively low corporate and personal income tax rates at the top end.

Figure 1: Canadian 2020 Marginal Effective Tax Rate on Small Business



Note: *Reflects five-per-cent pre-tax profit-to-asset ratio, 29 per cent debt-to-asset ratio and 40-per-cent dividend payout ratio. Dashed red lines represent the METR change when one dollar of profit (or income) is earned by a firm above its previous asset level. Red lines reflect the METR rise when one additional dollar in income is earned by the firm or owner.*

Table 2: Corporate and Effective Personal Tax Rate on New Investment: Canadian Small Business for 2020 (in Percentages)

Asset size ($ Mil)	CAN	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC
1	19.1	8.32	11.86	14.82	8.65	19.93	16.75	31.01	26.4	16.10	29.46
2	19.1	8.50	11.86	14.82	8.65	19.93	16.75	31.01	26.4	16.10	29.46
3	23.7	12.34	16.29	18.59	12.73	23.88	23.00	34.38	28.5	18.66	32.81
4	23.7	12.34	16.29	18.59	12.73	23.88	23.00	34.38	28.5	18.66	32.81
5	23.7	12.34	16.29	18.59	12.73	23.88	23.00	34.38	28.5	18.66	32.81
6	23.7	16.22	19.87	23.05	16.52	26.76	26.17	36.21	31.3	21.20	35.45
7	23.7	16.22	19.87	23.05	19.63	26.76	26.17	36.21	31.3	21.20	35.45
8	23.7	16.22	19.87	23.05	19.63	26.76	26.17	36.21	31.3	21.20	35.45
9	26.4	18.53	21.52	24.62	19.63	27.97	27.60	37.28	32.4	24.05	37.23
10	26.4	18.53	21.52	24.62	19.63	27.97	27.60	37.28	32.4	24.05	37.23
11	34.0	32.56	32.94	37.31	28.27	35.57	35.10	44.63	38.1	29.09	42.82
12	34.0	32.56	32.94	37.31	28.27	35.57	35.10	44.63	38.1	29.09	42.82
13	34.0	32.56	32.94	37.31	28.27	35.57	35.10	44.63	38.1	29.09	42.82
14	36.1	32.56	32.94	37.31	28.27	35.57	35.10	44.63	39.7	31.92	42.82
15	36.1	32.56	32.94	37.31	28.27	37.05	37.55	45.96	39.7	31.92	45.46
16	36.1	34.59	34.85	39.10	30.36	37.05	37.55	45.96	39.7	31.92	45.46
38	36.1	34.59	34.85	39.10	30.36	37.05	37.55	45.96	47.6	41.61	45.46
39	45.9	34.59	34.85	39.10	30.36	37.05	37.55	45.96	47.6	41.61	45.46
40	45.9	34.59	34.85	39.10	30.36	47.38	47.71	53.42	47.6	41.61	53.42

In general, tax walls are fairly steep across all provinces ranging from a 21-point increase in New Brunswick to a 31-point increase in Ontario. The biggest jumps in the METR due to the SBD are in Newfoundland (14 points) and Nova Scotia (13 points), reflecting the differences between small and large corporate income tax rates. The jump in Alberta is the smallest, at five points, as Alberta has the lowest general corporate income tax rate (eight per cent).

Two important extensions: Superstars and financial policy

Prior to a comparison of Canada with other countries, it is useful at this juncture to examine more deeply two important assumptions affecting tax walls: the estimated return on capital and unchanging financial policy.

The tax wall clearly depends on the assumed rate of return on capital. Take, for example, a high-growth company, which we will call a superstar. If the return to capital is 15 per cent, instead of five per cent, it will earn much more profit at each level of capital. For example, the superstar company would hit the profit limit of $500,000 at $3.3 million in asset size, and its profits would be $1.5 million at $10 million in asset size. The company would therefore be earning $1 million in profit more than the allowable limit, resulting in this excess profit being taxed at the large corporate income tax rate.

Further, the owner will receive more dividend and capital-gain income, thereby being taxed at higher personal rates as well as potentially hitting the lifetime capital-gains limit by the time the company grows each year by $1 million to $4 million in asset size.[17] Overall, the tax walls in figures 1 to 4 would shift upwards and to the left, reflecting higher METRs at each level of assets. In a sense, corporate and personal taxes most heavily penalize superstar owners.

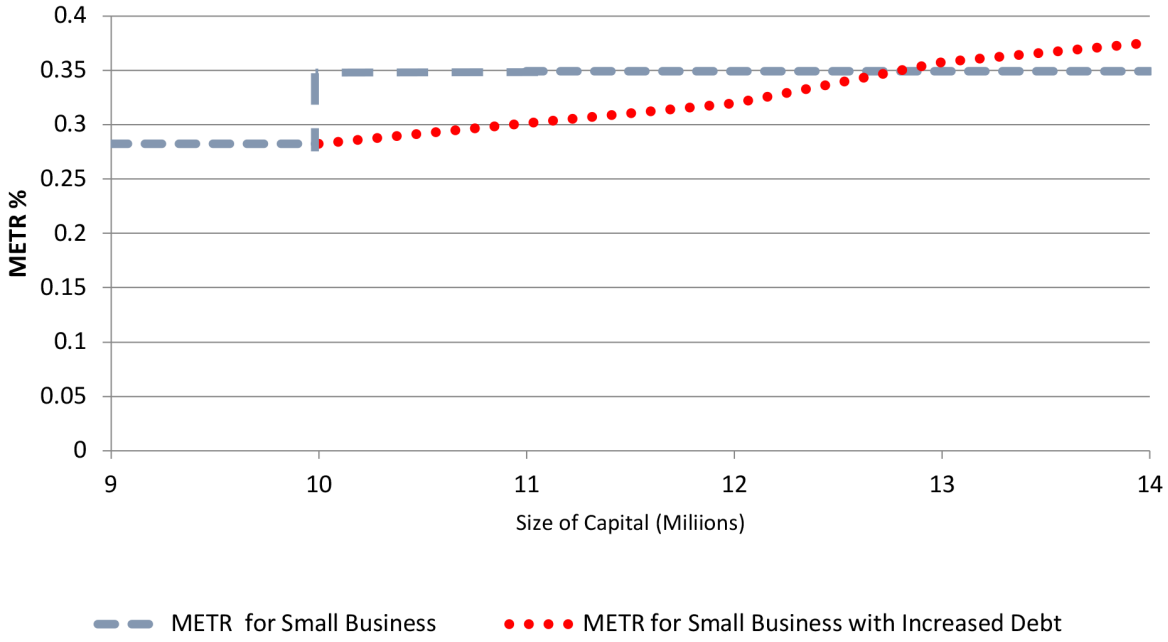
Our second assumption is that financial policy remains the same. However, there are good reasons that financial policy could shift as the firm grows. First, when the company faces a higher corporate income tax, owners choose to fund investment with more debt, given the higher tax savings from interest deductibility. Second, when companies reach the limit of $500,000 in profit or $10 million in asset size, owners can avoid jumping over the limit by paying out employment income, interest or other deductible expenses at the corporate level, rather than dividends to themselves. In both cases, the deductible expenses keep corporate profits below $500,000, although the owner will pay more personal income taxes, since ordinary income is taxed more heavily than dividends at the personal level.

In Figure 2 below, we illustrate a shift in financial policy when the owner lends debt rather than equity to the company, thereby shifting from dividends to a form of compensation that is deductible from corporate profits. Ignoring the asset limit, we consider the case in which the profit limit is breached at $500,000. To keep below the profit limit, the owner takes more and more compensation in the form of deductible expenses as the firm grows. At $550,000 in profit before any financial changes, the effect of a switch in financial policy to more deductible expenses (held by the owner) is to reduce the METR by 2.2 percentage points rather than simply maintaining the same financial policy. As the firm continues to grow beyond $10 million in asset size, the METR rises as more deductible debt is taken to keep below the profit limit. Eventually, the owner is better off to reduce deductible expenses and move back to the original financial policy, since the increased personal tax payments swamp any corporate tax savings when assets grow beyond $12 million.

As Dachis and Lester (2015) point out, financial policy shifts that try to avoid hitting the limits to claim the SBD can still impact investment decisions by raising the METR. In this case, it is not just the jump to the higher corporate income tax rate that causes the METR to increase. It is also the shift to higher personal income tax rates paid by the owner.

[17] The Department of Finance (2014) has shown that there is more bunching at the profit limit compared to the asset limit. See also Dachis and Lester (2015).

Figure 2: Example: Switch From Dividend to Deductible Compensation



Note: Assumes a five-per-cent profit rate.

HOW DOES CANADA COMPARE?

In most developed countries (Australia and G7 countries), small business plays an important role in the economy. Small business represents more than 90 per cent of all companies in G7 countries.[18] The majority of small businesses in developed countries are incorporated.[19] The income of an incorporated small business is taxed at two levels: the business level, and again at the individual level, when income is distributed in the form of a dividend or capital gain (when the owner sells the business). The definition of small business for tax purposes varies across the countries (see Table A3.3 in Appendix 3).

Similar to Canada, many countries have also provided special tax relief for small and medium-sized businesses. The most significant changes in recent years came from the U.S., France, the United Kingdom and Japan.

Corporate tax comparisons only are useful if a small-business owner continues to reside in Canada but establishes corporations to operate in Canada and elsewhere, since personal tax payments will be primarily based on Canadian law. However, if a small-business owner decides to sell his company to a foreign competitor or moves to a foreign country, then both corporate and personal income taxes are relevant for international comparisons. This is what we shall cover in this section.

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18 OECD, "Taxation of SMEs in OECD and G20 Countries," OECD Tax Policy Studies No. 2 (Paris: OECD Publishing, 2015). S corporations in the U.S. are not taxed at the corporate level (except in a few states); similar to partnerships, the income is allocated to owners of the S corporations. We treat S corporations separately from other U.S. small corporations.

19 ibid. p.27.

Corporate taxation

Many countries provide lower corporate income tax rates for small businesses. One of the striking reforms in several G7 countries has been the elimination of differential corporate income tax rates according to the size of taxable income earned by the firm.

Among the most notable changes in corporate tax policy came in under the Tax Cuts and Jobs Act of 2017 in the U.S. Starting Jan. 1, 2018, the federal top corporate income tax rate was reduced from 35 to 21 per cent and the progressive rate schedule was eliminated. Over half of U.S. business taxes are paid by flow-through companies, including S corporations, and are taxed at the personal level.[20] These businesses qualified for significant personal income tax reductions. Not only was the general personal income tax rate reduced, but qualifying business income accruing to the owner was also reduced by 20 per cent before the tax rate is applied.[21]

In September 2017, the French government announced its intention to progressively lower its corporate tax rate in an effort to align its taxation levels with EU averages. This came in the form of lowering tax rates incrementally from 33.33 per cent in 2017 to 25 per cent in 2022, eliminating any differences in corporate income tax rates for small and large firms.

Since the 2008 financial crisis, the U.K. has staged reductions in corporate tax rates from 30 per cent for large companies to eventually match the small-business rate of 20 per cent. The U.K. corporate tax rate in 2020 was 19 per cent (plans for further decreases to reach 17 per cent have been cancelled). The U.K. also provided an annual investment allowance of 100 per cent on the first 200,000 pounds of eligible expenditures for all businesses, regardless of size, which has been increased to the first 1 million pounds starting January 2019.[22] However, beginning April 1, 2023, the U.K. plans to increase the main corporate tax rate to 25 per cent for profits in excess of 250,000 pounds, leaving 19 per cent as the small-business rate on income below 50,000 pounds (the preferential low rate is clawed back for the intermediate income levels).

Contrary to France and the U.S., Australia has introduced a reduction in the corporate income tax rate from 30 to 27.5 per cent on businesses with revenues less than AUD$50 million. This provision, introduced for the first time in 2017, schedules a further reduction by fiscal year 2021–22, when the small-business corporate income tax rate will be 25 per cent.

Japan also provided a concessionary corporate income tax rate for businesses with taxable income less than 8 million yen. The tax rate is 15 per cent rather than the 23.8

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20 EY, "Large S Corporations and the Tax Cuts and Jobs Act" (October 2019), https://s-corp.org/wp-content/uploads/2019/10/EY-S-Corporation-Association-report-Economic-footprint-and-impact-of-TCJA-on-large-S-corporations-October-2019.pdf.

21 Various other reforms were adopted, including renewing bonus depreciation for short-lived capital at 100 per cent for five years (to be phased out after five years) and restrictions on interest and loss deductions (see Mintz 2018).

22 In addition, the U.K. offers a capital allowance on depreciation expenditures of eight per cent. As of April 2019, the U.K. announced a reduction of the capital allowance from eight to six per cent.

per cent applied to larger companies. As another level of tax on Japanese companies, the enterprise tax is progressive, with tax rates (including special local rates), varying from 4.8 per cent for taxable income less than 4 million yen to 9.6 per cent for taxable income over 8 million yen.

Germany and Italy levy the same corporate income tax rate on large and small businesses.

Personal income taxation

Personal income taxes are an important source of revenue for governments, including Canada's. Canada's top personal income tax rates tend to fall at a lower income threshold, relative to average wages, compared to that of other countries except for Australia, Italy and the U.K. (all of whom, though, have lower top personal income tax rates than Canada's). Dividend tax rates in Canada are higher than in the other countries (details about dividend tax regimes are left to the next section). Combined with general corporate income tax rates (and assuming book and taxable profits are the same), the combined corporate and dividend tax rate roughly matches the top personal tax rate on other income (e.g., employment income, interest income and rents) in Australia, and they almost match in France. The combined corporate and personal income tax rates on dividends are substantially lower than the top personal rates among these countries, especially in Japan and Italy.

Table 3: Top Personal Income Tax Rates and Top Brackets by Country 2020 (in Percentages)

	Top personal income tax rate on ordinary income	Top income threshold as multiple of the average wage	Top dividend tax rate	Combined corporate and dividend tax*
Australia	47.0	2.0	24.3	47.0
Canada	53.5**	4.0	39.3	55.4
France	55.4	16.1	34.0	55.1
Germany	47.5	5.3	26.4	48.4
Italy	47.2	2.6	26.0	43.8
Japan	55.9	8.5	20.3	44.0
U.K.	45.0	3.7	38.1	49.9
U.S.	43.7	9.2	29.3	47.5

* Based on the large-company tax rate where applicable. Assumes that the statutory tax rates are the same as corporate tax paid as a percentage of book profits.

** The OECD uses the Ontario top personal tax rate for Canada. The average top rate is 52 per cent across all provinces. The dividend and corporate income tax rates are for eligible dividends.

Source: OECD Taxation Statistics.

Personal taxation of dividends and capital gains for small businesses

As discussed above, many countries provide concessionary rates for dividends relative to other sources of income to avoid the double taxation of dividends under corporate and personal income taxes (see Table 3 above).

Australia provides dividend tax relief to investors, including owners of small businesses, under its imputation system. Similar to Canada, Australia uses a dividend tax credit, although the credit is calculated according to the amount of corporate income tax paid prior to the distribution of profits. For example, no credit is paid if the company did not pay corporate income taxes in that year.

In Japan, an owner with more than three per cent of the unlisted shares of a company includes dividends in ordinary income (dividends from listed companies are taxed at a flat rate of 20 per cent). The U.S. federal government taxes dividends at the rate of 20 per cent for individuals in the top bracket (otherwise 10 per cent for the lowest income bracket and 15 per cent for other brackets with state taxes applied to income as well).

The U.K. reduces the tax on dividends (in excess of a tax-free threshold) below the normal rate applied to each income band (for example, the top personal income tax rate is 45 per cent, but the dividend tax rate is 38.1 per cent). Germany applies a flat withholding tax on dividends equal to 25 per cent (26.5 per cent with a surtax). Italy taxes dividends at a flat rate of 26 per cent as final tax (dividends are previously taxed as ordinary income if the taxpayer's ownership stake is sufficiently high). In France, dividends are taxed partially.[23]

Countries also provide concessionary rates for capital-gain realizations. Capital-gains tax is paid on realizations, allowing for the deferral of tax until the asset is sold. This enables small-business owners to reinvest profits back into the business without paying personal income taxes in the current year. The tax treatment of the capital gains for small-business owners differs across selected countries (see Table A3.4 in Appendix 3). Canada's tax rate on capital gains is roughly in line with other countries, but is sharply less than those in France or Italy.

Besides Canada, some countries also provide a lifetime capital-gain exemption for small-business owners. Australia allows a lifetime capital-gain exemption up to AUD$500,000 and France up to 500,000 euros. In the U.S., qualifying stock in a small-business corporation (less than $10 million in capital) held for more than five years is eligible for 100-per-cent capital-gains exemption.

International comparison of tax walls

Below, in Table 4, Canada's tax wall is compared to those of other selected countries. Several observations can be made:

- For very small corporations with only $1 million in assets, Canada's METR is competitive at 19.1 per cent, with only U.S. S corporations enjoying an METR as low as Canada's, at 19 per cent (a U.S. regular corporation is more heavily taxed at 20.9 per cent). France's smallest corporations are taxed most heavily at 43.8 per cent, in part due to its personal taxes, which are the highest among all countries.

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23 The top personal income tax rate is 45 per cent, but there is a 40-per-cent allowance for dividends to reduce the double taxation (corporate income tax and personal income tax). The dividend income tax base is further reduced by a social contribution (5.1 per cent of the gross dividend).

- At the top of the scale ($40 million in asset size), Canada's tax on small business at 45.9 per cent is higher than that of the U.S. S corporation at 37.3 per cent and the U.S. regular corporation at 42.8 per cent. Canadian small businesses at this size are taxed more than Australia (44 per cent), the U.K. (43 per cent) and Italy (36.6 per cent), and at roughly the same rate as Germany (45 per cent). Canada's federal-provincial corporate income tax rate on profits at this level is slightly above 26 per cent, which is less than Australia, Germany, Italy and Japan (and slightly more than the U.S. and France) but much higher than the U.S. S corporation, which pays no federal-state corporate income tax as the income is fully attributed to the owners and subject to personal tax (for reinvested earnings, the U.S. system does not enable owners to defer tax). Canada's personal income taxes on dividends and capital gains are higher than those of most countries except for France.
- Canada has the steepest tax wall of all the comparison countries, rising by 27 points (the next highest are the U.S. for S corporations, and Germany, both at 18 points). Not surprisingly, the less steep walls of some countries (e.g., Japan at three points) are a result of flat taxes on corporate income and dividends.

Table 4: Corporate and Effective Personal Tax Rates on New Investment in G7 Countries and Australia for Small Business for 2020

Investment	Canada	Australia	France	Germany	Italy	Japan	U.K.	U.S. small business	U.S. S corp.
$1M	19.1%	24.0%	43.8%	27.1%	20.1%	46.5%	30.6%	29.9%	19.0%
$2M	19.1%	28.3%	47.4%	30.7%	30.0%	49.3%	30.6%	29.9%	28.2%
$3M	23.7%	31.3%	49.3%	31.4%	32.6%	49.3%	31.0%	35.8%	29.8%
$4M	23.7%	31.3%	49.3%	31.8%	34.3%	49.3%	40.6%	40.0%	29.8%
$5M	23.7%	31.3%	49.3%	32.0%	35.3%	49.3%	40.7%	40.0%	33.7%
$6M	23.7%	32.2%	49.3%	32.2%	36.1%	49.3%	40.8%	40.0%	34.7%
$7M	23.7%	32.2%	49.3%	32.3%	36.1%	49.3%	40.8%	40.0%	34.7%
$8M	23.7%	32.2%	50.6%	39.1%	36.6%	49.3%	41.0%	40.0%	34.7%
$9M	26.4%	32.2%	50.6%	39.1%	36.6%	49.3%	41.0%	40.0%	34.7%
$10M	26.4%	32.2%	50.6%	39.1%	36.6%	49.3%	41.0%	40.0%	34.7%
$11M	34.0%	32.2%	50.6%	39.1%	36.6%	49.3%	41.0%	40.0%	34.7%
$12M	34.0%	34.0%	50.6%	44.4%	36.6%	49.3%	41.0%	40.0%	34.7%
$13M	34.0%	34.0%	50.6%	44.4%	36.6%	49.3%	41.0%	40.0%	34.7%
$14M	36.1%	34.0%	50.6%	44.4%	36.6%	49.3%	41.0%	40.0%	35.4%
$15M	36.1%	34.0%	50.6%	44.4%	36.6%	49.3%	41.0%	40.0%	35.4%
$16M	36.1%	34.0%	50.8%	44.4%	36.6%	49.3%	41.0%	40.0%	35.4%
$38M	36.1%	44.0%	57.1%	45.0%	36.6%	49.3%	43.0%	42.6%	37.3%
$39M	45.9%	44.0%	57.1%	45.0%	36.6%	49.3%	43.0%	42.8%	37.3%
$40M	45.9%	44.0%	57.1%	45.0%	36.6%	49.3%	43.0%	42.8%	37.3%

Note: A number of assumptions made in the calculation of METRs (e.g., economic depreciation, the real interest rate, the inflation rate and the share of different financing sources) imply that the estimated METRs could have been overestimated or underestimated in some cases.

Overall, Canada's taxation of larger small businesses (those with over $38 million in assets) is not as competitive as in the U.S. That is not due to Canada's corporate tax rate, but is more a result of relatively high personal income taxes paid by the small-business owner.

POLICY IMPLICATIONS AND RECOMMENDATIONS

The overall aim of tax policy is to levy taxes in an efficient and fair manner with minimal administrative and compliance costs. An efficient tax system is one in which taxes do not distort decisions made by households and businesses with respect to the best use of economic resources. The administrative costs for governments and compliance costs for taxpayers are minimized by keeping taxes neutral and as simple as possible. The more complex tax provisions are, the greater the administrative and compliance costs, since more "boundaries" must be defined and checked to determine the eligibility of a taxpayer's activities for special consideration. Fairness is best achieved by varying taxes paid by individuals, since businesses can be owned by both rich and poor. Thus, business taxes are best levied at similar rates across business activities with varying personal tax rates to accomplish fairness objectives (Technical Committee on Business Taxation 1997).

As discussed above, preferential taxation for Canadian small businesses has been suggested for three important reasons. First, small businesses have less access to international and domestic capital markets, forcing entrepreneurs to rely on more selective financing sources, including banks, family and friends. Second, the administrative and compliance costs associated with the tax system are a greater burden on smaller businesses than they are for larger companies. Third, only a small proportion of privately held small businesses grow into medium-sized companies, and if they become successful, many sell their businesses to owners in the U.S. or migrate to other countries rather than remain in Canada.

In the analysis above, we have come to five important conclusions with respect to the tax system.

1. While corporate tax advantages are provided to support privately held small businesses, successful companies are disadvantaged by high personal income taxes on owners. This discourages entrepreneurs from innovating and taking on risks.

2. The effective tax rate on capital increases by almost 150 per cent when a Canadian small business grows from $1 million to $40 million in asset size. By comparison, this tax wall is steeper than in any other country in the G7 or Australia.

3. Current tax incentives help small firms enter markets, especially with retained earnings as a source of finance, but the loss of tax benefits discourage their growth, since corporate and personal taxes become more burdensome.

4. Canada generally provides favourable small-business tax incentives compared to other countries for small companies of less than $10 million in asset size. However, Canada taxes more heavily small businesses when they grow beyond $15 million in asset size compared to the United States (S corporations), primarily as a result of much higher personal income taxes in Canada.

5. Profit-insensitive taxes on small businesses, such as the retail sales tax on capital purchases in B.C., Saskatchewan and Manitoba, also impede their growth.

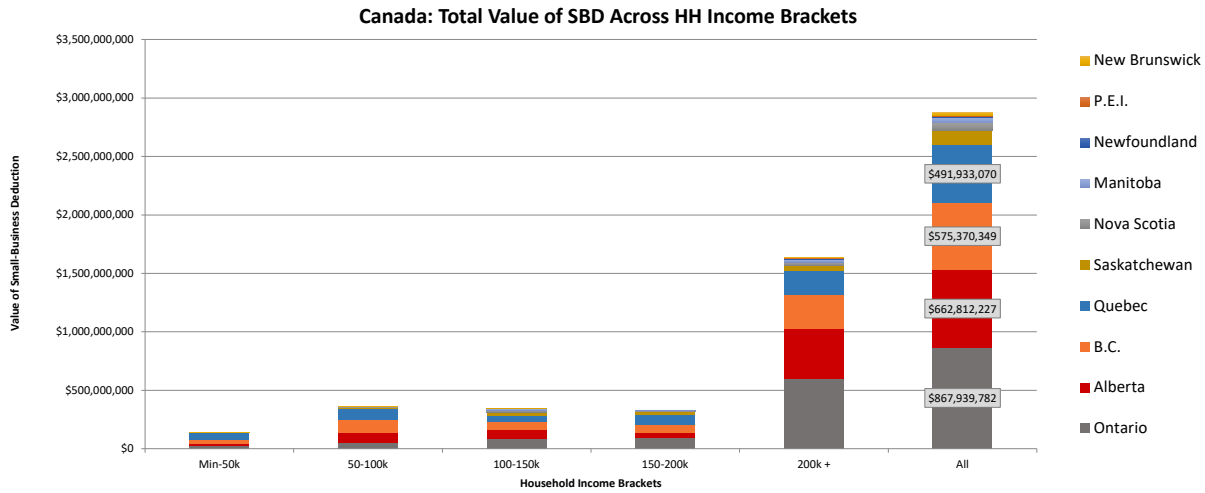
In our recommendations below, we shall place some emphasis on personal tax reforms that would benefit small-business owners, not just corporate tax reforms. The reforms are focused on small businesses only, even though some could be applied to all businesses instead. While the latter would be preferable for efficiency and equity reasons, it would result in substantially higher revenue costs. Thus, we view some of these recommendations as a start to wider adoption in later years when they become more affordable. Four specific reforms are suggested to reduce tax barriers to growth for small firms.

A flat corporate income tax: In the Canadian context, the strongest argument in favour of a preferential corporate income tax rate for small businesses is that it provides more cash flow for companies to reinvest earnings to fund their business investments. However, as we have shown, most small businesses do not grow, so the preferential rate primarily allows investors to defer payment of corporate tax on active business income (investment income is fully taxed, and when passive income is higher than a threshold, the SBD is clawed back). Instead, differential corporate income tax rates create needless complexity with two corporate income tax rates, two dividend tax credits and various other rules to limit tax avoidance.

Although many business owners with low or middle incomes benefit from a preferential corporate income tax rate, about 60 per cent of the benefit accrues to households with more than $200,000 in income, as seen in Figure 3 below.[24] The latter point is not entirely surprising, since small businesses are engaged in riskier and highly skilled activities, requiring owners to be compensated for risk and training. Whether small-business tax rates, especially at the provincial level, should be as low as they are today, raises questions about fairness.

[24] We are indebted to Philip Bazel, who used earlier data to determine claims of non-eligible dividends by households.

Figure 3: Total Value of SBD Claimed Across Household Income Brackets



Note: Data are based on the assumption that one dollar of retained earnings causes the value of the firm's equity to rise by one dollar.

Source: 2008–2010 Statistics Canada SPDM data, calculated by P. Bazel.

As discussed above, France and the U.S. have eliminated variation in corporate income tax rates based on company size (the U.K. did so as well, although size-related corporate income tax rates are being reintroduced there in 2023). Germany and Italy also do not have differential corporate tax rates. We would suggest that Canada should follow the more general practice and phase out the difference between high and low corporate income tax rates. Instead, to encourage small-business growth without creating tax barriers, the government could adopt annual expensing of capital up to a certain limit that would be available to all firms.[25] For example, to maintain a $9.9-million capital stock, annual capital investment would need to be about $1 million (roughly equal to the average depreciation rate of 10 per cent).[26] This incentive would be available to both large and small companies, so that when companies get larger there would be no clawback of the benefit.[27]

Income averaging for small-business owners: As shown above, small-business owners face progressive taxes with rising marginal tax rates on their income and investments. Given variable income, typical for self-employment, the effect of progressivity in tax rates is to put owners with variable income at a tax disadvantage (Gordon and Wen 2017). For example, an Ontario small-business owner earning $80,000 in 2019 income, and only $10,000 in each of 2020 and 2021 due to the COVID-recession, pays $16,709 in tax over the three years. An employee able to earn unvarying income over the three

25 The federal 2021 budget provides expensing of machinery for small businesses for two years. Our proposal would be provided to all businesses and types of capital without a time limit. Federal and provincial governments also provide temporary accelerated depreciation up to 2023, which is phased out thereafter for five years. Our model includes the latter provision as well.

26 Calculated from Statistics Canada, Fixed Flows and Capital Stocks, 2019.

27 Note that companies claiming expensing for capital expenditures would not be claiming annual capital-cost allowances or other accelerated-depreciation provisions.

years ($33,333 annually) pays $12,362 in tax, $4,347 less (a reduction of 4.3 percentage points in the tax rate on three years of income).

Income averaging was disbanded in 1989, before which Canadians could forward-average their tax liabilities. As tax reform at that time led to a reduction to three tax brackets, it was felt the system was too complex to administer. However, the number of tax brackets at federal and provincial levels has increased, along with the introduction of many income-tested benefits for children, the elderly and the poor. Gordon and Wen (2015) find that the fluctuations in income tax rates are less for employed taxpayers than for self-employed taxpayers (unincorporated self-employed taxpayers are impacted most by income fluctuations).

We recommend that income averaging at a smaller scale be introduced for self-employed individuals, including those drawing personal incomes from their private corporations. The recommended approach would be to provide block averaging for business income (including farming and fishing), professional income, dividend, and capital-gain income from Canadian-controlled private corporations, by prorating income during the current and previous five years. A limit could be imposed to reduce revenue costs and target the relief to lower-income business owners.

This approach of providing averaging to only certain types of income categories is consistent with earlier years, when block averaging was targeted to farmers, fishers and writers. It can be criticized for not providing more general relief, especially to the poor who face high penalty rates from the lack of averaging. Over time, when affordable, the system should be extended.

A new dividend tax regime targeted to small-business owners: As we have tried to emphasize in this report, it is Canada's personal tax system that has a larger impact on small-business growth than the corporate income tax. As owners earn more income from the fruit of their labour and innovation, they face one of the highest personal income tax rates in the world — topping 50 per cent or more in all provinces except for Alberta and Saskatchewan — at thresholds only four times the average wage (in comparison, the top personal income tax rates in the United States are 44 per cent, applied to income at nine times average wage levels). The progressive marginal tax rates on income and assets also increase the effective tax rates for variable income as discussed above.

Generally, countries provide tax relief for dividend income to avoid double taxation of profits at the corporate and personal levels. Australia has the most integrated approach, whereby a dividend tax credit is paid to investors matching the amount of corporate tax paid by the company. Most countries do not pursue such perfection. In the cases of Germany, Italy and the United States, a flat dividend tax rate is applied to most dividends paid to residents. The U.K. has three dividend tax rates that apply to income tax bands, with the rates below income levels.

As discussed above, Canada has a rough approach, with the dividend tax credit meant to provide relief for corporate tax on the presumption that profits have been taxed either at the small- or large-business tax rate. With the adoption of a single corporate income tax rate, a two-dividend tax-credit regime would no longer be necessary.

However, as suggested above, personal tax progressivity contributes most of the steepness of the small-business tax wall. The high personal tax rates on dividends (as well as the corporate tax) discourages risk-taking and innovation.

To flatten the tax wall and reduce the need for averaging the tax base, one option is to move to a system more similar to that in Germany, Italy and the United States, with a flat tax on dividends paid from active business income. We consider a narrower version of this policy by recommending that it would only be targeted to owners with a substantial interest in a small business (e.g., 25-per-cent ownership based on votes and value). This could be achieved by putting qualifying dividends into a separate schedule for tax purposes. For example, a dividend tax rate of 25 per cent, roughly equal to the capital-gains tax, alongside an effective corporate income tax rate of 26.5 per cent, would imply a combined corporate-dividend tax rate of about 45 per cent on income derived from the small business but applicable at all levels of income. While this proposal would encourage small-business growth by reducing and flattening the tax wall, it raises two particular issues.

First, the top combined corporate-personal tax rate of 45 per cent on dividends would be below the general income tax rate. This would encourage many individuals receiving employment income to incorporate, although the incentives already exist to do so. It also creates a non-neutrality between those who are able to incorporate their businesses compared to those who may not be able to do so. To limit income tax avoidance, the qualifying dividends subject to the flat rate should only be paid from active business income from a small business.

Second, dividends paid from small businesses with relatively low incomes would be taxed more heavily compared to other sources of income. At some cost of complexity, taxable dividends of less than $80,000 could be taxed at 10 per cent, with the excess taxed at 30 per cent. For the lower-income category, the combined corporate and personal tax rate would be 34 per cent, roughly equivalent to the same combined small-business and dividend tax rate in Ontario and only somewhat higher than marginal tax rates at the low end.[28]

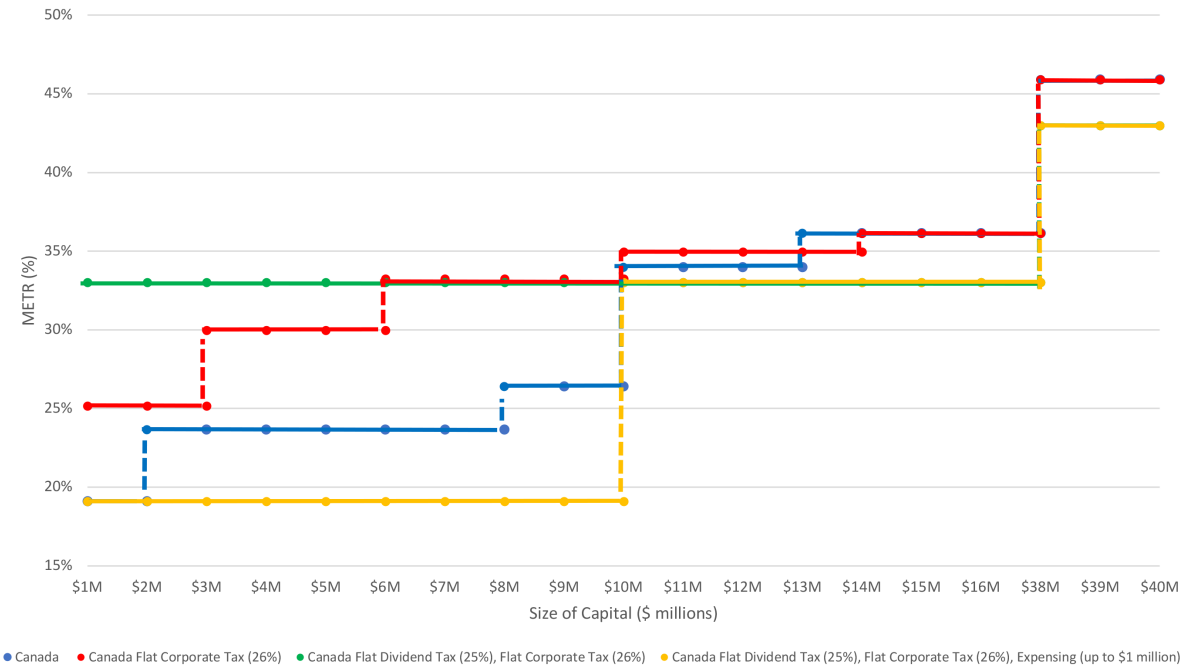
Targeted capital-gains relief for initial public offerings: Canadian small-business capital-gains tax policy is geared towards private companies. As soon as companies become public, they lose many of the tax benefits they have been entitled to, including the small-business tax deduction and lifetime capital-gains exemption (the latter can be realized by owners crystallizing their gains at conversion). In other words, incentives create a barrier to growth when firms become public. We recommend a 100-per-cent reduction in capital-gains tax paid by purchasers of shares issued by qualifying small

[28] One could also claw back the low dividend tax rate as income rises above a threshold amount, for example $200,000.

corporations when they become public.[29] The purchaser would have to hold the shares for five years. Qualifying shares could be limited to small businesses with less than $50 million in assets.

In Figure 4, we compare the tax wall for small businesses under our proposals to Canada's existing tax wall. Specifically, we provide a sequential approach showing the impact of (i) a flat corporate income tax rate at 26 per cent, (ii) a flat corporate tax rate and flat dividend tax rate at 25 per cent, and (iii) a flat corporate and dividend tax and annual expensing of the first $1 million of depreciable capital.

Figure 4: Current and Proposed Tax Walls



Note: Reflects a five-per-cent pre-tax profit-to-asset ratio, a 29-per-cent debt-to-asset ratio and a 40-per-cent dividend payout ratio. Dashed red lines represent the METR change when one dollar of profit (or income) is earned by the firm above the previous asset level. Red lines reflect the METR rise when one dollar more of income is earned by the firm.

As seen in Figure 4, moving towards a flat corporate income tax rate (red line) would raise the METR for capital for smaller firms up to $10 million in asset size (compared to the blue line). After $15 million in asset size (once the small-business deduction is fully phased out), the METR is the same for the red and blue lines.

With both a flat corporate income and dividend tax rate at 25 per cent (green line) compared to the flat corporate income tax rate (red line), the METR rises for companies with less than $6 million in asset size, because the flat dividend tax rate is higher than

29 This proposal is more restrictive compared to the capital-gains incentive for qualified small businesses in the United States. The U.S. capital-gains tax exemption for investors in a domestic C corporation (with less than US$50 million in assets) requires shares to be held for five years, with 80 per cent of assets earning active business income. Qualifying small businesses selling their shares in 2010 were found to increase investments in startups by 12 per cent (two-thirds of the incentive benefiting the firm and the remainder benefiting the investor). See Edwards and Todtenhaupt (2020).

the non-eligible dividend tax rates. However, under flat corporate and dividend taxes, there is only one jump in the (green) wall, at $38 million in assets, when the lifetime capital-gains exemption is exhausted.

The proposal including flat corporate income and dividend taxes as well as annual expensing of capital up to $1 million results in a the most favourable treatment of capital investments for capital, whereby the METR under the yellow line is below the existing tax system (blue line) for all levels of capital. There are two jumps in the yellow line under our proposals. The first is related to the lifetime capital-gains exemption (similar to the existing system). The second reflects the limitation on expensing that applies at roughly $10 million in assets in our model, as discussed above. However, unlike other provisions, companies that expand beyond $10 million in asset size will not lose the expensing benefits — so it is less of a tax on growth in that sense.

In addition to these recommendations, we would argue that other tax-reform measures could be particularly meaningful to small businesses. Provinces with retail sales taxes (B.C., Saskatchewan and Manitoba) should try to provide some relief to small businesses who, like others, must pay sales taxes on intermediate inputs and capital purchased from other businesses. It would be best for provinces to harmonize their sales taxes with the federal GST but, failing that, at least provide a credit to small businesses to offset retail sales taxes paid on their inputs.

Similarly, many small businesses have been affected by non-residential property taxes that tend to be higher than residential property taxes in many parts of the country. In some provinces, differential rates may apply to industrial and commercial property that distort markets as well. Without a more general approach, provinces and municipalities could address small-business distortions with a tax credit administered through the corporate income tax to provide partial small-business relief.

CONCLUSIONS

Canada's taxation of small business is evaluated in comparison with that of other G7 countries and Australia. Canadian competitiveness, especially with the United States, is important since small-business owners can decide to move to the U.S., or Canadian small businesses can be sold off, with their functions moved to foreign jurisdictions.

While small-business tax concessions are intended to encourage growth, very few Canadian small businesses grow. And owners of small businesses that do grow face extraordinarily high corporate and personal taxes. Tax incentives could have a perverse effect of creating a tax wall that impedes rather than encourages growth. Tax benefits given to startups at the early stage of growth will not provide long-term benefits if the company grows sufficiently large that the owners decide to move it to another country for tax and other reasons.

Canada has the steepest wall among the countries we compare, reflecting not just corporate taxes but also personal taxes on dividends and capital gains. For startups with little income, Canada's tax on capital is quite favourable for small-business investment compared to that of most countries. However, once a firm grows larger,

beyond $15 million in asset size, its tax on capital is above that of many other G7 countries, especially the U.S.

While small-business tax incentives have complicated the tax system in the past, the policy can still be used to shift the focus onto growth, rather than creating barriers to growth. As this paper later illustrates, tax incentives today undermine the neutrality of the tax system and have hindered efforts to simplify taxation and achieve increased economic efficiency and fairness. At the same time, however, there are a variety of policy alternatives that can help address this area of ongoing concern.

We specifically propose the following reforms:

- *Flat tax on corporate profits:* Canadian governments should levy a uniform corporate income tax rate on all businesses and provide a 100-per-cent write-off for the first $1 million of capital expenditures for all businesses regardless of size.
- *Income averaging for small-business manager-owners:* Given the risk faced by small businesses, manager-owners holding a minimum of 25 per cent of shares in a small corporation (or unincorporated business) should be given the option to average personal taxes for a period of years on income derived from their businesses, to reduce personal taxes on lumpy income.
- *Targeted small business special dividend tax:* Instead of providing corporate-tax-rate reductions, small-business owners with at least 25-per-cent share ownership would qualify for a special dividend tax regime, whereby a final withholding tax rate on dividends roughly equal to the capital-gains tax rate would apply.
- *Targeted capital-gains tax incentives:* Investors in an initial public offering of a small private corporation should be taxed on half of the taxable gains from selling shares held for at least three years. The lifetime capital-gains exemption used in Canada and some other countries would also apply to these shares.

APPENDICES

APPENDIX 1: METHODOLOGY

This appendix is provided to those readers who are interested in knowing the formulas used for calculating marginal effective tax rates (METRs) on capital at the small-business level.[30] A firm invests in capital until the rate of return on capital is equal to the depreciation, financing and tax costs of holding capital. The small business borrows debt from third parties (e.g., banks). The small-business owner funds equity (we assume there is only one owner in the model).

Given that the corporate and personal tax rates rise with income and the size of the firm, the investor's decisions account for shifts in tax rates. The most important change is the rise in the corporate income tax rate when the small business becomes taxed as a regular business. When a firm earns an extra dollar of income, it causes a jump in corporate and personal tax rates at some profit or corresponding asset level. A firm's marginal product on capital is then bounded between two costs of capital, reflecting differences in statutory tax rates applied at the margin. This creates a ladder, exemplified by Figure 1.

The formulas derived from the theoretical model incorporate miscellaneous taxes, such as capital taxes and sales taxes on capital purchases. Following are the general formulas used in this study. Note that these formulas are not indexed for time (given shifts in tax rates), except in cases when the time factors are relevant for definition. For simplicity, we provide formulas for changes in corporate tax rates only (not for changes in personal tax rates that would affect the discount rate for evaluating firm investments).

(I) The METR (t)

The METR on a given type of capital is defined as the proportional difference between the gross-of-tax rate of return (rG) required by a firm and the net-of-tax rate of return (rN) required by the equity investor. rG is the marginal revenue product (or user cost of capital, in equilibrium) net of economic depreciation. The after-tax rate of return is the return on equity securities held by the owner. Thus, the effective tax rate (t) is defined as:

$t = (rG - rN) / rG.$

(II) The net-of-tax rate of return on capital (rN)

The net-of-tax rate of return on capital is defined by the formula:

$rN = ßi + (1 - ß)\ \boldsymbol{\rho}\ (1 - m) - \pi$

where i is the interest rate on debt financing (we ignore personal taxes on third-party debt, which is assumed to be provided by banks), $\boldsymbol{\rho}$ is pre-personal-tax return on equity, m is weighted-average personal tax rates on dividends and capital gains (accrual-equivalent basis) and π is the rate of inflation. The after-tax return on equity, adjusted for inflation, $\boldsymbol{\rho}\ (1 - m) - \pi$, is the after-tax rate of return on capital required by the small-

30 For example, for countries levying a gross-receipts tax, which does not exist in Canada, formulas presented in this appendix would need to be modified.

business owner, which would be at least equal to the after-tax returns available on alternative investment opportunities.

(III) The real cost of financing (rf)

The real cost of financing (rf) for the small business is one of the main components of cost of capital for the small-business corporation. The real cost of financing (rf) is defined by

$$rf = i\,ß(1 - U) + (1 - ß)\,\rho - \pi$$

where ß is the ratio of debt to assets, i is the cost of debt, U is the statutory corporate income tax rate (which depends on size), ρ is cost of equity, and π is the inflation rate. That is, the cost of financing for the firm is the weighted-average cost of financing net of the inflation rate. Note that the cost of finance will shift in time due to two factors: higher corporate income tax rates and a higher personal tax rate on equity income. Assuming that we are not at a limit, the marginal return on capital is equal to cost of capital as shown below.

(IV) The gross-of-tax rate of return (rG) on capital

A. Depreciable assets (i.e., buildings and machinery and equipment)

$$rG = (\delta + rf)\,(1 + t)\,(1 - k)\,(1 - A)/(1 - U) - \delta$$

The present value of tax benefits from depreciation deductions and investment tax credits net of capital tax payments is equal to A (see Mintz 1990). Note rf represents the real cost of financing as defined above, δ represents the economic depreciation rate, k represents the investment tax credit rate, **t** represents the sales tax on capital purchases and τ represents the capital tax rate. Prior to full taxation, the present value of tax-depreciation allowances changes, reflecting shifts in corporate tax rates over time.

B. Inventory

$$rG = (rf + U\pi)/\,(1 - U) + \tau$$

C. Land

$$rG = rf[1 + \tau\,(1 - U) \,/\, (rf + \pi)] \,/\, (1 - U)$$

(v) Aggregation

The METR is the proportional difference between the weighted average of the before-tax rate of return and the after-tax rate of return; the latter is the same across asset types within a given sector. That is, the METR, T, is calculated as the following:

$$T = (\Sigma j\ rGi\ wj - rN) \,/ \Sigma j\ rGj\ wj$$

where j denotes asset type (i.e., investments in buildings, machinery, inventories and land) and wj denotes the weight of asset type j.

When the profit, asset or income limit is reached, one more dollar of income will be subject to a higher corporate or personal income tax rate. In this case, rG(1-t') > rN.

APPENDIX 2: LITERATURE REVIEW

Table A2.1 Systematic Review of the Countervailing Effect of Tax Rate on Entrepreneurial Entry and Firm Growth

	Author(s) /Year	Countries studied	Results
1	Poterba (1989)	U.S.	High tax on capital gains discourages entrepreneurship. Majority of the return on investment for the small-business owners comes from equity value of the company. Capital-gains taxation affects entrepreneurial activity.
2	Holtz-Eakin (1995)	U.S.	The study explores the link between preferential tax treatment for small business and growth of the firm. The author concludes tax incentives may actually discourage growth.
3	Gordon (1997)	U.S.	Taxes can have important effects on an individual's choices whether to become an entrepreneur. The difference between the corporate tax rate and top marginal personal tax rate is a key factor affecting the incentive to start a new firm. If the tax structure is to be fair, the personal tax rate should be at or below the corporate tax rate.
4	Carroll et al. (1998)	U.S.	The study found increasing the marginal tax rate of the entrepreneur by five points led to decreases by 10 points in the probability of the entrepreneur making an investment. Change in the user cost of capital significantly reduces the probability of capital investment.
5	Robson and Wren (1998)	OECD countries	Higher marginal personal income tax rates reduce self-employment rates.
6	Donald (2000)	U.S.	Increasing the marginal tax rate by five points decreases the transition into entrepreneur by 2.4 points.
7	Carroll et al. (2001)	U.S.	The personal income tax rate exerts a significant influence on the growth of a small-business firm. The study found that when the marginal tax rates goes up, the growth rate of small business goes down. Decreasing the marginal tax rate increases the growth of gross receipts of small business. The elasticity of gross receipts with respect to the decreasing marginal tax rate is 0.84 per cent.
8	Rosen (2005)	U.S.	Small business accounts for at least 10 per cent of U.S. economic non-residential capital investment. Taxes on the entrepreneur discourage investment. A five-percentage-point increase in the marginal tax rate led to a 9.9-per-cent decline in the mean investment expenditure. Higher marginal tax rates increase the small entrepreneur's user cost of capital. This has a substantial impact on the entrepreneur's investment spending.
9	Gentry and Hubbard (2003)	U.S.	Using data from 1979–93, the authors found a negative effect for marginal tax on entrepreneurial activities. The 1993 increase of the top marginal tax rate in the U.S. lowered the probability of entry into entrepreneurial activity for an upper-middle-class household by 20 per cent. A more progressive tax rate creates more entry barriers to entrepreneurial activity.
10	Stabile (2004)	Canada	Using micro-level data from 1990–96, the author concludes that a higher marginal tax has a negative effect on the decision to become an entrepreneur in Canada.
11	Bruce and Mishin (2006)	U.S.	The study concludes that the elasticity of entrepreneurship rate in relation to the top income tax rate ranges from 0.10 to 0.15 points. Capital-gains tax is an important factor that drives entrepreneurship. A 15-percentage-point cut in the capital-gains tax will result in one-per-cent increase in the entrepreneurship rate.
12	Cullen and Gordon (2006)	U.S.	The study concludes that the effect of tax reform on entrepreneurial activity depends upon whether the tax policy promotes risk-taking behaviour by the small-business owner. If a tax policy does not do that, overall entrepreneurial activity will fall.
13	Fossen and Steiner (2006)	Germany	The authors concluded that the tax reforms in 1994 and 2000 did not have a significant effect on entrepreneurial activity in Germany.
14	Georgellis and Wall (2006)	U.S.	Using panel data from 1991 to 1998, the authors found a U-shaped relationship between the marginal tax rate and entrepreneurship. When the top marginal tax rate is small, between 28 and 35 per cent, an increase in the rate reduces entry to entrepreneurship. When the top marginal tax rate is above 35 per cent, it increases self-employment activities.
15	Kneller and McGowan (2012)	OECD countries	The authors study the impact of tax on entry and exit of firms in OECD countries from 1998–2005. The study concludes that an increase in the corporate tax affects entry but not exit. The marginal tax rate affects entry at lower income levels and has the opposite effect at higher income levels.

16	Calvez and Bruce (2008)	U.S.	Studying the tax returns of individuals from 1979–90 in the U.S., the authors found a negative correlation between tax rate and entrepreneurial activity. A one-percentage-point increase in the personal marginal tax rate for an individual tax filer decreases the probability of the entrepreneurial entry by 1.42 per cent.
17	Kitao (2008)	U.S.	The study found that reducing tax on capital income increases investment and output. A flat business tax set at 10 per cent will raise entrepreneurial investment by 19 per cent and workers' wages will increase by five per cent for the U.S. economy.
18	Mooij and Gaetan (2008)	EU	Small businesses are very sensitive to taxes, and incorporation decisions are highly sensitive to tax rates. Every one-per-cent drop in the difference between corporate and personal tax rates creates semi-elasticities of the corporate tax base of 1.5 per cent for new firms.
19	Djankov et al. (2010)	85 countries	Effective corporate taxes have a large, adverse impact on entrepreneurship. The study found a statistically significant effect from taxes on entrepreneurial activity. A 20-per-cent increase in the first-year effective corporate tax rate reduces business density by 1.9 firms per 1,000 people and reduces the average entry rate by 1.4 per cent.
20	Da Rin et al. (2011)	17 EU countries	Using panel data from 1997–2004, the authors investigated the effect of tax policy on creation of new firms. The authors found corporate tax has a significant effect on entries of new firms. The authors show a reduction in corporate tax increases new firm incorporation. Reduction in the corporate tax rate from 30.04 per cent to 27.57 per cent implies a 0.10-per-cent increase in the entry of new companies. The authors also note that a reduction in the corporate tax rate in countries with good institutional mechanisms (e.g., good accounting standards) will create more new firms.
21	Ferede (2013)	Canada	As tax progressivity increases in Canadian provinces, the self-employment rate decreases. From 1979 to 2006, a one-per-cent increase in the marginal income tax rate led to a 0.20-per-cent decrease in the rate of self-employment.
22	Lutz and Garello (2014)	19 EU countries	The authors provide ample evidence that a higher marginal tax rate deters entry into entrepreneurship, especially with nascent entrepreneurship. The study found a one-unit reduction in progressivity at higher income brackets would increase the rate of nascent entrepreneurship by 0.5 units. The study also notes that significant level of entrepreneurial activity in Europe tends to start at income higher than the average income.
23	Federici and Parisi (2015)	Italy	The authors studied the effect of taxes on small-business investment. Using firm-level data from 1994–2006, the authors conclude that the corporate tax distorts investment decisions in Italy. A one-percentage-point increase in the corporate marginal tax rate leads to a 0.017-per-cent decrease in investment.
24	Asoni and Sanandaji (2014)	World	Progressive taxes impede entrepreneurial activity and lower the reward for high-quality ideas and innovation relative to flat taxes. The study found taxes not only affect the quantity of entrepreneurial startups, but also affect the quality of entrepreneurial activities.
25	Legree and Wolfson (2015)	Canada	Ownership of private corporations has been concentrated in the upper income groups since the corporate tax rate is below the higher personal income tax rates.
26	Darnihamedani et al. (2018)	World	While income taxes concern income from unincorporated firms, corporate taxes concern income from incorporated firms. Corporate taxes show a negative relationship with innovative entrepreneurship, while income taxes do not.
27	Sedlacek and Sterk (2019)	U.S.	The 2017 Tax Cut and Jobs Act led to increased new entry and higher demand for investment, labour and wages.
28	Bruce, Gurley-Calvez and Norwood (2020)	World	Survey on empirical literature showing that results have varied in terms of tax impacts on investment and entrepreneurship.

APPENDIX: 3 TAX PROVISIONS

Table A3.1: Canadian Tax Provisions Affecting Small Businesses in 2020

	Federal	Provincial
Corporate Tax Provisions		
Small-business deduction	The federal corporate tax rate on Canadian- controlled private corporation (CCPCs) with taxable capital below $10 million is reduced to nine per cent on active business income up to $500,000.	Provincial corporate income tax rate on CCPCs is reduced in all provinces to a lower rate, up to $500,000 in business income, except the threshold is higher in Saskatchewan ($600,000). In Nova Scotia, a new small business may be eligible for an exemption from paying Nova Scotia corporate income tax for the first three years of incorporation.
Research and development tax credit	Small businesses can earn an investment tax credit of 35 per cent up to $3 million on qualifying scientific research and experimental development (SR&ED), compared to 15 per cent for large business.	Higher credit for small businesses in Ontario in the form of an innovation credit limited to eight per cent. In Alberta, it is a 10-per-cent credit to a maximum of $400,000. Quebec has a refundable R&D tax credit. The basic rate for all this tax credit is 14 per cent of R&D expenditures, with an exclusion threshold for the first $50,000 spent on R&D. The annual exclusion threshold is for companies with less than $50 million in assets. The base rate is increased to 30 per cent on the first $3 million of eligible expenditure for CCPCs whose assets do not exceed $50 million. For companies with assets more than $50 million, the R&D tax credit is linear.
Tax holiday		Tax holidays for targeted sectors/activities are offered in many provinces. Prince Edward Island offers a tax holiday for the aerospace and bioscience sector. Ontario and Quebec offer tax holidays for new businesses created to commercialize intellectual property, for businesses in innovation projects and businesses doing R&D activities, to hire foreign experts and researchers. Newfoundland offers similar provisions if certain job-creation provisions are met.
Personal Income Tax (PIT) Provision		
Graduated PIT schedule	Rates vary by income.	Rates vary by income.
Dividend tax credit	Two dividend tax credits: nine per cent for eligible dividends and 10.4 per cent for non-eligible dividends, to reflect the small-business rate.	Dividend tax credits rates vary by province.
Lifetime capital-gain exemption	Capital gains on the disposition of shares in a CCPC are exempt from tax (as of 2019, equal to $866,912). Business must hold at least 90 per cent of assets in Canada and derive over half of income from active business.	Same.
Capital-gain deferral	Deferral of capital gains on shares held in a small business if they are replaced by another small business. Small businesses restricted to less than $50 million in asset size at time shares are issued. The proceeds must be reinvested in another small business within a given time frame.	Same.
Labour-sponsored venture capital credits	Tax credit for investments in labour-sponsored venture capital firms equal to 15 per cent of amount, up to $5,000, in those provinces providing the credit.	Not available in Ontario, Alberta and Prince Edward Island.
Stock options (CCPC)	Taxable benefits arising from the exercise of stock options issued by a CCPC to an arm's-length employee are deferred for tax purposes until the shares are sold. The CCPC stock options are taxed at half the capital-gains tax rate regardless of amount, although the employer cannot claim a deduction for the cost.	Same.

Equity/investor tax credit for small business	None.	Many provinces use tax credits to promote investment in small business: Nova Scotia: Equity tax credit (amount of credit: 35 per cent; credit limit: $17,500 per year) New Brunswick: Small-business investor tax credit (amount of credit: 15 per cent; credit limit: $75,000 per year). Manitoba: Small-business venture capital tax credit (amount of credit: 45 per cent; credit limit: $202,500). British Columbia: Investment capital program (amount of credit: 30 per cent; credit limit: $120,000).
Capital losses	Capital losses on the sale of shares or bonds held in Canadian-controlled small businesses may be deducted from any source of income. Fifty per cent of losses can be used and it can be carried back three years and carried forward 10 years.	Same.

Sales Taxes

Value-added taxes	Small-trader GST exemption for sales less than $30,000. A quick method (remit three-fifths of collections, with no input tax credits) for businesses with less than $200,000 in sales.	GST/HST exemption in Nova Scotia, New Brunswick and Newfoundland, Prince Edward Island and Ontario. A similar provincial sales tax exemption is provided to small businesses in Quebec.

Payroll Taxes

Provincial payroll taxes	n/a	Provinces apply employer payroll taxes with an exemption or low rates for employers with smaller payroll taxes.

Table A3.2: Small-Business Tax Rate and Revenue Threshold for the Tax Year Ending 2020

	Corporate Income Tax Rate (%) /Small-Business Rate/Basic Rate					Revenue Threshold (in Thousands) for the Small-Business Deduction				
	2005	2008	2010	2017	2020	2005	2008	2010	2017	2020
Federal	13.1 / 22.1	11 / 19.5	11 / 18	10.5 / 15	9 / 15	300	400	500	500	500
Newfoundland and Labrador	5 / 14	5 / 14	4 / 14	3 / 15	3 / 15	300	400	500	500	500
Prince Edward Island	6.5 / 16	6.5 / 16	1 / 16	4.5 / 16	3 / 16	300	400	500	500	500
Nova Scotia	5 / 16	5 / 16	5 / 16	3 / 16	3 / 16	350	400	400	500	500
New Brunswick	2 / 13	5 / 13	5 / 11	3 / 14	2.5 / 14	450	400	500	500	500
Quebec	8.9 / 8.9	8.9 /11.9	8.9 / 11.9	8 / 11.8	4* / 11.5	400	400	500	500	500
Ontario	5.5 / 14	5.5 / 14	4.5 / 12	4.5 / 11.5/10.0	3.2 / 11.5/10.0**	400	500	500	500	500
Manitoba	5 / 15	2 / 13	0 / 12	0 / 12	0 / 12	400	400	400	450	500
Saskatchewan	5 / 17	4.5 / 12	4.5 / 12	2 / 11.5/9.5	2 / 12/10***	300	500	500	500	600
Alberta	3 / 11.5	3 / 10	3 / 10	2/ 12	2/ 8****	400	460	500	500	500
British Columbia	4.5/ 12	2.5/ 11	2.5/ 10	2/ 11	2/ 12	400	400	500	500	500
Yukon	4 / 15	4 / 15	4 / 15	3 / 15	2 / 12	400	400	400	500	500
Northwest Territories	4 / 14	4 / 11.5	4 / 11.5	4 / 11.5	4 / 11.5	300	400	500	500	500
Nunavut	4 / 12	4 / 12	4 / 12	4 / 12	3 / 12	300	400	500	500	500

Notes: * Quebec's 2020 small-business tax rate is five per cent, but will decline to four per cent in 2021.

** Ontario has a general corporate tax rate of 11.5 per cent and a reduced 10-per-cent rate for corporations involved in manufacturing and processing.

*** Saskatchewan has a general corporate tax rate of 12 per cent and a reduced 10-per-cent rate for a corporation involved in manufacturing and processing.

**** Alberta's general corporate tax rate is eight per cent as of July 1, 2020.

Source: Canada Revenue Agency.

Table A3.3 Tax Treatment of Profit Under Small Business in Australia and G7 Countries 2020

Country	Small-Business Preferential-Rate System?	Small-Business Definition	Small-Business Corporate Income Tax Rate (CIT)	Large-Business Corporate Income Tax Rate (CIT)
Australia	Y	Annual aggregate turnover of less than AUD$10 million.	25 per cent (by 2021–22).	30 per cent.
France	Y	Threshold income (profit) of 75,000 euros or turnover of 50 million euros.	Rate of 28 per cent is applicable on small-business income less than 75,000 euros, with an annual turnover less than 50 million euros or balance-sheet assets of less than 43 million euros. The rate of 15 per cent is applicable on small-business income less than 38,120 euros, with annual turnover of less than 7.63 million euros.	The standard CIT rate is 33.33 per cent, which will be gradually reduced to 25 per cent by 2022.
Germany	N	n/a	n/a	CIT rate varies between 30 and 33 per cent. The average CIT rate is approximately 30 per cent, which includes corporate income tax, solidarity tax and trade tax.
Italy	N	n/a	n/a	The federal CIT rate is set at 24 per cent. The combined central and sub-central corporate income tax rate is 27.9 per cent. The CIT rate is reduced by a notional allowance for corporate equity. The new notional allowance for reinvested income for small businesses is taxed at 24 per cent. Otherwise, profit withdrawn from the small business is taxed at ordinary PIT rates, ranging between 23 and 43 per cent.
Japan	Y	Paid-in capital of less than 100 million yen.	Small businesses are preferentially taxed at 21.37 per cent, which includes national, regional and local taxes.	CIT rate is 29.74 per cent.
U.K.	N	n/a	n/a	Corporations are taxed at 19 per cent. That is set to increase to 25 per cent in April 2023.
U.S.	N	n/a	n/a	Federal corporate tax rate set at flat rate of 21 per cent. Additional state rates vary from zero to 12 per cent, with state corporate income taxes deductible from federal taxable income.

Table A3.4 Personal Tax Provisions Affecting the Small-Business Owner (Entrepreneur): Capital Gains[31]

Country	Treatment	Capital-Gain Exemption for Small-Business Owner?	Top Statutory Rate	Explanation
Australia	Partial inclusion	Yes	24.25%	Small-business benefits are given a variety of capital-gains tax exemptions. Capital-gains tax concession can exempt a capital gain on a business asset, up to a lifetime retirement exemption limit of AUD$500,000. Small-business entrepreneurs age 55 and older, with more than 15 years of their business's operation, will not be taxed on the capital gain from the sale of that business. Small businesses can reduce the capital gain on active assets by 50 per cent. Small-business owners can roll over capital gains from the sale of assets for two years.
Canada	Partial inclusion	Yes	25.79%	Only half of the realized capital gain is taxed. The lifetime capital-gain exemption limit for 2020 is $866,912.
France	Separate taxation	Yes	54%	Since 2018, capital gains made on the sale of shares in France have been taxed at a flat rate of 30 per cent. Taxpayers may also opt for taxation using their personal income tax rate, on a progressive basis, according to the marginal rate of tax that applies. Tax relief on capital gains from small-business shares is granted for the number of years the shares have been held (50 per cent from one to four years, 65 per cent from four to eight years and 85 per cent for more than eight years). There is a retirement exemption for lifetime capital gains up to 500,000 euros.
Germany	Final withholding/ separate taxation	No	26.375%	If the investor has held equity of less than one per cent, the entire capital gain from the sale of privately held shares is subject to a flat 25-per-cent tax rate (26.375 per cent, including the solidarity charges). Taxpayers may opt for taxation at their individual rate, if lower. If the investor has held equity of more than one per cent, 60 per cent of the capital gain from the sale of shares is taxable at the normal rate, if the taxpayer has held a direct or indirect interest of one per cent or more in the corporation within than last five years. In this instance, the top marginal tax rate in Germany would be 28.5 per cent.
Italy	Separate taxation	No	49.72%	Capital gains realized from the sale of small-business shares are subject to taxation based on the type of share. There are two categories of shares in Italy: qualified (traded and non-traded) and non-qualified. If the shares sold do not exceed five per cent of capital (traded) or 25 per cent (non-qualified), a flat tax rate of 26 per cent is applied. If the shares sold exceed the limit, progressive rates are levied on 58.14 per cent of the capital gains.
Japan	Separate taxation	No	20.315%	Capital gains for listed shares in Japan are generally taxed at 20.315 per cent (a 15.315-per-cent national tax and a five-per-cent local inhabitants tax).
U.K.	Separate taxation	Yes	20%	Capital gains beyond the basic rate bracket are generally taxed at 20 per cent. Taxpayers may also be eligible for entrepreneur relief, where capital gains will be taxed at 10 per cent, with the total amount of gain subject to a lifetime cap of 10 million pounds.
U.S.	Separate taxation	Yes	28%	Qualifying stock of a small-business corporation (less than $10 million in capital) held for more than five years is eligible for a 100-per-cent capital-gains tax exemption. The maximum gain eligible for the exclusion for each qualifying stock is greater than 10 times the owner's basis in the stock, or $10 million in aggregate.

Source: Review of tax statutes and government websites; OECD Tax Database; Ernst & Young; KPMG; Deloitte; and PWC.

31 For an excellent review of capital-gain taxation in the OECD, see op. cit. "Taxation of Dividend, Interest, and Capital Gain Income."

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