

THE WEALTH TAX AND THE TAX MIX

Robin Boadway, Pierre Pestieau

LIDAM Discussion Paper CORE
2022 / 07

CORE

Voie du Roman Pays 34, L1.03.01

B-1348 Louvain-la-Neuve

Tel (32 10) 47 43 04

Email: immaq-library@uclouvain.be

<https://uclouvain.be/en/research-institutes/lidam/core/core-discussion-papers.html>

The Wealth Tax and the Tax Mix

Robin Boadway, Queen's University
Pierre Pestieau, Université de Liège and CORE

February 10, 2022

Abstract

The objective of this paper is to study the role of wealth taxes as a component of the overall tax mix. In particular, wealth taxes are one of many potential taxes that apply to assets and asset income, so the question is whether wealth taxes should substitute, complement, or neither other taxes on assets and their income. More specifically, our purpose is to consider how well the Canadian tax system fares in taxing asset income, asset wealth and asset transfers with a view to judging whether wealth taxation would be a useful adjunct to the existing system. Despite the advantages that wealth taxation has compared to the existing capital tax system, we suggest that rather than incurring the administrative costs of introducing a wealth tax, a more satisfactory approach would be to reform the tax treatment of capital income and inheritances instead.

JEL Classification: H21, H23

Key Words: wealth tax, capital income tax, inheritance tax

Prepared for Public Finance in the Real World: A Symposium in Honour of Richard Bird,
Canadian Tax Foundation, April 7-8, 2022

Introduction

In his paper on wealth taxation published 30 years ago, Richard Bird makes the relevant observation that “the fate of wealth taxation is primarily determined by political forces” (Bird, 1991). Over the years, those forces have managed to convince majority of voters to vote against taxes that are paid by a minority and should benefit the majority and mainly low-income households. Bird explains the trend towards abandoning taxes that affect only the richest few by what he calls the decline in the “taste for equality.” Inequality is now back on the radar, and a wealth tax is among the proposals being touted in many countries as a way of addressing the growing concentration of wealth (Piketty, 2013; Saez and Zucman, 2019a,b; Advani et al, 2020; Jackson, 2020). This is an opportune time to revisit the issue. In this paper, we consider what role, if any, a wealth tax should play as a complement to other existing and potential components of the Canadian tax system.

To provide some context we begin with some stylized facts about the distribution of wealth in Canada. According to the World Inequality Report (Chancel, 2021), Canada is a wealthy country, with a per capita wealth of \$Cdn377,680.¹ The bottom 50 percent holds on average \$43,950 and a share of only 5.8 percent of total wealth. In contrast, the top 10 percent holds \$5,602,434 for a share of 57.7 percent of total wealth. These figures are comparable with Western European countries, such as France. Since the mid-1990s, wealth inequality levels have remained relatively stable in Canada.

Canada exhibits a much less concentrated distribution of wealth than its American neighbour where the share of the bottom 50 percent of wealth-holders is only 1.5 percent, or about one-quarter of that in Canada. The share of wealth held by the top 10 percent is 71 percent in the U.S. equal compared 57 percent in Canada. The contrast is even starker if we compare the share held by the top 1 percent: 25 percent in Canada and 35 percent in the US. Not surprisingly, this has led some prominent policymakers in the US to call for a wealth tax on the highest wealth-owners as a way not only to redress the inequity of high wealth inequality but also to curb its excessive political influence. Proposals for a wealth tax have been somewhat more muted in Canada, although such a tax was part of the recent election platform of the New Democratic Party. Wealth taxes have been used by several European countries, although their use has been declining in recent years (Organisation for Economic Cooperation and Development, 2018)

The objective of this paper is to study the role of wealth taxes as a component of the overall tax mix. In particular, wealth taxes are one of many potential taxes that apply to assets and asset income, so the question is whether wealth taxes should substitute, complement, or neither other taxes on assets and their income. More specifically, our purpose is to consider how well

¹ For alternative estimates, see Davies and Di Matteo (2020) and Parliamentary Budget Officer (2021). See also Organisation for Economic Cooperation and Development (2008).

the Canadian tax system fares in taxing asset income, asset wealth and asset transfers with a view to judging whether wealth taxation would be a useful adjunct to the existing system. We summarize the advantages and disadvantages that wealth taxation has compared to capital income and inheritance taxation. Despite the advantages that wealth taxation has compared to the existing capital tax system, we suggest that rather than incurring the administrative costs of introducing a wealth tax, a more satisfactory approach would be to reform the tax treatment of capital income and inheritances instead. Our views are based on some notion of how capital income ought to be taxed in principle. We address that in what follows. Hopefully our analysis does justice to Richard Bird's broad approach to tax policy.

Asset Tax Equivalences and Differences

Assets are subject to a variety of taxes, some of which apply to the value of the asset itself and others that apply to income from the asset or asset transfers. There is a close relationship between taxes on assets and those on asset incomes that will be relevant for assessing the role of wealth taxes, as discussed in Boadway and Pestieau (2019, 2021) and Scheuer and Slemrod (2020). We distinguish among taxes that apply a) to asset income, b) to the value of assets, and c) to asset transfers.

Begin with the simplest case where a tax on asset wealth is equivalent to a tax on asset income. Let A_t denote the asset wealth of a household in tax period t , and assume that A_t can be measured either by the household or by the tax authorities. In a well-functioning asset market, the value of an asset is the present value of its expected returns using a risk-adjusted discount rate. These expected returns can include 1) financial payments like interest, dividends, and royalties; 2) capital gains; and 3) imputed returns such as consumption benefits in the case of housing, consumer durables, jewellery and artwork. If asset wealth is taxed at the proportional rate τ_w , the annual wealth tax liability would be $\tau_w A_t$. Suppose r_t is a composite return on asset wealth. The tax liability on asset income is then $\tau_k r_t A_t$, where τ_k is the rate of tax on capital income. Thus, the tax on asset income at the rate τ_k is equivalent to a tax on asset wealth at the rate $\tau_w = \tau_k r_t$. Alternatively, a tax on wealth at the rate τ_w is equivalent to a tax on asset income at the rate $\tau_k = \tau_w / r_t$. If all assets had the same rate of return r_t , a proportional tax on wealth would be equivalent to a proportional tax on capital income.

Asset rates of return generally differ among assets and asset owners, so this equivalence breaks down. A wealth tax at a given rate imposes a relatively low implicit rate of tax on the income of assets with relatively high rates of return compared with a proportional capital income tax, and vice versa for low-rate-of-return assets. The main reasons why assets differ in their rates of return are the following.

Investor productivity. Households may differ in their skill at investing. This may be due to special knowledge of particular stocks or differences in productivity of personal business investments. A wealth tax seems to be inequitable since its effective capital income tax rate

falls with the rate of return on assets. On the other hand, Guvenen et al (2019) argue that by favouring high-return assets, a wealth tax encourages investment in them. This results in a higher share of assets in the economy being high-return and enhances overall productivity. Their simulations show that this can be welfare-improving overall. The gain in productivity increases total output by enough to offset the inequities resulting from favouring more productive investors.

Portfolio size and wealth. Some evidence suggests that larger portfolios earn higher rates of return (Piketty, 2013; Kacperczyk et al, 2016; and Fagereng et al., 2020). Since portfolio size increases with household income, wealth taxation would again be inequitable relative to a capital income tax. Xavier (2021) finds that the average rate of return on asset wealth in the U.S. increases with wealth. Individuals in the 99th wealth percentiles earn a rate of return of 8.3 percent, while those in the 20th percentile earn only 3.6 percent on average. She attributes much of the difference to the fact that the share of wealth held as equity raises with wealth. The Guvenen et al argument would again apply.

Returns to risk. Risky assets will have a higher expected return than risk-free ones because investors require a risk premium to invest in them. As well, actual returns realized ex post will vary among risky assets. A capital income tax will tax both the expected capital income, including the risk premium, and ex post variable returns to risk. Taxing the return to risky assets may not discourage risk-taking given the well-known Domar and Musgrave (1944) effect (Mossin, 1968; Stiglitz, 1969; Buchholz and Konrad, 2014). Risk-taking is more likely to be discouraged the less complete is loss-offsetting. The effect of a wealth tax on risky assets is more subtle. The market value of risky wealth is the present value of future expected returns which include a risk premium. However, these future returns are discounted using a risk-adjusted interest rate, which largely offsets the including of a risk premium in future returns. As a result, the wealth tax imposes only minimally on risk.

Rents or windfalls. Assets might yield above-normal returns or windfall returns. We refer to these as rents in what follows. This may be due to monopoly power, fixed factors of production of unexpected events (Stiglitz, 2012). The latter can include supply shocks, unpredictable government policies, natural disasters and disturbances, and public health shocks. There is some evidence that a significant portion of corporate profits consist of rents (de Mooij, 2011; Power and Frerick, 2016). In principle, the taxation of rents has no efficiency cost, and it might also be regarded as being fair. Windfalls are taxed under a capital income tax but not under a wealth tax, since the latter is based on the discounted value of expected future returns which excludes unexpected windfalls.

Wealth taxes might differ from capital income taxes for other reasons. Capital income taxes in Canada are part of the income tax system so are generally taxed using the same graduated rate structure as earnings (apart from special measures discussed below). The overall rate of taxation of capital income is complicated by two factors. First, some capital income is sheltered to encourage saving by lower-income households, especially saving for retirement. Second, the

fact that the income tax is part of a larger tax structure implies differential tax treatment of capital versus labour income. In particular, the tax mix includes both general consumption taxation (e.g., value-added taxation) and payroll taxation. Both are broadly equivalent to taxes on labour earnings with capital income exempt. This means that both the average and marginal tax rates differ between capital income and labour income, especially for low-income households. In any case, it would be very complicated to design a wealth tax that imposes similar tax rates on households as capital income taxes, and that achieves the same extent of tax sheltering of capital income. This compromises the ability of wealth taxes to achieve interpersonal equity and to fulfil policy objectives with respect to encouraging saving for retirement and self-insurance.

Another difference between wealth and capital income taxes is that imputed asset returns—for example, on housing, other consumer durables and works of art—are typically exempt from personal income taxes whereas they are included in most wealth tax proposals. For assets such as housing, reference to market values makes it feasible to include them as wealth, whereas imputed returns are much more challenging to measure. Housing is subject to property taxation, but tax rates are not chosen based on equity considerations. Instead, they are chosen to meet local government budgetary needs and are not differentiated by the homeowners' income.

As well, the base of the wealth tax is usually net wealth. That is, households can deduct their aggregate debt from their gross wealth. In principle, interest payments may be deductible from capital income in the income tax system, but in practice deductibility may be imperfect. For example, capital losses may only be deductible from capital gains and not from other income.

Finally, wealth taxation may be subject to liquidity problems since some persons with low incomes may own significant wealth. This is particularly the case when the wealth takes the form of housing. Liquidity problems may not be insurmountable if the tax authorities are willing to carry tax liabilities forward. But, the administrative complications may be significant as discussed in detail in Advani et al (2020).

The other category of wealth taxation involves taxation of wealth transfers. This is quite distinct from taxes on asset wealth or asset income since it only occurs when assets change hands. Wealth transfer taxes can apply to particular categories of sales of wealth. One example is the tax applied on sales of real estate property. This partly covers administrative costs incurred by the government in maintaining property ownership records. In some countries, transaction taxes (stamp duties) apply to the sale of shares. Transaction taxes fulfil at least partly a revenue-raising role rather than equity or efficiency objectives.

Taxes can also apply to unrequited transfers of wealth. The most common are taxes on bequests or inheritances that apply when property is bequeathed to heirs or other beneficiaries, either intentionally or unintended in the case of early death. These taxes can apply to the bequeathers (or their estates), or they can apply to inheritors (Boadway et al,

2010; Cremer and Pestieau, 2011). In either case, they differ in an important way from annual wealth taxes. Taxes on bequests apply only to the wealth accumulated over a lifetime, while wealth taxes apply to all wealth, both that which is held for life-cycle smoothing purposes and that held for bequest (either intentionally or for precautionary purposes). Another way to look at it is that a tax on inheritances is a tax on wealth received. As such it is like a tax on a windfall gain.

Vickrey (1944) observed that there was in fact a basic similarity among taxes on capital income, wealth and inheritances. The similarity was closest when individuals passed on to their heirs the same amount as they had inherited, denoted A . By assumption, individuals would adjust their earnings and consumption to maintain asset wealth of A each year of their post-inheritance life. As we have seen, a tax τ_k on capital income implies tax revenue of $\tau_k rA$. A wealth tax at the rate $\tau_w = \tau_k r$ yields the same revenue. A third way of collecting revenue is through an inheritance tax τ_b . If A is held for the length of time T until passed on as a bequest, a bequest tax at the rate $\tau_b = \tau_w T$ would yield the same lifetime revenue. Thus, the revenue-equivalent bequest tax rate depends on the length of life. Let us compare two dynasties. The first is made of short-lived individuals with life spans of T_S and the second of long-lived individuals with life spans T_L . The rate of inheritance tax that yields the same level of revenue as an annual tax has to be adjusted to the length of life with $\tau_b^S < \tau_b^L$. Note that this approach emphasizes the equivalence to annual wealth taxation of the inheritance tax viewed as a tax on the estate rather than on the inheritor.

Bequests may be subject to more limited taxation. Inter vivos transfers and gifts may bear limited if any tax. Countries like Canada that have no bequest tax as such may nonetheless impose property transfer fees (e.g., probate fees) on bequests. Although these are intended to cover the costs of administering estate transfers, they can raise significant revenues. In Canada, death also triggers capital gains on realization, so taxes apply on capital gains that have accrued over the lifecycle. This prevents them from being postponed until assets are actually sold. Other voluntary transfers may even be treated preferentially such as voluntary transfer to charitable or non-profit organizations which may obtain a tax deduction or credit.

Tax Treatment of Assets in Canada

A wealth tax would be a component of a broader system of taxation that applies to assets. We provide a brief review of the Canadian system here. For a more detailed summary, see Kerr et al (2012). Again, we can distinguish among taxes on asset income, taxes on asset value and taxes on asset transfers.

Asset income taxes

Individual and corporation income taxes include large elements of capital income in their bases. Individuals are fully taxed on interest income, rental income and royalties. Capital gains are

partially taxed, while dividends from Canadian corporations are taxed preferentially through a dividend tax credit that is meant to give credit for corporation taxes paid at source. Income from personal businesses is also subject to personal tax. Four features of personal capital income taxation are particularly relevant: a) only one-half of capital gains are taxable due to the capital gains exemption (CGE), they are taxed on realization rather than accrual, and loss-offsetting is incomplete; b) capital income is not indexed for inflation; c) only observed forms of capital income are taxed, and not unobserved forms like imputed rent on owner-occupied housing or works of art; and d) business income earned in small Canadian-controlled private corporations (CCPCs) is taxed at preferential rates due to the small business deduction (SBD). These features represent departures from the comprehensive income norm, and at least partly reflect tax administration realities. Note also, that in some instances it is difficult to distinguish labour income from capital gains or business income, so there is an incentive for taxpayers to report income as the latter. Some executives receive part of their compensation in the form of stock options whose returns are taxed as capital gains.

A substantial amount of capital income goes untaxed. For one thing, saving held in Tax Free Savings Accounts (TFSAs), Registered Pension Plans (RPPs), and Registered Retirement Savings Plans (RRSPs) are sheltered from personal taxation. However, the extent of sheltering differs in an important way. All forms of capital income escape taxation when invested in TFSAs. In the case of RPPs and RRSPs, only normal capital income is untaxed: windfall gains (rents) and risky returns are taxed when funds are withdrawn. A further implicit form of sheltering of capital income relative to labour income occurs through the tax mix. Since the Goods and Services Tax (GST) and the Harmonized Sales Tax (HST) that applies in some provinces are taxes on consumption, they do not apply to capital income. The same applies to payroll taxes, like contributions to Employment Insurance and the Canada and Quebec Pension plans.

The combined income tax, payroll tax and GST/HST systems implicitly tax labour income at a higher rate than capital income. This is relevant for evaluating the tax treatment of capital income for policy purposes. It is reinforced by the fact that human capital investment is roughly taxed on a cash-flow basis analogous to RRSPs. Taxes on the normal return to human capital investment are therefore sheltered from tax, but windfall gains in earnings are taxed. Although there is no reliable evidence, one expects that windfall labour earnings accrue disproportionately to highly educated taxpayers. Equity is served by the taxation of windfall earnings, although this is compromised to the extent that such earnings can be taken as capital gains or stock options by tax planning.

Overall, the limit on sheltering income through TFSAs, RPPs and RRSPs implies that a substantial proportion of capital income is sheltered from personal taxation for low- and middle-income households (Milligan, 2012; Department of Finance, 2013). Higher-income taxpayers who have exhausted their sheltering limits face more substantial marginal capital income tax rates. This is mitigated for the highest-income taxpayers who receive a relatively high proportion of their income as capital gains, including from stock options. The combination of the CGE and the fact

that capital gains are only taxed on realization means that their effective income tax rate is low. To the extent that capital gains are not realized during their lifetime, they escape taxation altogether, although accrued capital gains that are passed on as bequests are deemed to be realized and taxed on death.

Corporations pay income taxes on the income they generate for shareholders, although shareholders are partially reimbursed for this through integration measures. Natural resource firms pay a further tax on income earned from renewable and non-renewable resource income. The measurement of shareholder income is notoriously difficult because of the difficulties of measuring the user cost of capital. Numerous studies of the marginal effective tax rate (METR) on capital indicate how the corporate tax base differs among industries and type of investment (Bazel and Mintz, 2021). Of relevance for our purposes, corporate taxable income includes three components: normal competitive returns, windfall profits or rents, and returns to risk. As mentioned, studies have estimated that the latter two components are significant, though indistinguishable. There is a strong case for taxing them.

The tax treatment of corporations also varies by institutional type. As mentioned, small CCPCs obtain the SBD on a limited amount of profits which implies they face a lower tax rate. Owners also obtain a lifetime capital gains exemption (LCGE) that acts as a form of tax sheltering and provides an alternative to RRSPs and TFSAs as vehicles for retirement saving. Non-profit and charitable corporations escape corporate taxation altogether.

Taxes on the value of assets

There is no general wealth tax in Canada, but some asset values are taxed on a selective basis. Housing and commercial properties are liable for property taxes levied by municipalities and in some provinces as well. These are used to finance local public goods and services and, in some cases, education. Tax rates vary by jurisdiction, but not by the income or wealth or property owners. Properties are valued using market values estimated on a province-wide basis by public agencies. Property taxes compensate imperfectly for the fact that imputed rents on owner-occupied property are not taxed at the personal level.

There have been annual taxes imposed on particular types of business assets by both the federal and provincial governments. Currently, the federal government levies a capital tax at the rate 1.25 percent on financial and insurance corporations with taxable capital above \$1 billion. Prior to 2007, the federal capital tax applied to all corporations were liable for the paying tax capital in excess of \$50 million. Several provinces (MB, NB, NL, NS, PE and SK) also levy a capital tax on financial corporations with rates ranging from 4-6 percent above varying thresholds. Up to 2010 there was a capital tax on corporations in Ontario at the rate of 0.15 percent for regular corporations and between 0.3 percent and 0.45 percent for financial corporations depending on the amount of their capital. The base includes shareholder equity, debt and retained earnings.

Capital taxes on corporations raise relatively little revenue and their rationale is not clear. Like personal wealth taxes, corporate wealth taxes are in principle equivalent to taxes on the income of corporate capital. However, their base is much broader than the corporate income tax since they include capital financed by both equity and debt.

Taxes on the transfer of assets

Taxes can apply on some assets when they are sold or on others when they are transferred voluntarily to another owner. A prominent case of the former is a land transfer tax levied by provincial governments on property purchases. These serve mainly a revenue-raising function, although their original intent might have been as a user fee covering the costs to the state of administering property sales. Some provinces have introduced taxes on non-resident purchases of residential property in certain locations. For example, Ontario imposes a 15 percent non-resident speculation tax on residential property purchase in the Greater Golden Horseshoe Region.

Some countries tax share transactions on stock markets (such as stamp duties levied in the UK and Australia), although the economic rationale for these is not clear. One argument, associated with the Tobin tax (Tobin, 1978), is to dampen excessive and socially damaging speculation, although the Tobin tax was originally intended for international foreign exchange transactions. There have also been proposals for a tax on foreign exchange transactions, possibly at the global level both to dampen speculation and to provide financing for global public goods.

Taxes on asset transactions have not raised significant amounts of tax revenue. A potentially more lucrative tax on the transfer of assets is a tax on bequests. These could be taxes imposed on the value of the estate or on the value of inheritance received by heirs. The case for a tax on bequests and its design are fraught with conceptual issues to which we return below. What is important to note for our purposes is that unlike wealth taxes which are imposed in each tax year, taxes on bequests apply only when wealth is passed on, and they do so only once in a taxpayer's lifetime. The latter apply to all wealth, whether it is held for lifecycle smoothing purposes or to pass on to one's heirs. This makes bequest taxes fundamentally different from both wealth taxes and capital taxes. The rationale for bequest taxes is quite different than that for taxing capital income and wealth as we discuss below.

Unlike many OECD countries, including the UK and US, Canada has no tax on bequests. A federal estate tax existed until 1971. It was then turned over to the provinces as consequence of a tax reform that introduced a capital gains tax on deemed realizations at death. In effect, the inheritance tax was ruined over to the provinces. The fascinating history of inheritance, or estate taxes in Canada is recounted by Richard Bird in Bird (1978). Perhaps not surprisingly, one by one the province abandoned estate taxes culminating in Quebec by the early 1980s. Instead, estates are subject to two tax measures. First, accrued capital gains held in estates are deemed to be realized on death. This precludes the tax-free accumulation of capital gains across

generations and to some extent mitigates the growth in wealth inequality that would otherwise occur. Second, the transfer of wealth between generations via estates is subject to probate fees, which are analogous to transaction taxes. These are in principle equivalent to estate taxes, although they are neither progressive, since there is no large exemption, nor substantial, since the rates are relatively low and they raise limited amounts of revenue. It is worth noting that bequests do not obtain any tax credits for the bequeathers nor are they taxed in the hands of the inheritors.

A final type of wealth transfer consists of transfers to charities, non-profit organizations and political parties. Unlike bequests, these do not attract fees. Moreover, they are eligible for tax credits. These credits recognize both the benefit these donations might generate for recipient organizations but also the fact that donors are voluntarily forgoing personal consumption that would otherwise generate utility to the donors. The differences in tax treatment between transfers to heirs and transfers to charities and non-profits can be considered anomalous.

Economic case for taxing wealth

As we noted above, there is a fundamental similarity between taxing wealth and taxing capital income. If all assets yielded the same return, a wealth tax would be identical in effect to a tax on capital income. The case for taxing wealth as opposed to taxing capital income revolves partly around the fact that not all assets yield the same return, and partly around the fact that not all capital income is taxed under the income tax. Asset returns can differ either systematically or unexpectedly, and we return to the consequences of this below. Nonetheless, given their similarity, the case for taxing wealth is basically the same as the case for taxing capital income, and this has consequences for the case for wealth taxation.

The tax treatment of capital income has a long history in public finance. Three broad approaches to the taxation of personal income can be distinguished. The first is the *comprehensive income* approach favoured by Schanz (1896), Haig (1921), Simons (1938), Hicks (1939) and Musgrave (1959) as the ideal tax base. Comprehensive income indicates how much individuals could consume in the tax period without reducing their wealth, or equivalently, consumption plus net saving: $Y_t = C_t + \Delta A_t$. By the taxpayer's budget constraint, this is equivalent to labour income plus net transfers plus capital income. Comprehensive income was advocated by the Carter Commission (1966) in Canada and by the Royal Commission (1955) in the UK. It is used as the benchmark by the federal government in its annual tax expenditures report (Department of Finance, 2018).

A second approach to taxing persons is to use consumption expenditures initially proposed by Kaldor (1955) and subsequently advocated by the U.S. Treasury Blueprints (1977), the Meade Report (1978) in the UK, and the Macdonald Royal Commission (1985) in Canada. Kaldor argued famously (and naively) that consumption reflects what one taxes out of the social pot while income is what one adds to it. Consumption could be taxed directly, as in the case of value-

added taxes, or indirectly as income less savings, analogous to RPP or RRSP treatment. Recently, a version of personal consumption taxation has been advocated by the President's Panel (2005) in the US and the Mirrlees Review (2011) in the UK.

The existing tax system is a hybrid of comprehensive income and consumption taxation. The income tax purports to tax both labour and capital income, but the latter is favoured in a variety of ways. Limits amounts can be sheltered using RPPs, RRSPs and TFSAs, and imputed income on housing and other assets is not taxed. Capital gains are taxed preferentially through the CGE and taxation is postponed until realization, while dividend taxation is limited by the dividend tax credits. Personal business income earned in CCPCs is treated favourably by the SBD combined with the LCGE. A proportion of tax revenues is collected by general consumption taxes, including the GST, HST and QST, and payroll taxes, both of which exclude capital income. As mentioned, the limitation on contributions to RPPs, RRSPs and TFSAs favour lower-income taxpayers, while general preferences for capital gains and small CCPCs tend to favour high-income taxpayers for whom capital income and capital gains are especially important.

The proponents of comprehensive income and consumption taxation base their arguments largely on fairness and general efficiency considerations rather than on social welfare foundations. Consumption tax advocates emphasize the avoidance of distortions on savings (future versus present consumption) decisions, but that is not convincing. Both comprehensive income and consumption taxes distort labour/leisure choices. To raise a given amount of revenue, a consumption tax would have a larger effective marginal tax rate on labour income, but a smaller one on capital income than an income tax. Second-best theory tells us that removing the distortion on saving while increasing the distortion on labour supply is not necessarily welfare improving.

The third approach, optimal income tax analysis, studies the optimal mix of income and consumption taxation, or equivalently, the optimal taxation of capital income from a social welfare maximizing perspective. The naïve view, based on Corlett and Hague (1953), was that capital income should only be taxed to the extent that future consumption was complementary to leisure (Atkinson and Sandmo, 1980). Recently, dynamic optimal tax analysis has uncovered several arguments for taxing capital income (Banks and Diamond, 2010). The arguments are sometimes technical and include the following: 1) the utility discount rate falls with income levels, so saving propensities rise with income; 2) returns to saving rise with portfolio size and therefore with income; 3) some assets yield above-normal returns to capital, or rents; 4) uncertain wage income cannot be insured; 4) capital income taxation can indirectly tax consumption funded by unobserved inheritances; and 5) taxpayers face liquidity constraints that preclude them from borrowing when young.

At the same time, there are behavioural economics arguments that militate against taxing capital income. In particular, present bias (time-inconsistent preferences) results in systematic undersaving for retirement (Congdon et al, 2011), and this may be particularly pronounced for lower-income households. The government responds by encouraging personal saving for

retirement through sheltered savings devices and mandatory public pensions like the Canada and Quebec Pension Plans (CPP/QPP), as well as providing a backstop in the form of transfers to the low-income elderly (Old Age Security and the Guaranteed Income Supplement).

The upshot is that these arguments support a tax system that simultaneously shelters capital income from taxation for low- and middle-income taxpayers while at the same time taxing capital income earned on non-sheltered assets that accrues disproportionately to higher-income taxpayers. To the extent that the share of capital income consisting of rents increases with taxpayer income and wealth, capital income taxes should be progressive. That is not to say that capital income and labour income should be taxed at the same rate. The fact that the tax mix of consumption, payroll and income taxation favours capital income over labour income ensures that average labour income tax rates exceed average capital income tax rates. Whether capital income taxation should be more or less progressive than labour income taxes is an open question. Both have rent components at high income levels. Moreover, taxing capital incomes at different rates than labour incomes can be self-defeating to the extent that tax planning techniques give taxpayers discretion over how to classify their income.

Shortcomings of capital income taxation

Assessing the adequacy of the existing taxation of capital income requires making three kinds of judgments. The first is setting out an ideal system of taxing asset income to use as a benchmark for judging adequacy. The second is identifying divergences of the system of capital income taxation from the benchmark. The third is specifying instances where administrative, measurement and other problems make it difficult to rely on capital income taxation to achieve the benchmark treatment of asset income. These judgments can then lead to a discussion of whether wealth taxation and/or inheritance taxation can achieve outcomes that capital income taxation cannot, or whether it can improve outcomes that capital income taxation addresses imperfectly.

Defining an ideal tax base is difficult and there is little consensus among tax professionals, tax academics and policymakers. Considerable weight continues to be given to comprehensive income despite the findings and recommendations of the taxation literature and tax commissions in various countries. The Income Tax Act is essentially based on the idea that comprehensive income should be taxed, with exceptions from the ideal being specifically carved out. The exceptions include whole forms of capital income being excluded (e.g., imputed returns to owner-occupied housing), limited exemptions being given to some types of capital income (e.g., income in assets sheltered from taxation to encourage saving for retirement), and preferential treatment of some forms of capital income (e.g., the CGE, LCGE and dividend tax credit). The implicit acceptance of comprehensive income as the proper income tax base is reinforced by the fact that Finance Canada's tax expenditure accounts (Department of Finance, 2018) treat deviations from comprehensive income as tax expenditures.

Few countries come close to taxing income on a comprehensive basis and Canada is no exception. Arguably Canada is closer to a progressive consumption tax system than a comprehensive income tax system, at least for the majority of the population. The combination of sheltered savings vehicles, the tax exemption of imputed housing rents, the use of consumption and payroll taxes as part of the tax mix, and the preferential tax treatment of capital gains and dividends imply that all but the highest income Canadians pay relatively little tax on capital income. This is exacerbated by that fact that some sources of income, such as rents and inheritances, used to finance consumption go partly untaxed. On the other hand, some assets and asset income are taxed by property taxes and the corporate income tax.

Put differently, for most taxpayers, The Canadian tax system imperfectly resembles the system recommended by the Mirrlees Review in the UK. They proposed consumption taxation at the personal level, a cash-flow equivalent business tax and a tax on inheritances received. Consumption taxation would be accomplished by combining a broad-based VAT with a personal tax system that sheltered pension income and taxed capital income in excess of a normal rate of return using a so-called rate-of-return (RRA) tax. The latter would effectively tax both rents or windfalls and returns to risk. The Canadian tax system deviates from this in the following ways. While households are able to shelter their capital income in RPPs, RRSPs, TFSAs and housing, the former three have limits. The limits to sheltering are applied differently to different assets. Housing can be sheltered without limit, while the limits on the value of assets that can be sheltered in RPPs, RRSPs and TFSAs differ. Moreover, the extent of sheltering of assets returns differs. Capital income returns in excess of normal are taxed on assets sheltered in RPPs or RRSPs as well as by the HST/GST system. However, rents on assets whose returns go untaxed, such as TFSAs and housing, are not subject to tax.

For those assets that are not sheltered, capital income is taxed. In addition, there is no tax on inheritances and business taxes deviate from cash-flow equivalent taxes since they are based on shareholder income. Some provincial natural resource taxes are similar to rent taxes.

More of the capital income of higher-income persons is taxed, and this is consistent with recent tax analysis principles, including those that informed the Mirrlees Review (Banks and Diamond, 2010). However, unsheltered capital income is taxed inconsistently, especially those forms on which high-income taxpayers rely. Only half of capital gains are taxed and then only on realization. Stock options are treated as capital gains. Dividends obtain the DTC on the grounds that this compensates for corporate taxes already having been paid. This is despite convincing arguments that a substantial share of corporate taxes is shifted to labour. Personal corporations are taxed at preferential rates and, as mentioned, imputed rents and windfall capital gains on housing go untaxed. Some income that might be considered as managerial or entrepreneurial income and thus should be treated as labour income is instead reported as capital income to receive favourable tax treatment.

For our purposes, it is useful to think of our benchmark personal tax system as a modified version of the progressive consumption tax system proposed by the Mirrlees Review. Normal

capital income should be sheltered up to some exemption level, while above-normal capital income is taxed. This implies that for lower-income taxpayers, the personal tax is equivalent to a consumption tax. Above the exemption level, capital income should be taxed at progressive rates, but the implicit rate of tax on capital income is less than that on labour income because of the mix of consumption, payroll and income taxation. Cash-flow equivalent business taxation, general consumption taxation and a tax on inheritance would complement the personal tax.

The actual tax system deviates from this benchmark by treating different forms of sheltered income inconsistently, by taxing different forms of capital income differently, and by leaving inheritances untaxed. This issue is whether reform of the Canadian tax system to more carefully resemble the benchmark system could be achieved satisfactorily by reforming the existing capital income tax system, or would an annual wealth tax be a useful adjunct?

Wealth tax versus reformed capital income tax

The case for deploying an annual wealth tax depends on how it would differ from a capital income tax. As noted earlier, under certain circumstances, wealth taxation and capital income taxation are equivalent. If the rate of return on assets is the same for all taxpayers and the wealth and capital income tax apply to all assets, the two are equivalent. Neither of these conditions is likely to apply. If asset returns vary among individuals because they differ in their investment productivity, a wealth tax at a given rate will impose a relatively low rate of tax on the income of assets with relatively high rates of return compared with a capital income tax. It will therefore favour assets earning above-normal rates of return, including those that obtain significant rents. On grounds of fairness, taxing capital income might be preferred to taxing wealth when rates of return vary among individuals, although as noted by favouring high-productivity investments, a wealth tax will result in higher aggregate output from which all can benefit.

The case for capital income taxation is clearer when income on some assets includes some rents or windfall gains. Since windfall gains are not foreseen, they are not reflected in the value of assets, which are based on expected future returns. A wealth tax would not apply to windfall gains, whereas a capital income tax would. In these circumstances, capital income taxation is preferred. This is especially the case given that rents are relatively more important for high-income persons who obtain proportionately more of their income from shares and valuable housing.

By the same token, a wealth tax would not apply to returns to risk since the value of wealth is the present value of expected returns net of a risk premium. Capital income taxation would tax returns to risk, so would affect the incentive to take risks. While this might represent a distinct advantage for wealth taxation over capital income taxation, important caveats apply. The literature on taxation of risky capital income shows that a tax on risky returns does not

necessarily decrease risk-taking (Mossin, 1968; Stiglitz, 1969). If the tax has full loss-offsetting, individuals might actually increase the share of risky assets they hold in their portfolios via the Domar and Musgrave (1944) effect. This suggests that an important tax reform would be to improve loss-offsetting, for example, by allowing carry-forward and backward with interest and allowing deductibility of capital income losses against all forms of income. It would be difficult to have full loss-offsetting given that some assets are liquidated before all losses have been deducted. But, loss-offsetting could be much more complete than it is now.

The failure to tax fully all above-normal returns to capital, or rents, is a more general problem in the income tax system. Even if one aspires to a progressive consumption tax, the tax system should include labour income, transfers and rents. Only normal returns to capital should be tax-free. In the Canadian hybrid tax system, some assets are sheltered from tax. When the sheltering takes the registered-asset form (i.e., RPPS, RRSPs), accumulated rents are included in the tax base when the assets are withdrawn from the shelter. However, for assets sheltered in pre-tax form, such as TFSAs and principal-residence housing, all asset returns including rents are tax-exempt. Given the limits on TFSA contributions, the fact that rents go untaxed raises only modest concern. However, for owner-occupied housing, there are no tax-sheltering limits. Windfall gains can be relatively large, and they accrue disproportionately to higher-income persons whose housing assets can be substantial.

Rents can also go under-taxed for returns to assets that are not explicitly sheltered. Capital gains is an important case in point. There are three tax advantages enjoyed by capital gains relative to other forms of capital income, particularly interest income. First, they benefit from a 50 percent exemption from tax via the CGE. Although this is seemingly intended to offer a rough form of integration with the corporate tax, it is an imperfect device for doing so and arguably an unnecessary one. It is unnecessary because as mentioned the case for personal and corporate tax integration is weak given the evidence that much of the corporate tax is shifted to labour.

A second tax advantage available to capital gains is that they are taxed on realization rather than accrual. The ability to defer capital gains tax until realization implies that assets that yield capital gains can in part be sheltered from tax until the asset is sold. This can be a substantial advantage for assets for which capital gains constitutes a large portion of their return (Smart and Hasan Jafry, 2021). This is particularly so for stocks that include a significant component of rents. Evidence suggests that capital gains as a share of income rises with income and wealth, so this is particularly advantageous to top income earners. The ability to accumulate deferred capital gains contributes to the wealth inequality. To the extent that one wants to tax the capital income of higher income groups, deferral of capital gains constitutes a serious shortcoming of the existing tax system.

It might be argued that the special treatment of capital gains is in part motivated by offsetting the fact that purely inflationary gains are taxed. This argument is not fully convincing because other forms of capital income are taxed on a nominal basis, and in any case the advantages of

the CGE combined with taxation on realization more than compensate for the taxation of nominal capital gains. Smart and Hasan Jafry (2021) argue convincingly that the advantages of deferral of capital gains tax until realization far outweigh the costs of taxing nominal capital gains, and that that latter is in fact justified as a partial offset to the former.

In principle, capital gains could be taxed on accrual, and various schemes have been proposed for doing so (Gravelle, 2020, 2021). One approach to taxing accrued capital gains is to measuring the change in capital values each tax year, for example, using mark-to-market techniques. That would be a daunting task for all but traded assets. An alternative approach is a look-back method that taxes capital gains on realization but increases the taxable gain so that the tax liability is roughly equivalent to what it would have been on an accrual basis. This approach uses data on the base value, the sale price and the holding period, and assumes that the capital gain grew at a constant rate during the holding period. This method avoids valuation and liquidity problems, but it involves administration costs.

A third advantage is that the favourable treatment of capital gains and business income leads to tax planning opportunities. Entrepreneurs, senior executives and those contributing to the value of enterprises have an incentive to divert as much of their income as possible away from labour income and towards capital income. Besides capital gains opportunities, executives can receive some reimbursement in stock options, which are treated as capital gains. In addition, the income of small Canadian-controlled private corporations (CCPCs) is taxed at preferential rates and owners have some discretions as to how much income they should take as labour earnings and how much as business profits.

These problems are largely restricted to capital gains and small business profits. Dividends also receive preferential treatment through the dividend tax credit, while interest and royalties are fully taxed as income.

A final problem is that inheritances go largely untaxed in Canada. Since inheritances represent a windfall transfer in the hands of recipients, the case for taxing them seems strong. However, the literature takes a more nuanced view, and the taxation of inheritances across countries is mixed. For one thing, there are various inefficiencies associated with inheritance taxation. Some authors argue that there is an externality associated with making bequests for altruistic reasons (Kaplow, 2001). Bequests give benefits both to the donor and to recipients, and donors will only take their benefit into account (albeit that it represents the benefit that donors obtain from the utility of recipients). Kaplow argues that bequests should be subsidized on this account. Others dispute this on the grounds that it constitutes double counting of the benefits of bequests (Hammond, 1987; Diamond, 2006; Mirrlees, 2007). The taxation of bequests or inheritances can also give rise to inefficiency to the extent that it discourages the donor from giving them. Cremer and Pestieau (2006, 2011) summarize the equity-efficiency trade-offs given different assumptions about the motive for bequests and the treatment of benefits to the donor. Another issue concerns how to treat bequests from the point of view of donor's utility. If voluntary bequests are treated as a form of consumption they should be taxed as such. No

relief would need to be given for bequests given. On the other hand, if bequests are treated as a cost incurred by donors reflecting their foregone consumption, relief should be given. An indirect way to do so would be neither to tax inheritances nor to give relief to donors, which is similar to the Canadian system. In any case, if bequests are to be taxed, they should be taxed in the hand of recipients for whom they represent an income transfer. The Mirrlees Review (2011) recommended a progressive tax on lifetime inheritances.

As mentioned, there is no explicit tax on bequests in Canada. There are however provincial probate fees that are based on the size of the estate. They are of modest size and are not progressive. As well, accrued capital gains in an estate are deemed to be realized upon death. This cuts off the sheltering of accrued capital gains and reduces the value of the estate being passed on to heirs. It is a measure that only partly addresses the inequalities of wealth that have built up largely by the accumulation of accrued capital gains.

To summarize this discussion, the main deficiencies of the current system of capital income taxation are as follows. First, some forms of capital income are either not taxed or are under-taxed, including imputed rent of principal-residence housing. Second, capital gains are only taxed on realization implying that individuals can accumulate wealth in assets whose return takes the form of capital gains, and this contributes to the inequality of wealth that we observe. These issues particularly favour higher-income and wealthier individuals for whom capital gains and the rents that generate them are especially important. Third, wealth inequalities are perpetuated as the wealth that has been accumulated in part due to taxing capital gains on realization are passed onto future generations. Those lucky enough to have accumulated large banks of wealth can themselves take advantage of the deferral of capital gains tax as they reinvest their wealth. Finally, the favourable tax treatment of both capital gains and small CCPCs presents tax planning opportunities to high-income individuals to report labour income as capital income. These deficiencies apply mainly to high-income individuals who obtain disproportionately large amounts of income as capital income, especially capital gains. In effect, that tax system exacerbates the tendency noted by Piketty (2013) of capital income growing more rapidly than labour income.

Could an annual wealth address these deficiencies, or would a reform of the tax treatment of capital gains, small businesses and inheritances suffice? Reforming capital income taxation has a natural advantage over introducing a wealth tax since a properly designed capital income tax includes rents and windfall gains in its base. At the same time, it would tax returns to risk, so loss-offsetting would have to be enhanced to avoid discouraging risk-taking. Reforming capital income taxation to address the specific issues mentioned above would be more challenging. In principle, imputed rents on owner-occupied housing could be made taxable though that would be administratively costly. If that were done, mortgage interest should also be deductible against imputed rents, which would add to the complexity. An especially important issue with respect to housing is the possibility that a component of imputed returns to housing is windfall gains. These could be included in imputed rents for tax purposes. Alternatively, if taxing

imputed rents was deemed too complex, a fallback approach would be to tax capital gains on housing above some exemption level.

A net wealth tax applied selectively to the value of owner-occupied housing net of the value of mortgage financing is another option. This would avoid the need to measure imputed rents, and if applied with some exemption level would be equivalent to taxing the expected imputed rents on housing. However, it would have the disadvantage of excluding windfall capital gains on housing.

A further serious issue is the benefit to asset-owners from being able to defer capital gains taxation until realization, and then only to tax one-half of them. This effectively allows owners of assets giving rise to taxable capital gains to shelter them from taxation as long as the gains are unrealized. The problem would be mitigated by reducing the CGE. In principle, the deferral advantage could be addressed by taxing capital gains on accrual, and we have mentioned above some proposals for so doing. Moving to accrual-based capital gains taxation is something that could be thoroughly studied, but experience with it is limited and some of the valuation problems would have to be overcome. There is the precedent of using deemed realization of accrued capital gains on death that could provide some guidance. There are as well liquidity issues that would have to be addressed for taxpayers who have little income but sizeable accrued capital gains. There have been reasonable proposals for dealing with the liquidity problem that could be used should an accrual approach be adopted (Advani et al, 2020). A look-back approach to approximating capital gains taxation on accrual offers the most promising approach, but even it would have significant collection and compliance costs.

A wealth tax might be an option for dealing with the deferral problem, but it also runs into similar valuation problems as taxing capital gains on accrual. Valuing wealth each year would involve valuing unrealized capital gains. Little is gained by using wealth taxation to address the deferral problem, and much is lost in the failure to tax windfall gains as they occur.

There still remains the problem of wealthy individuals accumulating large amounts of wealth through unrealized capital gains. This can lead to policy concerns for two reasons. First, much of the wealth will be passed on to heirs and will perpetuate intergenerational wealth inequality (Alvaredo et al, 2017). This is only minimally dealt with by the deemed realization of accrued capital gains, which terminates the sheltering of capital gains by the bequeather. An annual wealth tax would temper the ability to accumulate unlimited amounts of wealth tax-free, but as mentioned, such a policy has no significant advantage over moving to accrual-based capital gains taxation. An alternative is to impose a tax on inheritances. If such a tax were designed to apply to the largest inheritances, it would partly undo the disproportionate advantage that wealthy individuals obtain from being able to defer their capital gains. This would be especially the case if the net value of housing wealth were also included in the inheritance tax base. The Mirrlees Review proposed a lifetime inheritance tax with a progressive rate structure. Whether the inheritance tax rate should increase with the holding period as proposed by Vickrey (1944) could be studied further.

Second, large accumulations of wealth might be considered a problem because they allow wealthy individuals to exercise undue influence on the political process (Saez and Zucman, 2019a). To the extent that such influence is exercised through political or charitable donations, the generosity of donation tax credits could be revisited. A wealth tax might be a direct way to blunt the political and other advantages that wealth itself confers. Alternatively, policies that preclude large accumulations of wealth could also be effective, such as elimination the CGE, precluding the ability to accumulate wealth in small CCPCs with minimal tax, and taxing inheritances progressively.

Summary of policy implications

We assume that in our benchmark tax system enough normal capital income is sheltered that encourages and enables low- and middle-income households to save sufficiently for their retirement thereby taking pressure off the state. We also assume that above-normal returns to capital and windfall gains should be taxed, and capital income of higher-incomes should be taxed progressively, albeit at rates that are less than labour income tax rates. We consider inheritances to be windfall gains to the beneficiaries and therefore suitable tax bases at least beyond some exemption level.

The current system approaches this benchmark with some exceptions. First, because capital gains taxation can be deferred until realization, high-income households can accumulate wealth free of tax, including wealth that originates in rents or windfall gains. Second, entrepreneurs and senior executives are often able to avoid full taxation of their earnings by reporting income as capital income and taking advantage of stock options and CCPCs where possible. Third, although housing is subject to property taxes, capital gains on owner-occupied housing escape taxation altogether and this is particularly advantageous to high-income households. Related to this, other forms of wealth whose returns tax an imputed form, such as consumer durables and works of art, escape capital income taxation. Fourth, inheritances go largely untaxed so that large concentrations of wealth are perpetuated across generations. Finally, returns to risk are over-taxed, especially because losses are not treated symmetrically with gains.

As we have seen, the wealth tax has some selective advantages in dealing with these shortcomings. It can tax some asset returns that currently escape capital income taxation, including imputed returns to housing and works of art. It can tax the accumulated capital gains that have not been realized. If it is imposed over and above a capital income tax, it can increase the progressivity of capital income taxation. It can also tax large concentrations of wealth that can be passed onto heirs or can be used to influence the political process. It can also avoid taxing the returns to risk, and so avoid discouraging risk-taking and innovative activities.

There are, however, significant downsides to relying on a wealth tax for these purposes. A main problem is that a wealth tax, which is based on future expected returns, does not tax rents or windfall gains. Another drawback is that, although an important advantage of a wealth tax is its

ability to tax accrued capital gains, it requires annual valuations of wealth. The same outcome can be accomplished by moving from a realization to an accrual basis for capital income taxation. Although this would face administrative difficulties, these would be no different than those involved in evaluating wealth each year. Indeed, achieving the equivalent of accrual taxation could be done using the look-back method discussed above, which would be less costly than valuing accrued gains as they occur. Some of the other deficiencies of the existing system—absence of taxation of housing capital gains, tax avoidance via CCPCs and stock options— can be addressed directly rather than using a wealth tax. With respect to concerns with high concentrations of wealth, much of these are passed on to the next generation. A lifetime inheritance tax would reduce the intergenerational transmission of wealth inequality. While it is true that a capital income tax taxes the returns to risk, the consequences of that for risk-taking could be reduced by enhancing loss-offset properties of the tax system.

In our judgment, a suitably reformed system of capital income taxation combined with an effective inheritance tax would achieve most of the advantages of wealth taxation. This would also avoid the significant administrative costs that would be involved in introducing a substantially new tax, especially one that might be prone to tax avoidance and evasion.

References

- Advani, A., E. Chamberlain, and A. Summers (2020), *A Wealth Tax for the UK* (London: Wealth Tax Commission).
- Alvaredo, F., B. Garbinti, and T. Piketty (2017), “On the Share of Inheritance in Aggregate Wealth: Europe and the USA, 1900-2010,” *Economica* 84, 237-60.
- Atkinson, A.B. and A. Sandmo (1980), “Welfare Implications of the Taxation of Savings,” *Economic Journal* 90, 529-49.
- Banks, J. and P. Diamond (2010), “The Base for Direct Taxation,” in J. Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles, and J. Poterba (eds.), *Dimensions of Tax Design*, (Oxford: Oxford University Press), 548-648.
- Bazel, P. and J. Mintz (2021), “The 2020 Tax Competitiveness Report: Canada’s Investment Challenge,” SPP Research Papers, The School of Public Policy, University of Calgary, vol. 14(21), September.
- Bird, R.M. (1978), “Canada’s Vanishing Death Taxes,” *Osgoode Hall Law Journal* 16(1), 133-45.
- Bird, R.M. (1991), “The Taxation of Personal Wealth in International Perspective,” *Canadian Public Policy* 17(3), 322-34.
- Boadway, R., E. Chamberlain, and C. Emmerson (2010), “Taxation of Wealth and Wealth Transfers.” In Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P.

- Johnson, G. Myles, and J.M. Poterba (eds.). *Dimensions of Tax Design: The Mirrlees Review*. Oxford: Oxford University Press: 737-814.
- Boadway, R. and P. Pestieau (2019), "Over the Top: Why an Annual Wealth Tax for Canada is Unnecessary," Commentary No. 546 (Toronto: C.D. Howe Institute).
- Boadway, R. and P. Pestieau (2021), "An Annual Wealth Tax: Pros and Cons," *FinanzArchiv* 77, 1-22.
- Buchholz, W. and K.A. Konrad (2014), "Taxes on Risky Returns—an Update," Max Planck Institute for Tax Law and Public Finance Working Paper 2014–10.
- Chancel, L., Piketty, T., Saez, E., Zucman, G. et al. (2021), *World Inequality Report 2022*, World Inequality Lab.
- Congdon, W. J., J. Kling, and S. Mullainathan (2011), *Policy and Choice: Public Finance through the Lens of Behavioral Economics* (Washington, DC: Brookings Institution Press).
- Corlett, W. J., and D. C. Hague (1953), "Complementarity and the Excess Burden of Taxation," *Review of Economic Studies* 21, 21–30.
- Cremer, H. and P. Pestieau (2006, "Wealth Transfer Taxation: A Survey of the Theoretical Literature." in L-A. Gérard-Varet, S-C. Colm and J. Mercier Ythier (eds.). *Handbook of the Economics of Giving, Reciprocity and Altruism*, Volume 2. Amsterdam: North-Holland: 1107-34.
- Cremer, H. and P. Pestieau (2011), "The Tax Treatment of Intergenerational Wealth Transfers," *CESifo Economic Studies* 57, 365-401.
- Davies, J.B. and L. Di Matteo (2020), "Long Run Canadian Wealth Inequality in International Context," *Review of Income and Wealth*, forthcoming.
- De Mooij, R.A. (2011), "Tax Biases to Debt Finance: Assessing the Problem, Finding Solutions," IMF Staff Discussion Note SDN 11/11 (Washington, DC: International Monetary Fund).
- Department of Finance (2013), "Tax-Free Savings Accounts: A Profile of Account Holders," in *Tax Expenditures and Evaluations 2012*, 31-45 (Ottawa: Department of Finance).
- Department of Finance (2018), *Report on Federal Tax Expenditures: Concepts, Estimates and Evaluations* (Ottawa: Department of Finance).
- Diamond, P. (2006), "Optimal Tax Treatment of Private Contributions for Public Goods with and without Warm Glow Preferences," *Journal of Public Economics* 90, 897–919
- Domar, E.D. and R. Musgrave (1944), "Proportional Income Taxation and Risktaking," *Quarterly Journal of Economics* 58, 388–422.

- Fagereng, A., L. Guiso, D. Malacrino, and L. Pistaferri (2020), "Heterogeneity and Persistence in Returns to Wealth," *Econometrica* 88, 115-70.
- Gravelle, J.G. (2020), "Sharing the Wealth: How to Tax the Rich," *National Tax Journal* 73, 951-68.
- Gravelle, J.G. (2021), "Capital Gains Options: Behavioral Responses and Revenues," Report R42364, Congressional Research Services, Washington. [Capital Gains Tax Options: Behavioral Responses and Revenues \(congress.gov\)](https://www.congress.gov/reports/42364/CRS-REPORTS/2021/R42364/capital-gains-tax-options-behavioral-responses-and-revenues)
- Guvenen, F., G. Kambourov, B. Kuruscu, S. Ocampo-Diaz, and D. Chen (2019), "Use It or Lose It: Efficiency Gains from Wealth Taxation," NBER Working Paper 26284. <http://www.nber.org/papers/w26284>
- Haig, R.M. (1921), *The Federal Income Tax* (New York: Columbia University Press).
- Hammond, P.J. (1987), "Altruism." in J. Eatwell, M. Milgate and P. Newman (eds.), *The New Palgrave: A Dictionary of Economics*, First Edition (Basingstoke: Palgrave Macmillan), 85-7.
- Hicks, J.R. (1939), "The Foundations of Welfare Economics," *Economic Journal* 49, 696-712.
- Jackson, A. (2020), "The Case for a Wealth Tax in Canada," Broadbent Institute, Ottawa. [The Case for a Wealth Tax in Canada - Broadbent Institute](https://www.broadbentinstitute.ca/wealth-tax-in-canada)
- Kacperczyk, M., S. Van Nieuwerburgh, and L. Veldkamp (2016), "A Rational Theory of Mutual Funds' Attention Allocation," *Econometrica* 84, 571-626.
- Kaldor, Nicholas, (1955), *An Expenditure Tax* (London: Allen and Unwin).
- Kaplow, Louis (2001), "A Framework for Assessing Estate and Gift Taxation," in W.G. Gale, J.R. Hines and J. Slemrod (eds.), *Rethinking Estate and Gift Taxation* (Washington: Brookings Institution), 164-204.
- Kerr, H., K.J. McKenzie and J. Mintz (eds.) (2012), *Canadian Tax Policy* (Toronto: Canadian Tax Foundation).
- Meade, J.E. (1978), *The Structure and Reform of Direct Taxation*, Report of a Committee chaired by Professor James Meade, (London: George Allen and Unwin).
- Milligan, K. (2012), "The Tax-Free Savings Account: Introduction and Simulations of Potential Revenue Costs," *Canadian Tax Journal* 60(2), 355-60.
- Mirrlees, J.A. (2007), "Taxation of Gifts and Bequests," slides for a talk at the Centenary of James Meade Conference.

- Mirrlees, J., S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles, and J.M. Poterba (2011), *Tax by Design* (the Mirrlees Review) (Oxford: Oxford University Press).
- Mossin, J. (1968), "Taxation and Risk-Taking: An Expected Utility Approach," *Economica* 35, 74–82.
- Musgrave, R.A. (1959), *The Theory of Public Finance* (New York: McGraw-Hill).
- Organisation for Economic Co-operation and Development (2008), *Growing Unequal: Income Distribution and Poverty in OECD Countries* (Paris: OECD).
- Organisation for Economic Cooperation and Development (2018), *The Role and Design of Net Wealth Taxes in the OECD* (Paris: OECD).
- Parliamentary Budget Officer (2021), *Estimating the Top Tail of the Family Wealth Distribution in Canada: Updates and Trends* (Ottawa: Office of the Parliamentary Budget Officer).
- Piketty, T. (2013), *Capital in the Twenty-First Century* (Paris: Éditions du Seuil).
- Power, L. and A. Frerick (2016), "Have Excess Returns to Corporations Been Increasing Over Time?" *National Tax Journal* 69, 831-45.
- President's Advisory Panel on Federal Tax Reform (2005), *Simple, Fair and Pro-Growth: Proposals to Fix America's Tax System*, Washington.
- Royal Commission on the Taxation of Profits and Income (1955), *Final Report* (London: HMSO).
- Royal Commission on Taxation (Carter Commission) (1966), *Report* (Ottawa: Queen's Printer).
- Royal Commission on the Economic Union and Development Prospects for Canada (Macdonald Commission) (1985), *Report* (Ottawa: Privy Council Office).
- Saez, E. and G. Zucman (2019a), *The Triumph of Injustice: How the Rich Dodge Taxes and How to Make Them Pay* (New York: W.W. Norton).
- Saez, E. and G. Zucman (2019b), "Progressive Wealth Taxation," *Brookings Papers on Economic Activity* Fall, 437-511.
- Schanz, G. Von (1896), "Der Einkommensbegriff und die Einkommensteuergesetze," *FinanzArchiv*.
- Scheuer, F. and J. Slemrod (2020), "Taxing our Wealth," NBER Working Paper 28150. <http://www.nber.org/papers/w28150>
- Simons, H.C. (1938), *Personal Income Taxation* (Chicago: University of Chicago Press).

- Smart, M. and S. Hasan Jafry (2021), "Inequity and Inefficiency in the Tax Treatment of Capital Gains," *Canadian Tax Journal*, forthcoming.
- Stiglitz, J.E. (1969), "The Effects of Income, Wealth, and Capital Gains Taxation on Risk-Taking," *Quarterly Journal of Economics* 83, 263–83.
- Stiglitz, J.E. (2012), *The Price of Inequality* (New York: Norton).
- Tobin, J. (1978), "A Proposal for International Monetary Reform," *Eastern Economic Journal* 4(3-4), 153-59.
- United States Treasury (1977), *Blueprints for Basic Tax Reform* (Washington: Treasury of the United States).
- Vickrey, W. (1944), "The Rationalization of Successions Taxation," *Econometrica* 12(3/4), 215-36.
- Xavier, I. (2021), "Wealth Inequality in the US: The Role of Heterogeneous Returns," mimeo.