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# Tax arbitrage through closely held businesses: Implications for OECD tax systems

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## Implications for OECD tax systems

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# Abstract

This paper explores tax arbitrage incentives and behaviours in OECD countries, and their implications for tax systems more broadly. It focuses on how OECD tax systems might encourage business owners, in particular owners of unincorporated businesses and owner-managers of closely held incorporated businesses, to minimise their tax burdens through tax arbitrage. The paper finds that tax incentives to incorporate and earn capital income through corporations have increased in the last two decades. It shows that there has been an increase in incorporated businesses in many OECD countries, which has been partly driven by tax factors. The paper also finds that, in many countries, a combination of tax system features – related to corporate, dividend, capital gains, gift and inheritance taxation – provide particularly strong incentives to retain earnings inside corporations.

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# 1. Introduction

1. **The differential tax treatment of different types of businesses and income may encourage owners of closely held businesses to engage in tax arbitrage.** This may involve shifts between business organisational forms, across types of income, and in the timing of income. Such arbitrage may have been encouraged by recent declines in corporate income tax (CIT) rates, by the fact that the costs associated with business incorporation have decreased in some countries, and by the blurry distinction between capital and labour income for business owners.

2. **Opportunities for business owners to engage in tax arbitrage may have a significant impact on the effective progressivity of tax systems, as well as their efficiency and revenue potential.** Data suggest that income inequality has increased recently in a number of countries (Keeley, 2015[1]; OECD, 2022[2]) and is higher when business income is taken into consideration given its concentration at the top of the distribution (Alstadsæter et al., 2016[3]). While the policy debate about how tax systems can address inequality has focused largely on personal income taxes (PIT) and wealth taxes, these trends underline the importance of considering the impact of business taxation, and the potential role of tax arbitrage. If tax arbitrage allows business owners to reduce their effective tax rates, this may have significant impacts on the effective progressivity and revenue potential of tax systems. In addition, tax arbitrage can reduce horizontal equity by leading to the differential tax treatment of taxpayers engaged in seemingly similar activities and receiving similar levels of income.

3. **This paper explores tax arbitrage incentives and behaviours in OECD countries, and their implications for tax systems more broadly.** It focuses on how OECD tax systems might encourage business owners, in particular owners of unincorporated businesses and owner-managers of closely held incorporated businesses, to reduce their tax burdens through tax arbitrage. The paper categorises the main arbitrage decision margins and the associated tax incentives. It also looks at whether taxpayers respond to such incentives by providing a structured review of the empirical evidence on tax arbitrage and drawing on data collected from OECD countries. The paper then discusses policy implications.

4. **The paper finds that tax incentives to incorporate and earn capital income through corporations have increased in the last two decades.** It shows that there has been an increase in the share of incorporated businesses in many OECD countries, and the empirical literature suggests that this has at least partly been driven by widening PIT-CIT differentials. The paper also finds that, in many countries, a combination of tax system features – related to corporate, dividend, capital gains, and inheritance taxation – provide strong incentives to retain earnings inside corporations. This can allow owners of closely held corporations to strategically defer or time the receipt of income at the personal level in order to reduce their tax liabilities. The paper surveys recent empirical studies that highlight the quantitative significance of such intertemporal income shifting.

5. **Reducing tax arbitrage incentives requires joint consideration of PIT and CIT as the design of CIT affects the functioning of PIT and vice-versa.** CIT functions as a backstop to PIT by limiting the degree to which taxpayers can avoid taxation through incorporation. and is therefore important to support the overall progressivity of the tax system. However, with the decline of CIT rates around the world until recently, risks of tax arbitrage and an erosion of PIT revenues through incorporated businesses have increased. In setting PIT and CIT policy, policymakers also need to consider all the ways in which capital income can be received or realised by individuals after it is earned by the corporation, whether through

dividend payouts, capital gains, or intergenerational wealth transfers (gifts or inheritances). The paper also highlights the role of more specific policies aimed at reducing tax arbitrage, such as measures restricting discretion in how earnings are allocated between capital and labour income or limiting the ability to retain earnings inside the corporation to avoid personal-level taxation. While reducing tax arbitrage strengthens the efficient and equitable functioning of tax systems, both PIT and CIT reforms should also carefully consider potential impacts on savings and real investment (Alstadsæter and Jacob, 2014[4]; Matray, 2022[5]).

6. **The paper is structured as follows**: Section 2 discusses recent trends in business income, how they matter for income inequality and what we know about business owners based on recent research. Section 3 presents the two main approaches to taxing business income in OECD countries as well as trends in statutory PIT and CIT rates. Section 4 describes the main tax arbitrage incentives and behaviours that result from existing business income tax systems. Section 5 briefly discusses other tax reduction opportunities. Section 6 provides an overview of measures that have been used by countries to limit tax arbitrage. Section 7 concludes by highlighting key policy implications.

# 2. Trends in business income and ownership

7. **Capital income is a large and growing component of national income**. Estimates find that capital income has risen from about 15-25% of GDP in a subset of OECD countries in the 1970s to 25-35% of GDP in 2010 (Elsby, Hobijn and Şahin, 2013[6]; Karabarbounis and Neiman, 2013[7]; Piketty and Zucman, 2014[8]; Piketty, Saez and Zucman, 2018[9]; Autor et al., 2020[10]; Guzzardi et al., 2023[11]).[1]

8. **Since capital income tends to be concentrated at the top of the income distribution, a growing share of national income going to capital may increase inequality** (Piketty, 2014[12]). While much of the early work on income inequality has focused on the role of wage income in driving key inequality outcomes (Piketty and Saez, 2003[13]), more recent analysis has acknowledged the importance of business and capital income. For the United States, Piketty, Saez, and Zucman (2018[9]) estimate that capital income represents 68% of income for the top 0.1% of US taxpayers.[2] While Smith et al. (2019[14]) also find that business income dominates other sources of income at the very top of the distribution, they conclude that approximately three-fourths of top pass-through profits reflects labour services in the form of owner human capital. A recent analysis of income inequality in Italy using the distributional national accounts approach has found that various categories of business income, including undistributed profits, amount to over half of income in the top 1% (Guzzardi et al., 2023[11]). In the United Kingdom, income from self-employment or owning or running a business accounts for 29% and 21% of income in the top 0.1% and top 1%, respectively, compared to under 10% for most of the income distribution (Delestre et al., 2022[15]). Finally, André, Germain and Sicsic (2023[16]) estimate that 48% of the income of the top 5% of earners in France can be attributed to capital and business income (including self-employment income and retained corporate earnings).

9. **In addition to the growing importance of business income as a category of national income, and its growing share among top incomes, there have been important developments in the type of business income being received at the top in some countries.** Data gathered by the OECD suggests a growth in recent years of the share of incorporated businesses among all businesses, and a reduction in the fraction of sole proprietorships and partnerships (see Section 4.2). Although it is hard to infer with certainty, it seems likely that the growth in businesses incorporation has been concentrated at the top given the concentration of share ownership at the top of the income or wealth distribution in countries where such data is available (Bastani and Waldenström, 2023[17]; Fagereng et al., 2020[18]). Some countries have furthermore seen a growth of a particular type of corporate form among the top one percent of taxpayers,

[1] See Figure XII of Piketty and Zucman (2014[8]). The countries include: the United States, France, Australia, Japan, the United Kingdom, Italy, Germany and Canada. Most recent OECD data on the labour income share for 2017 documents declining shares between 2001 and 2017, see the OECD Compendium of Productivity Indicators, 2019.

[2] See Figure VIII of Piketty, Saez and Zucman (2018[9]).

namely 'pass-through' corporations[3], which allows both limited liability and avoids taxation at the corporate entity level. This has been the case in the United States (Smith et al. (2019[19]); see also Section 4.2), for example, where over 69% of the top 1% of the income distribution earn some pass-through income, and Norway (Alstadsæter et al., 2016[3]).

10. **Attributing the accrued income of corporations to firm owners can have significant implications for measures of income inequality.** Business owners may choose to retain income inside their business, rather than pay it out as wages or dividends, in which case there is often no record of this on personal tax returns. In some tax regimes, focusing on reported personal income would vastly understate true levels of business income at the top of the income distribution. Consequently, attributing business income to personal owners as it accrues, rather than when it is realised, can increase measures of income inequality significantly (Alstadsæter et al., 2016[3]).

11. **Data on business owner characteristics is sparse, but new analysis using administrative data from the United Kingdom shows that business owners tend to be disproportionately represented at the top of the income distribution and are more likely to be older and male.** Cribb et al. (2019[20]) find that over two-thirds of business owners are male, with 66% of the self-employed and 72% of company owner-managers being men, based on UK administrative tax records. Moreover, they find that business owners are on average older than employees. Owners of incorporated businesses and some types of unincorporated businesses, specifically partnerships, also tend to be over-represented among high-income taxpayers. While sole trader incomes tended to be lower than those of employees, owners of partnerships were significantly over-represented in the top 1% of the taxable income distribution. 7% of all partners were in the top 1%. Among partners in financial services businesses, 37% were in the top 1%. Among owner-managers of corporations, 2% were in the top 1% of the taxable income distribution, but personal taxable income underestimates the income earned by many owner-managers who can retain their earnings within their company.

12. **Based on data from the United States and the United Kingdom, many closely held firms owned by the top 1% tend to be in professional services, and their owners tend to report both employment and business income.** In the United Kingdom, business services including for instance accountants, lawyers and consultants represent slightly over 30% of company owner-managers (Cribb, Miller and Pope, 2019[20]). In the United States, pass-through businesses owned by the top 1% tend to differ in their firm characteristics from non-pass-through businesses held at the top. Pass-through business owned by the top 1% tend to be firms in professional services (such as consultants, lawyers and specialty tradespeople) or health services (such as physicians and dentists) (Smith et al., 2019[19]). On average, a pass-through firm owned by someone in the top 0.1% had USD 20 million in sales, 100 employees, and was a regional business such as an auto dealer, beverage distributor or large law firm (Smith et al., 2019[19]). Non-pass through businesses owned by the highest income individuals tended to be in manufacturing and capital-intensive industries, and tended to be larger, with sales of more than USD 500 million (Smith et al., 2019[19]). An important feature of business owners is also the tendency to report both employment and business income. In the United Kingdom, one quarter of unincorporated business owners reported some income from employment. Incorporated business owners were half as likely to do so (Cribb and Simpson, 2018[21]).

[3] A pass-through business is one which passes its income directly to its owners. If it is owned by individuals, the business's income is reported on the individual income tax returns of the owners and is taxed at the individual level, and not the business level (see Section 3).

# 3. The taxation of business income and trends in statutory corporate and personal income tax rates

13. **In OECD countries, the tax treatment of business income typically depends on the legal form of the business.** Businesses may for instance operate as sole proprietorships, partnerships, closely held incorporated businesses or public corporations. The choice of business structure will depend on a variety of factors, including non-tax factors (see Box 1). From a tax perspective, the tax treatment of business income generally depends on whether the firm is a corporation or an unincorporated business, although there are other approaches in some countries[4] As summarised in Table 1 and discussed in greater detail in this section, unincorporated businesses (or pass-through incorporated businesses where they exist) are typically taxed on a flow-through basis at the individual level, while incorporated businesses are usually subject to tax on corporate profits at the entity level and at the personal level when income is received by individuals (e.g. as wages, dividends or realised capital gains). Applicable social security contributions (SSCs) on employment income also vary across business organisational forms and the status of the worker (employee vs. self-employed). In addition to regular income taxation regimes, some countries offer simplified presumptive tax regimes for small businesses whereby the tax liability is determined on a base other than income (Mas-Montserrat et al., 2023[22]). Businesses may also be subject to inheritance, estate or wealth taxes, which may implicitly tax some business income (see Box 3).

### Box 1. Non-tax factors determining choice of organisational form

***Limited liability***

Limited liability is generally only possible if a business is incorporated, minimising the risk associated with a business venture (Fama and Jensen, 1998[23]). Some mixed business forms may allow a degree of limited liability even if the organisational form is that of a partnership (for instance the *société en commandite* organisational form in France, in which a limited partner provides most of the funds). Nonetheless, such mixed forms are rare in most countries.

***Transfer of ownership***

Incorporation may facilitate the sale of equity in a business, either as a means for owners to exit the business, or as a means of financing investment in a business, either privately or through the issuance

[4] For instance, France allows individual entrepreneurs to be taxed under the corporate tax regime, while the United States allows certain corporations to be taxed on a pass-through basis.

of public shares. Given the less well-defined boundary between ownership and management for non-incorporated businesses, such as partnerships, divesting ownership in such circumstances may be more difficult, and require for instance the consent of other partners.

***Access to capital and funding structure***

Incorporation may facilitate external financing of a firm, not only through the issuance of equity but also by enabling access to bond markets. This access to financing may further enable an owner-manager to smooth losses over time inside the firm and allow the manager to continue receiving less uncertain wage income every period.

***Organisational flexibility***

Being an unincorporated sole trader, owner manager, or in a partnership may allow a flexible structuring of ownership and managerial responsibilities within a firm. Incorporation, on the other hand, usually imposes more rigid rules regarding the relationship between ownership and management (Williamson, 1981[24]).

***Regulatory requirements***

Depending on the country, incorporation may only be possible if certain conditions are met, for instance if the business has at least a minimum number of shareholders or capital contribution. Often, incorporation requires submission of a fee, and the preparation of required documentation which incurs legal costs, such as memoranda and articles of association.

## Table 1. Common approaches to business income taxation in OECD countries

| | Single-level taxation | Double-level taxation |
|---|---|---|
| *Entity level taxes* | *Income passes through to individual level* | CIT paid at the entity level and potentially other entity - level taxes paid in the tax year profits are generated |
| *Individual level taxes* | Business income is subject to (typically progressive) PIT rates and SSCs in the year income is received | Taxation depends on type of income received :<br>• Wage: subject to typically progressive PIT and SSCs at payout & deductible for CIT purposes<br>• Interest income: subject to typically progressive PIT or capital income taxes & deductible for CIT purposes<br>• Dividends: after-tax corporate profits subject to shareholder-level dividend taxation at payout, CIT - PIT integration may affect tax liability<br>• Capital gains: retained after-tax profits subject to capital gains taxes on disposal |
| *Business forms* | • Typically **unincorporated businesses** (e.g. sole proprietorships, general/ limited partnerships)<br>• In some countries, some incorporated businesses are taxed on a pass-through basis (e.g. look-through companies in New Zealand, S-corporations in the United States) | • Typically **incorporated businesses**<br>• In some countries, some unincorporated businesses are taxed at the entity - and personal level (e.g. France, or trusts in Hungary, New Zealand, Mexico and Switzerland) |

## Single-level taxation of business income

14. **Unincorporated businesses, including sole proprietorships as well as general or limited partnerships, are generally taxed on a flow-through basis**[5] Net business income typically flows through to the owner and is taxed at the personal level according to the relevant PIT rules. In most countries, net business income is taxed together with other personal taxable income, including employment income, typically at progressive rates. In some of the countries that operate a dual income tax system (Denmark, Finland, Norway and Sweden), income from unincorporated businesses is divided into a business income component (often based on a measure of a return to capital) taxed at business income tax rates and a labour income component, which is taxed together with other labour income. Other systems may apply. For instance, in Czechia, Italy and Poland, owners of unincorporated businesses are able to choose between taxation under the progressive PIT schedule or a flat tax rate which applies to all business income.

15. **In addition to PIT, OECD countries commonly levy SSCs or payroll taxes on self-employment income and may apply SSCs to income received through partnerships.** SSCs payable by self-employed individuals typically include some or all components of SSCs applied to employees in regular employment (e.g. pension, health care, unemployment). The SSC burden on self-employed individuals varies across OECD countries, as shown by a case study of eight OECD countries that analyses the differences in combined contribution rates[6] for self-employed individuals compared to employees (Milanez and Bratta, 2019[25]). Depending on the country, SSC rates on self-employed individuals may be lower than SSCs applying to employees, which may encourage shifts towards self-employment (Box 2). In around half of all OECD countries, partnership income is subject to self-employment SSCs, while other countries do not levy SSCs on partnership income, apply a special SSC schedule or make the tax treatment dependent on the type of partnership.

16. **In some countries, incorporated businesses may be taxed on a pass-through basis.** This is the case of look-through companies in New Zealand and S-corporations in the United States, for instance, for which income flows through to the owners and is treated as their personal income for tax purposes. Owners of US S-corporations can also classify part of their income as salary, subject to a reasonable compensation requirement (see Section 6), and part of their income as profit distributions. If these take the form of dividends, in contrast to labour income, they are not subject to payroll taxes (e.g. Medicare and other SSCs).

[5] For partnerships, thirteen OECD countries provide a choice between transparent (i.e. the partnership is not itself subject to taxation, as income is taxed in the hands of the business owner) and non-transparent tax treatment.

[6] The combined contribution rates paid by self-employed individuals and employees includes SSCs and Non-Tax Compulsory Payments (NTCP) which are compulsory unrequited payments to entities outside the general government therefore are not classified as taxes by the OECD Revenue Statistics Interpretive Guide

### Box 2. Incentives to switch from employment to self-employment or incorporation

Some tax systems offer preferential tax treatment to taxpayers who are sole proprietors or partners when compared to employees. For instance, Poland currently has a flat tax option for such business owners which is advantageous for high-income individuals who would otherwise fall into the top band of the progressive PIT schedule. Similarly, Italy and Czechia offer qualifying entrepreneurs and self-employed individuals the option to be taxed under a substitute flat tax regime instead of the progressive PIT schedule.

In other systems, self-employment may reduce taxpayers' SSCs. In some countries, SSCs for self-employed workers are lower than for employees (Milanez, 2017[26]). In such circumstances, switching to self-employment may increase take-home pay for a given level of employer labour costs, while obviating minimum wage requirements for employers. Of course, such shifts need to take into consideration potential future losses in social security benefits for the individual (such as reduced pension income later in life), but may in net terms represent a gain in disposal income or be perceived as such.

Where self-employed individuals benefit from preferential tax regimes relative to employment, there is some evidence that some previously employed taxpayers do set up unincorporated businesses to take advantage of these tax preferences (see Zawisza (2017[27]) for evidence from Poland). In particular, such responses can be sizeable when the tax advantages of owning unincorporated businesses persist over a long period of time.

The tax advantages of incorporation may also incentivise an employee to set up an incorporated business, while still undertaking similar types of economic activity. However, both Romanov (2006[28]) and Tazhitdinova (2020[29]) find evidence of small incorporation responses among individuals who were previously employed.

## Double-level taxation of business income

17. **Incorporated businesses are typically taxed at the corporate and personal level.** As mentioned above, incorporated businesses are taxed both at the entity level and the personal level when income is received by individuals. In some countries, certain types of unincorporated businesses may be taxed both at the entity and the personal level (for example, trust funds in Hungary, New Zealand, Mexico and Switzerland). The degree to which double taxation applies depends on the integration between corporate and personal level taxes, through dividend imputation systems for example.

18. **At the entity level, CIT is levied, although preferential tax treatment may apply.** CIT is levied on total business income in the tax year profits are generated[7]. Most OECD countries apply a single CIT rate to taxable income, independent of a company's income level. However, 17 OECD countries apply small businesses CIT rates subject to eligibility criteria, including for example business income or turnover thresholds, which reduce the tax burden for smaller businesses (OECD, 2023[30]). Many countries also offer tax incentives for various kinds of business income which reduce the CIT rate below the statutory rate, such as CIT holidays, reduced CIT rates or tax exemptions.

[7] In Estonia and Latvia, corporate profits are only subject to CIT on distribution while undistributed corporate profits are tax exempt.

19. **At the personal level, income taxation will depend on the type of income received.** Taxation at the personal level will depend on the form in which the income is received and on any available integration mechanisms between corporate and personal level taxation. Income may be received in four main possible forms:

- **Business owners may receive a wage, which will be subject to both PIT and SSCs**. Wages are typically a deductible expense for the business, so no CIT is paid at the entity level. At the personal level, labour income will be taxed according to the (typically progressive) PIT rate schedule on labour income and be subject to employee and employer SSCs.
- **Business owners may receive interest income, which is usually subject to taxation at the personal level.** Business owners may lend to their business. Interest expense is typically a deductible expense for the business, (with limitations in some countries[8]), so no CIT is paid at the entity level. At the personal level, interest income may be subject to flat or progressive tax rates.
- **Business owners can receive post-CIT income in the form of dividends, which are normally subject to shareholder-level taxation.** Depending on countries' tax systems (e.g. comprehensive vs. dual income tax systems), dividends may be subject to flat or progressive tax rates[9]. The level of dividend taxation will also depend on available integration between corporate and personal taxes. Many countries have classical dividend taxation systems, where there is no relief at the personal level for CIT paid at the entity level. Others have full (Australia, Mexico and New Zealand) or partial dividend imputation (Canada, Chile, Korea) which eliminate or reduce double taxation (Hourani et al., 2023[31]; Harding and Marten, 2018[32])[10].
- **When business owners sell their equity stake, capital gains may be subject to taxation.** Capital gains are typically taxed upon realisation and based on their nominal level, although Chile, Israel and Mexico adjust gains for inflation. Either part or all of the gains from the sale of shares may be included in taxable income and subject to ordinary PIT rates or special (typically lower) capital gains tax (CGT) rates. In several countries, shares that have been held for longer than a set period benefit from more preferential CGT treatment or a full exemption. The fact that capital gains are taxed upon realisation means that taxes on capital gains can be deferred, diminishing their net present value. The tax treatment of unrealised capital gains when assets are passed on as gifts or inheritances also varies across countries. In particular, some countries tax unrealised gains at death, while others apply step-up in basis, whereby the cost basis of the assets transferred at death is "stepped up" to their fair market value at the time of the bequest. Thereby, when the heir sells the asset, only the capital gains accrued since they received the inheritance are subject to CGT (OECD, 2021[33]).

20. **In some countries, access to the corporate form and corporate tax treatment has become available to a wider range of businesses.** For instance, in Canada, regulated professions (including doctors, lawyers, and others) were typically not allowed to operate as incorporated businesses, but rules have been made more flexible over the past two decades, allowing physicians to incorporate and family

[8] See https://qdd.oecd.org/subject.aspx?Subject=ILR for details of interest limitation rules across a sample of countries. An example of such a rule is the interest expense limitation rule as part of the EU's Anti-Tax Avoidance Directive, which requires member states to implement measures limiting the tax deductibility of interest on debt.

[9] In some countries, dividends and other forms of capital income may also be subject to SSCs.

[10] Under these systems, individuals are taxed on the grossed-up dividend income, which is composed of the distributed dividend income plus an amount approximating corporate taxes paid at the entity. The personal income tax liability is subsequently reduced by a tax credit accounting for the taxes paid at the entity level. Under partial imputation, the gross-up factor or the tax credit, or both, may be different from the rate of CIT paid.

members of physicians to own shares in medical corporations. A similar tax treatment was then extended to lawyers, accountants, and engineers in all Canadian provinces (Smart, 2021[34]). In the United Kingdom, rules were changed to allow one-director corporations in 2006 (Cribb, Miller and Pope, 2019[20]). In France, rules were changed in 2022 to allow unincorporated businesses to be taxed under CIT. In these countries, access to the corporate form or corporate tax treatment was therefore made easier. In the United States, where pass-through taxation for S-corporations has traditionally been more favourable than double-taxation for C-corporations, rules progressively allowed a wider range of businesses to be taxed on a pass-through basis (e.g. the maximum number of shareholders in an S-corporation was initially limited to 10, but gradually increased to 100 in 2004) (Clarke and Kopczuk, 2017[35]). This shows that in addition to shifts in tax incentives (discussed below), regulatory changes in some countries have given businesses more flexibility to elect their tax treatment and thereby increased room for tax arbitrage.

### Box 3. Inheritance, estate and wealth taxes on business assets

In addition to the taxes on business income described above, business owners or heirs may be subject to inheritance or estate taxes or wealth taxes depending on the country, which are important to consider in a comprehensive analysis of the taxation of capital investment.

Twenty-four out of 38 OECD countries levy inheritance or estate taxes. Inheritance or estate taxes are levied on the net value of transferred assets. This implies that (some) unrealised capital gains accumulated by donors during their lifetime effectively end up being taxed. However, preferential inheritance or estate tax treatment in the form of full exemptions or partial relief commonly applies to transfers of business assets, which means that unrealised business capital gains may partially or fully escape taxation when businesses are transferred to heirs.

Four OECD countries (Colombia, Norway, Spain and Switzerland) levy net wealth taxes, i.e. recurrent taxes on a wide range of movable and immovable property, net of debt. In some ways, a wealth tax is similar to a tax on capital income (e.g. a wealth tax of 1% is equivalent to a capital income tax of 25% when the rate of return is 4%), with the key difference that a net wealth tax is imposed irrespective of actual returns. Just like with inheritance or estate taxes, however, business assets typically benefit from exemptions or preferential tax treatment under net wealth taxes, provided they fulfil certain conditions.

Source: (OECD, 2018[36]; OECD, 2021[33])

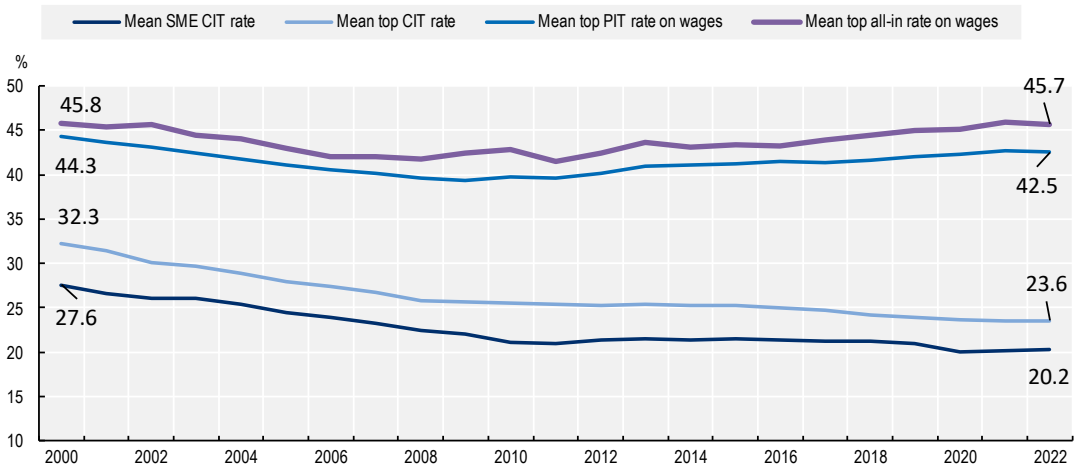
## Key trends in statutory corporate and personal income tax rates

21. **This section examines the evolution of key statutory tax rates on business income at the corporate and personal levels and highlights differences in tax rates on different types of income**. It shows that statutory CIT rates have experienced a significant and widespread decline in OECD countries, which has contributed to increasing gaps between top PIT rates on wage income and CIT rates in the vast majority of countries. There has been significantly more variation across countries in the evolution of gaps between top PIT rates on wage income and top combined corporate and shareholder level tax rates on dividend income. As will be discussed further below, the economic literature suggests that the size of these tax rate gaps matters for tax arbitrage by changing incentives to choose one business form or one type of income over another. The PIT-CIT differential is an imperfect measure of the incentives to incorporate as both corporate and personal-level taxes, as well as measures affecting the tax base (e.g. tax credits and allowances) need to be considered (Hourani et al., 2023[31]). Nonetheless, much of the empirical literature

has focused on this metric while acknowledging its limitations (de Mooij and Nicodème, 2008[37]; Lejour and Massenz, 2020[38]).[11]

22. **The average gap between top PIT rates on wage income and CIT rates across OECD countries has increased over the past two decades.** Figure 1 shows trends in top tax rates on wages in the OECD, including the average top PIT rate and the average top all-in (PIT and employee SSC) rate. It also shows the evolution of tax rates on corporate income, including the average top CIT rate and the average CIT rate for small and medium-sized businesses (SMEs), which takes into account SME CIT rates in the 17 countries where they apply. Both the average top CIT rate and the average SME CIT rate trended downward from 2000 to 2022, with the average SME CIT rate being between 4 to 6 percentage points lower than the average top CIT rate over the period. Conversely, the OECD average top PIT rate and all-in rate on wage income trended downwards until around 2010, then increased again, almost returning to their average levels in 2000. The net effect of these trends is that the gap between the average top tax rates on wage income and the average CIT rates increased significantly in OECD countries. For instance, the gap between the top PIT rate and the top CIT rate increased from 12 percentage points in 2000 to 19 percentage points in 2022.

## Figure 1. Evolution of CIT rates and top tax rates on wage income, OECD average, 2000-2022



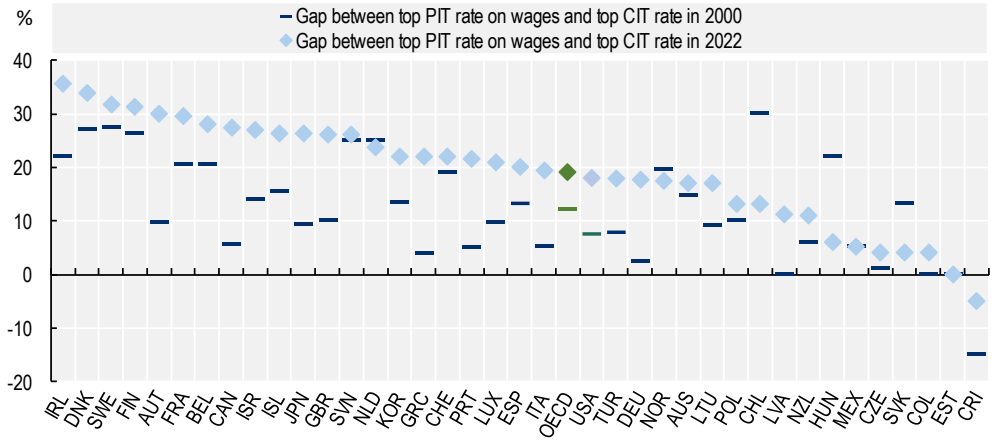

Note: Averages are calculated for the 38 OECD countries. The SME rates used in the calculation of the OECD average consist of CIT rates targeted at small and medium-sized enterprises wherever these rates exist. Where countries did not report a targeted SME rate in a given year, the statutory CIT rate is used. The top PIT rate on wage income, the SME CIT rate and top CIT rate refer to the top statutory rates levied at the combined central and sub-central government levels. The top all-in rate includes both PIT and employee SSCs.
Source: OECD Tax Database.

23. **However, trends in gaps between top PIT rates on wage income and CIT rates have varied significantly across OECD countries**. Figure 2 illustrates the gaps between top PIT rates on wage income and top CIT rates in 2022 and 2000 for each country. In 2022, in all countries except Costa Rica, the top PIT-CIT gap was either zero (Estonia) or positive, indicating that the top PIT rate on wage income was higher than the CIT rate. The highest top PIT-CIT gap was found in Ireland at about 36 percentage

[11] Differences in effective tax rates, incorporating the effect of progressivity, tax credits and allowances, will also likely matter for certain arbitrage decisions. Such differences in effective tax rates on labour and capital income are explored in detail by Hourani et al. (2023[31]). Nonetheless, for very high income individuals, top marginal and effective tax rates tend to converge.

points, followed by Denmark at 34 percentage points. Most countries have seen an increase in their top PIT-CIT gap since 2000, suggesting growing incentives for taxpayers to incorporate to benefit from lower CIT rates. The largest increases occurred in Austria and Canada, where the gap increased by around 20 percentage points between 2000 and 2022, and increases in excess of 10 percentage points also occurred in Germany, Greece, Ireland, Iceland, Italy, Japan, Luxembourg, Latvia, Portugal, the United Kingdom, and the United States. Only a few countries (Hungary, the Slovak Republic, Norway, and the Netherlands) saw their top PIT-CIT gap narrow between 2000 and 2022.

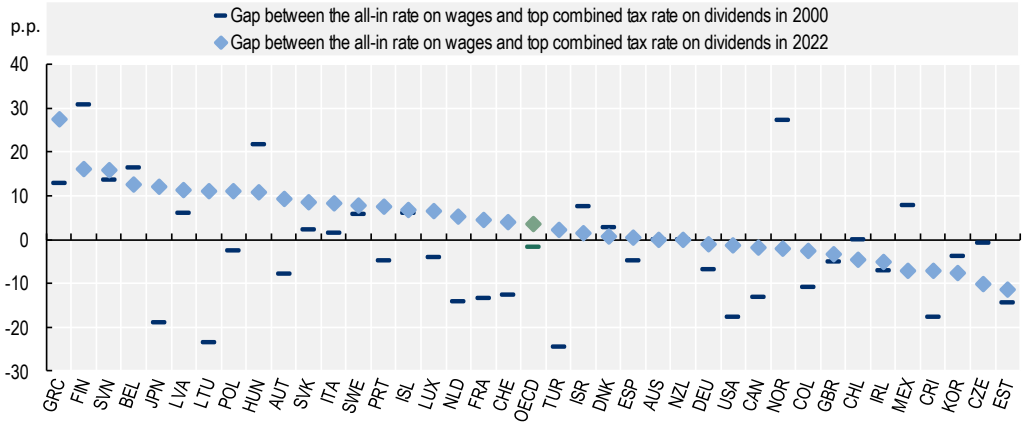
## Figure 2. Gap between top PIT rates on wage income and top CIT rates, 38 OECD countries, 2000 and 2022




Note: The top PIT rate on wage income refers to the top statutory PIT rate on wage income levied at the combined central and sub-central government levels. The top CIT rate shows the combined central and sub-central marginal statutory top corporate income tax rate.
Source: OECD Tax Database.

24. **The tax differentials between top tax rates on wage and dividend income have also evolved in many OECD countries.** Recent OECD work has examined the gap between combined personal and corporate-level taxes on dividends and wages including, respectively, CIT, as well as employer and employee SSCs in addition to PIT. It found that most countries effectively taxed dividend income more favourably in 2021, although gaps between wage and dividend taxation varied widely across countries (Hourani et al., 2023[31]). Such differentials suggest incentives for owners of closely held businesses to shift part of their remuneration from wage to dividend income in many countries. Figure 3 shows how the gap between the top all-in rate on wage income (which includes employee but not employer SSCs) and the top combined tax rate on dividend income evolved between 2000 and 2022. While many countries had a negative gap in 2000, indicating that the top combined rate on dividend income was higher than the top all-in rate on wage income, by 2022, only twelve countries had negative gaps, and in 23 OECD countries, the top all-in rates on wage income were higher than combined corporate and shareholder dividend tax rates. This suggests that the incentives to re-characterise wage income as dividends have increased in a majority of countries relative to 2000.

## Figure 3. Gap between the top all-in rate on wage income and the top combined corporate and shareholder tax rate on dividend income, 38 OECD countries, 2000 and 2022




Note: The top all-in rate shows the marginal rate on wage income including the central and sub-central government personal income tax and employee social security contributions. The combined dividend rate is calculated based on statutory tax rates applied at the corporate and individual level, and the interaction between the two levels. Social security contributions can confer entitlements to benefits that are not available to individuals earning non-wage income.
Source: OECD Tax Database.

25. **This section suggests that tax incentives to incorporate and earn capital income have increased in many countries.** First, the decline in CIT rates has increased incentives for taxpayers to incorporate. The data suggests that these incentives may have increased over time and may be especially salient for taxpayers who can benefit from CIT rates targeted at SMEs. There have also been significant changes to gaps between the combined taxes on wage and dividend income. A majority of countries have a more preferential tax treatment for dividend compared to wage income according to the measures presented in Figure 3 and, among 20 of these countries, incentives to shift from wage to dividend income have increased since 2000, driven mostly by a decline in CIT rates. However, the data show significant cross-country heterogeneity in tax rate gaps, suggesting that tax arbitrage channels may vary strongly across countries. Incentives for tax arbitrage also depend on other taxes, such as capital gains and inheritance taxes, that were not shown in this section. The next section provides a closer examination of tax arbitrage incentives, including from these other forms of taxation, and reviews the empirical evidence of such behaviours.

26. **Several rationales have been put forward to justify observed trends towards a more favourable tax treatment of capital income**. The literature offers a number of theoretical and empirical arguments as to why capital income ought to be taxed preferentially by policymakers, be it in the form of reduced CIT rates, or low dividend or capital gains tax rates, although recent studies have nuanced findings from earlier research (Box 4).

### Box 4. Considerations surrounding the favourable taxation of capital income compared to labour income

There are several justifications for taxing capital income at lower rates than labour income (See Section 2 of Hourani et al. (2023[31]) for further discussion). Key empirical arguments have focused on the need to support saving, investment and entrepreneurship. The fact that capital income has been found to be relatively more responsive to marginal tax rates provides another argument for preferential taxation of capital relative to labour income (Devereux, Liu and Loretz, 2014[39]). Other arguments have also been put forward based on concerns about intertemporal distortions.

Canonical theoretical papers using representative-agent, infinite-horizon models, have argued that the welfare-maximising tax rate on capital income is zero (Chamley, 1986[40]; Judd, 1985[41]). In principle, the taxation of capital represents a distortion of future consumption relative to present consumption, and this distortion increases as the time horizon gets larger. More recent macroeconomic models have pointed out that the zero-tax result depends on a number of assumptions, including that of infinitely lived agents but also assumptions about intertemporal utility (Straub and Werning, 2020[42]), and that optimal capital tax rates are positive under plausible assumptions. More recent models have incorporated capital income inequality, inheritances, shifting between capital and labour income and more realistic assumptions about preferences, with many also finding positive optimal rates of capital taxation for achieving redistributive outcomes (Saez, 2013[43]; Saez and Stantcheva, 2018[44]).

# 4. Key channels of tax arbitrage in OECD income tax systems

27. **This section examines how OECD tax systems create incentives for tax arbitrage for owners of unincorporated businesses and closely held corporations and whether there is evidence of such behaviours**. As mentioned, opportunities to engage in tax arbitrage may have a significant impact on the equity, efficiency and revenue potential of tax systems. Tax arbitrage may ultimately affect income inequality, although there are other possible channels through which business income taxation may affect inequality outcomes, for instance through the taxation of income from non-closely held businesses and the economic incidence of CIT on shareholders or workers (Box 5).

### Box 5. Other channels through which business income taxation may influence income inequality

There are a variety of ways through which the tax treatment of business income may influence income inequality. While the focus of this paper is the shifting of the form or timing of income to reduce tax burdens, with a particular focus on the interactions between the PIT and CIT systems for closely held businesses, other channels are also important.

***Taxes on income from non-closely held businesses***

The discussion in this paper focuses on closely held businesses, in which the owners maintain strong control over the business and can therefore exercise more influence over the form and timing of income. However, business taxation also impacts the owners of non-closely held businesses. It is well known that individuals at the top of the income distribution tend to own more shares of publicly listed companies (Fagereng et al., 2020[18]). Therefore, lower CIT rates or lower rates of capital gains tax will have the result of reducing effective tax rates for these individuals, may increase their capital gains by boosting the price of shares, and may increase pre-tax income inequality by encouraging higher levels of dividend payouts by publicly listed corporations. The role of CIT in this context is particularly important where the profits of many non-closely held businesses are in some countries increasingly not subject to taxes at the shareholder level (Rosenthal and Burke, 2020[45]).

In addition, higher-income individuals are likely to have higher levels of pension wealth or entitlements to retirement income than lower-income individuals. Given that pension income is often taxed at concessionary rates or may in a few countries be exempt from taxation (OECD, 2018[46]), corporate-level taxes may be the primary taxes paid on business income if individuals own businesses through pension funds. This highlights the need for consideration of CIT and PIT design together.

***Incidence of CIT on wages and capital; other indirect effects***

Changes in PIT and CIT systems may have an indirect effect on income inequality by impacting investment, employment and wages. According to a standard theoretical open economy general equilibrium model, an increase in CIT reduces the return to capital, which may result in a fall in investment, which in turn may lower the marginal product of labour and ultimately result in lower wages for employees. Changes in investment activity and wage-setting may also have secondary effects on product prices, further impacting real incomes. However, there is some uncertainty about the magnitude of these effects (Serrato and Zidar, 2016[47]; Kennedy et al., 2022[48]). Two recent surveys of the literature, which has mostly focused on the United States, have concluded that employment income bears between 16 and 40 percent of the corporate tax burden (Gravelle, 2017[49]; Milanez, 2017[26]). A recent study based on German data finds that following a tax reform, about half of the CIT increase falls on shareholders and half on workers (Fuest, Peichl and Siegloch, 2018[50]). However, the incidence of CIT on labour income is likely to differ between countries, and depend on factors such as the size of the country, the degree of capital mobility, the nature of competition in the output market, and whether changes in CIT are unilateral or coordinated between countries (Kennedy et al., 2022[48]; Cloyne, Kurt and Surico, 2023[51]; Fuest, Peichl and Siegloch, 2018[50]).

The degree to which taxation of business incomes may negatively impacts workers through reduced investment, labour productivity and wages, is linked to the share of business income that can be characterised as economic rents, i.e. as income beyond a normal return on investment (Power and Frerick, 2016[52]). Moreover, some research has suggested that some rents may be shared with workers through higher wages (see Gale and Thorpe (2022[53]) for a review). However, given that these rents may be more likely to be shared with higher-income taxpayers (Piketty, Saez and Stantcheva, 2014[54]), the impact on inequality of taxing these rents under the CIT even in the presence of sharing with workers may be ambiguous.

The taxation of dividend income may also impact the retention of income inside the firm, which may in turn impact investment, especially for cash-constrained firms. This may also impact worker productivity and thus, wages and inequality (Boissel and Matray, 2019[55]). A full analysis of the impact of the business taxation system on inequality would therefore incorporate all the above channels and responses.

## Margins of tax arbitrage response: a conceptual framework

28. **This section provides a conceptual framework categorising the main margins along which taxpayers can engage in tax arbitrage through different business organisational forms.** Similar business activities can be carried out through different organisational forms, which are associated with different categories of income which are in turn subject to different tax treatments. The framework identifies the relevant categories of income and their tax treatment to clarify taxpayers' decision margins when considering whether, and to what extent, to engage in tax arbitrage. It allows classifying the many empirical studies of tax arbitrage, which often focus on different margins of tax arbitrage. The framework is summarised graphically in Figures 4 and 5, which provide a stylised[12] overview of tax arbitrage decisions.

[12] Some countries operate systems which do not correspond to the classification in Figures 4 and 5. However, the figures represent the most common set of organisational forms and corresponding tax treatments. Importantly, they do not consider strategies involving multiple companies, such as structures with an operating company and a holding company.

The figures do not cover all possible arbitrage margins but focus on those which have been investigated most closely in the literature.

29. **Figure 4 starts by providing an overview of tax arbitrage decisions on the extensive margin, i.e. through the choice of business organisational forms.** Changing organisational form may enable taxpayers to benefit from differential tax treatment. Taxpayers subject to the PIT schedule by virtue of owning non-incorporated businesses may choose to incorporate, reclassifying previously unincorporated business income as incorporated business income.[13] As discussed in Section 3, operating through an unincorporated or a pass-through incorporated business allows taxpayers to avoid double-level taxation. On the other hand, high PIT-CIT differentials (including through small business CIT rates) can create incentives to incorporate. Incorporation furthermore gives owner-managers flexibility over the type and timing of the income they receive at the personal level, which can affect their personal income tax burden.

30. **In addition to an extensive-margin arbitrage decision, Figure 4 outlines intensive-margin decisions about the type and timing of income received by owners of closely held corporations.** The ability to engage in tax arbitrage through shifting between labour and capital income is typically a prerogative of incorporated businesses taxed at the corporate level, although in some countries owners of pass-through incorporated businesses and owners of unincorporated businesses may also be able to do so. Among those taxpayers who already receive a mixture of personal and corporate income – by virtue of being owner-managers of incorporated businesses – differential tax treatment across different income types can induce taxpayers to convert higher-taxed income into lower-taxed income (i.e. what we term the intensive-margin response). This could include earning more income as dividends and less as wages.[14] Figure 4 provides a stylised categorisation of these possible margins of response. The extensive-margin response is shown with the red arrow marked (1), while the intensive-margin response is shown with the red arrow marked (2) in Figure 4.

31. **Intensive-margin arbitrage decisions are facilitated by the fact that the boundaries between capital and labour income are blurry for owners of closely held businesses**. This is particularly true for businesses that rely heavily on the human capital of their owners (e.g. labour supply, network, reputation) (Smith et al., 2019[19]). Intensive-margin arbitrage incentives to shift between labour and capital income may also be offset to some extent by other considerations, such as reduced access to social security benefits, pension entitlements and, in certain situations, more difficult access to personal finance instruments such as mortgages.

32. **If a taxpayer decides to classify a proportion of their income as corporate income, they also need to make a decision about what happens to this income subsequently.** A taxpayer may decide to pay out the corporate income as dividends today or retain earnings inside the company. We show this type of intertemporal income-shifting decision with a dashed arrow labelled (3) in Figure 4 and Figure 5.[15] Figure 5 further classifies the possible decisions about how to ultimately dispose of or withdraw retained

[13] Box 2 discussed the decision of employees to switch to operate through an unincorporated or an incorporated business.

[14] For instance, an owner-manager may be able to choose between reporting (a) the company receiving $10 of profit and $90 of wages paid to him or her (and deducted as labour costs for the company) and (b) $100 of profit and $0 of wages. In scenario (a), the $10 of corporate profit is taxed under CIT, while all $90 is taxed under PIT. Under scenario (b), all $100 is taxed under CIT as corporate profit. Profits can be then subject to additional tax, in particular when/if it is distributed.

[15] In the example in the previous footnote, under scenario (a) $10 of corporate profits, or under scenario (b) $100 of corporate profits – once subject to CIT – can be paid out immediately as dividends and subject to dividend taxation, or retained for distribution at some future period.

earnings. Specifically, the taxpayer can choose to dispose of or withdraw this income in one of three main forms (response 4 in Figure 5): to hold it and pass it on as part of a gift or a bequest, to sell their shares to another owner and realise the income as capital gains, or to pay the earnings out as dividends but at a future date. In turn, this realisation or receipt of accumulated retained earnings would be subject to inheritance or gift taxation, capital gains tax or dividend tax, respectively.[16]

33. **Altering the timing of the realisation of income can be tax advantageous in a number of ways.** The cumulative tax liability in net present value terms on retained earnings realised as capital gains or transferred through inheritance may be lower than the tax liability from dividend distributions today.[17] Capital gains, particularly on long-held assets, also often benefit from preferential tax rates compared to other forms of income, including dividend income. Taxpayers may also seek to shift the timing of income realisation or receipt to years when their earnings are lower (for instance, if capital gains or dividends are taxed with other personal income at progressive rates) or around tax reforms, for instance by deferring dividend payments if they expect a more favourable dividend taxation regime to arise in the future. Timing decisions can also involve bringing income forward. For instance, owner-managers may advance salary or dividend payments from their business in anticipation of pre-announced tax rate increases. In some countries, the incentive to defer capital gains realisation may also be strongly reinforced by step-up in basis and inheritance tax relief on business assets, which encourage individuals to hold on to their assets until they die and pass on appreciated assets to the next generation.

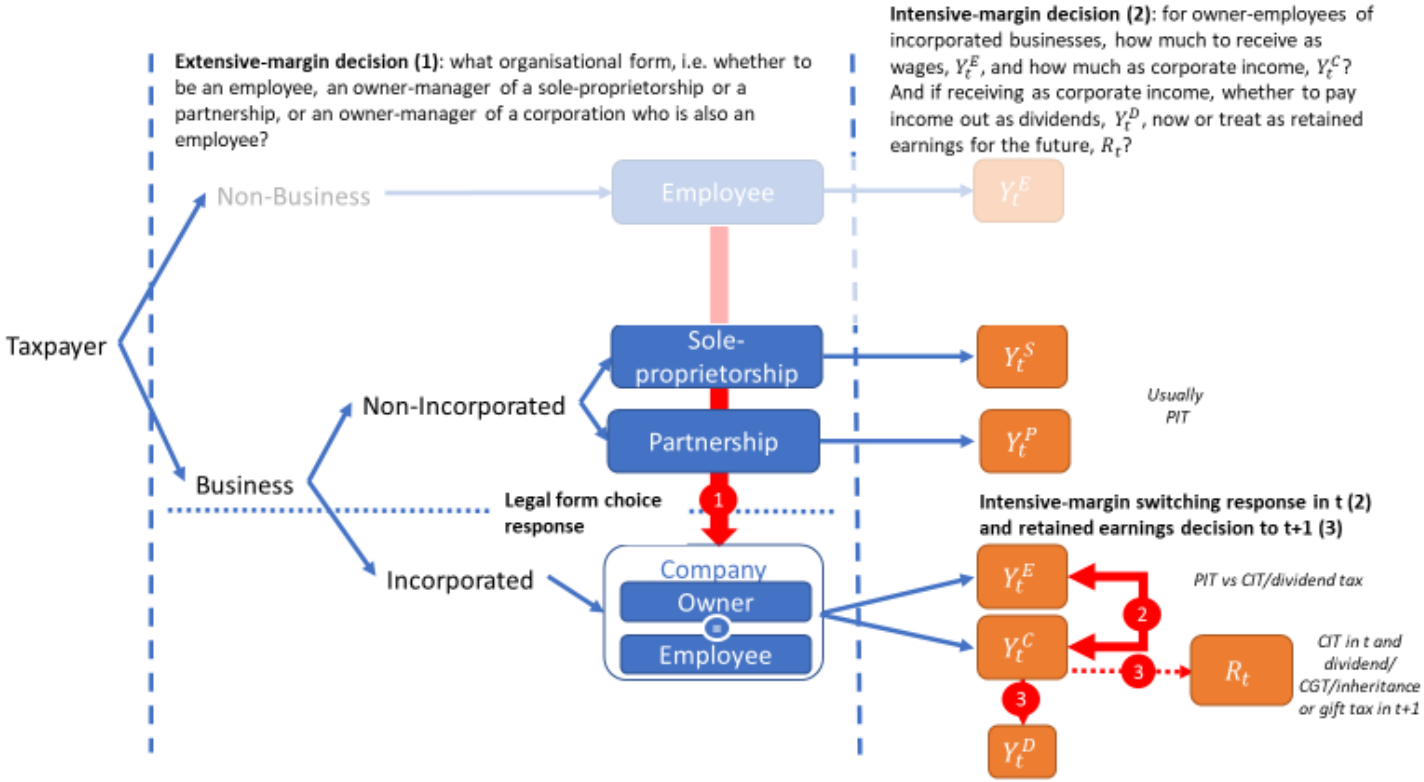
34. **Earnings retention may in some instances contribute positively to economic efficiency.** Retained earnings are a common way for companies to finance investment or to repay debt and are therefore an important component of overall business strategy. Furthermore, smoothing income fluctuations through retained earnings may be economically efficient and not systematically distort investment and consumption decisions (Smith, Pope and Miller, 2019[14]). However, if not used to finance investment or repay debt, they can be carried over to subsequent years which in some circumstances can be advantageous from a tax perspective as described above. Moreover, the strategic retention of profits over longer periods can create economic distortions affecting, for instance, investment incentives (Smith, Pope and Miller, 2019[14]).[18]

[16] The remuneration of managers through stock options is a special case of the conversion of wage income into prospective capital gains and may be advantageous for tax purposes. Related strategies not involving the conversion of labour income into corporate income could involve the use of royalties, as well as favourable treatment of contributions to private pension or disability insurance accounts by company owners or self-employed individuals. A detailed exploration of this channel is outside of the scope of this paper.

[17] A taxpayer may take further advantage of retained earnings by borrowing against them.

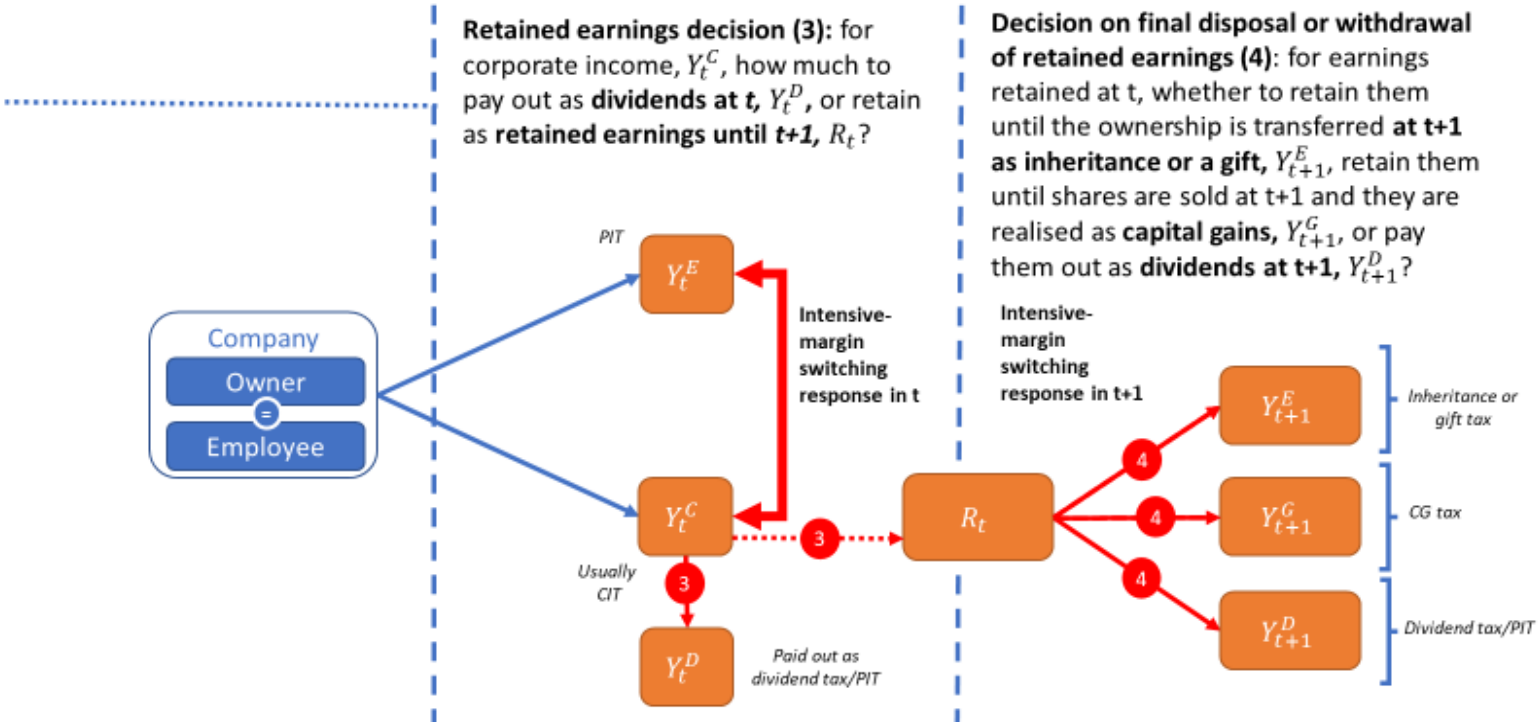
[18] For instance, if the rate of return on capital assets is increasing in investment size, incentives to retain earnings will lead to additional investment as agents reallocate between cash and capital assets. This, in turn, may lead to additional investment in cases where there are no market failures and thereby lead to a misallocation of resources.

## Figure 4. Categorising behavioural responses to differential taxation




Note: This figure presents a stylised categorisation of a taxpayer's decision-making in the face of multiple possible organisational forms and multiple forms of taxation. The taxpayer can be seen to face a sequence of decisions. Firstly, the taxpayer decides whether to be employed or operate through a business. Conditional on having chosen to operate through a business, the taxpayer decides whether to change their business activity from a non-incorporated business form (a partnership or sole-proprietorship) to an incorporated business form (a company), or vice versa. We refer to this type of response an "extensive-margin" response, and it is labelled (1) in the figure. Decision (2) denotes an individual who is an owner-manager of an incorporated company and at the same time receives some income from this company as wage, dividend, or capital gain income. This individual may then choose to shift some income in a given tax year across different income bases. We label this latter response an "intensive-margin" response. Decision (3) concerns the timing of the income: a taxpayer may decide whether to immediately pay out the corporate income as dividends, or to retain it in the firm.

## Figure 5. Categorising behavioural responses to differential taxation: final disposal or withdrawal of retained earnings



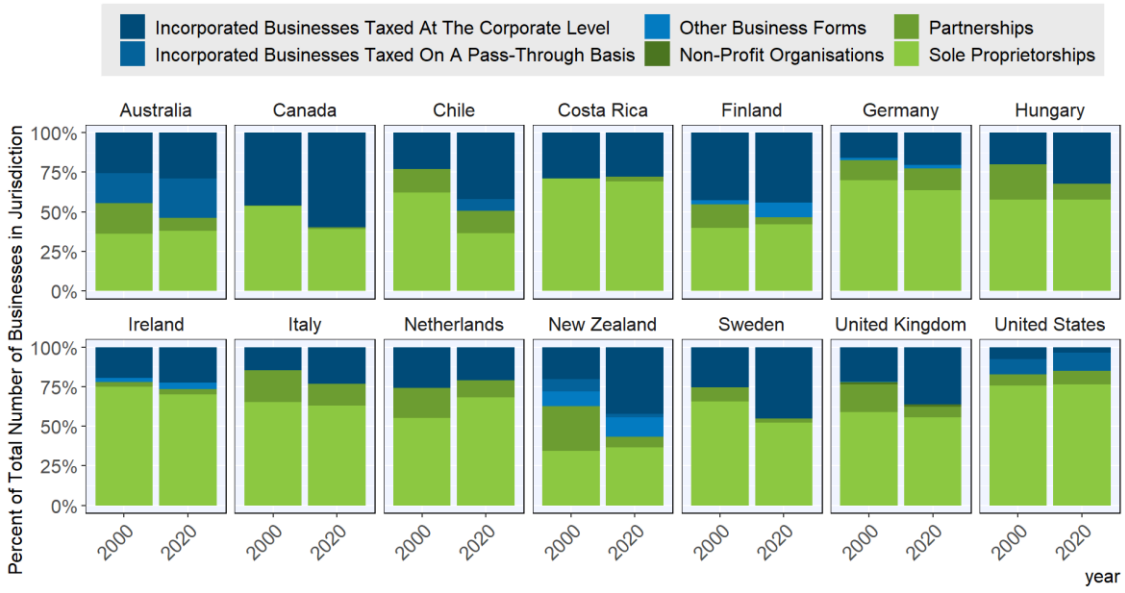

Note: This figure expands on the choices faced by a taxpayer who is an owner-manager of a corporation, subsumed under the category of 'intensive-margin responses'. As outlined above, decision (3) concerns the taxpayer deciding whether to pay out the corporate income as dividends at time *t* or to retain it in the firm as retained earnings. Decision (4) concerns how those earnings which have been retained are finally disposed of or withdrawn, either as a gift or a bequest, as capital gains at the point of the sale of the shares, or as dividends paid out. In some countries, there may be an incentive from the tax system to liquidate a business if the proceeds from a business liquidation are taxed as capital gains for instance (if it involves subsequently setting up a new business to carry on the same activities, it is an avoidance strategy known as "phoenixism"). It is worth bearing in mind that *t+1* here represents the next and all future periods. In principle, an individual could be distributing dividends from retained earnings for many years, and gradually winding down their involvement in the business.

35. **The rest of this section explores empirical evidence of the different margins of tax arbitrage described in the conceptual framework.** Subsection 4.2 examines evidence of extensive-margin arbitrage responses through changes in business organisational form, noting the many empirical challenges associated with this work (Box 6). Subsections 4.3 and 4.4 present evidence of intensive-margin arbitrage responses through shifting income between labour and capital income tax bases and over time. Table 2 at the end of the section provides a summary of the existing literature on tax arbitrage.

## Extensive-margin response: changes in organisational form

36. **In many OECD countries, the share of businesses taxed at the corporate level has increased over the past two decades.** Figure 6 shows data provided by a subset of OECD countries on the proportion of different types of business forms in their economies, including sole proprietorships, partnerships, incorporated businesses taxed at the corporate level, incorporated businesses taxed on a pass-through basis, and other business forms for the years 2000 and 2020. In most countries, sole proprietorships are still the most prevalent business form, although the proportion of businesses taxed at the corporate level as a share of all businesses has increased over the past two decades in nearly all countries. On average across the 14 OECD countries for which data is available, the share of businesses taxed at the corporate level increased from 24% in 2000 to 32% in 2020. In contrast, the average share of sole proprietorships and partnerships decreased from 59% to 55% and from 14% to 8%, respectively, over the same period. In 2020, the highest shares of businesses taxed at the corporate level in the total business population were found in Canada (60%), Sweden (45%) and Finland (43%). This data showing an increase in the rate of incorporation among businesses is consistent with other studies in specific countries, including the United Kingdom (Cribb, Miller and Pope, 2019[20]), Canada (Smart, 2021[34]), Sweden (Martin Jacob, 2020[56]) and Belgium (IMF, 2017[57]).

### Figure 6. Composition of businesses by tax regime, selected OECD countries, 2000 and 2020




Source: Delegates' responses to the OECD questionnaire on top income and wealth taxation, 2022.

37. **Empirical evidence based on cross-country variation shows that the increase in incorporation rates is associated with growing PIT-CIT differentials, corresponding to the extensive-margin response (1) in the framework above.** Two studies compare incorporation rates

across European countries using firm-level data. Based on data for 17 European countries between 1999 and 2003, de Mooij and Nicodème (2008[37]) find that a one percentage point increase in the tax differential between personal and corporate taxation is associated with an increase in the rate of incorporations of 0.55 percentage points for new firms and 1.02 percentage points among all active firms. Their results are consistent with between 12 percent and 21 percent of CIT revenue being attributable to income shifting, (de Mooij and Nicodème, 2008[37]). Results by Lejour and Massenz (2020[38]) for 24 European countries between 2000 and 2016 show that a one percentage point increase in the CIT-PIT gap is associated with a 0.20 percentage point increase in the share of incorporated firms for new firms and a 0.32 percentage point increase among existing firms, while PIT revenues paid by self-employed individuals decrease by 0.3 percent. Increased incorporations may therefore partly explain the "CIT rate-revenue puzzle", namely that CIT revenues have remained fairly stable despite the widespread decline in CIT rates in recent decades (see section 3).

### Box 6. Empirical challenges in studying tax arbitrage

The empirical literature on the effect of differential taxation on tax arbitrage incentives is constrained by the strong demands it places on micro data. Taxpayers may respond to differential taxation along various margins, including real behavioural responses in terms of labour supply and investment decisions, organisational form changes, or income shifting or tax evasion responses. For example, a CIT decrease may simultaneously create incentives for tax arbitrage using business structures, as well as real behavioural responses in the form of increased entrepreneurial activity (e.g. increases in the hours worked) or entrepreneurial entry (e.g. migration or changing from employment to self-employment). The literature on tax arbitrage using business legal form focuses on avoidance responses and requires empirical strategies separating tax avoidance from real entrepreneurial activity.

To provide a causal estimate of tax arbitrage responses, empirical analyses need to follow taxpayers responding to variations in taxation across different organisational forms. Organisational form choice is determined by a range of tax- and non-tax factors (see Box 1), which are likely to vary across countries, industries and over the lifecycle of a firm. Early literature, with more limited access to tax-return data, tended to focus on aggregate indicators such as the share of corporate income reported in the aggregate. Many policy reforms create quasi-natural experiments with different tax arbitrage incentives for different groups of taxpayers, which can be compared over time. In more recent papers, to identify a pure causal effect, researchers track individuals responding to different tax incentives over different business forms over time, which requires linking tax return data from both personal and corporate taxation (Tazhitdinova, 2020[29]).

Tax arbitrage responses are captured by different measures in the literature, which limits the comparability of elasticities related to tax arbitrage responses across studies. As can be seen in Table 2, different authors use different outcomes, incentive measures, and definitions of elasticities even when studying similar types of response. Table 2 lists key papers in this literature and compares the empirical strategies, sample populations and variables definitions. Papers studying incorporation responses have tended to either focus on changes in the share of corporate businesses among all businesses, or on changes in the probability of incorporation among previously non-incorporated businesses. The literature on income-shifting between labour and corporate income among owner-managers of incorporated firms has tended to examine the share of income received as corporate income as the outcome variable. In both of these literatures, the gap between PIT and CIT rates has tended to be the key explanatory variable. Several papers explicitly abstract away from including dividend payments or other forms of additional taxation of corporate income when calculating their incentive measure.

38. **In contrast to cross-country empirical evidence, some studies use individual and business tax records to evaluate the extent to which tax incentives influence organisational form choice.** Tracking the responses of business owners to policy variation (e.g. changes in taxation) across different organisational forms using micro data facilitates the identification of a causal effect of taxation on organisational form choice (see Box 6). Edmark and Gordon (2012[58]) link individual- and firm-level data of business owners to evaluate the effect of taxation on the choice between closely held corporations and proprietorships in Sweden. In particular, they exploit variation in the incentive to incorporate along the income distribution due to rules which limit the amount of income which can be classified as capital income by closely held corporations. Their results suggest that a one percentage point CIT rate decrease increases the share of incorporated businesses among all firms by 0.5 percentage points. They furthermore find, for a given change in incentives, considerably larger responses for the highest-income business owners. However, the result is based on a sub-sample of small business owners, which is why the authors caution against the extrapolation to the full population of business owners.

39. **Evidence from natural experiments confirms changes in incorporation rates as a result of tax reforms which change incentives to incorporate.** Tazhitdinova (2020[29]) analyses the effect of changes in the personal and corporate tax differential on organisational form decisions for low- and middle-income business owners in the United Kingdom and finds that a 10 percent increase in the tax differential raises the hazard rate[19] of incorporations by 2.3 percent, half of which is accounted for by organisational form changes by previously unincorporated businesses while the other half measures "real" firm entry at the point of firm creation. The author concludes that despite large tax differentials, many business owners do not choose to incorporate, suggesting that the use of organisational form changes to minimise taxes may be limited, at least among low and middle income business owners. Romanov (2006[28]) uses VAT records to examine avoidance responses to two Israeli tax reforms which increased the effective taxation of labour income relative to dividend income and created incentives for income shifting through incorporation, which was observed through a significant increase in newly incorporated businesses among high-income self-employed individuals.

40. **In the United States, in contrast to other OECD countries, the high CIT rate relative to the top PIT rate encouraged the growth of pass-through businesses, especially after the Tax Reform Act of 1986 from 1987 through 1992.[20]** As corporations taxed on a pass-through basis, S-corporations combine limited liability with the possibility of avoiding entity-level taxation.[21] Pass-through businesses accounted for 95 percent of all business tax returns filed in the United States in 2015. While the share of sole proprietorships and partnerships among all businesses remained fairly stable over the last four decades, at around 70 percent and 10 percent respectively, the number of S-corporations more than tripled (from 4% in 1980 to 13% in 2015) while the number of C-corporations (i.e. businesses in which the entity is taxed separately from the owners) fell by more than 70 percent (from 17% in 1980 to 5% in 2015) (Internal Revenue Service, 2015[59]).

[19] The hazard rate measures the probability of an individual failing to satisfy a particular, conditional on satisfying the criterion in the previous period. In this case the criterion is being an unincorporated business, such that the hazard rate measures the probability of incorporating conditional on having been an unincorporated business in the previous period.

[20] This period ended in 1993 when the top individual income tax rate was increased to 39.6 percent and the CIT rate to 35 percent. The incentive to organize as a partnership or S corporations continued as income of these entities are only subject to the PIT.

[21] Some types of partnerships in the United States also offer limited liability and pass-through taxation.

41. **Several studies have analysed the impact of major US tax reforms on organisational form choice.** The Tax Reform Act 1986 significantly reduced the top personal income tax from 50 to 28 percent and the CIT rate to 34 percent. This created an incentive to organise businesses as S corporations and partnerships. Later legislation eased requirements for becoming an S-corporation such as by increasing the number of allowed shareholders from 35 to 75 in 1997 and to 100 in 2004. Empirical evidence shows that the reform had a significant impact on organisational form choice, particularly increasing the share of S-corporations and partnerships (Auerbach and Slemrod, 1997[60]; Feenberg and Poterba, 1993[61]; Gordon and Slemrod, 1998[62]; Saez, Slemrod and Giertz, 2012[63]; Slemrod, 1995[64]). The Tax Cuts and Jobs Act introduced in 2017, which lowered the maximum CIT rate from 35 percent to 20 percent, has arguably increased tax incentives to incorporate (Looney, 2017[65]), but empirical evidence about the impact of the reform on business form choice is still scarce. Other studies analyse the variations in CIT rates and organisational form choice across US states. For instance, Goolsbee (2004[66]) shows that a one percent CIT increase is associated with a 2.5 percent decrease in the share of incorporated firms while Mackie-Mason and Gordon (1997[67]) find that a one percent tax rate cut on personal income is associated with a three percent increase in taxable gains within unincorporated businesses and a two percent decrease in corporate assets.[22]

## Intensive-margin response: shifting between labour and capital income

42. **An expanding empirical literature documents the re-characterisation of labour income to capital income, particularly among high income earners.** Some of these studies estimate intensive-margin income shifting responses corresponding to decision (2) in the conceptual framework, i.e. the decision of taxpayers to alter the share of income received as labour versus corporate income (Devereux, Liu and Loretz, 2014[39]), irrespective of whether the income is retained or immediately paid out as dividends. Other studies estimate intensive-margin responses corresponding to decisions (2) and (3) jointly, i.e. the decision to alter the share of income received as labour versus capital income and the share received as corporate income paid out immediately as dividend income versus income retained in the corporation (e.g. Alstadsæter and Jacob, (2014[4])).

43. **Several studies examine re-characterisation responses around tax and regulatory reforms in Nordic countries, which created specific income shifting incentives.** Pirttilä and Selin (2011[68]) and Alstadsæter (2003[69]) study behavioural responses under the Finnish and Norwegian split model[23], respectively, and show that self-employed individuals engage in tax arbitrage to convert higher taxed

[22] It must be noted that, since it focuses on the overall share of profits in the corporate sector, this study – as well as other studies, such as Gordon and Slemrod (1998[62]) – cannot distinguish between responses (1) and (2) in our classification, and may be best interpreted as a sum of the two.

[23] In some jurisdictions operating a dual-income tax system (e.g. Denmark, Finland, Sweden and, formerly, Norway), income accruing to some types of businesses is taxed under a split model i.e. divided into a business income component subject to business income taxes and a labour income component, subject to personal income taxes and SSCs. Finland operates a split model which defines the labour component's tax base as net profits (gross business profits net of interest payments on debt) minus the income taxed as capital income, which is defined as 20 percent of the businesses' net worth (e.g. business assets net of debt). By moving assets and debt between the personal and the private sphere (for example, shifting business debt into the private sphere), sole proprietors and owners of partnerships are able to minimise income subject to labour income taxes (Pirttilä and Selin, 2011[68]). The Norwegian split model assigned firm profits to the capital income tax base by multiplying the value of the business assets by a fixed rate of return. The estimated capital income is deducted from firm's profits to calculate the share of income subject to personal income tax rates, and creates an incentive for self-employed individuals to overinvest in real capital (Harju and Matikka, 2015[110]; Alstadsaeter, 2003[69]).

labour income into lower taxed capital income. Thoresen and Alstadsæter (2010[70]) examine the effect of the introduction of the dual income tax system in Norway on income shifting. They find an increase in widely held corporations (not subject to mandatory rules regarding the split of labour and capital income as opposed to the self-employed and closely held corporations), and that business owners who choose to convert to widely held corporations significantly increase their dividend payments, which is offset by a reduction in other forms of income. Alstadsæter and Jacob (2014[4]) and Harju and Matikka (2016[71]) study dividend tax reforms in Sweden and Finland, both of which lowered effective dividend tax rates and are associated with significant increases in dividend pay-outs as a total share of business owner renumeration among high-income business owners.

44. **A number of studies from other countries examine intensive-margin shifting responses to reforms or features in tax systems creating variation in tax treatment for similar taxpayers.** López-Laborda et al. (2018[72]) study income shifting responses by Spanish taxpayers around a tax reform introduced in 2007, which reduced the taxation of various short-term capital income sources relative to labour income.[24] The authors show significant income shifting from the general income tax base (e.g. labour, real estate income) to capital income tax bases (dividend, interest, capitals gains with a holding period of less than a year), particularly among the highest income individuals, self-employed individuals and business owners. Bettendorf, Lejour and van 't Riet (2017[73]) study income shifting among Dutch owners of small corporations and find significant excess taxable income ("bunching") around the minimum reference pay below which business owners are required to justify their pay level to tax authorities, and around cutoff points in the progressive labour income tax schedule, which suggests that business owners minimise labour income subject to progressive taxation. Results by Devereux, Liu and Loretz (2014[39]), who study the effect of the statutory CIT rate on taxable income in the United Kingdom, highlight that business owners use income shifting to reduce their tax burdens, though very few businesses exhaust all potential arbitrage opportunities, potentially because of liquidity constraints (e.g. owner-managers may prefer a regular flow of income through wages) or limited knowledge of tax minimisation options.

## Intensive-margin response: shifting income over time

45. **Some evidence suggests that intertemporal income shifting in the form of profit retention within the company is the predominant tax arbitrage channel through corporate structures**. This corresponds to decisions (3) and (4) in the conceptual framework. Le Maire and Schjerning (2013[74]) examine tax planning strategies among Danish self-employed individuals,[25] including profit retention in the business, pension contributions, income transfers among family members assisting in the business, and income shifting between the personal and capital income tax bases. Discontinuous changes in the marginal

[24] Before the reform, most movable capital income, including for instance dividends and interest income, and income from capital gains on assets held for less than a year, were taxed under the progressive general personal income tax schedule while capital gains accruing on assets with a holding period of more than one year were taxed at a flat rate of 15 percent. With the introduction of the reform, most movable capital income as well as short- and long-term capital gains became subject to a flat tax of 18 percent.

[25] Danish self-employed individuals can choose between three different tax regimes, which determine the division of the firm's profits into personal and capital income and business owners' ability to retain earnings in the firm. Under the personal income tax regime, firm profits are assigned to the personal income tax base in the year profits are earned while interest income and expenses are assigned to the capital income tax base. Those self-employed as a personally owned business or as a partnership can choose to be taxed under the capital return scheme or the firm tax scheme, which allows them to retain earnings in the firm, fully deduct interest expenses from the businesses' taxable profit, and classify part of their profit as capital income.

tax rates in the Danish tax schedule allow the authors to estimate bunching around kinks in the tax schedule, from which taxable income elasticities can be derived. The authors find significant income shifting responses for Danish self-employed individuals and show that profit retention in the company is the key margin of response. Miller, Pope and Smith (2019[14]) examine behavioural responses to marginal rax rate changes by business owner managers in the United Kingdom. Their results suggest that the entire response in taxable income of owner-managers to changes in marginal tax rates is driven by intertemporal income shifting (as opposed to changes in real economic activity), and especially by the systematic retention of profits, particularly among high-income business owners. The authors also show that an increase in tax-induced retained earnings is not associated with increased business capital investments.

46. **Other studies document significant substitution between dividends and retained earnings in response to changes in the tax treatment of dividends.** Bach et al. (2019[75]) draw on household- and firm-level data to analyse the impact of French tax reforms which altered the choice for some households between dividends being taxed under progressive rates together with other personal income or a flat tax regime[26]. They show that dividend payouts from owner-manager businesses fell in response to the cancellation of the flat rate tax option, and that affected firms substituted dividend payments with building up business equity. However, results suggest that the reform did not affect real investment or owner-managers' wages, as retained earnings were invested in financial assets and operating expenses. Bettendorf, Lejour and van 't Riet (2017[73]) analyse individual-level data of Dutch owners of small corporations and find that high income business owners primarily shift income over time (as opposed to altering the form of renumeration), by retaining earnings in the company or making pension contributions.

47. **There is some evidence for the deferral of capital gains realisations until death, but the extent to which this is driven by tax factors is unclear**. This corresponds to response (4) in Figure 5 where accumulated retained earnings are passed on as an inheritance. In the United States, where unrealised capital gains at death are not taxed due to step-up in basis, estimates of unrealised capital gains at death by the US Treasury Department Office of Tax Analysis (OTA) (2014[76]) and Porterba and Weibenner (2001[77]) amount to around one third of the total estate value while results by Gordon, Joulfaian and Poterba (2016[78]) suggest that the share is even higher, at 42 percent of the estate value. Avery, Grodzicki and Moore (2013[79]) show that the share of unrealised capital gains increases with the estate value and is as large as half of the estate value for estates above USD 100 million. A recent study examining effective tax rates at different points of the comprehensive income[27] distribution in France demonstrates that retaining earnings until the point of death enables those with highest incomes to benefit from very low effective tax rates (Bach et al., 2023[80]). While many tax systems provide incentives to defer realisations until death through provisions such as step-up in basis, there is a lack of empirical evidence examining the extent to which accumulated unrealised capital gains at death are tax-induced.

48. **Overall, the literature points to a significant incorporation response to PIT-CIT differentials, and there is strong evidence of intensive-margin shifting between labour and capital income, which is mostly tied to capital income being retained in the firm.** Table 2 summarises the empirical literature on tax arbitrage for a subset of key papers. These papers and parameter estimates are listed in Table 2, matching the classification of responses (1)-(4) in the conceptual framework (Figure 4 and Figure 5),

[26] Prior to 2013, French taxpayers were able to choose between the inclusion of dividend income in the progressive income tax schedule and the taxation of dividend income under a flat tax schedule. The flat tax option reduced the marginal income tax rates on dividends vis-à-vis the progressive tax schedule for top incomes. In 2013, the flat tax option for dividend income was abolished, before a similar flat tax regime was re-introduced in 2018, which reduced marginal income tax rates for high-income earners more than the pre-2013 flat tax regime.

[27] The study uses a comprehensive income concept which is broader than taxable income and in particular includes the undistributed earnings of companies controlled by households.

depending on their research design. The table shows various elasticity estimates, the country and year coverage, outcome and incentive measures, and 95% confidence interval for the parameters.Overall, studies focusing on the extensive-margin incorporation channel (1) in Figure 4 find that incorporations do respond significantly to tax incentives. Furthermore, studies focusing on the intensive-margin shifting between labour and capital income (channels 2 and 3) find that it tends to be dominated by shifting income through retained earnings, rather than shifting from labour income to contemporaneous dividend distributions.

## Table 2. Arbitrage Elasticity Rates Estimates

| Author(s) and year | Country coverage | Years | Identification | Outcome; incentive measure | Value | 95% Confidence Interval | |
|---|---|---|---|---|---|---|---|
| | | | | | | Lower bound | Upper Bound |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| *Response channel 1. Incorporation behaviour* | | | | | | | |
| Tazhitdinova (2020) | United Kingdom | 1996-2013 | Difference-in-Difference, UK CIT reforms | Hazard rate of incorporation among non-inc. firms; logarithm of savings from incorporation as % of profits | 0.23 | 0.22 | 0.23 |
| Romanov (2006) | Israel | 1999-2003 | Difference-in-Difference, Israeli reform to SSC ceiling | Log-change in corporate income; log-change in PIT marginal rate | 1.3 | n/a | n/a |
| De Mooij and Nicodeme (2008) | 17 European countries | 1997-2003 | Cross-firm regression, variation in country incentive | Share incorporated among new firms; difference between CIT and PIT rates (in pp) | 0.55 | 0.45 | 0.66 |
| | | | | Share incorporated among existing firms; difference between CIT and PIT rates (in pp) | 1.02 | 0.93 | 1.12 |
| Lejour and Massenz (2020) | 24 European countries | 2000-2016 | Cross-firm regression, variation in country incentive | Share incorporated among new firms; difference between CIT and PIT rates (in pp) | 0.20 | 0.10 | 0.30 |
| | | | | Share incorporated among existing firms; difference between CIT and PIT rates (in pp) | 0.32 | 0.24 | 0.40 |
| Goolsbee (2004) | United States | 1992 | Cross-firm regression, variation in state incentive | Share incorporated in retail sector; state corporate tax rate (in pp) | 2.45 | 1.41 | 3.49 |
| Edmark and Gordon (2013) | Sweden | 2004-2008 | Cross-firm regression, variation in incentive | Share incorporated; corporate tax rate | 0.52 | 0.48 | 0.56 |

*Response channel 2. Income-shifting among business owners*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Harju and Matikka (2016) | Finland | 2002-2007 | Dividend tax reform in Finland 2005 | Log-dividends, difference in log net-of-tax rates between dividends and wages | 1.432 | 0.71 | 2.16 |
| Devereux, Liu and Loretz (2014) | United Kingdom | 2001-2008 | Bunching at kink points in UK CIT schedule | Share of income paid as corporate profits; difference in PIT and CIT marginal rates | 0.080 | -0.010 | 0.170 |
| Alstadsaeter and Jacob (2014) | Sweden | 2000-2011 | Dividend tax cut in Sweden 2006 | Share of income paid as dividend income; CIT rate | 0.032 | 0.030 | 0.034 |

*Response channels 1-2. Aggregate income-shifting*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Gordon and Mackie-Mason (1997) | United States | 1959-1986 | Time-series variation in US tax rates | Share of profits in corporate sector; non-corporate tax rate | 0.280 | n/a | n/a |
| Gordon and Slemrod (1998) | United States | 1964-1993 | Time-series variation in US tax rates | Rate of return per $1 of assets; difference in PIT and CIT marginal rates | 0.064 | 0.030 | 0.099 |
| Gordon and Slemrod (1998) | United States | 1964, 1966-1993 | Cross-taxpayer regression | Log of labour income; %-point differential in CIT relative to PIT | 0.034 | 0.033 | 0.035 |

*Response channels 3-4. Earnings retention channel*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Miller, Pope and Smith (2019) | United Kingdom | 2005-2015 | Bunching at kinks in UK PIT schedule | Proportion of firms bunching due to intertemporal-shifting | 1 | n/a | n/a |
| Le Maire and Schierning (2013) | Denmark | 1994-2009 | Bunching at kinks in Danish PIT schedule | Share of bunching due to intertemporal-shifting | 0.6 | 0.52 | 0.68 |

Source: (Alstadsæter and Jacob, 2014[4]), (de Mooij and Nicodème, 2008[37]), (Devereux, Liu and Loretz, 2014[39]), (Edmark and Gordon, 2012[58]), (Goolsbee, 2004[66]), (Gordon and Slemrod, 1998[62]), (Harju and Matikka, 2016[71]), (Lejour and Massenz, 2020[38]) (le Maire and Schjerning, 2013[74]), (Mackie- Mason and Gordon, 1997[67]), (Smith, Pope and Miller, 2019[14]), (Romanov, 2006[28]), (Tazhitdinova, 2020[29]). Column (6) reports the point estimate of the parameter of interest, while columns (7) and (8) report the lower and upper bounds of the 95% confidence interval.

# 5. Other forms of tax arbitrage and tax minimisation

49. **There are other ways in which business owners may seek to reduce their tax burdens beyond altering the form or timing of income, but empirical evidence on other forms of tax arbitrage or minimisation is limited.** This section briefly discusses the strategic use of losses and debt, personal consumption through a closely held business, as well as income splitting between individuals, as strategies to minimise taxable income. Business owners may also use firm structures to shelter their assets from other taxes, such as inheritance or wealth taxes. Even though anecdotal evidence suggests that these tax arbitrage or minimisation strategies may be commonly used, empirical studies remain scarce.

50. Losses can be used strategically to offset taxable capital gains. Taxpayers may time the realisation of losses such that they coincide with higher income years. Businesses may also engage in short-term trading strategies, such as tax loss harvesting, which involves deliberately selling an asset at a loss in order to offset taxable gains in a given tax year while replacing the asset with a similar investment. **Empirical evidence on the use of losses as a tax minimisation strategy is limited, but several studies show a significant increase in partnership income after the implementation of the Tax Reform Act 1986 (TRA86) in the United States.** This reform, among other tax changes, limited passive losses in partnerships by prohibiting passive partners (i.e. partners not materially participating in the business) from offsetting temporary losses of the business against active income, such as wage or investment income (Saez, Slemrod and Giertz, 2012[63]).[28] Increases in partnership income after the implementation of TRA86 suggest that the reform successfully limited the use of partnerships as a tax shelter (Nelson and Petska, 1992[81]). Jacob (2013[82]) analyses patterns in the realisation of capital gains and losses based on cross-sectional data from German income tax returns and finds that higher marginal income tax rates have a significant positive effect on the probability of realising capital losses. The study also finds that losses are more likely to be realised by lower income taxpayers while high income taxpayers are more likely to defer the realisation of capital losses.

51. **Business owners may use debt strategically to minimise taxable income.** The effect of taxes on the use of debt by unincorporated businesses and closely-held incorporated firms is limited, partly because smaller and younger firms may be less likely than other businesses to use debt due to other non-tax factors, such as creditworthiness, information asymmetry and signaling (Cloyd, Limberg and Robinson, 1997[83]; La Rocca, La Rocca and Cariola, 2011[84]). Ayers et al. (2000[85]) show empirical evidence of the effect of marginal tax rates on the use of debt among small businesses in the United States. The empirical strategy is based on the fact that inside debt, defined as loans from business owners, provides no tax advantage for pass-through businesses, given that interest payments paid by the business generate taxable income to the owner, while for closely held incorporated businesses, inside debt reduces the CIT liability and therefore directly relates to the marginal CIT rate. On the contrary, outside debt, defined as loans from non-owners, reduces the applicable marginal tax rate for both incorporated and pass-through

[28] For more detail on the implications of TRA86 on pass-through businesses, see Nelson and Petska (1992[81]))

businesses. In line with their predictions, Ayers et al. (2000[85]) find that higher marginal tax rates are associated with an increased use of outside debt for both incorporated and pass-through businesses while higher marginal tax rates have a positive relationship with the use of internal debt in closely held incorporated businesses, but no effect on internal debt usage for businesses taxed on a pass-through basis. Cloyd et al. (1997[83]) also find a significant positive relationship between marginal tax rates and debt utilisation in a sample of closely held corporations in the United States.

52. **There is evidence of alternative ways in which business owners use debt to reduce or avoid tax liability.** Businesses may manipulate interest rates by using non-arm's length loans granted by related parties or business entities with an ownership interest. There has also been recent anecdotal evidence suggesting that some of the wealthiest taxpayers use debt to finance consumption, allowing them to avoid having to receive income or sell assets and being subject to PIT or capital gains taxes (Ensign and Rubin, 2021[86]).

53. **Business owners may also engage in private consumption through their business.** Business expenses are typically deductible, with tax authorities commonly requiring incurred expenses to be "reasonable" and related to running business operations. However, business owners may still be able to re-characterise part of their private consumption as business expenses, especially if the distinction between personal and business use is blurry, as may be the case with vehicles, IT equipment, travel and entertainment expenses, meals, or rent and mortgage payments when personal living spaces are also used professionally. If entrepreneurs can easily consume out of their business, this may increase incentives to retain earnings as opposed to distributing dividends. Alstadsæter, Kopczuk and Telle (2014[87]) examine the impact of a dividend tax reform announcement in Norway, which created incentives for high income business owners to maximise dividend payouts prior to its implementation in 2006 and to retain earnings in the following years. Besides the expected increase in dividend payouts prior to the reform, the authors find evidence of increased retained earnings following the reform, particularly within personally owned firms, and an increase in long-term financial, fixed, and durable assets. The difference between personally owned and corporately owned firms[29] is particularly pronounced in the category of durable assets including machinery, company cars, boats and other equipment, suggesting that investment decisions by firms with fewer owners may be driven by personal rather than profit-maximising incentives, and that increases in assets may reflect personal consumption through the firm.

54. **Business owners may also be able to engage in income splitting between individuals, most commonly between family members.** For instance, business owners subject to high PIT rates may have an incentive to split business income or firm assets. Such strategies may involve the payment of wage income or the distribution of dividends to family members who face lower marginal tax rates, in ways that may not reflect their real labour and capital contributions. Schuetze (2006[88]) provides suggestive evidence of income splitting among Canadian self-employed couples by comparing wage payments and employment of spouses of Canadian self-employed, who are taxed at the individual level, to comparable couples in the United States, who are taxed at the household level and therefore have no incentive to split income. The authors also show that more income is shifted among couples in incorporated businesses, who have the additional option of distributing capital income, compared to unincorporated businesses. Dividend distributions are also relatively more concentrated among the 18-21 age group compared to the 22-25 age group, which may suggest dividend income sprinkling to younger and typically lower income children (Department of Finance Canada, 2017[89]). Le Maire and Schjerning (2013[74]) show some suggestive evidence of transfers to assisting spouses being a tax minimisation strategy among Danish self-employed individuals. There is bunching in spousal income around income tax thresholds, although

[29] The authors define corporately owned firms as businesses which are solely owned by corporations and personally owned firms as those that have at least one personal owner.

estimated bunching responses are relatively small. Several studies note that for transfers of very large amounts of income, the marginal tax rates applying to family members converge, which limits the benefits of conventional income splitting between individuals, in which case income splitting through trusts may provide a tax-preferred alternative (Department of Finance Canada, 2017[89]; Joulfaian, 2018[90]).

55. **Business structures may also be used to shelter assets from inheritance and wealth taxes.** Business assets often benefit from preferential tax treatment under inheritance and wealth taxes, in the form of full exemptions or partial reliefs (see Box 3). Business owners may therefore seek to shelter their assets from inheritance or wealth taxes through their business. Looking at the exemption for the shares of owner-managers under the Spanish net wealth tax[30], Alvaredo and Saez (2009[91]) showed that it progressively and substantially eroded the wealth tax base. Their empirical results reveal strong shifting effects whereby wealthy business owners re-organised their activities to take advantage of the exemption. Looking at the reintroduction of the Spanish wealth tax in 2011, Durán-Cabré, Esteller-Moré and Mas-Montserrat (2019[92]) also find evidence that taxpayers who declared business ownership in 2011 were more responsive to wealth taxes. This suggests that taxpayers transfer part of their wealth in real estate, bank accounts and non-exempt business holdings to exempt business holdings, which is relatively easy once the business structure is set up (Duran-Cabré, Esteller-Moré and Mas-Montserrat, 2019[92]). Similar behaviours may occur to avoid inheritance or estate taxes, especially where the preferential tax treatment for business assets is generous and where eligibility criteria to obtain business asset relief are loosely defined (OECD, 2021[33]).

[30] The exemption applied to business owners substantially involved in the management of their business, who individually owned at least 15% of the business (or with their families at least 20% of the business), and who received over 50% of their labour and business income from this activity.

# 6. Anti-arbitrage measures

56. **OECD countries have implemented a variety of measures aimed at addressing tax arbitrage and other forms of tax minimisation through businesses.** This section provides an overview of the measures in place in different countries, based on responses to a questionnaire that was sent to all OECD member countries. These measures aim to address the tax arbitrage behaviours discussed in Section 4 as well as other tax minimisation strategies discussed in Section 5.

### Table 3. Measures aimed at addressing tax arbitrage and tax minimisation in OECD countries

| Tax arbitrage or tax minimisation channel | Description | Countries |
|---|---|---|
| Shifting between labour and capital income | Specify rules that limit discretion in the allocation of labour and capital income for owners or shareholders of closely held businesses | AUS, BEL, CHL, FRA, GBR, GRC, ISL, KOR, LVA, NLD, NZL, SWE, USA |
| Retention of profits | Retained profits tax / dividend retention tax | IRL, JPN, KOR, MEX, SVK, USA |
| Strategic use of losses | Limit the deductibility of losses | AUS, AUT, BEL, CAN, CHE, CHL, CRI, CZE, DNK, DEU, ESP, EST, FRA, GBR, GRC, HUN, IRL, ITA, KOR, LVA, LUX, MEX, NLD, POL, SVK, SVN, SWE, USA |
| | Ring-fence losses, such that losses on certain sources of income cannot be used to offset income from other sources | AUS, AUT, CAN, CHE, CHL, CZE, ESP, EST, FIN, GBR, DEU, HUN, ISL, IRL, ITA, KOR, LVA, MEX, NLD, NZL, POL, PRT, SVN, SWE, USA |
| Strategic use of debt | Limit deductibility of interest expenses for loans, in particular between related parties | AUS, AUT, BEL, CAN, CHE, CHL, COL, CRI, CZE, DNK, DEU, EST, FIN, FRA, GBR, GRC, HUN, ISL, IRL, ITA, JPN, KOR, MEX, NLD, NZL, POL, PRT, SVK, SVN, SWE, USA |
| | Limit individuals' ability to borrow using equity in a company as collateral | GBR, KOR, MEX, SWE |
| | Specify appropriate minimum interest rates for loans between individuals and business entities in which they have an ownership interest | AUS, CAN, CHE, COL, GBR, IRL, KOR, MEX |
| Private consumption through the business | Asset-use tests to ensure assets held in businesses are used for business (not personal) purposes | AUS, CAN, CHE. CHL, CRI, DNK, IRL, ITA, KOR, LTU, NZL, SVK |
| | Enhanced reporting requirements for classes of deductible expenses that are more susceptible to abuse | AUS, CHE, COL, CZE, HUN, ISL, KOR, MEX, NLD, USA |
| | Limit deductibility of a business' operating expenses | AUS, AUT, BEL, CAN, CHE, CHL, COL, CRI, CZE, DNK, DEU, EST, GBR, GRC, HUN, IRL, ISL, ITA, JPN, KOR, LUX, MEX, NZL, POL, PRT, USA |
| Other | Specify how income and losses from partnerships can be allocated between partners | AUS, CAN, COL, CRI, CZE, GBR, ISL, KOR |
| | Re-characterise expenses (such as wages paid to related parties) as dividends subject to taxation at the corporate and personal level | AUS, BEL, COL, CHE, CZE, DEU, FIN, FRA, IRL, ISL, KOR, LTU, MEX, NZL, PRT |
| | Apply an alternative minimum tax that uses either an | AUT, BEL, CAN, CHE, COL, DEU, HUN, |

| | | |
|---|---|---|
| | alternative broader tax base or a minimum tax liability (e.g. disallowing certain deductions, credits, and exemptions on some forms of income) | KOR, LVA, PRT, USA |
| | General anti-avoidance rule disallowing deductions, transactions, credits, etc. if their sole or primary purpose was to minimise the tax liability | AUS, AUT, BEL, CAN, CHL, CRI, CZE, DNK, DEU, EST, FIN, FRA, GRC, HUN, ISL, IRL, ITA, JPN, KOR, LVA, LTU, LUX, MEX, NLD, NZL, NOR, POL, PRT, SVK, SWE, USA |

Source: Delegates' responses to the OECD questionnaire on top income and wealth taxation, 2022.

57. **About a third of OECD countries have reported applying tax rules limiting the discretion of business owners in determining their compensation packages in order to restrict the shifting of labour into capital income.** These rules vary in the degree of flexibility which is left to owner-managers in determining the split between labour and capital income. For instance, the United States requires owners of corporations to pay themselves a "reasonable" compensation, similar to what could have been earned in a comparable position in other companies. In the Netherlands, managing directors with substantial shareholdings (at least 5% of total share capital) need to set their wage at the highest of 75% of the salary of a similar employment, the highest wage of other employees working in the company, or EUR 48 000 per year[31]. A law effective from 2023 in Greece (Law 5073/2023) introduces a deemed income alternative minimum tax for individuals involved in entrepreneurial activity, the self-employed and freelancers. An individual engaged in such activity must earn a minimum annual income from business activity which cannot be lower than the annual gross minimum wage or the amount corresponding to the gross earnings of the highest-paid employee, whichever is higher. It also penalises the tax-abusive creation of corporate forms by introducing a top-up tax on individuals who establish a single-member corporation engaged in the same business activity subsequent to the implementation of the law.

58. **In Nordic countries, owners of some types of businesses are subject to income splitting rules which determine the share of labour and capital income.** Denmark, Finland and Sweden[32] operate a dual income tax system, according to which the income of unincorporated businesses is divided into a business income component, subject to business income taxes, and a labour income component, subject to personal income taxes and SSCs. The split system aims to promote neutrality between business owners and employees earning wage income by recognising the dual role of business owner managers as capital owners and employees. Denmark and Finland apply a fixed percentage to the (net) value of business assets to determine the capital income share, and the residual net profit (i.e. net profits minus the capital income share) is assigned to the labour income tax base. In some countries, split-rate rules may also apply to other businesses, for instance to closely-held corporations in Sweden and all unlisted companies in Finland. In Norway, the rules applied to unincorporated businesses only.[33]

59. **A few OECD countries apply rules that allow taxing a portion of retained earnings in order to reduce incentives to retain profits within corporations.** Six OECD countries apply a retained profit or dividend retention tax (Ireland, Japan, Korea, Mexico, Slovak Republic, United States). Taxes on retained earnings differ in their design, including the definition of the tax base, the thresholds at which they apply and whether they are targeted at specific industries. For instance, Ireland levies a targeted corporate

[31] Source: https://research.ibfd.org/#/doc?url=/linkresolver/static/tns_2022-09-21_nl_8%23tns_2022-09-21_nl_8/

[32] Norway also used to have income-splitting rules.

[33] There is evidence that the system in Norway encouraged incorporation for tax purposes (Annette Alstadsæter, 2018[106]).

tax surcharge, which only applies to certain service companies, and is levied on 50% of the businesses' undistributed income[34]. Some rules also differentiate between active and passive income, to prevent corporations from holding financial assets purely for tax purposes. In addition to the surcharge on service companies, Ireland for example applies a surcharge of either 15% or 20% on undistributed passive income – rental or investment income - of closely held corporations. The United States levies an accumulated earnings tax, which applies to corporations that retain earnings "beyond the reasonable needs"[35]. Additionally, since 1934, the United States has had a tax on the retained earnings of holding companies, known as Personal Holding Company rules, to prevent taxpayers from using holding companies as vehicles for avoiding income taxation on dividends and interest on financial assets.

60. **The majority of OECD countries limit the strategic use of debt in businesses, by restricting the deductibility of interest, applying maximum interest rules, or restricting the use of the business as collateral.** Rules limiting the deductibility of interest for business loans between related parties are common across OECD countries. Several OECD countries also set minimum interest rates for loans between individuals and business entities in which they have an ownership interest (Canada, Colombia, Ireland, Korea, Mexico, Switzerland, United Kingdom). Some countries restrict the use of the business as collateral for private loans (Korea, Mexico, Sweden, United Kingdom).

61. **Many countries apply restrictions to the deductibility of losses and restrict the ability of taxpayers to offset losses on certain income sources against income from other sources.** Restrictions on loss deductibility differ by country, but commonly include a maximum value threshold or a pre-determined time period within which losses can be offset, or a combination of both. In many countries, losses are ring-fenced, which implies that losses on certain sources of income cannot be used to offset income from other sources (e.g. passive losses not allowed to offset active or ordinary income).

62. **For partnerships, some countries apply specific rules to regulate the allocation of income and losses among partners.** Partners may have an incentive to allocate incomes and losses in a way that minimises the overall tax burden of partners (e.g. by allowing some partners to shelter their income from taxation through the allocation of losses, or receiving a larger income share if partners are eligible for tax credits or loss carry-forwards, for instance). Some countries allow tax administrations to reallocate income and losses to accurately reflect contributions to the partnership (Canada, Colombia, Costa Rica, Czechia, Iceland, Korea, United Kingdom). For instance, the Canada Revenue Agency may reallocate income and losses if the adopted allocation is deemed unreasonable.

63. **Many countries restrict the deductibility of certain operating expenses to limit personal consumption through the business.** Many countries define a range of expenses which are partially or fully deductible against business income (e.g. travel expenses, costs related to the workplace), subject to the condition that costs are not excessive and related to the business activity. Countries differ in the range of allowable deductions, the application of caps and the level of detail with which allowable deductions are defined.

64. **Fifteen countries have reported rules which allow the retroactive re-characterisation of expenses as dividend payments by tax authorities.** Payments to shareholders which are characterised as business expenses, including, for example, the reimbursement for services provided by family members, allow business owners to reduce their taxable business income (subject to CIT). When such payments are deemed excessive given the services provided, and business owners effectively use such payments to distribute profits to shareholders without having to pay tax, some countries allow for the re-

[34] Source: https://www.revenue.ie/en/tax-professionals/tdm/income-tax-capital-gains-tax-corporation-tax/part-13/13-02-06.pdf

[35] Source: https://www.irs.gov/irm/part4/irm_04-010-013

characterisation of these payments as dividends by the tax authorities. For instance, in the United States, expenses paid to a shareholder, which are not intended to be paid back, can be classified as “constructive dividends” by the Internal Revenue Service (IRS), subject to dividend taxes or taxation together with other income.

# 7. Policy implications and potential future work

65. **Tax systems provide significant incentives for tax arbitrage and there is strong evidence that business owners respond to these incentives**. Business owners may exploit differences in the tax treatment of different organisational forms and different types of income to reduce their tax burdens. There has been a trend across many OECD countries towards increasing business incorporation, which some studies suggest has been driven at least partly by tax factors. In addition to changes in tax incentives, some countries have introduced regulatory changes allowing greater access to incorporation and the benefits of corporate tax treatment for small businesses, which has facilitated tax arbitrage.

66. **Incentives to retain profits and strategically adjust the timing of income are particularly significant.** Large and widening gaps between top PIT rates on wage income and CIT rates, stemming in large part from the decline of CIT rates worldwide over recent decades, have increased incentives to incorporate and receive capital income in the last two decades. At the same time, combined tax rates on dividends (including both corporate and personal level taxes) are often relatively high, which has incentivised owners of closely held incorporated businesses to retain their earnings and strategically time the realisation or receipt of their income in order to reduce personal-level taxation. Some recent studies have emphasised the large magnitude of tax arbitrage through such intertemporal income shifting. The literature is less conclusive about whether income deferral tends to be undertaken with a view to future dividend payouts, the sale of shares, or the passing on of ownership to heirs. Income shifting incentives between contemporaneous wage and dividend income are typically less significant and vary widely across countries (see also (Hourani et al., 2023[31])).

67. **The potential for tax arbitrage through the retention of profits in corporations highlights the "backstop" function of CIT and the risks that widening gaps between PIT and CIT rates would pose.** In the absence of CIT, retained corporate earnings would fully escape taxation until shareholders realise capital gains or income is distributed as dividends, possibly long after the income has been earned, highlighting the CIT's key backstop function. Widening gaps between top PIT and CIT rates, in the absence of any other policies aimed at limiting tax arbitrage, strengthen incentives to incorporate and retain profits. Such incentives can be stronger where jurisdictions offer preferential CIT rates for SMEs. To the extent continued CIT rate cuts lead to tax arbitrage, they could ultimately adversely affect the revenue-raising capacity and the progressivity of PIT, whereas stabilising or increasing CIT rates (while using more targeted measures to stimulate investment, such as accelerated depreciation) could strengthen them. In this context, the introduction of a global minimum tax as part of the Second Pillar of the Inclusive Framework on Base Erosion and Profit Shifting reduces downward pressure on statutory CIT, limiting corporate tax competition between countries, and reinforcing the backstop function of CIT (IMF, 2023[93]).

68. **Preferential capital gains tax treatment can increase incentives to retain earnings.** The preferential tax treatment of capital gains on long-held assets in the form of low rates or special relief for business asset disposals, can create strong incentives to incorporate and retain rather than distribute earnings with a view to extracting income in the form of capital gains. Scaling back some of these provisions could help reduce tax arbitrage but would require an assessment of their potential economic impacts. The taxation of appreciated business assets upon death through capital gains taxation and/or

inheritance taxation would also significantly reduce incentives for indefinite deferral and passing on accumulated retained earnings as inheritances. Beyond these potential reforms, there have been recent calls to re-examine more fundamentally the case for the taxation of (some) capital gains on an accrual basis or look-back charges (i.e. interest payment on deferred taxes), with a view to removing the deferral advantage and tax arbitrage opportunities associated with taxing gains upon realisation. The OECD is conducting further work on the role and design of capital gains taxes.

69. **Some countries have adopted or may consider alternative approaches to reducing incentives to retain earnings for tax purposes, and in particular to hold passive investments through closely held corporations.** Several countries levy taxes on a portion of the undistributed earnings of some corporations. These taxes, which differ across countries, are designed to reduce the retention of earnings with the purpose of deferring or avoiding shareholder-level taxation. Some of these taxes target retained earnings if a company's income is predominantly passive. Other approaches involve imposing higher tax rates on passive income or restricting access to preferential tax treatment (e.g. small business CIT rates) to corporations with passive income above a threshold. Some countries also tax certain closely held corporations on a transparent basis (i.e. as though retained profits had been distributed to shareholders), an approach which has led to renewed discussions in academic and policy debates (Bach et al., 2019[75])[36]. The relative advantages and disadvantages of these various approaches remain to be systematically evaluated.

70. **Other policies may help reduce the ability of business owners to minimise their labour income for tax purposes.** One approach is the split-rate model that applies in some Nordic countries and that seeks to specify an appropriate allocation between labour and capital income. Research has shown that the precise design of the split rate model matters for its effectiveness and in some cases may create additional arbitrage opportunities (Alstadsaeter, 2003[69]; Pirttilä and Selin, 2011[68]). Some countries also have rules requiring owners of closely held corporations to pay themselves a "reasonable" or minimum salary to limit their ability to shift income between tax bases.

71. **In addition to reducing income shifting incentives, policies to prevent other forms of tax minimisation are needed.** In particular, preventing business owners from consuming out of their business requires carefully monitoring the business-related nature of expenses. Fringe benefits should also be taxed as much as possible as regular income. Ring-fencing losses may constrain the strategic use of losses from passive income to minimise taxable income, though the impact on investment is an important consideration. Strict rules and monitoring should apply to loans from companies to their owners and vice versa to make sure these are truly loans, as opposed to disguised compensation or distributions, or artificial reductions in taxable income, and that reasonable interest rates apply. Rules should also be in place to restrict the use of businesses to shift income (e.g. paying dividends) to family members in lower tax brackets.

72. **Reducing opportunities for tax arbitrage would enhance the effective progressivity of tax systems, as well as improving their efficiency**. While the incidence of business taxes is complex, the ability of owners of closely held businesses to alter business organisational form and engage in income shifting between bases and over time reduces the capacity of tax systems to generate effective progressivity through the PIT and CIT. Reducing tax arbitrage opportunities would help raise effective tax rates on households at the top of the income and wealth distributions, protect the PIT base from erosion, and ultimately support the inequality-reducing impact of tax systems. Finally, it can increase the efficiency of PIT and CIT systems by reducing deadweight losses associated with arbitrage behaviour.

[36] See also the article "Revenue considers dusting down 1970s-style business tax", *Financial Times*, 11th December 2015 (https://www.ft.com/content/cb15106c-a01b-11e5-8613-08e211ea5317).

73. **This paper has identified key tax arbitrage channels and discussed approaches to mitigating such behaviours, but further work is needed in this area.** Tax arbitrage behaviours are complex and often involve a combination of strategies. They also often aim at minimising the tax burden of entire families as opposed to single individuals over long time horizons. This paper has focused on some key tax arbitrage channels, but more complex ones (involving for instance multiple business structures, including foreign ones), could be examined. Further work could also more completely document, quantify, and compare arbitrage channels and risks across countries. In addition, it could explore the merits and limitations of pass-through versus double-level (corporate and personal) taxation for certain types of closely held businesses. Finally, further analysis is needed to better quantify the impacts of tax arbitrage behaviours on tax systems, in particular on the effective tax rates paid by households at the top of the income and wealth distributions and on revenues collected through PIT and CIT.

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