

2 Review of the arguments for and against inheritance taxation

Chapter 2 reviews the arguments for and against inheritance taxation, drawing on theoretical and empirical literature. Through the lens of equity, efficiency, and administration, the chapter assesses the pros and cons of taxing inheritances. The chapter also discusses gift taxes, as a necessary and common complement to inheritance taxation.

This chapter reviews the arguments for and against inheritance taxation. Largely based on existing theoretical and empirical literature, it assesses the pros and cons of taxing inheritances based on equity, efficiency, and administrative considerations. In this chapter, the term inheritance taxation is used to refer to all taxes levied on wealth transfers upon the death of donors, whether they are levied on donors' estates (i.e. estate taxes) or on the wealth received by heirs (i.e. inheritance taxes). As a necessary complement to inheritance taxation, the chapter also considers taxes on gifts made during the donor's lifetime. After briefly characterising inheritance taxation, the chapter starts by discussing the equity arguments in favour of inheritance taxation. The chapter then examines the efficiency effects of inheritance taxation on the behaviours of both donors and heirs. The last section of the chapter discusses the administrative implications of inheritance taxation. The chapter also compares the effects of inheritance taxes with the impact of other taxes that can be levied on wealthy households, including personal income taxes and net wealth taxes.

Overall, this chapter suggests that there is a good case for making greater use of inheritance taxation in OECD countries. There are strong equity arguments in favour of inheritance taxation, in particular of a recipient-based inheritance tax with an exemption for low-value inheritances. The case might be strongest where the effective taxation of personal capital income and wealth tends to be low. From an efficiency perspective, while the number of studies is limited, the empirical literature generally suggests that inheritance taxes tend to have more limited effects on savings than other taxes levied on

wealthy taxpayers, and confirms their positive effects on heirs' labour supply and donors' charitable giving. In addition, while inheritance taxes might negatively affect family business successions (depending on tax design), they might at the same time reduce risks of misallocating capital. The chapter also shows that there is evidence of tax planning and migration among the very wealthy in response to inheritance taxation, but that these behaviours could largely be addressed through better tax design, as discussed in greater detail in Chapter 3. Finally, inheritance taxes have a number of administrative advantages compared to other forms of wealth taxation and recent progress on international tax transparency enhances the ability of countries to tax capital effectively.

2.1. Characteristics of inheritance taxation

Inheritance taxation is a specific form of wealth taxation. As opposed to net wealth taxes that are levied periodically (usually annually) on the ownership of wealth, wealth transfer taxes are levied when a transfer of wealth occurs and, in the case of inheritance and estate taxes, only upon the donor's death. Wealth transfer taxes can be further sub-divided into inheritance taxes, which are levied on the wealth received by heirs, and estate taxes, which apply to the total wealth transferred by donors. As with net wealth taxes, inheritance and estate taxes are typically levied on a broad range of assets, including immovable and movable property, as well as financial assets, and debts are deductible.

Some of the features of inheritance taxation make it different from other forms of property taxation. First, inheritance taxation inherently affects two related parties (Kopczuk, 2013^[1]). Second, the fact that inheritance taxes are infrequent (at death in the case of inheritance taxation or on occasions during the donor's lifetime in the case of gift taxes) implies that they allow for a long period of planning. The potentially large amounts of money at stake may also make tax avoidance and planning worthwhile for some taxpayers (Kopczuk, 2013^[1]). At the same time, the date of inheritances is uncertain, which may limit some behavioural responses, particularly among those who are less wealthy and cannot afford to give assets away prior to death or whose assets do not qualify for particular exemptions. Third, these taxes, even when they apply to a small group of taxpayers, can have significant distributional implications, in the short and the long term.

2.2. Equity considerations

This section examines the equity arguments in favour of inheritance taxation. It looks at equality of opportunity, horizontal and vertical equity, and the effects of inheritance taxes on the distribution of wealth. Using simple simulations, the last part of this section analyses how inheritance taxes, in combination with other taxes, can help prevent the build-up of dynastic wealth over generations.

2.2.1. Inheritance and gift taxation enhances equality of opportunity

A substantial share of wealth is inherited. Wealth inequality can result from inequality in self-made wealth – which is itself due to factors including differences in income from work or entrepreneurial activity, returns to savings and investments, and luck – and from inequality in inherited wealth. According to some estimates, the share of inheritances in overall wealth varies between 30% and 60% in Western countries (Wolff, 2015^[2]; Piketty and Zucman, 2015^[3]). In recent decades, evidence shows that the share of inherited wealth in total household wealth has increased in some countries, and the number and value of inheritances is expected to increase in the future (see Chapter 1).

From an equality of opportunity perspective, inheritances and gifts can create a divide between the opportunities that people face. Wealth transfers might give recipients a head start that is not linked to their personal efforts (Alstott, 2007^[4]; Boadway, Chamberlain and Emerson, 2010^[5]) and reduce equality

of opportunity, which can be understood as ensuring that people with similar abilities and levels of effort face similar prospects in life. This may be particularly true in the case of inter vivos gifts, which people receive earlier in life than inheritances.

Empirically, inheritances and gifts have been found to play a strong role in wealth persistence across generations, particularly between parents and their children. Intergenerational wealth mobility tends to be lower than intergenerational income mobility (Bastani and Waldenström, 2020^[6]). Looking at the degree to which the wealth association between parents and children can be explained by inheritances in Sweden, Adermon, Lindahl and Waldenström (2018^[7]) find that bequests and gifts account for at least half of the parent–child wealth correlation, while earnings and education can account for only a quarter. However, the authors also find that wealth tends to dissipate over time, with grandparent-grandchild wealth correlations being markedly lower than parent-child correlations. Boserup, Kopczuk and Kreiner (2018^[8]) find that inter vivos transfers play a significant role, with wealth holdings in childhood, which are related to parental giving, being a strong predictor for wealth in adulthood.

Inheritance taxes can therefore be justified to enhance equality of opportunity. By breaking down the concentration of wealth and correcting for factors that are beyond recipients' control, inheritance and gift taxation can contribute to levelling the playing field across individuals, and thereby increase equality of opportunity and improve social mobility. Piketty, Saez and Zucman (2013^[9]) have argued that, from a meritocratic perspective, inherited wealth should be taxed at higher rates than earned income and self-made wealth.

Results from theoretical optimal tax models on the design of inheritance taxes vary significantly. The optimal inheritance tax literature takes into account both equity and efficiency goals to draw insights about inheritance taxation. The optimal tax rate generally depends on a number of factors. These include the intent of the donor and the weights placed on the donor and recipients' utilities, the weights that the social planner assigns to efficiency and equity objectives, the type of social welfare function that the social planner is maximising, and the types of (linear or non-linear) tax instruments that the social planner can avail of to maximise social welfare. As discussed below, depending on their assumptions, some models find that bequests should not be taxed, some find that they should be subsidised, while others find that optimal tax rates are positive.

Based on highly restrictive assumptions, some optimal tax models have found that the optimal tax rate on bequests was zero or negative (i.e. that bequests should be subsidised). Farhi and Werning (2010^[10]) analyse a two-generation model, assuming that all the capital comes from the work efforts of the first generation. Children are assumed not to work but to derive utility from the consumption they can finance with the bequest they receive from their parents. They show that if the social welfare function only considers the utility of parents, who are assumed to be altruistic (i.e. the children's consumption financed with the bequest provides utility to parents), but places no direct weight on the utility of children, the optimal tax on bequests is zero. When governments can levy a non-linear income tax, parents' intertemporal consumption choices should not be distorted, in line with the result in Atkinson and Stiglitz (1976^[11]). When the utility of heirs is directly taken into account in social welfare, on the other hand, Farhi and Werning (2010^[10]) find that bequests should be subsidised, but in a progressive way, i.e. with subsidies decreasing with the size of inheritances, to reduce consumption inequality amongst the generation of children.

When a society is assumed to have meritocratic and equality of opportunity preferences, however, optimal tax models find positive optimal inheritance taxes. In a model that builds upon their 2010 model, but assumes heterogeneity in the degree of parents' altruism towards their children, Farhi and Werning (2013^[12]) find a range of possible optimal tax results, from subsidies to positive taxes, depending on redistributive objectives. They find that it can be optimal to tax inheritances if equality of opportunity weighs heavily in the objective function of the government. Piketty and Saez (2013^[13]) develop a more realistic setup which considers that each generation both gives and receives inheritances. They find that

the optimal tax rate is positive and high, up to 50%-60%, if the elasticity of bequests to tax is low, bequest concentration is high, and society cares primarily about those receiving small inheritances.

Equality of opportunity arguments have significant implications in terms of tax design. In particular, if promoting equality of opportunity is a major objective of inheritance taxation, then there is a strong case for a recipient-based inheritance tax rather than an estate tax levied on donors. Indeed, it is the amount of wealth received by each recipient that should matter rather than the overall amount bequeathed by the donor (Mirrlees et al., 2011^[14]). Based on equality of opportunity arguments, it would also make sense to consider the overall amount of wealth received by individuals over their lifetime, regardless of who they received it from. These various design options are examined in Chapter 3.

2.2.2. Inheritance and gift taxation can strengthen horizontal and vertical equity

An inheritance tax can enhance horizontal equity. According to the horizontal equity principle, people receiving the same amount of income or assets should be taxed similarly. Thus, there should not be a difference in the tax burden of people in equal circumstances depending on whether they receive transfers from others in the form of earnings or in the form of gifts and inheritances. An inheritance tax can therefore be justified to level the playing field between inheritances and earnings from work or savings.

An inheritance tax, particularly a progressive one, would also enhance vertical equity. According to the vertical equity principle, taxpayers with a greater ability to pay tax should pay relatively more tax. By taxing wealth transfers, particularly at progressive rates, an inheritance tax ensures that those who receive more wealth pay more tax. In fact, inheritance taxes are often among the most progressive elements of countries' tax systems (Piketty and Saez, 2007^[15]), although effective progressivity is often lowered by the way inheritance and gift taxes are designed (see Chapter 3).

Some have argued that wealth transfers should be taxed more heavily than earned income because wealth transfer recipients can be viewed as better off than income earners. Batchelder (2020^[16]) recently proposed reforming the US estate tax by treating inheritances as taxable personal income in the hands of recipients, but she argues that large inheritances should be taxed at a higher rate than income from work. Indeed, recipients of inheritances are better off than people who accumulate the same amount of money by working as the former do not incur opportunity costs: they do not have to relinquish any leisure to receive the bequest. Besides, people who inherit a lot generally also benefit from other economic and social advantages, which may reinforce the case for taxing inheritances at higher rates than income from work (Batchelder, 2020^[16]). In existing tax systems, however, inheritances are often taxed far more favourably than income from work and savings (see Chapter 3; and Batchelder, 2020^[3], for the United States and the Resolution Foundation, 2018^[10], for the United Kingdom).

2.2.3. Inheritance and gift taxes can reduce wealth inequality, particularly in the longer run and if revenues are redistributed

A number of studies simulating intergenerational wealth transfers have looked at the impact of inheritances on the distribution of wealth and shown mixed results. Results differ depending on the assumptions used. Some studies suggest that inheritances can be equalising, reflecting the role of imperfect correlation of spousal background in the sense that the partner in a couple from a financially less privileged background will benefit from the inheritance their partner receives (Laitner, 1979^[17]) or the tendency to leave more to less well-off children (Tomes, 1981^[18]). Others, however, suggest a disequalising effect of inheritances (Davies, 1982^[19]; De Nardi, 2004^[20]).

More recent studies based on individual level survey or administrative data have generally found that inheritances reduce relative wealth inequality but increase the absolute dispersion of wealth. Wolff and Gittleman (2014^[21]), using data from the Survey of Consumer Finances in the United States, find that the rich inherit more than the less affluent, but that the rich inherit less relative to their existing wealth,

causing inheritances to have an equalising effect on the distribution of wealth. Drawing on their methodology, Bönke, Werder and Westermeier (2017^[22]) find the same results for eight European countries using data from the Household Finance and Consumption Survey. Other studies relying on administrative data reach similar conclusions. Using Swedish population register data on inheritances and wealth, Elinder, Erixson and Waldenström (2018^[23]) find that inheritances reduce wealth inequality measured by the Gini coefficient or top wealth shares. However, they find that inheritances increase the absolute dispersion of wealth among heirs, measured as the difference in wealth between the heirs in the 25th and 75th percentiles of the distribution. In a similar study using Danish individual level tax register data on wealth, Boserup, Kopczuk and Kreiner (2016^[24]) also find that inheritances cause an increase in the absolute dispersion of wealth and a decrease in relative wealth inequality.

In countries where inheritances are found to have an equalising effect, this effect tends to diminish over time, as inheritances received by the poor are much more likely to be consumed in the long run. Nekoei and Seim (2018^[25]) show that the equalising effect of inheritances in Sweden is reverted in ten years. Heirs in the bottom 99% of the wealth distribution deplete almost all of their inherited wealth within a decade. In contrast, for the top 1%, the inherited wealth remains almost intact over time. Similarly, Elinder, Erixson and Waldenström (2018^[23]) find that the equalising effect of inheritances is diluted over time, in line with findings that less wealthy heirs spend a larger share of their inherited wealth than wealthier heirs.

In addition, the overall impact of inheritance taxes – i.e. including income redistribution – is more likely to be equalising. In Sweden, Elinder, Erixson and Waldenström (2018^[23]) find that inheritance taxes counteract the equalising effect of inheritances, but that this effect is reversed when tax revenues are redistributed to reduce inequality. The long-term impact of inheritance taxes might be even larger than the immediate redistributive effect. In their simulation model of intergenerational wealth transmissions, Cowell, Van De Gaer and He (2017^[26]) find that the long-run effect of an inheritance tax in reducing wealth inequality (i.e. the “pre-distribution” effect) will be much larger than the immediate “redistribution” impact, as work, leisure, and saving rates all change in ways that reduce wealth inequality. Previous OECD research has also found that, overall, tax mixes that rely more on taxes on wealth transfers are associated with lower levels of income inequality (Akgun, Cournède and Fournier, 2017^[27]). These findings reinforce the idea that the overall effect of inheritance taxation, including the redistribution of tax revenues, is equalising.

These findings provide valuable guidance for the design of inheritance taxes. Indeed, these findings suggest that a tax exemption threshold that allows small inheritances to be passed on free of tax, combined with a progressive inheritance tax rate schedule, may reduce absolute and relative wealth inequality. This would avoid taxing small inheritances that may have an equalising effect, at least in the short run, while taxing larger inheritances. Besides, since behavioural responses differ across the wealth distribution (i.e. the wealthiest heirs leave their inheritances intact, while the majority of heirs consume their inherited wealth) and wealthier heirs receive larger bequests, taxing large inheritances will have a long-run effect on the distribution of wealth (Nekoei and Seim, 2018^[25]).

2.2.4. Inheritance taxes can help prevent the build-up of dynastic wealth

This section examines the impact of different taxes on wealth accumulation over several generations, based on a stylised lifecycle model. The purpose of the simulations presented in this section is to model the effects of different types of taxes on the pace of wealth accumulation over generations across different types of households and in different rate of return scenarios.

These simulations are meant as simple illustrations and rely on highly stylised assumptions. The first part of the simulation exercise models wealth accumulation over five generations across three types of households, assuming a 4% rate of return, when different types of taxes are levied. The only difference between household types is assumed to be their initial wealth levels. Apart from initial wealth endowments,

the model assumptions remain unchanged across household types to ensure that the results are not driven by variations in labour and pension income, returns to savings or consumption behaviour. Across all household types and scenarios, wealth is also assumed to be equally split between two heirs at the end of each lifecycle. The second part of the simulation exercise looks at wealth accumulation dynamics for super-high wealth households earning a rate of return of 7%. The parameters of the model are specified in Box 2.1.

These simulations do not take into account potential economy-wide dynamic effects that may have a significant impact on wealth accumulation and inequality. In particular, it could be expected that if capital stocks continue to grow, the returns to capital could fall, depending on the elasticity of substitution between labour and capital, i.e. whether capital can easily be substituted to labour in the production process. If the elasticity of substitution is high (i.e. above one), the returns to capital are predicted to remain stable and higher than growth rates (Piketty, 2014^[28]), but if the elasticity is lower, returns to capital could fall, and if they fall quickly enough when the capital stock grows, the capital share of income could fall rather than rise (Rognlie, 2014^[29]). These dynamic effects are not taken into consideration in these simple simulations. The simulations also do not take into account the potential impact of the revenues raised through the different taxes that are modelled and how the increase in revenues and the size of the government may in turn affect private wealth accumulation.

These simulations also do not take account of observed changes in behaviours, including those of inheriting generations. The simple stylised scenarios assume that household behaviour does not change over time, and thereby assume that the steady accumulation of wealth between generations will continue uninterrupted over time. As discussed in sections 2.3.5 and 2.3.6, this assumption is in contrast to the empirical observation that inheriting generations tend to work less, consume more, and run companies less efficiently than their forebears.

Box 2.1. Model specifications

The model is estimated over five equally long generations. Each generation consists of a single taxpayer whose overall 60-year lifecycle is divided into a 40-year period of work and a 20-year period of retirement (this scenario corresponds to a taxpayer entering the labour market around the age of 20 and receiving an initial endowment in the same year from an inheritance).

At the beginning of the first generation, taxpayers are endowed with a certain amount of assets according to three different wealth categories: i) a medium-rich taxpayer with USD 40 000 of initial wealth, ii) a rich taxpayer with USD 500 000 and iii) a super-rich taxpayer with USD 10 000 000 of initial wealth. After death, the remaining assets are evenly split and passed on to two heirs with only one heir being followed up for further analysis. This heir is assumed to work also for 40 years, enjoy a 20-year retirement period and then pass on their accumulated wealth to two heirs, and this cycle repeats itself. The model disregards the fact that even if wealth is split between two heirs, it may continue to accumulate within the confines of the same family.

Apart from wealth endowments, taxpayers also earn a wage of USD 50 000 per year and a pension of USD 20 000 per year during retirement. Wage and pension income are kept constant for all wealth endowment levels and across generations. Every year, taxpayers consume a fraction of 30% out of their labour or pension income and consume a fraction of 1% out of their accrued wealth. The remainder is again invested into assets, which are assumed to yield a 4% rate of return. For simplicity, the model does not take inflation into account (although the accumulation of wealth in real terms will be affected by inflation).

A savings tax is levied on returns to savings accrued from wealth and labour income. The model imposes either an annual 20% flat tax or a progressive savings tax. In addition, an inheritance tax on wealth bequeathed above USD 300 000 is modelled; in one case a 10% flat rate applies and in another case progressive rates apply (see Table 2.1 for the respective income and bequest thresholds and tax rates). The impact of an annual 1% wealth tax levied on the wealth stock is also modelled.

Wages and pensions are subject to taxation. Wages are taxed at an average effective tax rate of 35%, and pensions at 20%. Consumption is subject to a 20% VAT.

To account for the fact that returns may vary with household wealth, a 7% return scenario for super-rich households is also modelled. Following for instance Lusardi, Michaud and Mitchell (2017^[30]) and Fagereng et al. (2020^[31]) who find that people systematically and persistently differ in their rates of return on capital depending on ability, risk-taking and wealth, the second part of the modelling exercise focuses on wealth accumulation for the super-rich, assuming a higher return on savings, in line with recent real-life returns.¹

Table 2.1. Model parameters

	Medium wealth household	High wealth household	Super-high wealth household
Initial wealth endowment	USD 40 000	USD 500 000	USD 10 000 000
Labour income	USD 50 000	USD 50 000	USD 50 000
Pension income	USD 20 000	USD 20 000	USD 20 000
Consumption out of income	30%	30%	30%
Consumption out of wealth	1%	1%	1%
Consumption out of pension	30%	30%	30%
Consumption out of wealth during retirement	1%	1%	1%
Return on savings	4%	4%	4% / 7%
Savings tax progression	20% / 30% / 40% / 50%	20% / 30% / 40% / 50%	20% / 30% / 40% / 50%
Savings tax thresholds	USD 10 000 / 20 000 / 50 000 / 100 000	USD 10 000 / 20 000 / 50 000 / 100 000	USD 10 000 / 20 000 / 50 000 / 100 000
Inheritance tax progression	10% / 15% / 20% / 30%	10% / 15% / 20% / 30%	10% / 15% / 20% / 30%
Inheritance tax thresholds	USD 300 000 / 500 000 / 1 000 000 / 3 000 000	USD 300 000 / 500 000 / 1 000 000 / 3 000 000	USD 300 000 / 500 000 / 1 000 000 / 3 000 000
Wealth tax	1%	1%	1%
Labour income AETR	35%	35%	35%
Pension income AETR	20%	20%	20%
VAT rate	20%	20%	20%
Number of heirs in each generation	2	2	2

The simulation results show that, in the absence of taxes on savings and wealth, wealth accumulates unfettered for all three household types. Estimates in the top row of Figure 2.1 show that despite wealth stocks being split between two heirs at the end of each lifecycle, taxpayers still end up over time with a wealth level many times higher than the initial endowment. In this scenario, there are no taxes levied, and heirs are the only shock to wealth growth. There may be other factors that affect wealth accumulation (e.g. crises, low productivity growth), but these are not taken into consideration in the model. In this setting and in the absence of taxation, wealth accumulates fast and in a self-reinforcing way, and reaches extreme levels particularly for super-high wealth households (note the different scales used across household types).

The imposition of progressive savings taxes slows wealth accumulation significantly across all household types. Relative to a 20% flat tax on savings, which already slows wealth formation, the progressive savings tax that is modelled results in an even slower increase in wealth over time (Figure 2.1, second row). While wealth formation during the first generation almost matches the trajectory of wealth accumulation under a 20% flat tax for a medium-rich and a rich taxpayer, it slows in subsequent generations. Wealth levels for a super-rich taxpayer increase less in relative terms than for other households under a 20% flat tax (although they do increase more in absolute amounts) and actually decline under the progressive savings tax. This observation is explained by a combination of model parameters. Additional savings from non-consumed labour income, which form a relatively higher share of total wealth for medium-rich and rich taxpayers, are re-invested, making their wealth levels initially increase faster in relative terms. The progressive savings tax also affects lower wealth levels less, as they generate lower savings income. In contrast, re-invested savings from labour income form a smaller share of the super-rich taxpayers' existing wealth and progressive savings taxes have a higher impact given their higher income from savings. The impact of the progressive savings tax is also directly determined by the tax rates chosen in the model, and it should be noted that these rates are (significantly) higher than the tax rates that

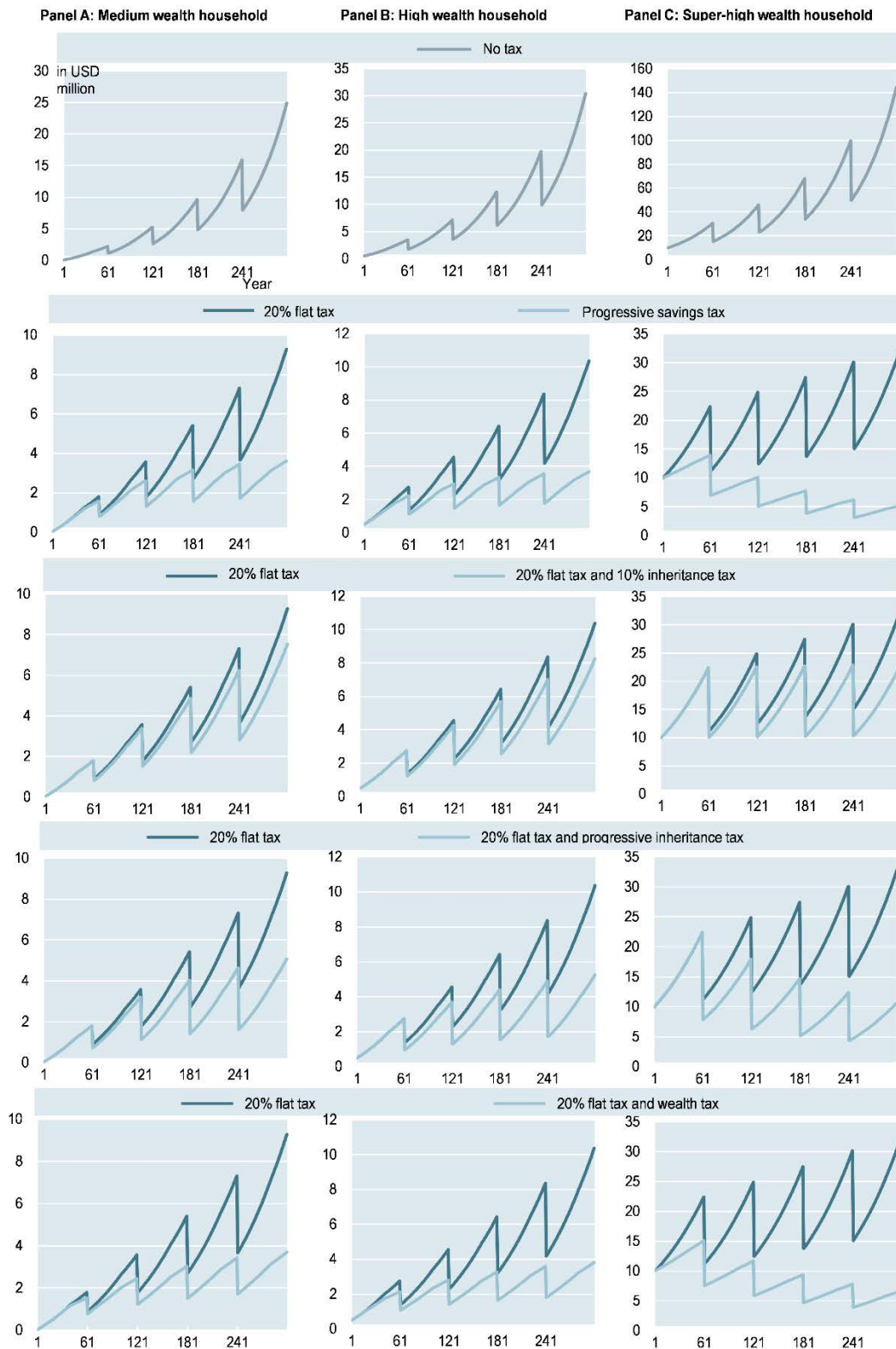
currently apply in most OECD countries. Under this progressive savings tax scenario, wealth levels across the different types of households would eventually converge, although this would take more generations than included in Figure 2.1.

Progressive inheritance taxes, in combination with a 20% flat savings tax, exert similar countervailing effects on wealth accumulation. While a 10% inheritance tax on wealth bequeathed in excess of USD 300 000 does not seem to alter the growth trajectory decisively for medium-rich and rich taxpayers, a progressive inheritance tax reduces wealth accumulation by half across generations compared to a scenario where only a 20% tax on savings is levied (Figure 2.1, third and fourth rows). For a super-rich taxpayer, the progressive inheritance tax results in a decrease in wealth over time. Depending on the tax rates, a progressive inheritance tax leads to similar, albeit slightly lower, effects on wealth accumulation dynamics over generations compared to the progressive savings tax and may thus act as an (imperfect) alternative to a progressive savings tax.

An annual 1% wealth tax, in combination with a 20% flat savings tax, exerts an overall lower impact on wealth formation than the progressive savings tax. Wealth growth trajectories across all three types of taxpayers flatten when a 1% annual wealth tax is combined with a 20% flat savings tax, with wealth growth turning negative for the super-rich taxpayer (Figure 2.1, bottom row). The reduction in wealth growth (or negative wealth growth for the super-rich) is slightly lower than under the progressive savings tax. In this context, it is important to recall the similarity of savings and wealth taxes absent capital market imperfections. If savings yield a return of 4%, a 1% tax on the wealth stock is equivalent to a 25% tax on the income from savings.

Figure 2.1. Simulations of wealth accumulation over five generations for different types of households under different tax scenarios

Estimated wealth accumulation in USD million for a medium-rich, rich and super-rich taxpayer at a 4% rate of return



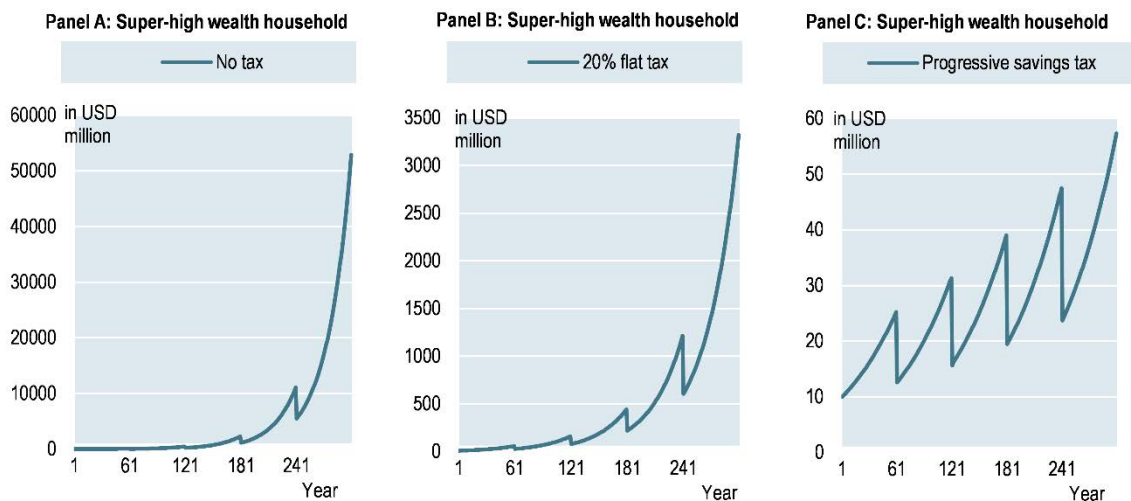
Source: OECD staff estimations.

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To account for the fact that returns may vary with household wealth and significantly affect wealth accumulation dynamics, a 7% return scenario for super-rich households is also modelled. Under this scenario, Panel A in Figure 2.2 shows that wealth increases exponentially over time in the absence of any tax: it grows from an initial USD 10 million to over USD 50 billion over five generations (despite the fact that wealth is split into two at the end of each generation). A similar pattern can be observed under a 20% flat savings tax, although to a lesser extent. It requires a progressive savings tax to slow the exponential growth in wealth (Figure 2.2, Panel C) and, in this example, total wealth grows “only” six-fold over time and the accumulation trajectory behaves in a rather linear fashion. This example shows that when taxpayers are able to earn a very high return on their savings, a progressive savings tax might not be sufficient to prevent wealth from growing significantly over generations. To limit such wealth accumulation, the progressive savings tax would either have to be levied at very high marginal rates or, alternatively, be complemented with an inheritance tax.

Figure 2.2. Simulations of wealth accumulation over five generations for a super-high wealth household at a 7% rate of return

Estimated wealth accumulation in USD million. Tax scenarios: no tax, flat savings tax and progressive savings tax



Source: OECD staff calculations.

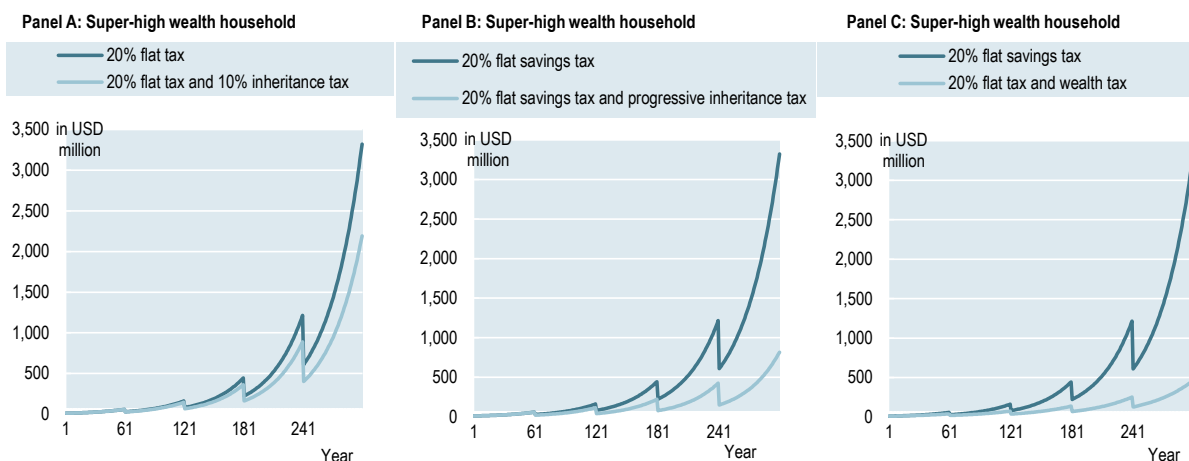
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As previously observed, a progressive inheritance tax and a wealth tax may also help prevent the accumulation of extreme wealth. Relative to a scenario where only a flat savings tax is levied, adding a progressive inheritance tax or a wealth tax significantly reduces the growth of the wealth stock over generations (Figure 2.3). While at the end of the last generation the wealth stock under a flat savings tax stands at roughly USD 3.5 billion, adding the progressive inheritance tax reduces the amount to slightly above USD 700 million and the wealth tax to below USD 500 million at the end of the fifth generation. Both taxes manage to prevent exponential wealth growth, but overall wealth levels still end up being considerably higher than under a progressive savings tax (compare Figures 2.2 and 2.3). This comparison shows that overall a progressive savings tax is better at capturing higher returns. Indeed, if asset returns increase, the tax liability under a savings tax will increase, but the tax liability under a wealth tax will remain the same, implying a drop in the effective tax on the return. Moreover, the flat inheritance tax does not exert a major impact on the growth of super-rich taxpayers' high-yield wealth over generations. Finally, Figure 2.4 shows wealth accumulation patterns when inheritance or wealth taxes are combined with a progressive savings tax. When a progressive savings tax is combined with a progressive inheritance tax

or an annual wealth tax, wealth levels progressively decline over generations for super-rich households earning a 7% return on their assets.

Figure 2.3. Simulations of wealth accumulation over five generations for a super-high wealth household at a 7% rate of return

Estimated wealth accumulation in USD million. Tax scenarios: inheritance or wealth taxes, in combination with a flat savings tax



Source: OECD staff calculations.


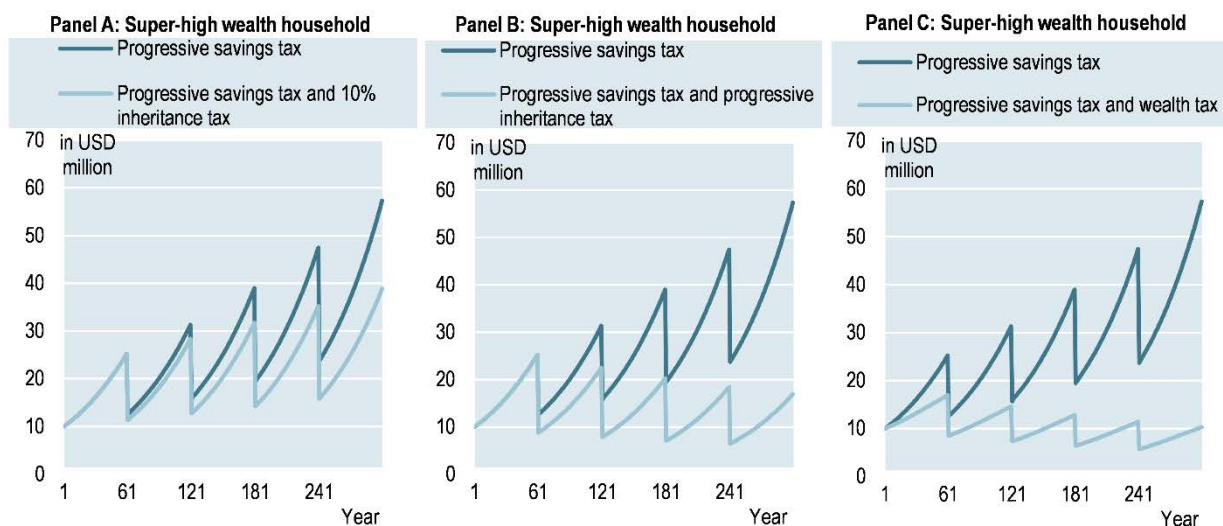

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Figure 2.4. Simulations of wealth accumulation over five generations for a super-high wealth household at a 7% rate of return

Estimated wealth accumulation in USD million. Tax scenarios: inheritance or wealth taxes, in combination with a progressive savings tax



Source: OECD staff calculations.

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Overall, the results suggest that a high progressive savings tax, or a lower savings tax combined with a progressive inheritance tax, may help prevent large wealth accumulation over generations.

From an efficiency point of view, the combination of a more moderate progressive savings tax with a progressive inheritance tax may be preferable, given the overall limited negative efficiency effects of inheritance taxes (see Section 2.3). An annual wealth tax, in combination with a progressive savings tax, could also be a powerful tool to reduce wealth concentration over generations, but depending on its design, it could lead to very high marginal effective tax rates, particularly in low asset return scenarios. Besides, as discussed further in the chapter, a wealth tax is more administratively challenging than an inheritance tax.

These simulation results also suggest that certain factors may have significant effects on wealth accumulation trends in the future. For instance, the currently low to negative real interest rate environment poses a significant challenge to savings returns and the accumulation of wealth, particularly for the less well off. Since the financial crisis, major central banks have drastically lowered their policy interest rates and entered into asset purchasing programmes to provide additional liquidity to the market amid low inflation. As intended, this has lowered interest rates for credit, but rates on safe assets have equally been affected. At the same time, the recent expansionary monetary policy may contribute to the inflation of certain asset prices, for instance in real estate or equity markets, which could further increase wealth inequality. Another trend that may have a significant impact on the accumulation and distribution of wealth in the future is the decline in fertility rates.² As the simulations have shown, increased numbers of heirs have an effect akin to an additional inheritance tax on wealth accumulation. The growing shortfall of heirs as a “demographic shock to wealth accumulation” (Piketty, 2015^[32]) might exacerbate intra- and inter-generational wealth inequality as wealth will be split between fewer heirs.

Finally, the build-up of significant wealth in one generation is not considered in the simulations but it has important implications for tax design. The simulations presented above consider the build-up of wealth over generations, through saving and investments, but the build-up of extreme wealth has often been the result of successful entrepreneurship in a single generation, supported by rapid technological change (e.g. industrialisation, financial innovation or digitalisation), as well as factors enabling economic rents, or supernormal returns, such as reduced market competition. This highlights that inheritance taxation is not a silver bullet and that other tax reforms, in particular in relation to personal capital income, as well as non-tax reforms are needed to address wealth inequality.

2.3. Efficiency considerations

This section examines the efficiency arguments for and against inheritance taxation. As mentioned earlier, a unique feature of inheritance taxation is that it affects the incentives of both donors and heirs. It can also affect behaviours along different margins. Inheritance taxation might influence donors’ wealth accumulation, giving, migration, and avoidance behaviours. From the perspective of heirs, savings and labour supply decisions may also be affected by inheritance taxation. This section first considers how inheritance taxation affects donors’ behaviours. It then looks at the impact of inheritance taxation on heirs. It also discusses the potential impact of inheritance taxation on entrepreneurship and business successions. Additional efficiency arguments for and against inheritance taxation, including double taxation and negative externalities from wealth concentration, are considered. This section also compares the efficiency effects of inheritance taxes with the effects of other taxes and looks at how tax design may affect behavioural responses to inheritance taxation.

2.3.1. Inheritance taxation may have a small negative impact on wealth accumulation by donors

An inheritance tax directly reduces wealth accumulation over generations (see Section 2.2.4). However, without taking into account potential effects on donors' behaviours, this effect only materialises when assets are transferred to the next generation by reducing the net amount of wealth that is transferred to heirs. As discussed below, inheritance taxes may also affect wealth accumulation prior to being levied by encouraging changes in donors' behaviours.

In theory, inheritance taxation may have varying effects on the behaviour of donors. Prospective donors might save less knowing that a part of their wealth will not be passed on to their heirs (substitution effect). On the other hand, if donors have their mind set on passing on a certain amount of wealth to the next generation, an inheritance tax could make them save more (income effect). Donors may also seek to transfer their assets earlier, in countries where inter vivos transfers result in lower taxation than if assets are transferred at death. Prospective donors might also prefer to invest more heavily in their children's education as opposed to accumulating wealth in a taxable form.

A vast theoretical literature has emphasised how donors' bequest motives influence their responses to inheritance and gift taxation. Potential donors accumulate wealth for different reasons (see Box 2.2) and the theoretical literature has found that bequest motives strongly influence donors' behavioural responses to changes in inheritance taxation. Potential donors might save to meet their needs in retirement (i.e. lifecycle saving). They might also save because they enjoy being wealthy and value the power and prestige that wealth confers while they are alive (egoistic saving). In these cases, donors might leave unintentional or "accidental" bequests if they die before using up all their wealth. Such unintentional bequests are expected to be unresponsive to inheritance taxation (Gale and Slemrod, 2001^[33]). From a tax design perspective, this may justify having higher tax rates on transfers to distant relatives or non-related heirs, as the likelihood of accidental transfers may be greater than in the case of bequests to direct descendants (Cremer and Pestieau, 2009^[34]). There are other cases, however, where bequests are not accidental but are at least partly planned by donors, and where inheritance taxes will affect donors' savings and consumption decisions to some extent. For altruistic parents who care about the welfare of their children, the effect of an inheritance tax is ambiguous, depending on income and substitution effects. On the one hand, they may have fewer incentives to save and work if part of their wealth cannot be passed on to their children. On the other hand, altruistic parents may save more if an inheritance tax is levied in order to compensate for the tax that heirs will face (Joulfaian, 2016^[35]). If inter vivos transfers are tax-advantaged, altruistic parents may also be expected to increase the amount of inter vivos transfers to avoid a reduction in the post-tax amount of transfers that their children receive (Niimi, 2019^[36]). Other models consider exchange-related motives, where parents transfer wealth in exchange for services from their descendants, such as taking care of them in old age. If inter vivos transfers are taxed preferentially compared to bequests, parents may avoid a tax increase by accelerating the timing of transfers, as altruistic parents would. However, parents with an exchange motive may also decide not to accelerate the timing of transfers and make wealth transfers conditional upon their children supporting them in old age (Niimi, 2019^[36]).

Box 2.2. Bequest motives

The role of bequest motives in determining behavioural responses to inheritance taxation has been closely studied. A body of theoretical literature has suggested the following bequest motives (Cremer and Pestieau, 2009^[34]):

(1) **accidental bequests**: Wealth transfers may be unintentional or “accidental” when people die before they were able to use up all their wealth (Abel, 1985^[37]; Hurd, 1987^[38]). Accidental bequests may occur when a part of donors’ savings for consumption smoothing has not been consumed before death. Accidental or unplanned bequests may also occur when wealthy households accumulate wealth for the utility that wealth provides, rather than for dynastic or lifecycle purposes (Carroll, 2000^[39]). The assumption is that donors do not obtain any utility from accidental bequests.

(2) **strategic motive**: Donors may transfer wealth to their heirs in exchange for a service, i.e. to induce their heirs to behave in certain ways, such as taking care of them in old age (Bernheim, Shleifer and Summers, 1985^[40]).

(3) **altruistic bequests**: Donors may derive utility directly from the welfare of their heirs and seek to compensate for the lower earnings or earnings abilities of their children (Becker, 1974^[41]; McGarry and Schoeni, 1995^[42]).

(4) **“joy of giving” bequests** – also known as “warm glow”: Donors may derive utility simply from the act of giving to their children (Andreoni, 1990^[43]). Unlike altruistic bequests, “joy of giving” is a private benefit experienced only by the donor and benefits that heirs receive from bequests are not valued by the donor.

Estimations of bequest motives have differed. For example, Hurd (1987^[38]) found that households with children do not save more and, based on this finding, concluded that bequests are largely accidental. On the other hand, Kopczuk and Lupton (2007^[44]) found that approximately 75% of the elderly population have a bequest motive. Their results on whether bequests are altruistic or strategic are not statistically significant. Wealth is a major driver of having a bequest motive, as wealthy people “have more than enough assets to sustain their required consumption through retirement” (Burman, McClelland and Lu, 2018^[45]; Kopczuk and Lupton, 2007^[44]). As discussed in the main text, the impact of inheritance and gift taxes on donors’ behaviours is expected to be different depending on the presence and type of bequest motive.

However, this highly theoretical literature on bequest motives has had limited influence in practice.

Despite a large body of work on bequest motives, there is no consensus on what drives bequest behaviours. In fact, determining the intent of donors is extremely difficult and they usually have more than one motive. In addition, different individuals may have different motives (Kopczuk, 2013^[11]). For instance, wealthier people are more likely to have a (non-accidental) bequest motive because they have more assets than they need to finance consumption in retirement (Burman, McClelland and Lu, 2018^[45]; Kopczuk and Lupton, 2007^[44]). Despite the strong emphasis on the role of bequest motives in theoretical work, most empirical studies assessing behavioural responses to inheritance taxation do so without establishing explicit links with donors’ bequest motives (Niimi, 2019^[36]). From a practical tax design perspective, findings on bequest motives have also been of limited use as tailoring tax rules to bequest motives would not be feasible.

The empirical literature on the impact of inheritance taxation on donors’ wealth accumulation is very limited and generally shows negative, but small effects. There are very few empirical studies looking at the impact of inheritance taxation on wealth accumulation. Using different approaches, Holtz-Eakin and Marples (2001^[46]), Slemrod and Kopczuk (2000^[47]) and Joulfaian (2006^[48]) estimate similar

modest elasticities of taxable estates with respect to the estate tax rate of between 0.1 and 0.2, meaning that a one percent increase in the marginal tax rate reduces estates by between 0.1 and 0.2 percent (Kopczuk, 2009^[49]). However, given that Slemrod and Kopczuk (2000^[47]) and Joulfaian (2006^[48]) rely on estate tax data, real wealth accumulation effects cannot be clearly distinguished from tax avoidance behaviours. On the other hand, Holtz-Eakin and Marples (2001^[46]) use actual wealth data, but their estimates do not cover the richest households who are the most affected by estate taxes. More recently, Goupille-Lebret and Infante (2018^[50]), using discontinuities in the French inheritance tax treatment of life insurance assets transferred at death depending on the age at which contributions were made and the date the account was opened, sought to disentangle real wealth accumulation effects from avoidance responses and found modest effects on capital accumulation.

Savings and wealth accumulation responses to inheritance taxation tend to be lower than responses to net wealth taxes. Recurrent net wealth taxes might be expected to have stronger disincentive effects on savings and wealth accumulation decisions than inheritance taxes given that they have to be paid by savers every year, while inheritance taxes are only levied once at the end of the donor's life and, in the case of recipient-based taxes, have to be paid by the recipients rather than by the savers themselves. In addition, inheritance taxes may be less distortive than net wealth taxes because a part of inheritances is likely to be unplanned and hence not affected by inheritance tax rules. Empirically, estimated taxable wealth elasticities are on balance larger in the case of net wealth taxes than with respect to one-off taxes on bequests (Advani and Tarrant, 2020^[51]; OECD, 2018^[52]).

2.3.2. There is evidence of significant inheritance and gift tax planning

Susceptibility to tax planning is one of the most common criticisms levelled against inheritance taxes. Some have argued that given the ease with which inheritance and estate taxes can be avoided, they have largely been “voluntary taxes” (Cooper, 1979^[53]). As mentioned earlier, the fact that inheritance and estate taxes are levied at death leaves significant time for planning and the potentially large amounts of wealth at stake may make tax avoidance worthwhile for some taxpayers (Kopczuk, 2013^[54]). In some countries, inheritance taxes only apply above high thresholds, affecting predominantly very wealthy and well-advised households. Schmalbeck (2001^[55]) highlights the existence of many estate tax avoidance strategies, which can substantially reduce tax burdens on bequests in the United States. Such strategies include transferring wealth as gifts while alive, converting property into assets that benefit from exemptions or relief (e.g. business and farm assets), as well as using trusts, deductions for charitable bequests, and generous valuation discounts.

There is evidence of widespread inheritance tax planning, particularly through inter vivos gifts. A basic tax planning strategy consists of passing on wealth as inter vivos gifts, where these benefit from a more favourable tax treatment. In addition to exploiting the differential tax treatment between gifts and bequests, gifting allows future asset appreciation to escape inheritance and estate taxation. Studies generally find that the size and timing of gifts are responsive to inheritance and gift taxation (Bernheim, Lemke and Scholz, 2004^[56]; Joulfaian, 2004^[57]; Joulfaian, 2005^[58]). Looking at the German inheritance tax, Sommer (2017^[59]) finds that in the case of gifts between close relatives, gift amounts are particularly responsive to tax incentives. There is also heterogeneity in behaviour across taxpayers, with a higher responsiveness of gifts to tax among wealthier households. In the case of France, for instance, Arrondel and Laferrère (2001^[60]) use inheritance data to show that the probability of gift giving depends on the amount of taxable wealth. Escobar, Ohlsson and Selin (2019^[61]) find that the high elasticity of the Swedish inheritance tax base was due to tax-favoured inter vivos gifts and that there is a strong correlation between acquiring legal advice and making inter vivos gifts. At the same time, however, studies have found that gifts are not fully used as tax planning tools. For instance, McGarry (1999^[62]) and Poterba (2001^[63]) show that taxpayers do not take full advantage of the annual gift exemption in the United States.

Empirical findings on deathbed inheritance tax planning have varied across countries. Relying on estate tax returns filed in 1977 in the United States, Kopczuk (2007^[64]) focuses on behaviours following the onset of terminal illnesses. He finds that there are significant adjustments to the size and structure of estates shortly before death, reflecting deathbed estate planning. This suggests that the wealthy care about what they leave as bequests but at the same time postpone important succession decisions until shortly before death. Erixson and Escobar (2020^[65]), following the empirical approach used by Kopczuk (2007^[64]), find no evidence of deathbed tax planning in Sweden. One of the explanations they offer is that Swedes have fewer interactions with professional tax advisers than US citizens and may have been less informed about tax planning strategies. Looking at Germany, Sommer (2017^[59]) does not find evidence of deathbed inheritance tax planning either. The lack of evidence of deathbed tax planning in Sweden and Germany may also partly reflect more limited inheritance tax avoidance opportunities than in the United States.

The fact that tax-minimising strategies are not fully pursued may be explained by various factors. Many inheritance and gift tax avoidance techniques, including in-life giving, require people to give up control of their assets, which they may not be ready to do (Kopczuk, 2007^[64]; Schmalbeck, 2001^[55]). This could be for either wealth-loving or precautionary savings reasons, although precautionary savings is likely not to be the main factor at the top of the distribution. Maintaining control over one's assets may not be the only reason why tax planning is not more widely pursued. For instance, looking at French life insurance policies, which are commonly used as tax planning tools, Goupille-Lebret and Infante (2018^[50]) find behavioural responses of a small magnitude, which cannot be explained by the desire to retain control over assets, as life insurance policies actually allow people to retain control over their assets until death. A lack of awareness of tax minimising strategies and myopic biases may be potential explanations, although this may be more likely for households with moderate wealth, compared to the very wealthy who are well-advised by professionals.

Possibilities for tax planning have reduced the effective progressivity of inheritance taxes. In addition to reducing horizontal equity, there is evidence that inheritance tax planning has reduced vertical equity because tax planning opportunities are mostly available to the wealthy. In Sweden, Henrekson and Waldenström (2016^[66]) find that new laws combined with more efficient avoidance strategies during the 1990s enabled the wealthiest people to avoid paying the inheritance tax, while significant portions of the population experienced rapid increases in their inheritance tax liability. Various studies confirm that the provision of exemptions and reliefs have reduced the progressivity of inheritance taxes. A recent study in France shows that exempt assets under the inheritance tax generate a much greater reduction in the effective tax rate for very large wealth transfers than for small ones (Dherbécourt, 2017^[67]). In the United States, Gravelle and Maguire (2006^[68]) find that charitable deductions are the primary reason for the lower average effective tax rate on the highest estate bracket. In the United Kingdom, a recent study shows that relief for business and agricultural assets predominantly benefit the wealthiest households, significantly reducing the effective tax burden on some of the largest estates (Office of Tax Simplification, 2018^[69]). These issues are discussed further in Chapter 3.

Opportunities for tax planning are far from unique to inheritance taxes, however, and highlight the need for reform rather than for their repeal. Opportunities for tax avoidance, and the lack of horizontal and vertical equity stemming from narrow tax bases, are not unique to inheritance taxation. In fact, it is a criticism that is very much applicable to net wealth taxes and personal capital income taxes as well (OECD, 2018^[52]; OECD, 2018^[70]). Moreover, the availability of tax planning opportunities is primarily a consequence of the way inheritance and gift taxes are designed, and could therefore be addressed in large part through reform. Well-designed reforms could address the concerns raised by tax avoidance by the wealthy, weakening the argument for repealing inheritance taxes altogether.

2.3.3. Migration responses to inheritance taxation appear generally limited

Taxpayers' location decisions may be affected by estate or inheritance taxes, but the few available empirical studies generally do not find high tax-induced mobility, except for the very wealthy. Bakija and Slemrod (2004^[71]) find that state estate taxes in the United States have a statistically significant but modest negative effect on the number of federal estate tax returns filed in a state. Conway and Rork (2006^[72]) find no statistical evidence that bequest taxes affect the inter-state migration patterns of elderly taxpayers in the United States. Looking at Switzerland, a much smaller country characterised by a great degree of heterogeneity in sub-national bequest taxation, Brülhart and Parchet (2014^[73]) also find that cuts in bequest tax burdens across cantons had little noticeable impact on the migration patterns of elderly taxpayers. This suggests that there may be more important factors determining elderly taxpayers' location decisions, such as being close to family or trusted medical services. Moretti and Wilson (2020^[74]), on the other hand, find significant mobility responses among billionaires to heterogeneity in estate taxation across US states, especially as they grow older. This suggests higher sensitivity at the very top of the distribution. Yet, despite the high elasticity of geographical location with respect to estate taxation, they find that for most states, the additional revenue from the estate tax exceeds the cost of foregone income tax revenue by a significant margin. This nevertheless suggests that the risk that very wealthy taxpayers may migrate to other countries should be carefully examined and prevented. Tax design may help limit such migration: for instance, in several jurisdictions, taxpayers continue to be liable for inheritance or estate taxes for a number of years after leaving the country. Exit taxes may also be considered (see Chapter 3).

Mobility responses to inheritance taxation may be lower than in the case of other taxes on wealthy households, such as taxes on net wealth or personal income. A recurrent tax on net wealth may provide stronger incentives to migrate than a one-off or infrequent tax on wealth transfers. There are very few studies on migration responses to wealth taxes, but these find substantial within-country migration responses to net wealth taxes. In the case of Switzerland, Brülhart et al. (2020^[75]) find that 24% of the aggregate response to changes in net wealth taxes is due to taxpayer mobility. Looking at Spain, Agrawal, Foremny and Martínez-Toledano (2020^[76]) find evidence of wealthy individuals flocking to Madrid following the reintroduction of the net wealth tax in 2011, with Madrid serving as an "internal tax haven" with a tax rate of 0%. They find that five years after the reform, the stock of wealthy individuals in the region of Madrid increased by 10% relative to other regions. Recent studies looking at personal income taxes have also found sizeable tax-induced migration among wealthy taxpayers, although behavioural responses are highly context- and population-specific (Kleven et al., 2020^[77]) and the ultimate economic effects of such migration may be limited.

2.3.4. Inheritance taxation encourages charitable giving

In theory, levying an inheritance tax with an exemption for charitable giving could potentially have two opposing effects. An inheritance tax provides greater price incentives to give to charity rather than to other beneficiaries. At the same time, an inheritance tax has a wealth effect, as it reduces the wealth that is available to heirs, which could reduce overall charitable giving (Kopczuk, 2013^[54]).

Empirical evidence shows that inheritance taxation encourages charitable giving. In general, the empirical literature has found strong price and wealth effects, with the first effect dominating, which implies that eliminating estate or inheritance taxes would likely result in a reduction in charitable giving (Kopczuk, 2013^[11]). Using data for estates of US decedents in 1992, Joulfaian (2000^[78]) finds taxes to be an important determinant of charitable transfers, suggesting that in the absence of the estate tax, charitable bequests may decline by around 12%. Bakija, Gale and Slemrod (2003^[79]) find a much higher estimate of the drop in bequests that would result from repealing the estate tax, of up to 37%. McClelland (2004^[80]) re-examines the results of Joulfaian (2000^[78]) and Bakija, Gale and Slemrod (2003^[79]) by applying their methods to 1999 and 2000 data and arrives at an estimate of around 20% (McClelland, 2004^[80]).

However, exemptions for charitable giving tend to be regressive and may in some cases be used for tax planning purposes. Exemptions granted to charitable giving are primarily used by the wealthiest households, ultimately reducing the progressivity of inheritance or estate taxes (e.g. Gravelle and Maguire, 2006^[55], for the United States). Exemptions for charitable giving may also provide greater benefit to high wealth households, whose inheritances would be taxed at higher marginal tax rates in countries that levy progressive inheritance tax rates. In addition, the preferential tax treatment for charitable giving may in some cases create tax avoidance opportunities. In the United States, for instance, there may be cases where special structures taking advantage of the preferential tax treatment for charitable giving are set up largely to transfer wealth to family members partially or entirely free of tax. The structures typically involve partial transfers to charities and allow assets to be transferred to ultimate beneficiaries at reduced values (see Chapter 3).

2.3.5. Inheritance taxation has been found to increase heirs' labour supply and savings

Inheritance taxation is also expected to affect the behaviour of heirs. A higher level of inheritance taxation leaves them with a lower net inheritance, which might give them an incentive to work and save more. At the same time, inheritance taxes may lower the probability that heirs start a business since bequests are often a source of seed capital for potential entrepreneurs (see the discussion in the next subsection).

Empirical evidence shows that inheritance receipts depress heirs' labour supply and that inheritance taxes could raise their incentives to work. In an early study, Holtz-Eakin, Joulfaian and Rosen (1993^[81]) found results that were consistent with the "Carnegie conjecture" using tax-return data on the labour force behaviour of people before and after they receive inheritances. They found that those who received a large inheritance were more likely to exit the labour force and that for those remaining in the labour force, high-inheritance recipients tended to experience lower earnings growth than low-inheritance recipients, suggesting that inheritances reduce the heirs' hours of work. Relying on data from the US 1992–2002 Health and Retirement Study, Brown, Coile and Weisbenner (2010^[82]) show that the receipt of an inheritance is associated with a significant increase in the probability of early retirement and that the effect increases with the size of the inheritance. They also find that unexpected inheritances have a larger effect than expected ones. Using Swedish tax register data, Elinder, Erixson and Ohlsson (2012^[83]) find that the receipt of an inheritance depresses labour income, with stronger effects for older recipients than for younger heirs. They also find evidence of anticipation effects, with labour income declines prior to wealth transfers. Using a lifecycle model that they calibrate to the German economy, Kindermann, Mayr and Sachs (2020^[84]) show that an inheritance tax has a positive fiscal externality. They find that for every euro of revenue raised directly from inheritance taxes, the government obtains an additional EUR 9 cents of labour income tax revenue (in net present value) as a result of higher labour supply.

In addition to labour supply effects, some studies suggest that an inheritance tax may generate an increase in potential heirs' savings. Different approaches have been used to study the impact of inheritances on heirs' saving behaviours. One approach considers changes in consumption after the receipt of an inheritance. For instance, Joulfaian and Wilhelm (1994^[85]) find small consumption increases after the receipt of an inheritance using Panel Study of Income Dynamics data. Another approach consists in looking at changes in wealth after the receipt of an inheritance. Using estate tax records linked to the income tax records of beneficiaries, Joulfaian (2006^[86]) shows that wealth increases by less than the full amount of the inheritance received. Elinder, Erixson and Ohlsson (2012^[83]) find a temporary increase in capital income following the receipt of an inheritance, which they speculate may partly reflect the realisation of previously unrealised capital gains and may indicate increases in consumption. Overall, these studies may be interpreted as suggesting that savings tend to decrease following the receipt of an inheritance, although an increase in consumption cannot be directly equated with a decrease in savings as households may still be saving a significant part of their bequest. Overall, findings by Akgun, Cournède and Fournier (2017^[27]) suggest that greater reliance on inheritance and gift taxes, as well as other one-off property taxes,

tend to be output-enhancing in comparison with other revenue sources. Although such findings should be interpreted with caution, they may suggest that the negative efficiency effects of inheritance taxes (e.g. reduced incentives to save by donors) may be more than compensated by their positive efficiency effects (e.g. increased incentives to work and save among heirs).

2.3.6. Inheritance taxation may negatively affect entrepreneurship by heirs and family business successions, but reduce risks of misallocating capital

Inheritance taxes might lower entrepreneurship by heirs, as bequests can be sources of “seed capital” for entrepreneurial activity. Inheritance taxes may lower the probability that heirs start a business since bequests often constitute a source of seed capital (Burman, McClelland and Lu, 2018^[45]). Thus, in theory, a reduction in bequests could lead to a reduction in new business creations. Empirically, Holtz-Eakin, Joulfaian and Rosen (1994^[87]) find that the size of the inheritance has a significant impact on the probability of heirs becoming entrepreneurs by combining federal income tax returns for a group of people who received inheritances in 1982 and 1983 with information on the size of those inheritances from estate tax returns. Moreover, they find that conditional on becoming an entrepreneur, the size of the inheritance has a statistically significant and quantitatively large effect on the amount of capital employed in a new firm. This suggests that an inheritance tax may lower entrepreneurship among heirs. However, these results are old and the context is likely to have changed. For instance, it might be easier for entrepreneurs today to find capital and start a business than it used to be, by borrowing from a bank or through venture capital, which means that the link between receiving an inheritance and starting a business may have weakened.

Inheritance taxes may also jeopardise existing businesses when they are transferred if business owners do not have enough liquid assets to pay for the tax. Some studies shed light on the potential difficulties that inheritance taxes may generate for businesses, but do not directly assess whether they force business sales. For instance, based on two nationally representative samples of older individuals, Holtz-Eakin, Phillips and Rosen (2001^[88]) find that, in anticipation of the estate tax, business owners purchase more life insurance than non-business owners, but that even with these purchases, business owners do not have enough money to cover estate taxes. Based on a survey of small business owners in upstate New York, Holtz-Eakin (1999^[89]) also looked at the effect of the estate tax on employment growth and found a strong negative relationship between the expected estate tax liability and the number of jobs created. Other studies have explored more directly the link between estate or inheritance taxation and business sales. Using San Francisco probate records from 1980-1982, Brunetti (2006^[90]) found a small positive relationship between the estate tax and business sales by heirs, but did not find statistically significant evidence that this was linked to the lack of liquidity. The study relied on a small sample, however (Kopczuk, 2013^[1]; Houben and Maiterth, 2011^[91]). Using a 2002 reform that substantially reduced the tax on family transfers of businesses in Greece, Tsoutsoura (2015^[92]) found that, in addition to leading to a significant decline in investment, slower sales growth, and a depletion of cash reserves, inheritance taxes strongly affected the decision to sell or retain the firm within the family.

Liquidity constraints might be more acute for small businesses. First, SMEs might be more impacted by inheritance taxes as they are more likely to be run as family businesses, in comparison with larger firms that tend to have more atomised ownership structures (Redonda, 2017^[93]). Moreover, SMEs often face more significant constraints in accessing credit markets, which may reinforce liquidity issues. In her analysis, Tsoutsoura (2015^[92]) finds that the negative effects of inheritance taxes on investment hold for both large and small firms, but that they are stronger for family firms with low asset tangibility and businesses owned by people with low income from other sources.

Such liquidity pressures have often been used to justify generous business asset relief under inheritance and estate taxes. Indeed, most countries provide inheritance tax relief for business assets. However, these reliefs are not always well targeted, primarily benefit the wealthy and may sometimes be

unnecessarily generous (see Chapter 3). For instance, Houben and Maiterth (2011^[91]) examined the significant expansion of tax reliefs for family business successions introduced in Germany in 2009, but concluded that the reform was unnecessary to protect businesses against liquidity issues, as their analysis showed that the previous (less generous) system did not jeopardise transferred businesses. In the United States, Gravelle and Maguire (2010^[94]) showed that, even when the federal estate tax exemption threshold was considerably lower than it is now, very few family businesses actually paid the estate tax, with less than 5% of businesses and farms affected. They also found that only a very small fraction of family-owned businesses (less than half of 1%) lacked the liquid resources to meet their estate tax liability, and highlighted that these businesses still had the option of paying the tax in instalments, borrowing, or selling a partial interest in the business (Gravelle and Maguire, 2010^[94]).

More fundamentally, however, the goal itself of supporting family business succession has been questioned by some, in particular due to evidence of underperformance by businesses managed by heirs. While countries may wish to support family business successions because family businesses are often a significant economic sector and a large employer, evidence shows that heirs tend to not be as skilled as their parents in running family businesses. Using a dataset with more than 5 000 successions in limited liability firms in Denmark between 1994 and 2002, Bennedsen et al. (2007^[95]) find that family succession has a large negative causal impact on firm performance: operating profitability on assets falls by at least four percentage points around CEO transitions. Bloom and Van Reenen (2007^[96]) used data from 732 medium-size manufacturing firms in the United States, France, Germany and the United Kingdom, collected in a survey measuring management practices, and found that poor management practices are more prevalent when family-owned firms pass management control down to the eldest sons. Other studies looking at larger or publicly traded companies find similar results. Using data from 355 CEO successions in publicly traded US corporations, Pérez-González (2006^[97]) finds lower firm performance in terms of profitability and market-to-book ratios when incoming CEOs are related to the departing CEO, a founder, or a large shareholder by either blood or marriage. Using proxy data on all Fortune 500 firms during the 1994-2000 period, Villalonga and Amit (2006^[98]) find that family ownership creates value only when the founder serves as CEO or as Chairman with a hired CEO, but that when descendants serve as CEOs, firms underperform.

Thus, while inheritance taxes might negatively affect entrepreneurship by heirs and family business successions, they might reduce skills-capital mismatches and enhance efficiency. If heirs are not found to perform as well as their parents, or better than other individuals, reducing the amount of capital that they receive through an inheritance tax may reduce the risks of misallocating capital and possibly enhance productivity.

2.3.7. The double taxation argument appears to be weak

Double taxation is a popular objection to inheritance taxes, but it is far from unique to inheritance taxation. If the wealth transferred is accumulated from wage earnings, savings or personal business income, then these flows will have in many cases already been taxed. However, multiple levels of taxation are far from unique to taxes on wealth transfers. Consumption taxes, for instance, are paid out of post-tax income. In the area of wealth taxation, the double taxation argument is stronger in the case of net wealth taxes, levied on self-made wealth on a recurrent (usually annual) basis, than in the case of inheritance taxes which are levied once at the end of the donor's life (OECD, 2018^[52]). Economically, it is important to point out that what really matters is overall effective tax rates, rather than the number of times assets or income are subject to taxation.

Opponents of inheritance taxation on the grounds that it generates double taxation tend to look at the issue from the perspective of donors. This view holds that donors who have built savings over the course of their lives and paid taxes during their lifetime should not be subject to another round of taxation upon their death. Evidence shows, however, that in some cases, an inheritance or an estate tax might be

the first time that asset returns are taxed. This is particularly the case where some forms of personal capital income, including some capital gains, escape taxation (see below). The case for an inheritance tax might therefore be strongest for those countries where there are significant differentials in the way the accumulation of wealth may have been taxed and there are questions around the efficacy of the taxation of savings.

The double taxation argument is weaker when inheritance taxation is considered from the perspective of beneficiaries. The inherited wealth is only taxed once in the hands of the recipient and the wealth received provides them with what can be viewed as an unearned gain, which can, in some circumstances, exacerbate existing inequalities. More generally, opponents of inheritance taxation on the grounds that it generates double taxation tend to look at it from the donor's perspective, while those in favour of inheritance taxation tend to consider the issue from the recipient's perspective (Mirrlees et al., 2011^[14]).

In some cases, inheritance taxes might be a way of taxing some income that would otherwise go untaxed. For instance, increases in the value of main residences are often exempt from capital gains tax. As a consequence, while the purchase price may well have been paid out of taxed earnings, any subsequent increases in value will not have been subject to tax and inheritance taxes may be the first time any taxation is levied on the capital gains (Boadway, Chamberlain and Emmerson, 2010^[5]). Gale and Slemrod (2001^[33]) highlight that in the United States, the estate tax also serves as a backstop to the income tax, taxing some forms of income, in particular unrealised capital gains, which would otherwise go untaxed. Capital gains taxes are only levied upon realisation, which means that capital gains are not taxed if the owner holds on to their assets until they die and if the country does not treat death as a realisation for the purpose of capital gains taxes. In most OECD countries, assets are bequeathed to recipients with a so-called step-up in basis, which implies that when heirs sell these assets, they only pay tax on the capital gains made from the day they inherited them (see Chapter 3). This creates strong incentives for individuals to hold onto appreciated assets until they die. In fact, Poterba and Weisbenner (2000^[99]) found that unrealised capital gains constituted more than half of the value of US estates above USD 10 million. Auten and Joulfaian (2001^[100]) find that the estate tax reduces these lock-in incentives, by encouraging earlier capital gains realisations, which can in turn improve capital allocation and economic efficiency. These figures also suggest that the case for imposing an inheritance tax might be stronger in the case of high-value wealth transfers, as the wealthiest households are more likely to have accumulated undertaxed forms of capital income, such as unrealised capital gains.

2.3.8. Negative externalities from wealth concentration may strengthen the case for inheritance taxation

The existence of negative externalities from wealth concentration imply that inheritance taxes could be justified on efficiency grounds. Negative externalities arise when the social costs of a behaviour outweigh its private costs. In such cases, a corrective tax can be used to ensure that agents internalise (part of) the negative social costs of their actions. If high wealth concentration was found to have a negative effect on the welfare of society at large, then targeting wealth concentration through an inheritance tax may be part of an optimal tax structure (Kopczuk, 2009^[49]). However, justifying an inheritance tax on those grounds would require identifying externalities that directly stem from intergenerational wealth transfers or wealth concentration, rather than from the income or consumption resulting from wealth.

Inheritances and wealth concentration may indeed be associated with a number of undesirable effects. Regarding the negative externalities stemming directly from inheritances, the discussion above highlighted the increased opportunities for heirs and the misallocation of entrepreneurial and managerial talent as evidenced by the underperformance of businesses run by heirs. The perpetuation of wealth accumulation and family business successions over generations may also reduce competition, with

potentially longer-term detrimental consequences on entrepreneurship and innovation. Additionally, increased wealth concentration over generations may have a detrimental impact on democratic political processes (Solt, 2008^[101]) and be a source of social unrest.

2.4. Tax administration considerations

This section briefly discusses the administrative aspects of inheritance taxation. Interestingly, while administrative complexity is often put forward as an argument against inheritance taxes, it may be argued that some forms of wealth are easier to observe than income and that, historically, taxes on wealth – including on successions – have preceded the taxation of income (Kopczuk, 2013^[11]) (see also Chapter 3, Table 3.1). This section highlights that inheritance taxes may also have advantages over other forms of wealth taxation and that the potential for tax evasion has significantly decreased thanks to recent progress on international tax transparency.

2.4.1. Inheritance taxation has administrative advantages over other forms of wealth taxation

The cost of administering and complying with inheritance taxes may seem high in comparison to the limited revenues they typically raise. Chapter 3 contains information on the revenues raised from inheritance and gift taxes, as well on the administrative and compliance procedures they involve. Inheritance taxes generally require a full statement of the donor's 'wealth' i.e. assets at death, detailed valuations where necessary and the computation and payment of the tax on a wide range of assets for which different reliefs apply. While these administrative and compliance costs may seem high, they include a number of unavoidable fixed costs that are linked to the legal recognition of transmissions and changes in property ownership. In addition, part of these administrative and compliance costs arise from the way inheritance and estate taxes have been designed, particularly from their narrow tax bases, and could therefore be reduced through tax reform.

Inheritance taxation has administrative advantages compared to net wealth taxation. One of the advantages of inheritance taxes is that they are levied only once (or infrequently in the case of gift taxes), as opposed to annually, and at a time when the tax administration can appropriately observe inherited assets and when assets often need to be valued anyway (Kopczuk, 2013^[11]). Net wealth taxes require regularly updating asset values, while valuing assets under an estate or inheritance tax typically involves determining their market value (or their realistic selling price) only once, at the time of the transfer of assets between donors and recipients (OECD, 2018^[52]). Thus, the tax administration and compliance costs, relative to the revenue raised, are likely to be lower for inheritance taxes than for net wealth taxes (OECD, 2018^[52]). Nevertheless, there are still some important valuation and administrative issues involved in taxing wealth transfers, including for instance complexities in relation to jointly held assets or due to the presence of two parties (donors and recipients) with different jurisdictional affiliations (Iara, 2015^[102]) (see also Chapter 3). It may be argued that net wealth taxes, which can be levied at low annual rates, are less salient and may therefore result in greater tax compliance than inheritance taxes, which are levied only once and apply at higher rates. Inheritance or estate taxes also give taxpayers ample time to engage in tax planning compared to annual net wealth taxes. Empirical evidence shows, however, that annual net wealth taxes can have a sizeable impact on wealth reporting and tax avoidance and evasion (Brühlhart et al., 2020^[75]; Durán-Cabré, Esteller-Moré and Mas-Montserrat, 2019^[103]).

Uncovering wealth and identifying ownership is also likely to be easier under inheritance taxes than under net wealth taxes. Indeed, taxes on wealth transfers are assessed when property changes hands. As mentioned above, this happens infrequently and makes the administration of the tax easier than for recurrent taxes on wealth. Importantly as well, wealth transfer recipients have a clear interest in ensuring that all the legal requirements to attest the transfer of ownership are completed properly to secure

their ownership rights (Rudnick and Gordon, 1996^[104]). Rules may also be put in place to disallow the transfer of ownership if inheritance taxes have not been duly paid (Rudnick and Gordon, 1996^[104]).

Liquidity issues, while they may arise, are also likely to be lower than under other property and net wealth taxes. Liquidity constraints may arise from the fact that taxpayers may not have sufficient liquid assets to pay their inheritance tax bill. However, unlike other property taxes, there may be less of a concern regarding liquidity as inherited immovable property may have multiple recipients and thus would be sold to divide the value amongst the recipients (Boadway, Chamberlain and Emmerson, 2010^[5]). Regarding closely held businesses and farms, the lack of liquidity to pay the inheritance tax can be more problematic. However, there are a number of practical solutions that can be implemented to limit such issues (see Chapter 3). Liquidity issues are also likely to be less severe under inheritance taxes than under a net wealth tax levied every year (depending on the level of the wealth tax).

2.4.2. Capital tax evasion has become harder with recent progress on international tax transparency

Historically, rising international capital mobility has made capital taxes harder to enforce. The increasing mobility of financial assets as well as the use of low-tax jurisdictions, combined with the development of information and communication technology and the elimination of barriers to cross-border capital transfers have allowed taxpayers to hold their capital offshore without declaring it to their tax authorities and have made the enforcement of capital taxes much more difficult (Krenek and Schratzenstaller, 2018^[105]). In fact, capital mobility has been a major factor behind the reduction of taxes on capital in the last few decades. In addition to generating revenue losses, the mobility of capital may have significant effects on the incidence of taxes on capital and wealth transfers, which may end up bearing primarily on taxpayers who do not engage in such tax planning or evasion and on immobile assets.

Empirical evidence of tax evasion directly linked to inheritance and estate taxes is scarce. Some US audit-based studies have estimated estate tax non-compliance to be between 8% and 13% of the overall tax liability (Kopczuk, 2013^[54]), although they sometimes suggest that the true value is likely to be higher (Eller, Erard and Ho, 2000^[106]). As audits of estate tax returns used to be fairly common, Kopczuk (2013^[54]) argues that the scope for easily detectable and clearly illegal tax evasion tends to be limited and that non-compliance is likely to take the form of “plausibly legal but often legally uncertain strategies”. Recent research in the United States has showed that the wealth reported by decedents from the Forbes 400 richest Americans on their estate tax returns is only half the wealth estimated by Forbes magazine (Raub, Johnson and Newcomb, 2010^[107]). The authors find that the values reported for tax purposes and those estimated by Forbes are closest when valuations were relatively objective and amounts of debt were low, and much further apart when portfolios mainly consisted of assets for which valuation was difficult or involved some subjectivity, which tends to be the case for very wealthy individuals who typically own unique and hard-to-value assets, and when individuals held relatively more debt. While previous research suggested that differences between tax and Forbes estimates reflected evasion, the authors point out that the tax returns they looked at were those of very wealthy individuals, which tend to be carefully prepared by licensed professionals. They concluded that “while values reported for tax purposes may be conservative, they will fall within legally defensible parameters”.

However, estimations point to significant wealth held offshore, and to the concentration of offshoring practices among the wealthiest households. Alstadsaeter, Johannesen and Zucman (2018^[108]) estimate that globally the equivalent of about 10% of the world GDP is held offshore, but reveal significant heterogeneity across regions — from limited levels in Scandinavia, to about 15% in Continental Europe, and more than 50% in Russia, some Latin American countries, and Gulf countries. Offshore wealth is also highly concentrated. Using leaked data from offshore financial institutions and tax amnesty data, matched to population-wide administrative income and wealth records in Norway, Sweden, and Denmark, Alstadsaeter, Johannesen and Zucman (2019^[109]) find that the top 0.01% of the wealth distribution owns

about 50% of the wealth in tax havens. They also find that the top 0.01% evades about 25% of their income and wealth tax liability by concealing assets and investment income abroad. These findings use data that predates the implementation of the Automatic Exchange of Information (see below), but the concentration of offshoring practices among the very wealthy may mean that this a potentially significant margin of response to wealth taxation (Advani and Tarrant, 2020^[51]), and possibly to inheritance taxation as well.

The recent progress made on international tax transparency standards is greatly increasing countries' ability to tax capital effectively. Information exchange agreements as well as further international cooperation on the exchange of information on request (EOIR) and the automatic exchange of information (AEOI) reduce opportunities for tax evasion. These standards mean that information on foreign financial assets is now being shared between tax authorities globally, making it harder for taxpayers to evade taxation by concealing their assets overseas. Research has shown this has a deterrence effect, with the value of bank deposits held offshore decreasing with the densification of the information exchange network (O'Reilly, Parra Ramirez and Stemmer, 2019^[110]). In the context of inheritance taxation, rules on the availability and accessibility of beneficial ownership information also help prevent donors and beneficiaries from concealing their ownership of assets through the use of opaque structures. Such progress is enhancing countries' ability to effectively tax inheritances, but progress needs to continue to ensure that jurisdictions effectively implement information exchange standards and to ensure that persons, assets, and institutions not covered under existing EOI standards do not offer opportunities for continued tax evasion (see Chapter 3).

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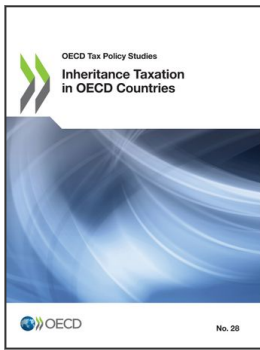
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Notes

¹ These assumptions are close to real life returns. For instance, the average annual return on a relatively risk-free 30-year US Treasury bill in the last 10 years was 3.28% (Federal Reserve Bank of St. Louis, 2020). Jordà et al. (2019_[111]) provide evidence that across residential real estate and equities asset classes the mean return was about 7% on a global level over the period 1870-2015. Both asset classes have been shown, for instance in Norway, to play a dominant role in the investment portfolios of the top 5% in the net worth distribution (Fagereng et al., 2020_[31]).

² https://www.oecd.org/els/family/SF_2_1_Fertility_rates.pdf.



From:
Inheritance Taxation in OECD Countries

Access the complete publication at:
<https://doi.org/10.1787/e2879a7d-en>

Please cite this chapter as:

OECD (2021), "Review of the arguments for and against inheritance taxation", in *Inheritance Taxation in OECD Countries*, OECD Publishing, Paris.

DOI: <https://doi.org/10.1787/6315055c-en>

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