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Key Issues in Taxing Profit

In the Introduction, we set out a case for revisiting the fundamentals of business-level taxes on profit. Rather than simply taking the basic structure of the existing system as given, we argued that any reform aiming to generate a long-term solution to the problems surrounding the taxation of profit in an international setting would need to be based on clear and well-understood principles. Identifying such principles requires stepping back from the immediate political debate, and from measures designed to shore up the existing system. It requires asking afresh whether and why a sensible national and international tax system would include a business-level tax on profit. If we can identify better the rationale for having such a tax, then that should lead us to a deeper understanding of its aims and objectives, and ultimately how it should be designed and implemented.

This chapter begins that process by setting out the key conceptual issues that arise in designing a business-level tax on profit in an international setting. It is in four parts—each addressing a basic question. First, what is meant by a tax on profit? We identify different approaches to taxing profit and compare such a tax with various other taxes. We show that there are a number of equivalences between taxes. Second, what criteria should be used for evaluating a business-level tax on profit in an international setting? We set out in some detail five criteria: fairness, economic efficiency, robustness to avoidance, ease of administration, and incentive compatibility. Third, given these criteria, is a business-level tax on profit a useful addition to the set of taxes that can be employed by national governments? We consider different possible underlying rationales for taxing business profit, especially in an international context. Fourth, is taxation at both the business and the owner level problematic? We consider this question in different settings and whether there is need for relief from this form of 'double taxation'.

The answers given to these questions frame and guide the analysis in the rest of the book. In particular they will be used to answer the central question asked in the book: given the most persuasive rationales for having a business-level tax on profit—and given the existing system and the cost of reform—what is the most appropriate design for such a tax in an international setting?

The main focus of this book is on the international dimension of taxation. Nevertheless, in discussing the properties of a tax in an international context, it is helpful to first set out its properties in a purely domestic context. We broadly take

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this approach and try to identify carefully how the properties of tax change when we move to an international context.

1. What is business profit?

A first issue in thinking about taxing business profit is to point out that—at least for now—we are not considering a tax only on corporate profit. Most countries have a separate tax on profit earned by corporations.[1] In some countries (like the UK), all businesses taking corporate form are subject to a specific 'corporation tax'. In others (like the US or France), only some corporations face such a tax; for others, profit is assigned directly to the owners, and subject to individual income taxation, rather than being taxed at the corporate level—referred to as 'look-through' or 'pass-through' treatment. Also, of course, many businesses do not have legal corporate form. Individuals can own and run their own business, and their returns are typically subject to personal income tax. This also typically applies to much larger firms organized as partnerships—which, for example, are found in professional firms, and also in commercial firms in Germany. In the US, the emergence of the S-Corporation and the Limited Liability Company has given rise to a huge increase in pass-through taxation.[2] For the moment, we aim to keep the discussion of taxing business profit as broad as possible; where appropriate below, we will be explicit about when we are referring only to taxes at the corporate level.

A much broader question is the relationship between different forms of tax. In many countries, businesses remit most taxes—that includes tax on profit, personal income tax and social security contributions on the labour income of employees, sales tax, valued added tax (VAT), and other particular forms of taxation.[3] This raises the issue that, given accounting identities, these taxes are closely linked to each other, and indeed some combinations of taxes are equivalent to others—a point of considerable importance and elaborated on below. We begin by setting out two important dimensions of tax bases that might be considered to be 'profit'. First, we discuss how the total profit of a business might be defined, and, second, how some definitions are closely related to other tax bases. We then discuss how profit is allocated to different countries in which the business operates.

[1] For a comparative overview of this issue, see Ault et al (2019) and Harris (2013).

[2] See, for example, Röder (2018) for a comparative analysis of corporate legal forms being subject to pass-through taxation.

[3] For example, Shaw et al (2010) estimate that in the UK in 2006/7, 88% of taxes in the UK were remitted by business. Milanez (2017) estimates the proportion to be 78.8% for a sample of twenty-four OECD countries. And, in the context of India, Slemrod and Velayudhan (2018) ask 'Do Firms Remit At Least 85% of Tax Everywhere?'.

1.1 Defining 'profit'

1.1.1 The cost of capital, economic rent, and cash flow taxation

Very broadly, we can think of the conventional base for a tax on profit as being equal to sales, less the cost of inputs including labour costs, and less the interest costs of servicing debt. The costs of some inputs are typically 'capitalized', meaning that they are deducted over several periods—for example, investment in fixed assets is typically depreciated over several years.

This form of profit is nominally a tax on the return earned by the owners from their investment in the business; for a corporation this would be the shareholders. This is because the return earned by those who lend to the business is deductible from the tax base. But this does not mean that the owners of the business are the only persons made worse off by the tax, or even that they are made any worse off at all. Depending on the nature of the markets in which the business operates, the burden of the tax may be partly or even wholly passed on to others—for example, consumers in higher prices, or the labour force in lower wages. We return below to the question of who is ultimately worse off as result of a tax on profit—what economists refer to as the 'incidence' of the tax.

For a number of reasons, including comparing taxes on profit with other taxes, two variants of such a tax base are worth noting. The first would deny a deduction for the cost of servicing debt—this would then be a tax on the total return on the investment in the business, rather than just on that part returned to the owners. This option is known as a 'Comprehensive Business Income Tax' (CBIT).[4] Although this is not a common base for taxing business profit, there are numerous examples where interest payments are not deductible. Many countries limit deductions (in particular with respect to interest on shareholder loans),[5] and the OECD/G20 BEPS project proposed limiting such deductions to between 10% and 30% of profit subject to a number of exceptions.[6] A second variant would move in the other direction, and—as well as a deduction of interest payments—would offer a deduction for the opportunity cost of the equity capital that is invested in the business by the owner. This opportunity cost would be the return that the owner could have earned on an alternative investment of comparable risk. This is sometimes known as an 'Allowance for Corporate Equity', or ACE.[7] Permitting such a deduction would mean that the tax base would be reduced to profit over and above the 'normal return', that is the minimum return required by the owner and lender. Profit over and above the normal return is known as 'economic rent', or just 'rent' (see Box 2.1).

[4] US Treasury (1992).
[5] See Blouin et al (2014).
[6] OECD (2015b).
[7] See IFS Capital Taxes Group (1991).

Box 2.1 Normal return and economic rent

We use the term 'normal return' to indicate the minimum rate of return required by an investor, given the risk of an investment. It therefore includes any 'risk premium' required to compensate the investor for risk.[8] US Treasury bonds tend to have a relatively low normal return because they are deemed to be a safe investment, whereas the normal return on an equity investment tends to be relatively high because of the risk involved. But both rates of return reflect the minimum required by an investor to compensate both for the time value of money and the risk involved. An investment that is not expected to earn the normal return, commensurate with its risk, ought not to be undertaken.

In a small open economy, the normal return is generally determined on the world market. The activities of investors, businesses or the government of the small open economy would not affect the 'world' rate of return since each of them forms only a small part of the world market. As a result, the return that residents in such a country require—even on domestic investments—is determined by the rate of return available in the rest of the world on other investments of comparable risk.

The normal return is also known as the 'opportunity cost' of an investment or the 'cost of capital'. Put a different way, the cost of capital reflects the return an investor must expect from an investment for it to be worth undertaking given its risk profile. In this context we can refer to an investment which is expected to earn a normal return as a 'marginal investment'.

'Economic rent' is a return earned over and above the normal return. Under perfect competition businesses only earn a normal return.[9] Generating an economic rent typically requires some market power, or a scare resource, such as intellectual property, that is not easily replicated. A common synonym for economic rent is 'economic profit' (or sometimes, and perhaps confusingly, simply 'profit'). We use the former term here to avoid confusion regarding the concept of profit. Other synonyms include 'supernormal' profit and 'inframarginal return'.

A conventional corporate tax base is composed of the normal return on equity investment and economic rent. The tax base under a CBIT also includes the normal return on debt. The tax base of a cash flow tax or an ACE system is economic rent.

[8] The term 'normal' return is sometimes also used to refer just to the return required on a risk-free investment. When normal return is used in this way, 'profit' is then said to be composed of the 'normal return', the 'return to risk' (or 'risk premium') and 'economic rent'.

[9] We discuss quasi-rents in Section 3.3.2 of this chapter.

Table 2.1 Illustration of properties of a cash flow tax on investment incentives

	Pre-tax cash flows	Tax	Net cash flows
Tax without relief for the cost of finance			
Period 1 purchase of asset	–100	0	–100
Period 2 net receipts	110	–22	
Relief for cost of asset		20	
Period 2 net cash flows	110	–2	108
Economic rent	*0*		*–2*
Tax with relief for the cost of finance			
Period 1 purchase of asset	–100	0	–100
Period 2 net receipts	110	–22	
Relief for cost of asset		20	
Relief for cost of finance		*2*	
Period 2 net cash flows	110	0	110
Economic rent	*0*	*0*	*0*

A simple illustration of these alternative ways of defining profit is set out in Table 2.1.[10] This examines the tax on an investment of 100 in period 1, which yields revenue in period 2 of 110. This therefore represents a return of 10%. Suppose that this is the minimum return required by the investor, commensurate with the risk of the project; the project therefore just breaks even and does not earn any economic rent. We can think of the investment as being the purchase of an asset which has no value at the end of period 2. There is a tax rate of 20%, which applies to revenue less the cost of depreciation of the asset. The tax on the revenue is therefore 22. Relief for the cost of the asset is permitted in period 2, and is worth 20, since the value of the asset falls from 100 to zero.

In the first panel, there is no relief for the cost of finance. This is the case for an equity-financed investment under a conventional tax base. It would also be the case for investment financed by equity or debt under a CBIT. In this case there is a tax charge of 2 in period 2, reflecting the tax on revenue less the depreciation cost of the asset. This implies that the post-tax return is only 8%, or equivalently, that the post-tax economic rent (measured in period 2) is negative, at –2. Given that the required return is 10%, this project should not go ahead in the presence of this tax.

[10] For a comparison between the effects of CBIT and ACE see de Mooij and Devereux (2011).

In the second panel, we allow for tax relief for the cost of finance, at 10% of the initial cost of the asset. The notional deduction for the cost of finance is 10, which reduces the tax liability by 2. This is broadly the situation for debt-financed investment under the conventional system and would be the situation for both debt and equity under a system with an ACE allowance. This tax relief means that there is no tax on this investment. This implies that the investment now breaks even after tax as well as before tax.

A conventional tax on business profit therefore has two effects which are illustrated in the example. First, under conventional tax systems, there is clearly a bias towards the use of debt finance (at least if we leave investor level taxation out of the picture).[11] This bias would be removed under either the CBIT or a tax with the ACE allowance. Second, a tax which gives conventional relief for the depreciation of assets, but which does not give relief for the cost of finance, tends to have a negative impact on investment: some projects which are worth undertaking before tax are not worth undertaking after tax. A tax which gives relief for the cost of finance as well as depreciation of assets is in effect a tax on economic rent; as such it is neutral with respect to investment decisions.

This is not the only way of taxing just economic rent. An alternative approach is a 'cash flow tax'. Such a tax was advocated by the Meade Committee, among others[12]—which named this form of tax as an R-based cash flow tax (for a tax on 'Real' as opposed to 'Financial' cash flows; we also discuss an R+F based tax below). Intuitively, a deduction for the cost of finance compensates for the fact that expenditure on capitalized assets can only be deducted over a number of years. Permitting immediate expensing removes the need for a deduction for the cost of finance.[13] Hence a cash flow tax is also—in net present value terms—a tax on economic rent. This is illustrated in Box 2.2, which extends the example in Table 2.1 to an investment that earns an economic rent.

Box 2.2 Alternative methods of taxing economic rent

Consider the example in Table 2.1 but suppose that revenue in period 2 is instead 120. This means that in the absence of tax it earns an economic rent of 10—the profit over and above the required return of 110.

The first panel in the table included in this Box illustrates the position under a conventional tax with relief for the cost of finance. As in Table 2.1, in period 2, there is tax relief for depreciation of 100, and for the cost of finance of 10.

[11] For a consideration of investor level taxes, see de Mooij (2012). For a comparative analysis of the tax treatment of debt and equity instruments under domestic and international tax law see Schön (2012b).

[12] Meade Committee (1978). See also United States Department of the Treasury (1977). The primary work on this report was undertaken by David Bradford, then Deputy Assistant Secretary for Tax Analysis.

[13] The equivalence was first noted by Boadway and Bruce (1984).

These reduce the tax liability by 20 and 2 respectively. The tax on the revenue of 120 is 24. This leaves a total tax liability in period 2 of 2. In this case, the pre-tax economic rent of 10 has been reduced by 20%, so that the post-tax rent is 8. In effect, this is a tax of 20% on the economic rent earned.

This can also be achieved with a cash flow tax. Broadly, this tax would simply tax all cash flows in each period, whether positive or negative. In this case, the expenditure of 100 in period 1 would result in a negative tax liability of 20. So the net cost to the investor is only 80. In period 2, the entire revenue is taxed without further relief, so that the tax liability in period 2 is 24.

The pre-tax economic rent is again 10. The post-tax economic rent in this case is the return over and above the initial investment of 80, grossed up at the required rate of return of 10%. That is equal to the total income in period 2 of 96, less the required income of 88. This yields an economic rent of 8. This is the same as the outcome as in the previous case. So the cash flow tax also falls solely on economic rent.

	Pre-tax cash flows	**Tax**	**Net cash flows**
Tax with relief for the cost of depreciation and finance			
Period 1 purchase of asset	–100	0	–100
Period 2 net receipts	120	–24	
Relief for cost of asset		20	
Relief for cost of finance		2	
Period 2 total net cash flows	120	–2	118
Economic rent	*10*	–2	*8*
Cash flow tax			
Period 1 purchase of asset	–100	20	–80
Period 2 net receipts	120	–24	96
Economic rent	*10*	–2	*8*

The choice between a conventional profits tax base and a base of only economic rent is one of the underlying themes in this book and raises many issues which will be explored in detail later. A key issue, which we set out in more detail below, is that a tax on pure economic rent should not induce a business to change any of its activities or prices. Because of this, the incidence of the tax generally falls on the owners, rather than being passed on through, for example, higher prices or lower wages. Given the owners are more likely to be in the upper part of the income distribution, this would imply that the tax is progressive.

However, although this is the basis of many contributions that have advocated a tax on economic rent,[14] these arguments do not always hold. One reason is that if a business must choose amongst mutually exclusive options, then it is likely to choose that option which earns the highest post-tax economic rent. If it faces a tax on the economic rent earned under each of the different options, then differences in tax rates between the options may affect the choice between them. An example of this would be taxes on the economic rent associated with mutually exclusive production in different countries. If tax rates differ between countries, then location choice may be affected.[15] This raises the question as to whether it is possible to design a tax that falls on rent that can only be earned in a specific location. More generally, it raises the issue of *where* profit should be taxed. We turn to this issue in Section 1.2 after having discussed equivalences.

1.1.2 Equivalences to other taxes

With this brief summary of alternative tax bases on business profit, we can now identify that some of them are equivalent to other forms of taxation. The clearest example of this concerns the R-based cash flow tax, described above, which in a closed economy—with no exports, imports, or cross-border investment—is a tax on all 'real' net cash inflows in a particular period. Financial flows are excluded, but capital purchases can be immediately expensed and labour costs are also deductible.

This is very similar to a very common tax base—value added—the base for VAT. Although VAT is typically administered in a different way to corporation tax,[16] the base for VAT is identical to the R-based cash flow tax with the exception that labour costs are not deductible under the former.

Value added as defined for VAT is also equal to the sum of economic rent and wage income—in effect, it is the sum of the returns to factors of production, with relief given for the costs of other inputs. It follows that a VAT could be implemented by means of a R-based cash flow tax plus a tax on wage income at the same rate. Alternatively, a tax on economic rent could be implemented by means of a VAT, combined with a subsidy to wage income at the same rate.

[14] See, for example, Meade Committee (1978).

[15] Evidence on this was first provided by Devereux and Griffith (1998).

[16] VAT is normally collected on an 'invoice-credit' method—in this case, tax is assessed each time a business supplies a good or service, and the business is permitted to reduce its VAT liability by a credit equal to the amount of VAT paid on inputs. However, VAT could also in principle be collected on a 'subtraction method', under which a business would subtract the cost of its inputs (excluding wages) from the total value of its sales. The subtraction method is close to the implementation method used for most taxes on business profit.

Box 2.3 Equivalent tax bases in a closed economy

In Box 2.2, we showed that a tax on real business cash flows had the same economic effects as a tax on business profit which included relief for both depreciation and the cost of finance.

Here we show that if such a tax is combined with a flat rate tax on labour income at the same rate, then it is equivalent to a VAT. We use a slightly different example, to distinguish wage costs from other costs. In this case we can compress the example into a single period. A business hires a worker, to whom it pays a wage of 60. It also has other costs of 40, and sales of 150. Its net cash flow before tax is therefore 50.

A R-based cash flow tax at 20% would be applied to each of these cash flows. These net out to a tax payment of 20% of 50, i.e. 10. Suppose that the business also remits personal income tax on behalf of the worker at 20% of her wage. This corresponds to a personal income tax liability of 12. The total tax liability remitted by the business is therefore 22.[17] The worker earns 48 net of tax, and the remaining value of 40 accrues to the owner. (Note that this would be unchanged if the worker had the responsibility for remitting the income tax.)

Another way of identifying the relevant flows is to identify the value added of the business. This is conventionally measured as sales less the costs of inputs. Treating other costs as the costs of inputs, then value added is equal to sales of 150 less costs of 40, with a net value added of 110. This is also equal to the sum of labour income (60) and profit (50). A conventional value added tax would be applied to this value added. This would yield a tax liability of 22, and the net value added is 88. This is the same tax liability as the combination of the cash flow tax and the personal labour income tax, and also leaves the owner and worker exactly as well off as under that combination of taxes.

	Pre-tax cash flows	Tax	Net cash flows
Cash Flow Tax			
Labour costs	–60	12	–48
Other costs	–40	8	–32
Sales	150	–30	120
Net business cash flows	*50*	*–10*	*40*
Personal income tax on wages			
Labour income	60	–12	48
Cash flow tax on business + tax on wages			
Totals	*110*	*–22*	*88*

[17] This is similar to the 'Flat Tax' proposal of Hall and Rabushka (1983). They proposed a cash flow tax at the business level, together with a flat rate tax at the same rate on personal labour income. An important difference from the example given here is that the flat tax would exempt a significant part of personal income from tax; this has the effect of making the tax progressive.

	Pre-tax cash flows	Tax	Net cash flows
Value Added Tax			
Other costs	–40	8	–32
Sales	150	–30	120
Value added	***110***	***–22***	***88***

This equivalence calls into question the traditional distinction between direct and indirect taxation. Broadly, an indirect tax is typically defined as a tax paid on expenditure by consumers, while a direct tax is defined as a tax on the income, profit or property of people or corporations. VAT is therefore normally considered to be an indirect tax, but taxes on business income and labour income are thought to be direct taxes. But as the example in Box 2.3 demonstrates, in simple cases at least, these direct and indirect taxes are equivalent.

The key distinction between taxes levied on income and taxes levied directly on spending is that the former can be adjusted to the characteristics of the taxpayer. For example, a personal allowance can be used for income tax that introduces a degree of progressivity in the personal income tax schedule; this cannot be so easily achieved through taxes on spending.[18] The relevance of this distinction is less clear in the context of business-level taxes on profit. That is because there is no clear rationale for introducing progressivity into a tax on profit—there is generally no reason to require a business earning higher profit to pay tax at a higher tax rate. To consider the fairness of the tax we need to look through the business to make comparisons between individuals that are made worse off by the tax.

It may seem odd to argue that VAT can be economically equivalent to a tax on economic rent and a tax on wages. VAT is typically believed to result in a rise in the price of goods and services sold with the result that the consumers bear the tax burden. By contrast a tax on economic rent should be borne by the owners of the business and a tax on labour income is typically believed to be borne by the workforce.[19] But these effects are equivalent; what matters is the spending power of post-tax income. And this is the same for all agents under a VAT and the combination of a business cash flow tax and personal income tax at the same rate. However, note that the cash flow tax, which falls only on economic rent, would leave spending power out of labour income unaffected, so would fall only on the owners of the economic rent.[20]

[18] For more thorough discussions of these issues, see Atkinson and Stiglitz (1976) and Atkinson (1977). Note that an 'expenditure' tax can also be levied on an individual's income less her saving; this too can reflect characteristics of the individual taxpayer, and was advocated, among others, by the Meade Committee (1978) and Bradford (1986).

[19] Whether these different outcomes would actually occur as described depends on a number of factors, including the response of monetary policy to tax changes and the extent to which wage rates are flexible.

[20] This issue is discussed further in Chapter 7.

1.2 Allocation of profit between countries

The activities of a business may transcend national boundaries in many ways. A second important dimension to taxes on profit is therefore where profit is taxed. This issue is important for the allocation of profit between countries and also between regions that set their own tax rate—for example, US states or Swiss cantons. In this book we focus in particular on the allocation across countries, but essentially the same issues arise whatever the level of government.[21] Chapter 3 sets out in more detail the ways in which the existing allocation between countries is determined. Chapter 4 considers and evaluates four different types of location in some detail. These four locations constitute the broad range of options for allocating taxing rights over business profit; we introduce them briefly here.

We can start with the location of the owners of the business.[22] These individuals ultimately receive the profit or return earned by the business. Their location may be completely different from where all the other activities of the business take place.

One approach that could be taken is not to tax the profit at the level of the business at all, but to tax the owners directly. If residents of a country were taxed on their worldwide income accruing from business profit—wherever that profit arises—then many of the problems of the existing system, set out in detail in the next chapter, would simply not arise. Of course, it is not straightforward to tax a resident of, say, Japan on her share of profit earned in a business in Chile. The Japanese tax authority would need to be able to verify the profit accruing in Chile, even if it were not distributed to Japan. The practical difficulty in doing so is one reason for exploring the taxation of profit at the business level.

The second possible location for tax is the place of residence of the ultimate parent corporation of the business. Suppose, for example, that the Chilean business is a corporation that owns other subsidiaries and has branches around the world. Then, in principle at least, the tax accruing worldwide to that multinational group of companies could be taxed in Chile, on the basis of the Chilean business tax system. This approach would also have challenging information requirements, in this case for the Chilean tax authority. It also depends crucially on the notion and legal definition of the 'residence' of the Chilean company. A mix between the first and the second locations would result if one defines the residence of a parent company by reference to the residence of the majority of its shareholders.[23]

We use the word 'origin' to describe the third possible location. By this we mean the place where the activities and the assets of the business are located.[24]

[21] As income is intrinsically a personal concept and not a spatial concept, there is no 'natural' allocation of profit to a given country; for discussion, see Ault and Bradford (1989).

[22] More generally, we could also consider the location of anyone who supplies funds to the business, for example, creditors.

[23] This has been proposed by Fleming et al (2016b).

[24] Economists typically use the word 'source' to describe this location. We do not use this term, since it has a very different meaning in the legal literature, as we describe in more detail in Chapter 3. The

The activities of the business may include production, financial management, research and development, marketing and sales, administration, and many other aspects of the business. In a large multinational business, these activities may be spread around the world in different parts of the business, which may also have different legal forms. In addition, the business may own assets—both tangible and intangible—in other countries. Very broadly, as described in more detail in Chapter 3, the existing tax system tends to allocate some taxing rights to all of these locations. A key issue under the existing system is therefore how the profit allocated to each country—or more specifically to each element of the business, for example a subsidiary or branch—is determined.

The fourth possible location is the place in which the business makes sales to third parties—which we call the 'destination' country (or 'market' country).[25] This is traditionally the approach that has been taken by taxes on sales of goods and services, such as VAT, but—as of 2020—it has not been used as a location for the taxation of profit.[26] But the equivalence noted above, between a cash flow tax, a tax on wages, and a tax on value added may give pause for thought.

VAT is typically levied on a destination basis. To implement this, VAT is typically not levied on exports, but it is levied on imports. That is, the sales of a business located in country O (the origin country) and exporting to consumers in country D (the destination country) will be subject to tax only in country D, at country D's tax rate. By contrast, these 'border adjustments'—'zero-rating' exports and taxing imports—are not typically applied in taxes on business profit or on labour income and so taxes on profit and wages are typically levied in country O, at country O's tax rate. Under these circumstances then, the direct equivalence of VAT to a tax on economic rent and a tax on labour income would no longer hold.[27]

However, while this is the standard way of implementing these taxes, this is not a necessary feature of them. In principle, it would be possible not to have border adjustments for VAT, so that VAT on exports from O to D would be levied in the origin country. This was the design envisaged by the European Community for its 'final' VAT system in 1993 which has only been abandoned recently when the European Commission—following a public consultation—declared the origin principle to be 'politically unachievable' and stressed the necessity of coherently

term 'origin' is taken from the literature on taxes on cross-border flows of goods and services, which typically distinguish between the 'origin' and 'destination' locations.

[25] Alternatively, we might think of this as the country of residence of the purchaser.

[26] At the time of writing, the members of the OECD/G20 Inclusive Framework are considering allocating some partial taxing rights to the destination country, although some of those advocating this reform argue that this may be justified because the business owns valuable intangible assets there—thereby treating the place of sale as an origin country.

[27] There is a substantial academic literature investigating circumstances in which an origin-based VAT would be equivalent to a destination-based VAT; see, for example, Keen and Lahiri (1998) and Lockwood (2001).

applying the destination principle under EU VAT legislation.[28] Also, it would be possible to introduce border adjustments to a cash flow tax, turning the cash flow tax into one levied on a destination basis.

The location in which profit is taxed is one of the core themes of this book. Given the range of possible locations, where should the profit earned by a multinational business be taxed? The answer may depend on the underlying reason why profit is taxed at all—and in Section 3 of this chapter we explore in some detail alternative rationales for taxing profit, and the implications of each possible rationale for where the profit should be taxed. Before that we turn to considering how to evaluate alternative forms of taxes on profit.

2. Criteria for evaluating taxes on business profit

Many authors—famously including Adam Smith[29]—have set out general criteria for evaluating the design of taxes. There is little dispute about the broad attributes of a good tax system—that is, the set of taxes that a country uses and how it implements them. Here we present and discuss five criteria that we believe are especially relevant to the international taxation of business profit: fairness, economic efficiency, robustness to avoidance, ease of administration, and incentive compatibility.

For the most part, we take a global view of the tax system. That is we apply the criteria in thinking about the social and economic welfare of the world as a whole. But that is unlikely to be the way that individual governments view their objectives; they are rather more likely to assess the criteria from the perspective of the welfare of their own citizens.[30] For some of the criteria, these different approaches need not necessarily conflict. For others they clearly do. For example, from a global perspective economic efficiency is likely to be best served by trying to avoid distortions to location decisions. From the perspective of an individual country, there may be a gain to inducing business activity to move to that country, even though that may create a negative effect on other countries.[31] Including incentive compatibility as a criterion is intended to indicate that tax systems which contain incentives to diverge from a common system, or to undercut the tax rates in other countries, are likely to be unstable and ultimately unlikely to be successful.

In applying these criteria, we should also acknowledge the obvious: that the primary purpose of tax is to raise revenue for the government to pay for public goods, services, and transfers. A tax that meets our criteria but raises no revenue would

[28] European Commission (2011), para. 4.1.
[29] Smith (1776).
[30] This point has been made forcefully by Graetz (2001) and Shaviro (2014).
[31] If the action taken—such as reducing the tax rate—induces other countries to take similar action, the benefit may be short lived.

be useless.[32] A reasonable way of applying these criteria in comparing alternative taxes is therefore to have in mind a revenue requirement for the tax; for a given revenue, which tax option best meets the criteria set out here? This seems a reasonable approach for governments that have the capacity to levy alternative forms of taxation to achieve the same revenue goal.

But there are cases in which governments lack such capacity. In particular, many governments in lower income countries would like to raise a higher share of national income in tax revenue than they have been able to.[33] There are a number of possible reasons.[34] One is the practical constraint of a lack of administrative resources. In terms of our criteria this is a problem of administration. Our basic approach compares alternative forms of taxation that have the capacity to raise the required revenue. However, in some cases, a lack of administrative capacity may be so severe that alternative forms of taxation cannot raise the required revenue. This does not imply that the five criteria set out here do not apply in such settings—taxpayers in such settings should still expect a fair tax system, for example. However, it may well imply that in such settings a greater weight should be given to the costs of administration; in this case these costs would be larger and effectively include falling short of the revenue target.

We discuss the five criteria in turn.

2.1 Fairness

2.1.1 Fair taxation of individuals versus fair taxation of businesses

In the context of a single country, a starting point for designing a tax system is that those individuals who are associated with that country should contribute a reasonable share to the cost of the provision of publicly provided goods and services, including social assistance and support. Most would agree that a 'reasonable share' would entail a progressive tax structure—under which the better off contribute a higher share of their resources (and where the least well off may receive benefits rather than pay taxes). Clearly opinions may differ on how progressive the structure should be. And several issues arise: for example, should taxes be related to ability to pay or benefits received, and should inter-personal comparisons be based on income, wealth, or expenditure? We do not address these questions here. But we do

[32] For a strong emphasis on revenue aspects in comparison to efficiency aspects, see Rosenbloom (2009). Graetz (2015) has argued that the corporate income tax should be maintained for revenue purposes.

[33] The goal of revenue mobilization is an important element of the tax policy debate and has been at the top of the development agenda since at least the 2015 Addis Ababa conference on financing the Sustainable Development Goals.

[34] For an account of the issues arising in taxation in African countries, see Moore et al (2018).

start from the premise that the overall tax and benefit system should be progressive in some form.

That is still very broad. But it does rule out applying the notion of fairness to businesses as entities distinct from the individuals associated with them. Box 2.4 on the effective incidence of tax explains why it makes little sense to think about fairness in the context of the taxation of businesses.

Box 2.4 The effective incidence of taxes on profit

There is a commonly-held view that 'business should pay its fair share of tax'. This is uncontroversial if it means that business should pay the tax due under the law. Beyond that, this view makes little sense. Ultimately, only individuals can be worse off as a result of taxes being levied on business profit, or any other form of taxation. It may be that, in the popular imagination, a business is synonymous with its owners, and therefore that a tax on business profit is borne by the owners of the business.

There are circumstances where that may be true. However, more generally, businesses adjust their behaviour in response to taxation. This has an effect on the prices of the goods and services that it sells, and the prices of the inputs that it uses, including wages paid to its employees. As a result, as prices adjust, the tax can be passed onto consumers in the form of higher prices, employees in the form of lower wages, or other suppliers in the form of lower prices paid for inputs. In a competitive market, for example, where competing businesses earn just the minimum required rate of return, a tax on profit would initially reduce the rate of return below the minimum. Consequently, businesses are likely to raise their prices; but that would reduce total demand and ultimately some businesses would then have to exit the market. The remainder would earn a higher rate of return before tax, but the same rate of return after tax. Meanwhile, the remaining customers would be paying a higher price. The 'incidence' of the tax describes which individuals are actually worse off as a result of the tax being levied.

In practice, the incidence of a tax on business profit is very difficult to identify. We have to imagine the counterfactual of what would have happened in the absence of tax—or perhaps more precisely, the counterfactual of what would have happened if the same tax revenue had been raised from an alternative tax. Since the counterfactual is not observable, there is plenty of room for disagreement on the question of who bears the burden of a tax on business profit, and it is probably fair to say that this question is unresolved. But this is to be expected; given that market conditions vary among businesses, sectors, and countries, it is likely that the incidence also varies.

There is a substantial economic literature investigating this question, which dates back to Harberger (1962). In his early work, he identified a tax on profit in one sector of the economy (for example, levied only on incorporated businesses) as effectively falling on all owners of capital. But the opposite view can be taken in a small open economy, in which there is free movement of capital, but an immobile labour force (Gordon, 1986). In this case, the required rate of return on investment after local taxes is determined in the world market; a tax on profit earned in the small open economy cannot change this, and so would instead have the effect of raising the pre-tax required rate of return, leaving the post-tax rate of return unaffected. In this case, the tax would be borne ultimately by domestic residents. There are several reviews that address both the theory and empirical evidence of the incidence of tax on business profit, which go beyond these two extreme views.[35]

The academic debate on this issue is primarily on the question of the extent to which a tax on business profit is passed on to employees in the form of lower wages. This is at best an indirect answer to the more central question of whether such a tax is progressive or regressive. Given that the owners are more likely to be in the upper part of the income distribution, then if the tax fell on the owners then it is likely to be progressive. But there has also been a marked dispersion in the distribution of wage income, with a greater share going to those at the very top of the distribution.[36] So a central, and largely unaddressed, question is whether—to the extent that taxes on business fall on the labour force—they fall on the upper or lower end of the distribution of wage earners.[37]

A tax on pure economic rent is a special case. Such a tax should not induce a business to change any of its activities or prices. Intuitively, a business seeking to maximize value for its owners chooses activities and prices that maximize economic rent after tax—but if the base of the tax is pre-tax economic rent, then those same activities and prices would maximize pre-tax economic rent as well. This has two implications. First, such a tax leaves the activities and prices (including wage rates) of the business unaffected. Second, since prices are unaffected, the tax cannot be shifted onto other agents—consumers and employees, for example—and hence the incidence of the tax falls on the owners. Given that the owners are more likely to be in the upper part of the income distribution, this would imply that the tax is progressive. As we discuss at length in Chapter 7, a caveat to this is if the tax on economic rent is levied on all goods and services on a destination basis, this would raise nominal domestic prices and wages, leaving the tax incident on domestic residents who consume from the economic rent they receive.

[35] See, for example, Auerbach (2006); Gravelle (2011); and Fuest (2015). More recent papers include Suárez Serrato and Zidar (2016); Fuest et al (2018); and Nallareddy et al (2018).

[36] See Atkinson et al (2011) and Bell and Van Reenen (2013).

[37] It is not completely unaddressed. For example, using state corporate taxes in the US as a setting, Nallareddy et al (2018) find that corporate tax cuts lead to increases in income inequality.

It is worth noting that while the overall fiscal system, including taxes and transfers, should be progressive, that does not necessarily mean that each individual tax within the system need be progressive. For example, a VAT applied at a single rate on all consumer purchases is likely to be regressive relative to income in any given year (although not relative to expenditure) if the better off have a higher savings rate, and so consume a smaller proportion of their income. That does not mean that VAT cannot be an element of an overall progressive tax structure. It does mean that governments have to generate progressivity from other taxes or transfers. So to the extent that an individual tax can contribute to the overall progressivity of the system, then that is a useful attribute.

2.1.2 Taxation according to 'ability to pay'

In the context of taxing business profit, one important consideration for fairness is how the returns to individual savings should be taxed. That is because we can think of business profit being at least partly a return to a financial investment in the business, which is akin to the return to other forms of saving.[38] There are both a fairness and an efficiency case for taxing the returns to different forms of saving in the same way. The fairness case is straightforward. Suppose two otherwise identical individuals A and B save the same amount and receive the same returns but choose different forms of saving. Then on fairness grounds there is no reason to discriminate between them.[39] The efficiency case is also straightforward. Taxing the returns on different forms of savings in different ways is likely to distort the form in which individuals save, creating inefficiency.

In practice, in most countries the returns to savings are taxed in numerous different ways. Some types of return are taxed as ordinary income (e.g. rental income). Some types of return are not taxed at all (e.g. tax-free capital gains on owner-occupied housing). In some cases the return is taxed, but the initial saving receives tax relief (e.g. retirement plans). In these last cases, only the return over and above the required return—the economic rent—is effectively taxed. We discuss the taxation of the returns to saving further in the context of identifying a rationale for a business-level tax on profit below. We will leave to one side any discussion on the fairest way to tax the return to savings by individuals.[40] But the varying treatment of other forms of saving raises difficulties in identifying the appropriate taxation of business profit. In principle, business profit should be taxed in the same way as other forms of saving; but this may give little guidance when there is so much variation in the taxation of other forms of saving.

[38] By 'saving', we include any form in which an individual may hold wealth while deferring consumption; this could include a bank account, pension fund, lending, company shares, or any other asset. When an individual owns a business, the return to such saving may be hard to distinguish from the return to work contributed by the owner.

[39] For further discussion in an international context, see Fleming et al (2001).

[40] For thorough discussions see, for example, Mirrlees et al (2011) and Banks and Diamond (2010).

A special case of such a comparison is between business profit that is treated as part of the owner's income, and is subject to personal taxation, and profit which arises in a business that is not subject to personal taxation as it accrues (though it may be when it is distributed). The former treatment is known as 'pass-through' or 'look-through' treatment of a business, and can apply to sole proprietorships, commercial or professional partnerships, limited liability companies, and also to some corporate entities, for example, S-corporations in the US.

Where a business is a corporation that is too large, or too complex, to allocate all profit to shareholders in this way, it is often argued that a separate corporation tax on the company's profit is needed as a proxy or 'backstop' for the personal income tax. Even if the corporation tax rate is not the same as the personal income tax rate applying to each shareholder, such a tax, it is argued, provides some measure of equal treatment of profit arising in businesses that have different legal forms. We discuss the merits of this argument in some detail below.

In the context of the OECD/G20 BEPS project, the notion of fairness in international taxation has become strongly related to the 'single tax' principle.[41] The idea here is that coordinated efforts around the world would ensure that business profit is taxed exactly once—so there would be no 'double taxation' and no 'double non-taxation'. This principle is widely thought to be linked to the 'ability to pay' concept. But the single tax principle is not a means to further international tax fairness for at least two reasons. First, it leaves open which country has the right to tax some specific profit. Second, it gives no indication of the overall rate of tax applied. Double taxation may be advantageous to a taxpayer if the two rates applied are very low, while single taxation may be disadvantageous if the single rate applied is very high.[42]

2.1.3 Fairness between countries

An alternative approach is to consider fairness between countries[43]—or at least the residents of those countries. In particular, we can ask—on fairness grounds—which country should have rights to the revenue from taxing the profit of a multinational business. A notion of inter-nation equity has been developed to consider this.[44] An argument might be made that the country in which the economic activity took place deserves to receive some of the revenue from taxing profit on the grounds that the business made use of publicly provided goods and services in that jurisdiction. This reflects the assertion of the OECD, that taxing rights should be primarily related to economic substance, or where economic activity takes place.[45]

[41] For a recent overview of the debate see Gil Garcia (2019).

[42] This point has been emphasized by Shaviro (2014).

[43] Or, more generally, jurisdictions that may be at a lower level than a country.

[44] This originated with Musgrave and Musgrave (1972). In the legal literature, this approach has been made most strongly by Vogel (1988a, 1988b, 1988c); for recent accounts, see Infanti (2013) and Escribano (2019).

[45] OECD (2015c).

But we argue below that such considerations do not necessarily justify a tax on profit, as opposed to a fee for the use of such goods and services.[46] And in any case, some use of public goods and services is made in all countries in which a business raises funds, produces, and sells—all of which could be seen as economic activity.

A special case of this argument is where profit is generated by exploiting fixed natural resources. This is rather different, since in this case the profit is directly related to the fact that there has been an extraction of natural resources which would most naturally be considered as being owned by the residents of the country concerned. In general, we would argue that this is both a special and important case which justifies a level of taxation over and above that applied to other profit earned in a country. In this case, the form of taxation may not necessarily or exclusively be a tax on profit; a royalty or user fee may in some cases also be appropriate. A contractual regime, such as a production sharing contract, may also be used.

But in a more general setting, what is an equitable basis of the allocation of taxing rights between countries is debatable. On the basis of fairness, should taxing rights be claimed more by the country of residence of the shareholders, the country where production takes place, or the country in which the final good is consumed? There does not seem to be any clear basis to answer this question. There is no 'scientific' method to identify the 'right' allocation of taxes between countries.[47]

The international question could be framed differently: for example, should greater taxing rights be given to less well-off countries? The underlying logic in this re-framing is to go back to comparing individuals, but in this case, across countries.[48] Many would argue that there is a case for creating a more equitable distribution of wealth amongst all individuals, irrespective of country of residence. But it is not clear that this would be best achieved by allocating more taxing rights associated with business profit to less well-off countries.[49] And even if this were desired, it is not clear how a tax system could be designed that would have this effect. Certainly any such tax system would have to be based on allocation rules that reflected factors unrelated to the nature of the business—indeed, in principle taxing rights could be allocated to the least well-off countries even if the business was not present there.

2.1.4 Competitive fairness between businesses

At the outset, the BEPS project was partly driven by a specific notion of fairness as applied between market participants. It was meant to address the tax planning

[46] For a discussion on this point, see Schön (2009).
[47] See Bird and Wilkie (2000) and Schön (2009).
[48] See Dagan (2017).
[49] See Graetz (2001) and Stark (2019).

employed by large multinationals to shield their profits against any tax burden, a strategy regarded as unfair not only with regard to regular taxpayers but in particular when competing against local business.[50] A much-cited example is of a digital business selling goods and services directly to customers in competition with more traditional businesses. If the digital business is able to arrange its affairs to face a lower effective tax rate on its profit, then it may be treated more favourably. This appears unfair, although that conclusion should really depend on a comparison of the individuals who are made worse off by the taxes on the two businesses. In this setting, the profit of one business may depend on the tax advantage of another business. This is also an efficiency issue, in the sense that one business may gain a competitive advantage over its rivals.

To properly address this problem requires yet another approach—that businesses selling to customers in the same market should face the same tax system. This would ensure that one business did not gain an unfair competitive advantage over another business. This is clearly not the basis on which the international system of taxing profit has developed until now, although it is the basis of value added taxes, employed by the vast majority of countries. Given that a business can supply a market in a different country by exporting to that country, it would require the tax to be set by the market country. We develop this idea in the reforms we discuss in this book.

2.1.5 Conclusions

Ultimately, these notions of fairness are almost impossible to operationalize in designing a business-level tax on profit. We have at least three conflicting notions—that residents of a particular country should be taxed in the same way on all forms of their worldwide income, including any business profit accruing to them; that countries should receive some reasonable amount of revenue from taxes on profit in return for the provision of public goods and services; and that there should be fair competition between businesses operating in the same market. Beyond that, fairness is generally thought to imply a progressive tax system, but how progressive a tax on profit is depends on its incidence, which is very difficult to assess. Finally, we may also consider preferential treatment for countries with lower income levels.

These considerations make a tax on business profit (at least at a business level) a weak instrument in the design of a fair and progressive tax system. In aiming for a fair and progressive tax system, it is less suitable than taxes levied directly on better off individuals—on their income, wealth, or transfers—as long as such taxes are feasible to implement and administer.

[50] OECD (2013a, 2013b).

2.2 Economic efficiency

2.2.1 Fundamentals

The second criterion by which we seek to evaluate taxes on business profit is the extent to which taxes impose a cost on private economic agents—in effect on society as a whole—over and above the value of the taxes collected. All taxes impose a burden on private economic agents equal to the size of the tax payment—since the government appropriates part of their income, or wealth, to fund public goods and services and for redistribution.[51] That is inevitable. The issue here is that most taxes also impose an 'excess burden', representing a cost to society in excess of the tax collected.[52]

The excess burden arises because taxes typically affect relative prices and hence economic behaviour. For example, a tax on sales drives a wedge between the gross price that a consumer must pay for a good and the net price that the seller receives for it. That is likely to affect both the willingness of the producer to sell the product and the willingness of the purchaser to buy it. A tax on labour income drives a wedge between the gross cost to an employer of employing an individual and the net take home pay of the employee. That affects both the demand and supply of labour. The net result in both cases—and many others—is that, by making different decisions in response to different prices, the welfare of economic agents is reduced, and hence there is a cost—the excess burden—on top of the actual payment of tax.

The aim of maximizing economic efficiency is equivalent to minimizing this excess burden. Underlying this aim is a starting point that, without government intervention, an economy would be efficient, in the sense that it would not be possible to make anyone better off without making at least one other person worse off—this is known as 'Pareto efficiency'. Changing the behaviour of economic agents by altering relative prices is likely to move the economy away from Pareto efficiency. As consumption choices and labour demand and supply decisions, for example, would be different, the economy would reach a different equilibrium, one which is not Pareto efficient.

In thinking about the costs of taxation, the assumption that we start with an efficient economy is of course important.[53] There may well be a role for distortionary taxes in a world which is not efficient in the absence of tax. The classic example is

[51] This is known as the 'income effect'.

[52] Also known as the 'deadweight cost'.

[53] The first theorem of welfare economics states that a private market will be Pareto efficient under conditions of perfect competition, no externalities, perfect information, and rational agents. Note that Pareto efficiency says nothing about the distribution of income or wealth; that is why we must consider fairness as a separate criterion from efficiency. In many cases there is likely to be a trade-off between the two.

environmental pollution, where an economic agent may impose costs on others, without taking those costs into account in her own behaviour. In such situations, there is in principle a case for government intervention in the form of distortionary taxes, known as 'Pigouvian taxes', which aim to correct the underlying inefficiency; a tax on carbon emissions is one example of such a tax.

However, most taxes are not designed to correct market failures. They are designed to collect revenue to support publicly provided goods, services, and transfers. We therefore start with a presumption that one important criterion for choosing taxes on profit is that they should be designed as far as possible to minimize distortions to economic behaviour and hence minimize the excess burden.[54]

Before analysing economic efficiency in more detail, we note two final points with respect to economic efficiency and tax revenue. First, in an international setting, the considerations discussed here have no implications for which government receives the tax revenue. The issue at stake is what tax rate each business faces under different circumstances, and how that affects business behaviour and competition. Assuming that businesses are indifferent as to which government keeps the tax revenue, then the revenue allocation between governments is a completely separate issue, and one more closely connected to fairness, as discussed above.

Second, in analysing the economic efficiency of alternative taxes, we abstract from the overall size of government revenue and public spending. We address the question of how to collect a given tax revenue in the most economically efficient way; and in doing so we can compare the efficiency of alternative taxes. This allows us to sidestep the issue of the appropriate level of tax revenue, and to avoid having to make any judgements on the optimal size of government.

In Chapter 3 we describe the existing international corporation tax system and evaluate it according to the five criteria we set out here. In evaluating its performance with respect to economic efficiency we draw on an extensive empirical literature which attempts to identify the impact of business-level profit taxes on business behaviour, and—to some extent—to translate that into measures of the cost, or excess burden, arising from economic inefficiencies. In subsequent chapters, we discuss how alternative reforms of the existing system are likely to affect the costs arising from economic inefficiencies. Here we introduce these ideas by setting out the most important ways in which economic inefficiencies arise due to business-level taxes on profit. In the next subsections we explore what economic theory has to say about how to address these inefficiencies.

[54] We do not address the argument made by Avi-Yonah (2005) that business-level taxation might reduce inefficiencies by reducing the economic and political power wielded by corporate managers, making 'empire building' for them more costly. The validity of this argument depends on a number of assumptions including the legal protection of shareholders, the nature of the business, and the local business culture.

2.2.2 Economic inefficiencies in taxing profit

One form of economic inefficiency arises when a tax on profit deters a business from undertaking a new investment project. The conventional criteria for deciding whether or not to proceed with a new project is whether the economic rent of the project is expected to be positive. If it is, that represents a gain to the business and makes the project worth undertaking. This is generally equivalent to the project being expected to earn at least the normal rate of return, commensurate with its risk. But a tax on profit represents an additional cost for the project. As seen above, for conventional taxes, it is possible that the tax may turn the economic rent from positive to negative; or equivalently that the rate of return falls from above the normal rate to below it. This implies that the tax has the consequence that the business decides not to proceed. Again, this represents an economic inefficiency and cost; the benefits of the project—to the owner, employees, and customers—would be lost. As well as affecting the decision as to whether an investment takes place or not, conditional on an investment taking place, a tax on profit can also affect the marginal decision as to the size of the investment. The same considerations apply, but in this case apply to the decision as to whether to marginally increase the scale of the investment; a tax on profit can make a marginal increment unprofitable and so have the effect of reducing the scale of investment.

There is now a vast literature which attempts to estimate the impact of the existing tax system on investment, which is summarized briefly in Chapter 3. As we noted in Section 1.1, this inefficiency would be avoided by a tax solely on economic rent.

A second form of economic inefficiency is in the type of finance used by a business. As described in Section 1.1, a conventional tax on profit gives tax relief for the cost of debt finance—the interest payment—but offers no comparable relief for the cost of equity finance. As a result, and leaving investor level taxation to one side, the tax creates an incentive for a business to finance its activities by borrowing rather than issuing equity. The economic cost of this inefficiency is less immediate. It relates to the financial fragility of the business. A business has an obligation to repay its debt with interest, and if it cannot do so, then it may default. A business with smaller obligations to lenders is less likely to default. The economic costs arising from default may be significant, especially as a default by one business can impair the financial health of others. The financial crash of 2007–2008—which had enormous economic costs—occurred in part due to extreme levels of leverage of banks, which in turn were—again at least in part—fuelled by the tax advantages of debt.

There are many other potential economic inefficiencies arising from taxes on profit. Indeed, almost any aspect of business behaviour may be affected by taxation, and when that occurs there is likely to be some economic cost. Other important

examples include the legal form of the business, and the decision whether to distribute profit as dividends or retain it in the business.

2.2.3 Economic inefficiencies in taxing international profit

In considering international issues, a starting point is the location of economic activities. If, for tax reasons, a business is induced to choose a more costly location for its activities, then those higher costs reflect a cost to society. Suppose, for example, that a parent company resident in country A may choose whether to manufacture its product in a subsidiary company in country B or country C. Suppose also that, in the absence of taxation, costs are higher in B. Yet suppose that tax levied on the profit arising from production would be higher in C, to such an extent that the business nevertheless decides to locate in B. The additional cost that it faces as a result of that decision represents a cost to society as a whole. The cost is likely to be reflected in higher prices for consumers, lower income for employees, or lower post-tax income to the business owners.

Of course, this cost is hard to measure; it is in principle necessary to identify that the location of production has been affected by the difference in tax, and also to identify the difference in the underlying costs of the two locations. The business may be aware of these, but researchers attempting to identify the size of the economic cost must estimate them from available data. The difficulties in measuring the costs arising from economic inefficiencies may partly help to explain why policy makers who introduce and reform taxes often neglect the issue of economic efficiency.

Note that this economic cost arises because of differences in taxation in the alternative locations for production, B and C. In this example, the inefficiency would be avoided if tax were instead levied only in the residence country of the parent company, A, and therefore did not depend on the location of production. This illustrates that the distortion to the location decision is not an inevitable consequence of tax being collected on profit; the distortion arises in this example because the tax is levied in origin country. We discuss this further below.

On the other hand, if the tax were levied in A, then there could be a different distortion: the location of the parent company may then be affected by taxation. For example, the business could have chosen to be resident for tax purposes in another country, say D—or it may be able to move to D. If the costs associated with being located in D are higher than being located in A, then again there is potential for the profit tax—this time located in the residence of the parent company—to create an economic inefficiency and economic cost. As an example, in recent years, many US companies have sought to move their headquarters out of the US for tax reasons. These so-called 'inversions' often sought to avoid the US treatment of foreign source income, by placing the headquarter company in a more favourable environment. The US responded by introducing ever more stringent anti-inversion rules to try to prevent the inversions taking place.

A third form of economic inefficiency in an international setting is that a tax on profit may distort competition between businesses competing with each other for sales in the same market. This is especially likely to arise in the case of businesses that export to the same market. Suppose, for example, that a shoe manufacturer in London exports shoes to Paris. An Italian manufacturer in Milan does likewise, so that British and Italian shoes are side by side in a shop in Paris. The prices of the two competitors should partly reflect the costs of producing and exporting the shoes; but they may also reflect taxes on profit that the two manufacturers must pay. Suppose, for example, that the Italian manufacturer is obliged to pay much higher taxes in Italy on its profit, compared to lower taxes due from the British manufacturer in the UK. Then the British manufacturer has a tax-induced advantage; it may be able to use that advantage to undercut the Italian manufacturer and gain a greater share of the market. If the Italian has lower costs, or better-designed shoes, then this represents an economic inefficiency and cost.

This example of a potential economic inefficiency does not stem from any form of discrimination. It stems only from the fact that the tax on profit depends on the location of production (or possibly the location of a parent company); and that taxes on profit are not fully harmonized between the UK and Italy. This example again brings to the fore the issue of where taxes on profit could be levied. An attractive option from an efficiency perspective in this example is to levy the tax in Paris—the place of sale to the third party. If both manufacturers were obliged to pay tax only in France, at the French tax rate, then there would be no distortion to the competition between them. By contrast, any other location of taxing the profit could lead to a distortion and an economic cost.

One final point is worth noting: in international tax there is to some degree a trade-off between economic efficiency and profit shifting (which we discuss next). Successfully shifting profit to a lower taxed jurisdiction means that a business pays lower tax. One consequence of that is that the impact of taxes on profit on the real activities of the business are moderated. To return to the location choice example above, if the company were able to shift all of its profit from either B or C to a low tax jurisdiction, then there would no longer be a distortion to location choice. This does not imply that profit shifting is beneficial. But it does imply that reducing profit shifting may increase real economic inefficiencies and costs. We discuss this further in the context of the OECD/G20 BEPS project in Chapter 3.

The OECD/G20 BEPS project aimed to reduce profit shifting. Before this, some tax planning strategies allowed profit to be shifted to low tax countries without having to locate substantial real activity there. After the BEPS project this became much more difficult without also moving real functions and activities to the low tax countries. For example, to achieve desired transfer pricing outcomes, senior decision makers might now have to relocate to low tax countries post-BEPS. Businesses are likely to relocate staff if the tax savings

outweigh the cost. But this would represent the creation of new economic inefficiencies and costs.[55]

2.2.4 Guidance from optimal tax theory

Having made the case for considering economic inefficiencies by the likely size of the economic costs, where does that leave us in thinking about the design of taxes on profit? Almost all taxes affect prices and generate inefficiencies and hence an excess burden. The creation of an excess burden does not therefore necessarily mean that a particular tax should not be used. But then how should we compare alternative taxes in a world that already has such inefficiencies?

A useful starting point in answering this is the production efficiency theorem of Diamond and Mirrlees (1971). This states that even when there is some underlying distortion, we should still aim for production efficiency—which is the condition that the economy cannot increase the output of one good without having to produce less of another. The intuition for this result is that it cannot make sense to produce less than the economy could do, as long as the government has enough instruments to ensure that it can achieve any desired distributional outcome.

The theorem does depend on strong assumptions: that economic rents are either zero or are taxed at a rate of 100%; that there is no restriction on the use of instruments that government can deploy; and that there are no administrative or compliance costs of taxation. In an open economy the principle continues to hold only if there can be transfers of wealth between countries.[56] However, while it is possible to identify conditions under which the theorem does not hold, such conditions do not give a clear prescription for what would be the optimal form of production inefficiency in those cases. In what follows we will therefore have a presumption in favour of the tax system not distorting economic behaviour; deliberate distortions should be justified by an appeal to either existing inefficiencies or distributional issues.

To identify the implications of the production efficiency theorem for the design of business-level taxes on profit we must first make two distinctions. First, in this subsection, we will consider taxes on the normal return to an investment. Such taxes drive a wedge between the pre-tax and post-tax rate of return. In the next sub-section we consider taxes on economic rent, which do not tax the normal return to an investment, and so do not drive a wedge between pre-tax and post-tax rates of return.

Second, we start by interpreting the production efficiency theorem here in a global context. That is we consider the implications of the theorem for the design of taxes which would create the highest possible global welfare. This need not be the same as the implications if considered solely from a national perspective, simply because a national perspective would take into account only the welfare of the citizens or residents of a particular country.

[55] For further discussion, see Schön (2014).
[56] Keen and Wildasin (2004).

With these points in mind, the production efficiency theorem implies that production decisions should not be distorted. That means that intermediate goods in a supply chain should not be taxed. Hence, for example, turnover taxes are inefficient and should be replaced by a VAT or retail sales tax.

Second, the production efficiency theorem implies that the marginal pre-tax (risk-adjusted) rate of return on all production should be equal; if this were not the case, it would be possible to increase total output by shifting resources from an activity earning a low rate of return to an activity earning a higher rate of return. In the absence of tax, we can assume that this will happen as private agents seek to maximize the returns from their saving. But in the presence of tax, private agents will seek to earn the same post-tax, rather than pre-tax, rates of return from alternative forms of saving and investment. The implication for the design of tax is that—in principle, at least—the returns from all forms of saving should be taxed at the same effective rate. This is a strong prescription with implications for the types of inefficiency described above. It implies that a business aiming to earn the same post-tax rate of return on all its activities would simultaneously be aiming to earn the pre-tax rate of return on all its activities, consistent with production efficiency. Further, the same would also apply more generally: different businesses would also be aiming to earn the same pre-tax (as well as post-tax) rate of return. This could clearly be achieved by taxes that were fully harmonized across all countries. But in different settings we examine situations where this is not the case.

One example of this, in an international setting, is that business decisions as to the location of investment should not be affected by taxation.[57] In the discussion above, we considered mutually exclusive location options—whether the company in A would choose to locate production in B or C. But a more general way of thinking about this is that a higher effective tax in one country would induce investors to invest less in that location until the overall pre-tax rate of return was raised far enough to offset the higher tax. Taxes in the origin country—where the economic activity takes place—are likely to affect location decisions unless tax rates are the same in all possible locations.[58]

A second example is that collective output cannot be reallocated between businesses in such a way as to reduce the total costs of its production. In the example of shoe manufacturers above, suppose that the Italian manufacturer has a cost advantage over the UK manufacturer. Then it would be inefficient if the tax system taxed the Italian at a higher effective rate, resulting in a tax-induced competitive advantage to the UK manufacturer. Such a tax could raise overall costs of production since the Italian would have a smaller share of the market, resulting again in

[57] This principle is known as 'capital export neutrality', see Richman (1963).
[58] Or at least that the taxes are fully creditable against other taxes.

a deadweight cost. Production efficiency therefore requires that the tax system should not give one business a competitive advantage over another.[59]

In the absence of harmonization of business-level taxes between countries, these considerations could in principle justify two different locations for taxation. The key is that the location of business activity should not depend on the tax. One is to tax each investor on her worldwide profit in her place of residence—but only if the place of residence were fixed.[60] The other is to tax profit at the business-level in the location of sale (the 'destination' country)—again as long at this location was fixed. In either case, there would be no distortion to business location decisions, nor to competition between businesses resident in different countries but exporting to compete with each other in the same market.

A variant of the competitive advantage example is the case in which two businesses may be competing to acquire a third business, or some other asset. In this case, in principle, the tax should not affect the relative prices that the two firms are willing to pay.[61] If the tax did affect relative prices then a higher-cost firm may be given a tax-induced competitive advantage, which would again result in an excess burden. Requiring the tax to leave both firms with same required pre-tax rate of return would avoid this problem. In the general case, where the normal return to investment is taxed, this requires tax to be levied in the location of the asset being purchased.[62]

Choosing between these options for taxation depends in principle on the excess burden generated by each distortion. For example, is there a greater excess burden from distorting the location of investment or the identity of the investing business? This is ultimately an empirical question and is so far unresolved. A single worldwide tax on all activity and investors would remove the issue, but such a solution requires political will that seems as yet far away. We therefore focus instead on taxes that fall only on economic rent.

Before doing so, though, let us turn to the national perspective. In the case of a small open economy, maximizing the welfare of domestic residents implies a much stronger prescription; that there should not be any tax on the normal return to investment in that country.[63] That is because any small open economy must take the post-tax rate of return required by investors throughout the world on investment taking place in that economy as given. If investors could earn a higher post-tax rate of return elsewhere, they would shift their investment out of the small open

[59] This has been referred to as 'market neutrality'; see Devereux (2008).

[60] Note that while this may be true of individual shareholders, it is less likely to be true for a parent company, which could in principle relocate to a different jurisdiction.

[61] This has been called 'capital ownership neutrality'; see Desai and Hines (2003). The principle that all business operating in a country should face the same tax rate has also been referred to as 'capital import neutrality', see Richman (1963).

[62] However, as set out below, this requirement does not hold if the tax is limited to economic rent; see Devereux et al (2015).

[63] See Gordon (1986). Formally, this prescription requires capital to be perfectly mobile between countries, whilst individual residents are perfectly immobile.

economy until the pre-tax rate of return rose far enough to offset any tax levied on the return to investment located there. Any reduction in investment would reduce the pre-tax income of residents of the small open economy who supply the country's workforce. So in effect the tax would fall on domestic residents, rather than foreign investors. Those residents would be better off if the supply of investment was not reduced by tax. This would be achieved by not distorting the required pre-tax return to investment located there; residents would be better off if taxes were instead levied directly on their income.

2.2.5 Taxing economic rent

This discussion of efficiency has been based explicitly around taxing the normal return to savings and investment. This affects the rate of return earned by the investor, and hence distorts savings and investment decisions. But in Section 1.1 of this chapter, we also discussed the possibility of taxing economic rent. It should also be recalled that the production efficiency theorem formally depends on either businesses not earning economic rent, or on economic rent being taxed at a rate of 100%. There is a small literature that investigates implications for taxing the normal return to capital when this does not hold.[64] However, let us now consider the likely effects of a tax on economic rent at less than 100%.

With a tax solely on economic rent, investment projects that earn just the normal return are not taxed; it follows that the required return on a project—and hence the scale of investment, and the choice between different types of investment—should not be affected by such a tax. A tax on economic rent would also give relief for the marginal cost of finance, whatever the source of finance—whether debt, equity, or some combination. This means that the source of finance would not be distorted by taxation. So in many—especially domestic—situations, a tax on economic rent would be neutral.

However, this is not always the case, especially in an international setting. In particular, even taxes on economic rent can affect the location of production where countries impose rent taxes on the returns to production at different rates.[65] To return to the example above, the company in A can choose to produce in B or C, where costs are lower in C. Even a tax on economic rent could affect the choice of location in this case, as long as the tax is located in the country of production, B or C—the origin country.

This is also relevant from the national perspective of the small open economy. The argument above indicated that the country should not have an origin-based

[64] Keen and Piekkola (1997) consider the case in which rents cannot be fully taxed (so that the Diamond-Mirrlees result fails) and show that capital export neutrality and capital import neutrality are optimal in (respectively) the extreme cases in which savings in each country or the demand for capital in each country are fixed.

[65] See Devereux and Griffith (1998).

tax on the normal return to investment located there. But since origin-based taxes on economic rent can also affect location decisions, then from the perspective of economic efficiency there is also a case against an origin-based tax on economic rent even from the national perspective.[66]

However, a tax on economic rent should not affect competition between businesses in a market. That is because a tax on economic rent should leave prices unchanged; the profit-maximizing prices chosen by businesses are unaffected by a tax on economic rent. That implies that such a tax would not lead to one business reducing its price to under-cut another—hence competition should be undistorted. In our example, suppose that the UK and Italy both taxed the economic rent of their resident businesses. In this case, there would be no distortion to the competition between the two in the Paris market.

As noted above, a tax on the normal return on a residence basis could affect which business purchases an asset in an origin country. However, a residence-based tax on the economic rent accruing from an acquisition in an origin country would be neutral with respect to the purchase of the asset.[67]

Nevertheless, the potential distortion from an origin-based tax even on economic rent to the location of investment and economic activity is potentially serious. In this book, therefore, we explore other locations for a tax on economic rent, which would not have these properties, in particular a tax levied in the destination country.

The central rationale for doing so is that the final consumers, the ultimate purchasers of goods or services, are likely to be relatively immobile. That is, they are unlikely to move to another country because the business selling to them may face a higher tax rate—even if that tax is partly, or wholly, passed on to them in the form of higher prices. However, as we discuss at length, this may be less likely to be true when the customer is another business.

2.3 Robustness to avoidance

Our third criterion against which to evaluate taxes is their robustness to avoidance. The possibility that a business—or any other taxpayer—may reduce its tax liability through avoidance overlaps with our other criteria—on fairness, efficiency, and ease of administration. However, we include it as a separate criterion partly because of its importance in the public debate about the taxation of business profit, especially in an international context. There has been widespread disquiet amongst politicians,

[66] This should be set against the possibility of 'exporting' the tax base with an origin-based tax; see Auerbach and Devereux (2018).

[67] See Devereux et al (2015). The key here is that the ranking of prices that two competitors are willing to pay for the asset cannot be overturned by such a tax as long as the price paid is equal to the maximum price offered by the lower bidder (as is the case in most auctions).

civil society organizations, academics, the media, and the general public about the extent to which some multinational companies shield their profit from taxation.[68] Where people feel that a section of the taxpayer community is avoiding the tax due, this can undermine general compliance with taxation.

This public disquiet led to the OECD/G20 BEPS project. This was aimed squarely at addressing problems of profit shifting by multinational companies, which it identified as 'gaps and frictions among different countries' tax systems that were not taken in account in designing the existing standards and which are not dealt with by bilateral tax treaties'.[69] We discuss the BEPS project and its recommendations in more detail in Chapter 3.

As is clear from the name of the OECD/G20 initiative, avoidance by multinational companies typically takes the form of shifting profit from a high tax jurisdiction to a low tax jurisdiction, and there are many ways that such shifting can occur, as described in Chapter 3. There is a growing academic literature on the scale of profit shifting by multinational companies, although there is as yet no clear consensus on the scale of such activity. We summarize the empirical estimates of the degree of profit shifting under the existing system in Chapter 3.

2.3.1 What constitutes international tax avoidance?

Part of the problem in identifying the scale of avoidance is that the term is not well defined. 'Avoidance' is typically distinguished from 'evasion' on the grounds that avoidance is thought of as being within the law, whilst evasion is illegal. However, this distinction is not sufficient for at least two reasons. First, it is not always clear whether a particular activity should be thought of as avoidance or evasion; pushing at the boundaries of what might be within the law may take a taxpayer beyond the law. Second, it is very difficult to define avoidance in a satisfactory way;[70] if activities comply with the law, then by 'avoidance' we must have some alternative in mind.

Avoidance has no fixed meaning and is used by different people to mean different things. Matters are often complicated but not usually clarified by the addition of adjectives such as 'aggressive', 'abusive', or 'unacceptable' to the term. Terms such as not complying with the 'intention of Parliament' or the 'spirit' of the law have also been used,[71] but they do not get us very far since we then have to define these terms instead. In many countries, courts go beyond the letter of the law to take into account the 'intention of Parliament' or the 'spirit of the law' when

[68] As noted in the Introduction, prominent amongst the political debate on these issues have been the UK Public Accounts Committee, chaired by Margaret Hodge and the US Senate Permanent Committee on Investigations. Both of these have investigated the tax affairs of prominent multinational companies. For an account of the rise of these concerns in the public debate, see, for example, Forstater and Christensen (2017).

[69] OECD (2013b), p. 9.

[70] See Devereux et al (2012).

[71] OECD (2017a).

interpreting a statute; however, these notions can have a narrower meaning in this context to that found in political and public debates.[72] International tax planning is often aimed at benefitting from disparities between tax legislation in different jurisdictions, a phenomenon commonly known as 'tax arbitrage'. It can be debated whether the exploitation of these disparities can be called avoidance at all, given full compliance with the involved countries' tax laws.[73] Given these difficulties, empirical research has tended to try to measure actual tax receipts relative to some benchmark that a company would otherwise have paid.

In the context of evaluating potential tax reforms, however, it is necessary to consider the opportunities that businesses would have to shift profit to low tax jurisdictions. Take three examples. First, currently, multinationals can shift profit to low tax jurisdictions by owning intangible assets there and charging a royalty to other affiliates of the multinational in high tax countries. In general, and subject to anti-abuse rules, the multinational would receive tax relief in the high tax country at the expense of tax charge in the low tax country. Second, a similar arrangement can be achieved by the affiliate in the low tax country lending to an affiliate in a high tax country. Third, sales and services between companies belonging to the same multinational group have to be priced. These are subject to control under the 'arm's length principle', as set out in Chapter 3. But this is not a mechanical exercise, and transfer pricing allows some discretion for businesses which permit them to adjust the shares of the different affiliates in the overall profit of the business.

These activities use the existing international tax rules to take advantage of differences in tax rates between jurisdictions. While the question of 'where' the multinational has made its profit is unclear, we simply ask the extent to which a reformed system would leave itself open to this kind of activity—or any other activity which would permit multinational companies to 'avoid' tax.

Multinational businesses may, of course, take advantage of differences in tax rates between countries by locating real activity, such as manufacturing plants, in low tax countries. But this would generally be considered a real response rather than avoidance. Tax avoidance is generally taken to involve strategies that allow a business to pay less or no tax without changing its real activities or changing them nominally or marginally. It allows tax liabilities to be reduced whilst broadly pursuing the real activities which would have been pursued in the absence of the tax. Real responses can also lead to a reduction of tax liabilities, but only as a result of pursuing different real activities to those that would have been chosen in the absence of the tax or pursuing the same activities in a different location. Both tax

[72] The public debate on tax avoidance is often confused with the larger issue of 'corporate social responsibility' which addresses the fundamental issue of whether shareholder value should be the ultimate focal point of management behaviour. For discussion, see Avi-Yonah (2008) and Schön (2008).

[73] For opposing views, see Kane (2004) and Rosenbloom (2000).

avoidance and real responses entail transaction costs, but the latter also entails real costs associated with taxpayers not pursuing their preferred course of action.

It may be difficult to draw a line between a real response and avoidance. If a tax strategy involves moving a senior management team to a low tax country, that could be seen as a real response or tax avoidance. There is no generally applicable distinction between the two. Instead there is a grey area where tax strategies may have elements of both.

These considerations call for a 'continuity approach' whereby similar types of income would be taxed in as similar a way as possible; and differences in taxation should be justified on grounds of fairness, efficiency, or costs of collection.[74] Unfortunately, and as described in more detail in Chapter 3, in the context of existing taxes on international business profit, there are numerous cases where this principle does not hold. In some cases these reflect the broad problem that national tax authorities attempt to tax a share of international business profit; differences in tax rules and rates between countries can lead to distortions to business decisions and to international arbitrage opportunities. In others, the problem lies more with the existing set of international tax rules which, for example, frequently treat income differently depending on legal form.[75] Others reflect common elements of national tax systems, such as the distinction between debt and equity finance. The use of hybrid financial instruments makes this distinction increasingly difficult to draw; and in any case it is doubtful whether there is a good economic reason why the two forms of finance should be treated differently.

2.4 Ease of administration

It is inevitable that there should be some cost to collecting taxes—even the simplest tax would require some computation as to the amount to be paid. The fourth criterion we use for evaluation is that the tax should be collected with minimal direct costs to the taxpayer and the government. Such costs can be substantial. They include the entire costs of tax administrations around the world, and the costs of all those professionals in business and practice, in short, the costs of all work that involves preparing, checking, and auditing tax returns, collecting revenue, and where necessary resolving issues in court. These costs vary considerably between taxes. The administrative costs of governments of collecting corporation tax are considerable. Estimates of compliance costs for taxpayers vary substantially, with

[74] See Schön (2009). This view does not exclude the necessity of resorting to hard 'line-drawing' where the administrative advantages of simplification exceed the material benefits of a continuous treatment of different economic options; see Weisbach (2000) and Goldin and Fox (2020).

[75] For example, whether an activity is carried out by a subsidiary or permanent establishment.

some estimates identifying corporation tax as a very expensive tax relative to revenue generated.[76]

A principle of tax design to minimize costs should take into account administrative and compliance costs as well as the deadweight costs discussed above in the context of economic efficiency. In principle, the total administrative and compliance costs of a range of taxes would be minimized if the marginal cost of raising an extra dollar of revenue from each tax was the same; in that case, there would be no possibility of reducing total costs by switching between taxes.[77] Administrative and compliance costs depend on the design of the tax. Where similar types of income are taxed at different rates, there are additional costs for taxpayers of identifying between the different types of income, and for the authorities in enforcing the distinction. More broadly, the compliance and administrative costs entailed by a tax system increase with its complexity.

These considerations emphasize the need to put administrative and compliance costs firmly in the picture in designing a tax system.[78] This is especially true for taxes on international business, where sophisticated taxpayers and their advisers are able to take advantage of arbitrary distinctions in tax law. Profit shifting by multinational companies could result in smaller or greater economic inefficiencies and deadweight costs—as some companies may take less account of the formal tax system in their decision making, but also as competition between companies may be distorted. But the costs of such profit shifting to companies and the costs of combating it to tax authorities both represent costs to society. We therefore take the costs of administration and compliance to be an important factor in considering the design of taxes on international business profit. This is a particular problem for developing countries which, despite capacity building, have not yet established resources to be able to deal adequately with the taxation of business profit at a domestic level, let alone when multinational businesses are involved.[79]

A final issue on costs of compliance and administration is the potential costs that may be incurred in tax reform. Systems for compliance and administration are already set up for existing systems, and practitioners already have knowledge and experience of existing tax systems. Marginal changes from existing tax

[76] Some estimates of administration and compliance costs under the existing system are provided in Chapter 3.

[77] See Slemrod and Yitzhaki (1996) for a formal statement of this principle. Tax authorities should not invest in tax collection up to the point at which their marginal costs are equal to their marginal revenue, since the costs are a true resource cost to the economy, while revenue generated is purely a transfer from the private sector; see Slemrod and Yitzhaki (1987). Note also that the costs to society are lower for $1 of compliance costs paid by the taxpayer compared to $1 of administrative costs paid by the government. That is because the administrative costs are generally financed from taxation which itself incurs a deadweight cost.

[78] An emerging literature has emphasized the importance of these costs for tax design; see, for example, Slemrod and Gillitzer (2013) and Keen and Slemrod (2017).

[79] The challenges posed by BEPS to developing country tax administrations are discussed by Lennard (2016).

systems may induce relatively small additional costs. More fundamental reform may incur much larger costs, depending on the nature of the reform. But of course, in evaluating fundamental reform, it should be remembered that specific costs of change should be incurred only once; any changes in ongoing costs are incurred continually.

2.5 Incentive compatibility

Incentive compatibility is not commonly among the list of desirable features of a tax system. But it should be, especially in the case of the taxation of international business profit, where the existing system is far from incentive compatible.

In broad terms, the idea of incentive compatibility is that each individual economic agent can achieve her best possible outcome while following the norms established by a group of agents. This implies that there can be no gain to failing to cooperate with other agents.

In the context of business-level taxes on profit, tax competition illustrates the absence of incentive compatibility. Suppose two countries, A and B, both have identical tax systems with tax rates of 25% on profit from activities taking place in each country. If A then reduces its tax rate, it will create an incentive for businesses to move their real activity to A, and also to shift profit to A. Both of these impose a cost on B—known a 'negative spillover' in economists' jargon. A likely response from B is to reduce its tax rate as well. This is the essence of the tax competition problem which has been internationally active since at least the mid-1980s when the UK and the US both reduced their corporation tax rates, but which has also been well-known in federal countries like Switzerland for many decades. The resulting reduction in tax rates around the world has been well-documented and is illustrated in Chapter 1.[80] Such competition can take many forms—a reduction in the statutory tax rate, but also more generous provisions, for example, for deductions for interest.

There are two key points here. First, that each individual country has an incentive to undercut the other. But, second, the ultimate result of doing so is to potentially make both countries worse off—since they end up with tax rates below those they would prefer.[81]

It is debatable where we now stand in the tax competition game being played out between governments. But it seems unlikely that any snapshot of the distribution of tax rates across countries is an equilibrium outcome. It seems more likely that the process of adjusting tax rates is slow and cumbersome and has not yet reached

[80] More specifically, there is evidence of a competitive process, in that countries respond to changes in the tax rates of other countries: see, for example, Devereux et al (2008); Altshuler and Goodspeed (2015); and the review by Devereux and Loretz (2013).

[81] For the potential impact of tax competition on the welfare state, see Avi-Yonah (2000).

a final point. There may be factors that prevent countries setting taxes on corporate profits to zero (such as trying to maintain a backstop for taxes on personal income, to exploit quasi-rents from 'sunk investment' or to create equal treatment for businesses with different legal forms), but this is certainly one plausible outcome of tax competition.[82]

Note that this process of tax competition is being played out despite there also being significant cooperation between countries. The existing tax treaty network is a key example of cooperation, but the extent of cooperation is increasing markedly, partly as a result of greater exchange of information and other factors contained in the OECD/G20 BEPS recommendations. This cooperation limits double taxation, helps tax administrations, and is increasingly designed to counter 'double non-taxation'. But it does not currently significantly limit the powerful economic forces which drive strategic national tax policy making.

A key aim of any reform of the taxation of international business profit should be to reduce or eliminate this incentive for countries to compete with each other and hence undermine the international tax system. A good system would exhibit incentive compatibility. In this context, if one or more countries operated a particular tax system, then other countries would have an incentive to join that tax system, rather than stay apart from it. For a country operating the system, there should be no incentive to undermine it by setting lower rates than other countries that operate the same system. The same should apply to the first mover—in principle, an incentive compatible tax system would be one worth undertaking even unilaterally. Incentive compatibility is important for creating stability. In turn, stability reduces uncertainty and thereby supports investment and economic activity.[83]

Competition is not a necessary feature of international tax. Competitive pressures to reduce tax rates are much more powerful for origin-based business-level taxes than for other taxes. For example, there is very little pressure for a country to reduce VAT rates to match lower rates in other countries. The reason is clear. VAT is levied in the country of the sale—the destination country. Businesses cannot easily move the place of sale to reduce their tax liability; as a result, governments do not need to reduce their VAT rates to attract business. There is also generally little pressure to reduce tax rates on worldwide personal income because of lower personal income tax rates in other countries. These differences from business-level taxes reflect the location and the mobility of these tax bases and suggest that tax competition—and the resulting instability—may not be an inevitable feature of taxes on profit.

[82] For a review of the theoretical literature on tax competition, see Keen and Konrad (2013).

[83] There is a growing literature on measuring uncertainty, and the impact of uncertainty; see, for example, Baker et al (2016) and Bloom (2014). There is relatively little on the effects of uncertainty about taxation, although recent surveys that document these effects are Devereux (2016) and IMF/OECD (2017).

3. Possible rationales for business-level taxes on profit

Having discussed the criteria that should be used to evaluate taxes, especially business-level taxes on profit, we now consider related questions: should there be any such taxes, and if so, why? In this section we consider four possible rationales for business-level taxes on profit.

We start in Section 3.1 by analysing the argument that such taxes are necessary to support the personal income tax—as it applies to labour income and capital income. The argument is that in the absence of business-level taxes, individuals may be able to shelter their income inside a business without paying tax. Even if there were a tax on distributions from the business to the owners, the owners could gain by deferring tax from the time the profit accrues until the time it is distributed. This is probably the most commonly advanced rationale for a separate business-level tax. For example, in a recent review, Gordon and Sarada (2019) take this as given, stating that: 'the problem that the corporate tax was designed to solve is the more favourable treatment of income accruing within the corporate sector under the personal income tax'. In the same vein, Boadway (2015) considers the corporate income tax as a complement to the personal income tax: 'a withholding tax to prevent shareholders from sheltering their income indefinitely within the corporation'.[84]

However, it is far from clear that existing business-level taxes do very well in meeting this aim—this is particularly true when we consider cross-border investment between open economies. Furthermore, it is not easy to see how they could be redesigned to meet this objective. There are several strands to this argument. We examine them closely, since the optimal design of a separate business-level tax depends crucially on whether its primary aim should be to support the personal income tax.

We begin by distinguishing between the role of a business-level tax in a closed economy and an open economy. There is a reasonable argument for a business-level tax on profit as a backup to the personal income tax in the case of a closed economy. In an open economy setting, where the investor and the business are located in different countries, we have to distinguish two forms of personal income tax: one based on the worldwide income of residents, and the other an origin-based tax on the income derived in the country but accruing to a non-resident. The latter may apply, for example, to a foreign private investor owning real estate in the origin country, a foreign sole trader who carries on his business through a local permanent establishment, or a foreign resident being a partner in a domestic commercial or professional partnership. Most countries employ both forms of the

[84] This backstop function is also related to it being easier to enforce the tax at the business-level, see Bird (2002).

personal income tax. We therefore have to ask whether there is a case to establish a business-level tax on profit to support either form of personal income tax.

We argue that the case for a business-level tax on profit is most precarious viewed from the perspective of the investor's country of residence. Here, consistent with the 'ability to pay' principle, an individual generally pays income tax in her country of residence on all her income wherever it is earned. But existing business-level taxes do not mirror this; in practice they are normally levied on an origin basis, where the economic functions and activities of the business take place. This undermines the case for a business-level tax on profit as a backup to the personal income tax in this context. On the other hand, there is a case for a business-level tax as a backup to personal income tax if the latter is levied on an origin basis, although the case for levying personal income taxes on this basis can itself be questioned.

The second rationale we consider in Section 3.2 is that a business-level tax on profit is justified on the basis of the 'benefit principle'. As set out above, the benefit principle holds that individuals or businesses should contribute to the costs of providing public goods and services in the country in which they operate and earn income or profit. It may be argued that this principle justifies taxing personal income or business profit on an origin basis. While this may be persuasive in a general sense, we argue that this principle does not justify a tax on personal income or business profit per se, since the level of profit may be a poor guide to the use made by the business of publicly provided goods and services.

The third rationale we consider in Section 3.3 is that such a tax can be designed to meet well the criteria of a good tax set out above. Chapter 3 argues that the existing system does not match the criteria well. However, it may be that a reformed tax could do much better; we set out a broad approach that would do so.

The fourth rationale we consider in Section 3.4 is that particular countries may not have alternative means for raising the tax revenues they require. As noted above, in general we use our criteria to choose between alternative ways of raising a given tax revenue. But where the capacity of tax administrations is weak, then it may not be possible to reach a desired level of revenue. In this case, the focus may be rather more on the issue of administration than the other criteria. In particular the criteria are primarily designed to aid governments in choosing between alternative taxes that could raise the required amount of revenue. But in lower income countries the problem for governments is more that they are unable to collect as much revenue as they would like. A very important factor for such countries is then simply whether a specific tax would indeed be successful in raising revenue. In this context, applying taxes to businesses can be a successful strategy, since businesses tend to have formal records which aid tax collection. Even then, however this need not imply that the business-level tax base should be profit, as opposed to a tax base that might be more easily observed. And this approach does not mean that the other criteria do not also remain relevant.

3.1 Business-level tax as a backup for personal income tax

We consider the case for a business-level tax as a backup for personal income tax in two settings: a closed and an open economy.

3.1.1 Closed economy

A closed economy implies a domestic setting in which the owner, the business, and all of its activities and sales are in the same country.[85] As the personal income tax traditionally covers both income from labour and income from capital, it is necessary to consider both dimensions.

We start with the problem of sheltering labour income inside a business, partly by describing it as capital income. This is typically a problem of relatively small, owner-managed businesses, and we argue it can largely be dealt with by specific personal income tax rules for such cases.

We then continue with the problem of sheltering genuine capital income in a business, which is more general and could apply to any size, and legal form, of business. The key problem here is that, in the absence of a business-level tax, funds could be accumulated inside the business tax-free. The extent to which that is a problem depends on whether the returns to saving—that is, the capital income of the owner—both should be, and actually are, taxed under the personal income tax if they accrue outside a business.

3.1.1.1 A backup for personal tax on labour income

An individual who both owns and manages a business has a choice as to whether to take her remuneration in the form of a wage, as compensation for her labour, or profit, as a return to her investment.[86] Even as a matter of principle, it can be extremely difficult to draw a dividing line between these two forms of income. An owner-manager typically both provides a labour input and a capital input into the business; the capital input may include retained earnings from previous periods. If there is a tax advantage of one form of income over the other, then there is a clear incentive for the owner-manager to choose the lower-taxed form of income. This most commonly applies to small businesses but can also apply to very large businesses that are largely owned by the original founders who continue to manage the business.[87]

The possible role for a business-level tax in this case stems from a personal income tax treating profit and labour income differently. This could be because the

[85] Such a domestic setting could also apply to an individual business in an open economy, as we discuss below.

[86] The issues discussed in this section apply equally to most businesses in an open economy. Typically—although not necessarily—if the owner is also employed by the business she will be both resident and working in the same country.

[87] This problem has been discussed most intensely in the context of the 'Dual Income Tax' introduced in some Nordic Countries in the early 2000s. See Birch Sorensen (2010).

two forms of income are taxed at different rates, though that is not a structural problem of the tax system. Labour income represents a payment to the owner-manager as a worker, which is straightforward to tax. But profit can be kept within the business and not distributed to the owner. In the absence of a business-level tax, this may mean that tax on the profit earned inside the business can be deferred until it is distributed to the owner. This represents a gain to the owner, relative to taxing the profit as it accrues inside the business, as we describe further below.

This gain could, in principle, be exploited by any individual employee. The individual could set up a business, arrange a contract between that business and her employer regarding the labour contract, and have a fee paid to the business for her labour services. This fee could then be treated as profit inside the business. If it were not immediately paid to the owner, then there would be a benefit through deferring the personal tax. As a practical matter, however, this seems to be unrealistic for the vast majority of employees for whom the option—even if feasible—would also probably take away worker protection under social security law and employment law.[88]

On the grounds of fairness, personal income tax should be protected from such avoidance schemes. But it is not clear that having a separate business-level tax is the most efficient way to close this loophole. Most business-level taxes create significant costs, both direct and indirect, as is emphasized throughout this book, partly because they apply not just to owner-managed businesses, but also to huge multinational companies. Are those costs justified in return for closing this loophole?

There are other options in the case of an owner-managed business; and most countries already have anti-avoidance rules to prevent the most obvious ways of sheltering employment income as business-level capital income. One approach for an owner-managed firm would be 'pass-through' treatment, under which the profits of the business would be attributed to shareholder and taxed as personal income. This can be difficult for a complex business, where ownership changes regularly, but is relatively straightforward for a small business, owned by relatively few individuals, which are the main focus of this issue.[89] In this case, there would be no need for a further tax on distributions from the business to the owner. Of course, there would be many practical difficulties if this approach were to apply to all business-level profit, as we discuss in the next section and in Chapter 4.

3.1.1.2 A backup for personal tax on capital income

An investment in a business is simply one form of saving that an individual may undertake. In the absence of a business-level tax, the profit earned—representing

[88] See Batchelder (2017) and Adams et al (2018).

[89] This is the treatment of S-corporations in the US, which can have a maximum of 100 shareholders. This seems more than enough to deal in most cases with the ambiguity of labour and capital income, since labour income will be paid to an individual while profit belongs to all the owners.

the capital income of the owner—may again not be taxed until it is distributed to the owner. The individual would then benefit from deferral of the tax. This benefit may be available for investment in any business, of any size, and so represents a more significant problem than simply sheltering labour income.

As an example of the value of sheltering income in a business, suppose that an individual saves 1,000 for ten years, and earns a rate of return pre-tax of 10% a year. In the absence of tax, this would be worth 2,594 at the end of ten years. Suppose that the funds were invested in a business that did not face tax as the income accrued, but that the saver paid tax at a rate of 20% on the eventual return of 1,594.[90] Then she would pay tax of 319 and be left with a total of 2,275. Compare this to the case in which the income is taxed each year at 20% as it accrues. Then in effect the post-tax rate of return is only 8%, and the value at the end of ten years would be only 2,159. The difference of 116 in these values reflects the gain from deferring tax.

Whether this is a significant problem depends on whether capital income—as a return to savings and including both the normal return and any economic rent—should be taxed as a matter of principle. It also depends on whether it is in fact normally taxed. If both are true—that there is a good case for taxing capital income, and that forms of capital income arising outside a business are generally taxed—then there may be a case for a business-level tax to put the taxation of that form of saving in line with others. We first address the case for taxing capital income. We then go on to examine whether a business-level tax on profit would be a useful component of a tax on capital income.

Is there a good case for taxing capital income, and is capital income taxed in practice? The question of whether capital income —including the normal return—should be taxed is controversial and has been the subject of healthy debate.[91] Based on efficiency grounds, the classic results from economic theory suggest the answer is 'no'.[92] However, the theoretical literature has investigated many cases where the assumptions underlying the classical results do not hold.[93] The Mirrlees Review (2011) identified several situations where the optimal capital income tax rate might be positive. They include cases where: there is a positive

[90] That is, the value distributed of 2,594 less the initial investment of 1,000.

[91] For recent contributions, see, for example, Mankiw et al (2009); Banks and Diamond (2010); and Diamond and Saez (2011).

[92] The basic idea is that a tax on the normal return creates a wedge between the pre-tax and post-tax rate of return on saving, and hence a disincentive to save and consume in the next period instead of this period. Over time, due to compounding of the rate of return, this wedge grows at a constant rate. In order to avoid tax compounding that grows without limit as the horizon extends, the optimal rate must go to zero, strictly asymptotically: see Chamley (1986) and Judd (1985). However, this result is disputed by Straub and Werning (2020). In a two-period model, Atkinson and Stiglitz (1976) show that, given various assumptions about preferences, a tax on the normal return is redundant in designing an optimal tax structure.

[93] See Banks and Diamond (2010) for an excellent review of this literature.

correlation between earnings capacity and willingness to save to consume at a later date; there is underinvestment in human capital due to borrowing constraints; and if earnings are risky, then individuals save more, and those with a good outcome end up with too much wealth relative to their intention. These theoretical arguments do not give a clear prescription for the rate at which capital income should be taxed—or even in some cases whether it should be positive or negative. It is certainly not the case that this literature necessarily supports the view that capital income should be taxed at the same rate as labour income.

There are of course also arguments based on fairness and issues of implementation. On fairness grounds, it may seem straightforward to some that those who rely more on capital income (who, in any case, tend to be the better off) should not escape tax on that income. However, there are counter-arguments. An individual who is willing to defer consumption from this period to the next will expect to earn a normal return to her saving that compensates for the delay in consumption. Hence her spending will be higher in the next period, but in net present value terms, taking account of the delay, the consumption is the same. Indeed over a lifetime, total income (including gifts and inheritances received) must equal total expenditure (including gifts made and inheritances left). In principle, the fairness of a tax system could therefore be based on either total income or total expenditure. In this context, it is not necessary to tax the normal return to saving to create a fair tax system—though it would be necessary to tax gifts and inheritances appropriately.

A more practical issue is whether it is feasible to tax all forms of capital income at the same effective rate (as would be required to achieve production efficiency). One of the motivations for the Meade Committee's (1978) proposals for an expenditure tax for individuals is that it would result in the same marginal tax rate on all forms of capital income: in their case, zero. It is much more difficult—and arguably impossible—to apply the same effective positive tax rate to all forms of savings and investment—among other things, this would require an appropriate depreciation for capital assets, effective accrual-equivalent taxation of capital gains, and appropriate treatment of inflation and relative price changes.

Against this, a practical issue in some countries is that governments have a much smaller range of choice of feasible tax instruments. In this case, the more relevant factor for governments is that some revenue is raised to support public spending. If capital income of some individuals can be taxed, then it may be optimal to do so. Another practical issue, as we discussed above, is that the fuzzy borderline between labour and capital income is a practical argument in favour of taxing capital income at the same rate as labour income, at least at the margin.

As well as asking whether capital income should be taxed in principle, we should also ask whether it is taxed in practice. It is one thing to design a business-level tax on profit on the grounds that capital income should be taxed; but if it is not generally taxed, then the practical case for taxing business profit is much weakened.

From the perspective of an individual saver, there are many forms of saving, and almost as many forms of taxation of the return to saving. It is customary to identify three elements of the taxation of saving:[94]

- Is the saving made out of taxed, or untaxed income?
- Is the return to saving taxed as it accrues?
- Is the payment of the return (and possibly the repayment of the initial saving) to the saver taxed?

Different forms of saving have different treatment in these three respects. For example, saving in a bank account is generally out of income that has already been taxed. The interest accruing may be taxed on accrual, or it may not be taxed at all. Generally, there is no tax charge on withdrawal of funds. As another example, saving through a pension fund is typically permitted from income before tax, and the return at the level of the fund is not taxed as it accrues. However, the eventual payment to the individual is taxed.[95] All three elements of the tax need to be taken into account in determining an effective tax rate on the capital income generated. For example, the pension fund treatment is akin to a cash flow tax, which is equivalent to a tax on economic rent.

But there is also a deeper issue here. A bank earns its profit by borrowing from a depositor and lending the funds, with a mark-up on the interest rate. The ultimate return that the depositor receives may therefore depend not only on her own tax, but also on the taxation of the bank and the taxation of the person or business that borrows from the bank. Similarly, savings in a pension fund do not stay in the fund—otherwise they would make no return. They are mostly invested in businesses that use the funds to undertake real activity on which they earn a profit.

So it is not possible to determine the appropriate taxation of business profit by comparing it to, say, the taxation of the returns in a pension fund. In principle, we would have to compare the taxation of business profit with the taxation of returns that ultimately did not arise in a business—for example, purchasing a property or lending to the government.

Where does that leave us? A full review of the literature on the optimal taxation of capital income is well beyond the scope of this book. So is a full review of the actual tax treatment of capital income—including all the relevant levels of taxation. That makes the appropriate treatment of the taxation of profit at the business-level difficult to determine.

We therefore take a short cut. Instead of opining on whether capital income should indeed be taxed, at what rate, and whether it is in fact taxed, we address an easier question. Let us assume that there is a good case for taxing capital

[94] See, for example, Mirrlees et al (2011).
[95] A much more detailed account is given in Mirrlees et al (2011).

income and that it is in fact taxed: then what are the implications for business-level taxation of profit? In particular, assuming we want to tax capital income, is a business-level tax on profit a useful and cost-effective component of the ways of doing so?

Can a business-level tax on profit be a useful element of a tax on capital income? Recall that in this section we are considering the case of a closed economy; we consider an open economy below. In this setting we would aim to tax all forms of capital income at the same rate. This would be fair, in comparing individuals who choose different savings instruments. It would also be economically efficient in not distorting the choice between alternative savings instrument. So, the system should have the aim that individuals could not avoid personal income tax on their capital income by sheltering it in a business. In this setting, there is therefore a plausible case for taxing the profit of the business as it accrues. If there is more than one marginal tax rate in the personal income tax system, then it is not possible to tax the profit at the rate of all possible owners simultaneously. Nevertheless, a tax on business profit may be a useful approximation to the personal income tax.

A business-level tax on profit is not the only possibility, though. Anti-avoidance rules, or pass-through treatment, might achieve this. But either approach is probably more difficult in the case of genuine capital income, compared to labour income masquerading as capital income. For example, pass-through treatment may work well for a business in which there are not frequent changes of owners. However, there are clearly problems in using such an approach for a widely owned business, especially one that is listed. Suppose for example, that one shareholder of a company bought shares mid-way through the accounting and tax year, and then held those shares until the year end. It would be necessary to identify the profit made in the remaining part of that year to attribute to that shareholder. Of course, this could be done on a pro-rata basis, but that may not adequately reflect the profit that should accrue to the shareholder. In larger corporations, then there may be additional problems with multiple classes of stock and information problems. There is also an issue of liquidity; pass-through treatment would apply a tax to an individual shareholder even if the income were still held by the company as retained earnings.[96]

Where taxing on a pass-through basis is not feasible, an alternative might be to modify existing taxes on personal income and capital gains. For listed companies, for example, it may be possible to cut through this problem by identifying the period-by-period capital gain attributable to the owner by tracking movements in

[96] These issues are discussed in more detail in US Treasury (1992).

the share price.[97] An alternative approach—as in Auerbach and Bradford (2004)—is to adjust the effective rate of taxation so that it rises with the period of the investment, to offset the gain from deferral. These ideas are discussed in more detail in Chapter 4.

One further point should be noted. We are presuming here that there is a tax on the normal return to capital for other forms of savings and investment. That raises the question of whether any tax at the business level should also fall on the normal return. This would not be the case for a tax falling only on economic rent, for example.[98]

3.1.2 Open economy

We next consider an open economy, and in particular the cross-border situation in which the residence state of the investor and the state where the business entity is active are different. Does it make sense to introduce a business-level tax in such cases in order to complement the individual income tax? This is a more complicated question, since under existing systems, personal taxes are both levied on a worldwide basis—an individual resident in country A is taxed in A on income derived anywhere in the world following the concept of 'unlimited tax liability'—and on an origin basis following the concept of 'limited tax liability' of foreign residents as regards income derived on a territorial basis. We must therefore examine separately the rationale with respect to residence-based income taxation and with respect to origin-based income taxation.

3.1.2.1 Worldwide taxation by the residence country

As we have seen, in a closed economy, with a personal tax on capital income, a tax on profit at the business-level may serve as a backup to the personal income tax. But a more difficult problem arises when the domestic investor owns shares in a non-resident company that may not have any connection with the domestic country.

To proxy for the personal tax on the worldwide income of domestic residents, the domestic tax authority would in principle have to tax the retained earnings of any company in the world in which a domestic resident owned shares. It is subject to debate whether the domestic tax authority would have the jurisdiction to apply a tax to such non-resident companies. Further, such an approach would of course entail being able to collect and audit information on any such company. And to do

[97] This approach has been proposed by Toder and Viard (2014), and we discuss it in more detail in Chapter 4.

[98] Other proposals for fundamental reform have taken a different approach. For example, the Meade Committee (1978) and Hall and Rabushka (1983) effectively proposed forms of an expenditure tax at the individual level, which would not fall on the normal return to capital. This fits with cash flow tax treatment at the business-level, since such treatment also does not tax the normal return to investment. It is sometimes argued that taxing only economic rent at the business-level is only compatible with expenditure tax-type treatment at the individual level, for example, see Mintz (2015). In this section we argue otherwise.

this, it would in principle be necessary to look through all domestic savings vehicles such as mutual funds and pension funds, to identify each resident's claim to retained earnings arising in each foreign company. Without very substantial automatic exchange of information among countries it is difficult to see how this could be achieved on a universal scale.[99] More likely it would need to rely on information provided by foreign tax authorities on the income of domestic shareholders. It is, of course, possible for the domestic government to tax flows of income that are repatriated. But that is akin to taxing dividends from a domestic company to its shareholders; that does not amount to a tax on all capital income as it accrues.

It might be objected that outbound portfolio investment is a relatively small problem; that home bias in investment and savings portfolios means that in many countries the bulk of corporate profit due to domestic shareholders is still generated in companies that are also resident domestically. This argument has typically been made in respect of the US. However, Rosenthal and Austin (2016) estimate that even in the US foreign investors directly owned around 26% of US corporate stock in 2015; the equivalent percentage for UK listed companies for 2018 is 55%.[100] For outbound investment, UK data from 2015 on the holdings of mutual funds indicate that 56% of their holdings of corporate securities were in overseas securities. In any case, in considering fundamental tax reform, we should take the long view. The current system for taxing international profit originated in a very different world in the 1920s. If we want to consider lasting fundamental reform now, we need to imagine what the global economy will look like in the future. And it seems inconceivable that the economy will be anything but more global. Designing a tax system in the hope that not too many residents will directly or indirectly purchase shares in foreign companies in future years is unlikely to provide a base for a stable tax system.

Outbound portfolio investment is not the only problem. To support a residence-based worldwide income tax, a domestic tax on business profit would in principle need to tax the accruing worldwide profit of any business owned by domestic residents. That is, it should also include profit earned—whether or not distributed—in foreign affiliates of any domestic business. On the whole, the international tax system has been moving away from taxing the profit of foreign affiliates even when it is repatriated.[101] The 2017 US tax reform did introduce the 'Global Intangible Low-Taxed Income' (GILTI) provision to tax foreign-source intangible income of US resident companies, calculated as profit in excess of a 10% rate of

[99] However, exchange of information among counties has grown very significantly in recent years, and the US has been remarkably successful in collecting information of this form under its Foreign Account Tax Compliance Act (FATCA), enacted in 2010 to target non-compliance by US taxpayers using foreign accounts.

[100] Office for National Statistics (2019).

[101] Practice varies across countries. China, Brazil, and India do seek to tax repatriated profit. Most other major countries currently no longer do so.

return to investment on tangible capital. A 'minimum tax' based on the location of the parent company is also currently under active consideration by the OECD's Inclusive Framework.[102] However, neither the GILTI provision, nor the proposed minimum tax, are limited to businesses owned by domestic residents.[103] They therefore cannot be easily justified as a means of taxing the worldwide capital income of domestic residents. We discuss in more detail the prospect of taxing businesses on their worldwide income in Chapter 4. For now, we can just point out that to the extent to which the business-level tax on profit does not tax outbound direct investment on the same basis as outbound portfolio investment by individuals and domestic investment by individuals, then it provides a poor proxy for a residence-based personal tax on worldwide capital income.

It might be argued that there could be a balance at a macro level. That is, suppose that country A taxes the profit of a business resident in A but owned by residents of B. And country B taxes the profit of a business resident in B but owned by residents of A. If the scale of cross-ownership and profitability between the two countries were roughly balanced, then the origin-based business-level taxes on profit collected in A and B would be similar, and might then represent a rough proxy for the residence-based personal income taxes in A and B. However, that is a rather big 'if'. There is no particular reason why the cross-ownership of profit should be balanced in this way.

These drawbacks of the business-level tax on profit in this setting are severe. As we discus below, in a small open economy, an origin-based business-level tax on profit would be a poor proxy for a residence-based personal income tax.

3.1.2.2 Taxation of non-residents by origin country

This leaves the question as to whether there is a case for a business-level tax on profit as a proxy for a personal income tax levied on an origin basis. In answering this question, we set aside, for now, whether there is a case for countries to levy personal income tax on an origin basis. We return to this question in Section 3.2.

Policy makers should act consistently. If the tax system in the country of origin maintains the concept of 'limited income tax liability' for foreign residents, it is reasonable to safeguard that concept by establishing a business-level tax for incorporated businesses. Consider an example. An individual resident in country A who rents out a property that she owns in country B may be taxed on the rental income in country B. This is much more akin to an origin-based tax on business profit. If country B does tax the rental income as it accrues to the owner, then it would also make sense to tax the same income if the property were owned through a corporation resident in B. In this sense, a business-level tax in B on the income would be a reasonable backup to the origin-based income tax in B.

[102] OECD (2019a, 2019b, 2019d).

[103] For the conceptual background of GILTI-style taxes see Shay et al (2015).

3.1.3 Conclusions

In this section, we have discussed the case for using business-level tax on profit as a backup for personal income taxes. There is a plausible case for a business-level tax on capital income in a closed economy. There is also a plausible case for such a tax in an open economy as a backup to a personal income tax levied on an origin basis, although we have not yet discussed the case for taxing personal, or business, income on an origin basis.

However, it is virtually impossible to see how an origin-based business-level tax could usefully support a tax on the worldwide income of domestic residents where there is both international portfolio and direct investment. One might hope that there could be some balance in tax revenues; under existing systems, countries collect origin-based taxes on business level profit, but do not collect personal income tax on all worldwide income as it accrues. It would be a leap of faith to suppose that these two factors offset each other.

3.2 Benefit principle

As has been described above, existing taxes on business profit are not generally levied in the place of residence of the investor. They are typically—very broadly, and with many exceptions—levied in the origin country in which the economic activity generating the profit takes place. In more technical terms, they are levied where the functions and activities of the business take place, or assets are held.

In searching for a rationale for a tax levied on this basis, some have argued for the benefit principle, that it is fair on the grounds that the business makes use of publicly provided goods and services in the place in which it does business.[104] This could include a wide range of goods and services from infrastructure to the ability to enforce law. On the face of it, this seems reasonable—to the extent that the business does make use of such goods and services, then it may seem fair that it contributes to their cost.

But there are three problems with the claim that this contribution should be based on the profit earned in that jurisdiction. The first two apply generally to the notion that a tax on business profit should reflect the benefits received from publicly provided goods and services. The third concerns the international allocation of profit.

The first problem returns us to the issue of who effectively bears the cost of the tax. We cannot simply leave it as a tax 'borne' by the business—all taxes must ultimately be borne by individuals. The benefit principle argument seems to make some sense if the tax is borne by the owners of the business. This seems consistent

[104] See, for example, Vogel (1988a, 1988b, and 1988c).

with the principle—that those who make use of publicly provided goods and services should contribute to their cost (even if they are not personally resident). This is perhaps less obvious if the tax is passed on to consumers in higher prices or workers in lower wages. It is possible to argue, though, that both consumers and workers benefit from the business and so it is fair for these groups to bear the cost of the business' contribution. In this way, if the tax is seen as representing the cost of producing the good or service purchased by the consumer, for example, then it may be thought reasonable for this cost to be treated like any other cost; initially paid by the business, even if ultimately passed on in higher prices or lower wages.

The second problem is related. Different businesses make very different use of publicly provided goods and services. And profit also varies considerably between businesses. But there is not necessarily much correlation between the two.[105] Think of a large factory, employing a substantial workforce, making a great deal of use of available transport facilities, and for good measure polluting the atmosphere. But it may well make very little profit. By contrast, take a business developing software. This may be extremely profitable yet use only a fraction of the resources of the factory. On the benefit principle, we should be seeking to relate tax liabilities to the use of publicly provided goods and services. That suggests some kind of fee for their use—in our example, with a larger fee being paid by the factory than the software business. It does not suggest a tax on profit, and certainly not a tax of the kind that is currently used in most countries.

The third problem requires us to go a little deeper into how the profit of a multinational company is allocated to different countries. Active business profit is largely taxed in the place in which economic activity takes place. But a significant part of profit relates to passive income—for example, interest and royalty payments—which is typically taxed in the place in which the income is received, that is where a loan is made, or where an intangible asset is owned. The benefit principle seems much weaker in applying to such income since, for example, owning an intangible asset in a country may make relatively little use of publicly provided goods and services. Of course, there are some benefits—for example, in the legal protection of property rights—but these benefits would apply much more widely to where the company has activities. Indeed, one form of property rights is patent protection, which is most relevant in the place in which the good or service is sold.

These considerations do not rule out an appropriate fee for the provision of public goods and services. But they do raise a question as to whether a tax on business profit is the best proxy for such a fee. There is an overlap with other considerations here. Other ways of charging a fee may also create problems of economic efficiency, although—depending on how they are levied—they may also be easier to collect and be less susceptible to avoidance and evasion. The balance between

[105] See, for example, Schön (2009).

these considerations may vary between countries and the strength of its tax administration. It is clear, for example, that the existing methods of allocating profit between countries are very complex; and are likely to become more so. Developing countries in particular that have relatively small and less sophisticated tax authorities may find that the balance of these factors favours a simpler approach, even though it may induce greater economic inefficiencies.

These points need also to be related to the role of a business-level tax as a complement to personal income taxation. This goes to the heart of 'limited tax liability' as applied to foreign resident individuals who are subject to individual income taxation on an origin basis. The arguments against basing business-level taxation on the benefit principle also apply to individual income taxation. If a foreign resident owns real estate in the country of origin or carries on a business through a permanent establishment, the notion that local income taxation works as a *quid pro quo* for public benefits received should also be challenged. To put it differently: the persuasive force of the benefit principle does not depend on whether income is derived by a local business entity owned by a foreign resident or directly by that foreign resident. Therefore, whilst we argued—in Section 3.1.2—that if a personal income tax is levied on an origin basis then an origin-based business-level tax is necessary as a backup, we note that the case for an origin-based personal income tax is not easily made on the strength of the benefit principle.

3.3 The possibility of a tax that meets the evaluative criteria

A third possible rationale for a business-level tax on profit is that it could meet the criteria that we set out above for evaluating taxes. That is, if some form of the tax could be fair, economically efficient, robust to avoidance, with reasonable costs of administration, and incentive compatible, then it would be a good tax. We argue in Chapter 3 that existing business-level taxes on profit do not do well in meeting these criteria. But that leaves open the possibility that some form of such a tax could meet these criteria. If a tax which met these criteria could be designed, then meeting them would provide a sufficient rationale for the tax.

We now consider this possibility. We do not set out detailed proposals for such taxes here—this is left to Chapters 6 and 7. Instead we simply make the case that such a tax would be justified and begin to consider what it might look like. In this section we focus primarily on economic efficiency and fairness; we leave issues of avoidance, implementation, and incentive compatibility to the more detailed discussion.

3.3.1 Taxation of rents

A starting point is to consider taxes on economic rent. We know from the analysis above that a tax that was levied only on economic rent, and which therefore

permitted the owner to receive the minimum required rate of return free of tax would not affect the decision to undertake an investment project. This would be true if investors undertook all investments that yielded any economic rent. In many circumstances then, a tax on economic rent would not generate any excess burden; it would be efficient. We will return to cases where this may not be true in a moment.

But before doing so, it is worth recalling from Box 2.4 that a tax on economic rent would also generally be progressive. In general, we have argued that it is very difficult to determine the incidence of a business-level tax on profit; the tax may be passed on in higher prices to customers, in lower wages for employees, and lower prices to suppliers. It is therefore difficult to say whether a business-level tax on profit is progressive or fair. But a tax on economic rent is a special case. If the assumption that businesses aim to maximize economic rent holds, then the decisions they make will be unaffected by a tax on economic rent; maximizing pre-tax economic rent will require the same behaviour as maximizing post-tax economic rent. This is the basis for the claim that the tax would be efficient. But it also has implications for incidence. In particular, it implies that the prices at which the business transacts with customers, employees, and suppliers will not be affected by the tax; that is, the prices which maximize pre-tax rent are the same as the prices which maximize post-tax rent. That has the important implication that the burden of the tax cannot be passed on to customers, employees, or suppliers; it must be borne by the owners of the business.

That is a striking claim, with strong implications for fairness. If we take the additional step of claiming that business ownership is predominantly seen amongst the better off, then taxing the economic rent earned is likely to be progressive. In many discussions of tax policy there is thought to be a trade-off between efficiency and fairness; this is an exception. A tax on economic rent can be both efficient and fair.[106]

A caveat is in order here. A tax based on economic rent as it accrues inside a business will generally fall on the owners of the business at that time. But owners of a business can also receive what amounts to an economic rent in anticipation of future profit. Suppose for example, that an oil company discovered a new and highly profitable well. We would expect the value of that company to increase immediately, reflecting the higher stream of profit in the future that is now expected. That amounts to an immediate gain for the current shareholders. If it were taxed it would fall on those current shareholders, rather than the shareholders at the time the income is eventually earned. But that does not detract from the likelihood that the tax would be progressive.

[106] Note that this does *not* generally apply to a tax on the normal return earned by a business, since this is likely to be at least partly passed onto customers, employees, and suppliers. In that case we cannot be sure whether the tax is progressive.

However, we must be more careful in our claims of efficiency. As we have already discussed, there may be circumstances in which investors have to choose between two alternative investments each of which is expected to earn an economic rent. The classic example is where the two locations are in different countries and would be subject to different tax rates on the economic rent earned in each. In this case, even a tax on economic rent could affect location choices, and so not be efficient.

3.3.2 Location-specific economic rent

One response to this problem is to consider economic rent that can be earned only in one location: 'location-specific economic rent'. Then in principle that location-specific rent could be taxed by the government of the country in which it is earned without affecting any business decisions. From a national perspective, it is natural for a government to seek to tax economic rents that are specific to its jurisdiction. But this is also efficient from a global perspective, since by definition, the activity cannot go elsewhere, and so there are no negative spillovers onto other countries. There may be many sources of such location-specific economic rent.[107] Here we briefly review the possibilities.

One obvious possibility is natural resources. For example, diamonds can only be mined where they already exist underground. It is true that they are underground in several countries but given the overall restriction in the world supply of diamonds, it seems plausible to suppose that opening a new diamond mine could result in earning economic rent. That economic rent, at least in part, can be located in the place where they are mined.

Location-specific rents can in some cases also be attributed more generally to the place where economic activity takes place. For example, there is a well-known phenomenon of geographical clustering of businesses in the same sector—for example, hi-tech software businesses in Silicon Valley, or financial companies in the City of London. Such clustering appears to bring benefits to the businesses that locate there. Those benefits should ultimately be reflected in higher profit—and that higher profit is location-specific. A location-specific rent may arise in a place of economic activity in any instance where the business has access to a resource where the cost of that resource is less than its value to the business. In the case of a cluster of businesses in the same sector, that may, for example, reflect access to a specialist, highly-skilled workforce. There are many other examples.

One interesting case is where a business can exploit the fact that the local labour force may be willing to work for a low wage—this is the basis of much offshoring, where a business moves production from a high wage country to a low wage country. It is certainly the case that the business may raise its profit by moving production in this way (subject to other costs incurred), and this suggests the presence

[107] For further discussion see, for example, Boadway (2015).

of a location-specific rent in that country. But while that rent might only be earned in low-wage countries, it may not be the case that it can only be earned in a specific low-wage country. It is more likely that there are many countries equally able to supply labour at the same low wage. If so, then the rent is not specific to a single country. As a general point, then, the location-specific rent in one country depends on circumstances arising in other countries.

An important issue related to production-based location-specific rents is the taxation of income from activities that are already established in a location. Suppose, for example, that a business has invested a considerable sum in a new production facility and is now earning a stream of income from it. Such income is typically referred to as a quasi-rent: it appears to reflect rent earned by the facility, but at least part of it reflects the normal return to the original capital cost. Because that cost has already been spent, it is possible that the government may be able to tax the quasi-rent without there being any effect on the behaviour of the business. But this would not be true in the longer run. The prospect for future investors of the government seeking to tax quasi-rents may induce them not to undertake the investment in the first place.

A third source of location-specific rent may be the place in which the final good or service is sold. This generally depends on there being some form of imperfect competition which the business can exploit by reducing the supply of its product to the market in that country, thereby enabling the price to rise, generating an economic rent. The classic example of this is a monopolist, who earns a rent by restricting supply and pushing up the price. This is likely to be enabled by some barriers to entry. For example, there may be proprietary products, products that are protected by patent, intangible assets associated with past purchases, or a number of other factors. By contrast, under perfect competition, businesses take the market price as given, and so this form of location-specific rent in the place of sale would not exist. The existence of this form of location-specific rent also depends on what other markets are available to the business. If the final good to be sold is fixed in supply, and if consumers in many countries would like to buy the good, then the business may have a choice as to where to make the sale; in that case, there may be no location-specific rent in the country in which the good is sold since that rent could also be earned elsewhere.[108]

Another form of rent may not be specific to any location in which the business operates, but is nevertheless associated with a particular business. This can reflect the return to any asset owned by the business which was acquired for less than its

[108] A variant of the case in which location-specific rent arises in the country of the customer is the case in which a business may earn the rent in the country of an immobile 'user' of its services. A customer purchasing, say, an advertisement directed towards the user may be located anywhere, but the advertisement is in effect delivered to the user's screen. This is the basis of where digital services taxes are levied, although they are typically based on revenue, rather than economic rent. For further discussion on these issues in the context of cross-border digital services, see Cui (2019); Shaviro (2019); and Schön (2019).

value for the business. For example, suppose the research and development division of a multinational business invents a process that reduces the cost of production. The cost saving can be achieved in production wherever the business chooses to produce. And although the research and development took place in a single location, it could have equally taken place elsewhere. This cost saving represents a rent to the business but is not location-specific.

Even in this case, it could be argued that all rent has an element of being location-specific, because the business is ultimately owned by relatively immobile residents of a particular country; this suggests that there is a sense in which even that rent is specific to the location of the owners. So if the governments of the countries of residence of the owners could observe that rent, then they could levy an efficient tax on it—unless residents choose to relocate to a different country where they would pay a lower rate of tax.

In principle, then, it might be feasible to consider efficient taxes based on location-specific rent. That could be based on rents specific to the location of resources, production, consumption, or ownership. However, there are at least three difficulties in designing taxes to achieve this.[109]

First, we are interested in designing a general tax to apply to all business profit earned within a single country. We are not attempting to design a specific tax that applies only to a sector or group of businesses that generate a location-specific rent. That means that the tax base would in principle need to be designed in such a way that although it applies generally, in practice it falls only on location-specific rent. An alternative approach would be to argue that the existence of location-specific rent allows the government to engage in a trade-off. Introducing a general tax on economic rent may affect the location of some businesses (for whom the rent is not location-specific), but not those with a location-specific rent. Such a tax would not be efficient, but it may be more efficient than some other taxes. That judgement, however, depends on the proportion of rents that are location-specific.

Second, and crucially, the forms of location-specific rent that we have identified are not exclusive. For example, a business that extracts a resource in one country may have market power in another country, where consumers have a particular desire for that resource. Or a business may rely on more than one form of production-related rent; for example, production of an engine may depend on knowledge encapsulated in two patents that were generated in two different research laboratories, each using location-specific factors. In these cases—and this may apply to many examples, including natural resources—the extent to which one country can tax the economic rent depends on the tax levied by the other country.

[109] In some cases, it may be more practical for the government to auction the rights to produce, or sell, specific goods or services within its jurisdiction. In this case, the value of the location-specific rent may be revealed through auction. Since this would apply only to specific activities, it does not face the same problems as a general tax on profit.

And of course, in both cases, there is also an element of economic rent in the country of residence of the shareholders.

Third, the existence of a unique, location-specific rent does not mean that the rent is easily measured for the purpose of taxation. For example, even if Silicon Valley is the location of vast rents, measuring these is difficult, not least because of the internal transfer pricing companies use to influence the rents' reported locations.

These considerations suggest that, although a tax targeted at location-specific rent would have attractive properties in terms of efficiency, in most cases it would be extremely difficult to implement. If the tax authority had perfect information, it could in principle levy a tax that depended on economic conditions and the actions of other governments. But to implement a general tax would in most cases include taxation of economic rent that was not location-specific. In the end, a country levying a tax on the overall profit of a business would simply rely on an educated guess about the share of the profit representing the location-specific rent.

Perhaps the best opportunity for introducing tax on location-specific rent would be a tax on natural resources. The problems in doing so are similar to those in other circumstances; it may be, for example, that the developer of a natural resource could instead exploit resources elsewhere. However, it seems plausible that a greater share of economic rent generated would be location-specific, and so the trade-off with creating distortions is probably weaker. But this observation suggests that countries with natural resources should use a separate resource rent tax; this need not be part of the general system of taxing business profit.

3.3.3 Other location-specific factors

We have concluded that a key problem of identifying location-specific rent is the non-exclusivity of the location specificity. But we could also consider a more general form of location specificity, based on the immobility of certain factors. As we argue throughout this book, levying a business-level tax on profit in the place in which economic activity takes place is prone to economic inefficiency since that economic activity can move elsewhere. It may do so even if there are only origin-based taxes on economic rent, since the tax rates may differ between jurisdictions.

But other factors—notably individuals—are rather less mobile. One option would be to levy the tax on economic rent in the place of destination or market—where the good or service is sold. The value of immobility is that individual customers are unlikely to move to another country to help the business avoid the tax levied on the economic rent.[110] Thus, suppose a business wanted to sell its product

[110] As we set out in more detail, especially in Chapter 7, the destination-based tax on economic rent will fall on consumers in the market country; so customers may have an incentive to move—but they are likely to be much less mobile than, for example, production factors.

to individuals in the UK. It could produce the product in a number of countries, and its headquarters may be in any country, but its customers are in the UK. This gives the UK the opportunity to tax the economic rent earned by that business without distorting its behaviour.

Note that this is the same principle under which VAT and other sales taxes operate. VAT is seen as a tax on sales in a particular jurisdiction; exports are zero-rated, and imports are taxed. But the same approach could, in principle, be applied to the taxation of business profit, and economic rent.

This argument could also be applied to support taxing large digital companies in the location of their users. Even if the business model used is that revenue is derived from advertisements that appear on users' screens, paid for by other businesses in any location, there is still a sense in which the economic rent could be taxed by the country in which the user is located (subject to issues of implementation). In this sense, as noted above, we might think of the country of the user as being the 'destination' of the sale by the digital business.[111]

We distinguish the argument here from the case of identifying and taxing location-specific economic rent. That is because it does not depend on the economic rent arising exclusively in the market country. For example, we could imagine a medicine developed in a research and development laboratory in country A, and sold to customers in country B. It might reasonably be claimed the economic rent generated from this was created in country A, although this is arguable since the business still requires customers to pay a premium price for the medicine, and they are in country B. Nevertheless, and irrespective of the position taken on whether there is a true location-specific economic rent in this case, a tax could be levied on the economic rent in country B without distorting the behaviour of the business.

In Chapters 6 and 7 we develop in detail two proposals which draw on the insight that taxing profit in the market country can be economically efficient.

3.4 Absence of alternative sources of revenue

So far, we have assumed that the policy maker faces a choice between alternative forms of taxation. We have implicitly or explicitly assumed that other forms of taxation are available, so that the target for total tax revenue is attainable. The question is then which is the best combination of taxes to achieve that revenue target, taking into account our criteria of fairness, efficiency, robustness to avoidance, the costs of administration, and incentive compatibility. This seems a reasonable characterization of the problem in high income countries.

[111] For more detailed discussion of these issues see Devereux and Vella (2017, 2018a); Cui (2019); Schön (2019); and Shaviro (2019).

But it is less clear that this is the case in lower income countries. As set out in Chapter 1, revenue raised in these countries tends to be a much smaller proportion of national income, and revenues from corporation tax tend to make up a larger share of total revenues. That is not typically directly by choice—governments of such countries would generally prefer to raise additional revenue from taxation, and 'revenue mobilization' is a key aim. The reasons for lower tax revenues in these countries stem from a number of factors, including lack of information and lack of resources in the tax authority.

In this context, the arguments that apply to high income countries tend to be less relevant. For example, we should not necessarily be debating the relative efficiency of alternative forms of taxation. Rather, we should be attempting to identify a means of raising tax revenue that is not so costly that it is not worth introducing at all. In this context, too, the role of business is important, especially businesses that are not very small. That is because businesses tend to have better records, keeping better accounts—and so problems of information and implementation are smaller. This is especially true of larger business, and even more so of multinational companies.

This may be an additional reason for a tax on business profit in countries that face problems in raising enough tax revenue. However, note that the benefits identified in taxing business occur here because the business itself is a useful tool in tax administration, and can be required to undertake the role of tax collector. But this feature of taxing businesses is independent of the tax base. It would apply, for example, whether the tax base were sales, the stock of capital, or the income of employees, as well as profit.[112] The choice between these alternative bases therefore needs to be based on considerations other than that the business is a useful element of tax collection. This returns us to some of the considerations above. If governments that seek to increase tax revenues identify advantages to using businesses to collect taxes, then they subsequently need to choose amongst alternative tax bases associated with businesses.

4. Business-level and investor-level taxes

It is commonly believed that a business-level tax on profit combined with a personal-level tax on dividends (and capital gains) represents 'double taxation' and should be avoided. As a result, most countries offer some relief against this double taxation—but relief is often restricted to domestic taxes paid.[113] However,

[112] Best et al (2015) explore the options of taxing business profit or sales in the context of Pakistan.

[113] For example, in Australia and the US dividends from domestic businesses are treated more favourably than dividends received from foreign businesses. In the European Union, this distinction is no longer accepted, which has led to a widespread abolition of imputation systems and their

a simple framework for thinking about these issues suggests that there is no need for such relief; and that restricted relief is likely to create distortions to investment portfolios.

To see this, suppose first that there is a single effective rate of tax that applies to the worldwide personal capital income of each individual.[114] To maximize income, the investor should aim to equalize the post-tax risk-adjusted rates of return on all available forms of investment. If these rates of return were not equal, then she could increase her post-tax income by shifting investment from an asset with a low rate of return to one with a higher rate of return. But if the tax rate were the same on all forms of investment, then this is equivalent to equalizing pre-personal tax risk-adjusted rates of return. Then the tax would not affect the portfolio choice of the investor; she would choose the same portfolio even in the absence of tax.[115]

Further suppose that the investor resides in a small open economy. By 'small' we mean that economy is small relative to the rest of the world. By 'open', we mean that there are no restrictions on flows of capital, or goods or services, between that country and the rest of the world. Under such conditions, activities in the economy will have no impact on the pre-personal tax rate of return available to domestic residents, since that return is determined on world markets. Investors resident in the economy must take the 'world' rate of return (commensurate with the risk of the asset) as given. This characterization reasonably describes all but the very largest open economies, notably the US and China. To a reasonable approximation it would include the UK, for example, which in 2019 had the world's sixth largest GDP, but only a little over 3% of the total world GDP.

In this setting, a rise in the effective tax rate faced by the investor would have the effect of reducing her post-tax rate of return; the incidence would be on the investor. Individual investors and companies would take the rate of return as given even if they are in a large open economy. The difference as the economy becomes larger relative to the rest of the world is that changes in tax rates in the large economy may affect the 'world' rate of return. This would reduce the power of the general argument made here but would not negate it.

Now consider companies that raise finance on world markets (or from financial institutions that themselves raise finance on world markets). In a small open economy, companies would take the required rate of return to the provision of finance as given. Any origin-based business-level tax to which they are liable in the

replacement by different shareholder-relief systems which apply even-handedly to domestic and foreign underlying corporate income tax. In the UK, for example, the same tax rates apply to dividends from both sources.

[114] This is unlikely to be true in practice, but it serves as a useful simplification for understanding the argument.

[115] This is essentially the same as the case for residence-based taxation to achieve capital export neutrality, described above.

countries in which they undertake business would need to be matched by a higher pre-tax rate of return, so that the post-business-level tax rate of return is sufficient. Then the post-business-level tax rate of return must be the same as the 'world' rate of return earned by individuals before personal taxes. In this setting, a rise in the effective tax rate faced by the business would have the effect of increasing the required pre-tax rate of return to investment in that business. In this case, shareholders do not bear the incidence of the business-level tax—the tax must be passed on in higher prices or lower wages, for example.[116]

The typical argument against combining these two forms of taxation is that they represent double taxation: the underlying profit is taxed once at the corporate level and taxed again at the personal level when it is distributed. And a conventional response is that there should be some relief against such double taxation. Many forms of such relief have been used—for example, a lower corporate-level tax rate for distributed earnings and a lower personal tax rate on dividends received than on other forms of capital income. Broadly, such forms of relief are known as integration of the personal and corporate levels of tax.

There is some truth in the fact that—in the absence of any relief—the income has been taxed twice. However, in an open economy these taxes have very different effects, and they have a very different incidence. That is, as just argued, in a small open economy the residence-based personal tax is borne by the investor—given a pre-personal tax rate of return on world markets, personal taxes reduce the return to savings and investment. But in a small open economy the origin-based business-level tax does *not* fall on the investor; rather, by increasing the required pre-tax rate of return it must fall on others—such as customers and workers.

These effects would be moderated somewhat for a large open economy that can affect the world rate of return on its own. For example, a rise in the tax rate on business-level profit in a very large open economy would also tend to depress the world rate of return, implying that business owners everywhere would see a reduction in their post-tax rate of return. This is because there would be a large outflow of capital from the large economy following a rise in the business-level tax rate. Not all of this capital could earn the same rate of return elsewhere, and so the equilibrium world rate of return would fall.

Taking this perspective—at least from the perspective of the small open economy—implies very different prescriptions for taxation.

First, the two levels of taxation do not really imply double taxation in the sense that a single person is made worse off by both taxes. A reduction in the business-level tax would reduce the rate of return required by the business but would not affect the return to owners of the business. A reduction in the personal-level tax

[116] See Gordon (1986). Note that this would be true even if the location of the business-level tax for a multinational were the location of the headquarter company or the destination country. The key issue here is that the tax is not levied in the place of residence of the ultimate investor.

would increase the post-tax income of the owners but would not affect the rate of return required by the business.

Second, common attempts to integrate personal and business-level taxes may result in distortions to economic choices by both savers and businesses. In practice, many systems of personal and corporate tax integration only operate for domestic taxes—that is only domestically earned business income distributed to domestic owners receives the benefits of integration. For example, shareholders may receive a tax credit on dividends from domestic companies, but not from foreign companies—an issue widely discussed in the European Union and subject to a strand of jurisprudence by the Court of Justice of the European Union.[117]

Suppose a government introduced such a form of integration that reduced the personal tax rate on returns from domestic businesses only.[118] In this case, the post-tax rate of return earned by domestic individuals from investing in domestic businesses would rise. Consequently, they would aim to switch their portfolio of investments away from other assets towards the tax-favoured domestic businesses. Assuming they started with a well-diversified portfolio, then as they made such a switch their post-tax rate of return would rise due to the lower tax. But their risk would also rise since the benefits of diversification would be lessened. At some point they would reach a new balance, owning more shares in domestic businesses, with a higher expected rate of post-tax return (due to the lower tax rate) but also with higher risk. The world rate of return would be unaffected, and hence investment by businesses located domestically would be unaffected. The main effect of introducing such a form of integration would therefore be to distort the portfolio choices of domestic individual investors.[119] This is set out in more detail in Appendix 1.

It has been pointed out that an integration system of this form may help to prevent profit shifting by multinational companies.[120] That is because the benefits of integration typically apply only to domestic profit. To the extent that a company acts in the interests of domestic shareholders, then in order to allow them to benefit from the integration scheme, the company must earn (or at least declare) a sufficient share of its worldwide profit domestically. Hence it is less likely to shift profit abroad—and indeed may deliberately shift profit to the domestic parent. But this incentive also applies to real activity as well as profit shifting; domestic companies would have a disincentive to undertake outbound foreign direct investment, since such investment may face a higher effective tax rate if it does not benefit from the integration system. More generally, this approach is unlikely to be consistent with

[117] This jurisprudence is heavily criticized by Graetz and Warren (2007); for a comparative view on cross-border integration see Vann (2003a).

[118] This would not now be permitted within the European Union.

[119] Evidence supporting this view is provided by Bond et al (2007), for example, based on a model of Brennan (1970).

[120] For a discussion, see Graetz and Warren (2016).

maximizing the market value of a company, which is determined by the much larger group of non-resident (potential) investors. Non-resident investors do not receive the benefit of the preferential personal tax regime and would continue to benefit from shifting profit to a lower taxed jurisdiction. The integration system therefore creates a difference between the interests of domestic and non-resident shareholders.

Third, this perspective also gives insight into the appropriate taxation of the returns to owning, or providing finance to, either domestic or non-domestic business. The insight here is that in principle all such businesses should be required to earn the 'world' rate of return, commensurate with their risk, and importantly after business-level tax but before personal level taxes. We should also expect the required rate of return on other assets to be the same—again commensurate with their risk—before personal tax. This includes investment in government bonds, housing, and—crucially—also businesses that do not face any business-level tax, for example, pass-through businesses (e.g. S-corporations in the US, and mostly unincorporated businesses elsewhere). To avoid personal taxes distorting the choice between these different investment options, any individual should face the same effective tax rate on all such investment opportunities. Then pre-personal tax rates of return are equalized, as well as post-tax rates of return.

It should be noted that this is a very different prescription from that commonly advocated. It implies that origin-based business-level taxes should be ignored when comparing personal taxes on different forms of investment. It implies that personal taxes on the returns from business ownership should be no different from the personal taxes on other assets—so there should be no integration of business and personal taxes. It also implies that, in the cross-border setting discussed here, it is not correct to aggregate business-level and personal level taxes in a comparison with other personal taxes. Rather, the personal taxes levied on pass-through businesses should be equated with the personal level taxes on businesses that face a business-level tax. Again, these strong claims need to be moderated somewhat in the case of a large open economy (or a closed economy).

It might be objected that this analysis may apply to international businesses and international investment, but not to a purely domestic business, even one operating in an open economy. After all, in a purely domestic context the distinction between residence-based and origin-based taxes does not appear to be relevant. However, while there may be some truth in this objection, it is open to challenge. The issue is whether an individual owning a purely domestic business makes decisions based on a required rate of return (or, equivalently, the net present value). Basic investment theory would suggest that she should. That is, if she can earn a rate of return of 10% on some other investment of comparable risk, then she should require the same rate of return from her own business. If she can only earn, say, 7% from her own business then she would be better off investing her money elsewhere. But—as long as she resides in an open economy—the 10% rate of return she can

earn elsewhere is almost certainly determined by the equilibrium rate of return on world markets. In this case, her investment decision would still be determined by the world rate of return even if her investment is purely domestic. And the 10% should be the equilibrium after business-level taxes on profit.

Of course, it may be the case that individual business owners do not make such calculations. Some may simply prefer to own, and work for, their own business, as long as they receive a reasonable income.[121] In that case, the precise rate of return earned may not be relevant, and the analysis here is not relevant. There may well be such business owners. But it is hard to analyse the effects of a profit tax in such cases, since we do not have any good understanding of how they make decisions. For example, we cannot simply revert to assuming that we should consider a business-level and a personal-level tax on the profit earned to be an unfair form of double taxation on the owner, since the incidence of either tax is still unclear.

5. Conclusions

This chapter has explored some of the fundamental issues that should be considered before moving to a more detailed design of a business-level tax on profit in an international setting. We have discussed four broad issues.

First, in very general terms, we have considered the definition of profit as a tax base. We distinguished three possible tax bases: a conventional tax base, which constitutes the total return to the owner of the business; a broader tax base which would also include the return to other financiers of the business; and a narrower tax base of economic rent, representing the return to investment over and above the normal rate of return. We set out the advantages to a tax on economic rent for both economic efficiency and fairness. A caveat to the advantages for economic efficiency is that even a tax on economic rent which is levied where functions and activities take place may affect the location of economic activity. That draws us to considering other locations for taxation. A second element of the choice of the tax base is therefore the location of rights to tax business profit.

Second, we set out in some detail the criteria that we believe are suitable for evaluating alternative ways of levying a business-level tax on profit. We identified five: fairness, economic efficiency, robustness to avoidance, ease of administration, and incentive compatibility. We believe that these should be relatively uncontroversial, although the inclusion of incentive compatibility is uncommon. The idea of this criterion is that a stable worldwide tax system would be one in which there was no gain to governments from undermining that system, and imposing costs on other countries. This can be achieved only if the best policy from a national perspective

[121] Even in this case, they may be debt financed and they need to earn enough to pay their creditors—and the return that creditors demand is determined by world markets.

coincides with the best policy from a global perspective. Then governments have no incentive to deviate from that policy. As we discuss further in Chapter 3, this is clearly not the case under the existing system, which leads to competition between governments.

Third, we reviewed the case for having a business-level tax on profit at all. Even if governments have no intention of giving up such taxes, if we can identify good reasons for having such a tax, then that should help to identify the best design of the tax. The two most commonly advocated reasons are that a business-level tax acts as backup to personal income tax and the benefit principle. But we also argued that a business-level tax on profit would be justified if it met our criteria. We also considered the case for using business as a tool for the collection of taxes because of the benefits in terms of implementation.

The argument that a business-level tax on profit is useful in supporting a personal level tax on capital income has some force in a closed economy, where there is no cross-border investment. But in an open economy, the argument is not persuasive. In particular, in a small open economy, a origin-based business-level tax on profit simply cannot support a residence-based tax on the worldwide capital income of domestic residents. The case for such a tax is stronger as a backup to an origin-based personal income tax levied on non-residents. However, the rationale for levying such a personal income tax is itself not very persuasive. We are also unconvinced by the benefit principle argument. It may be reasonable that businesses should contribute to the costs of publicly provided goods and services. But it is not clear that such a contribution should be proportional to profit, rather than to the benefits received by the business.

Fourth, we have considered whether taxation at both the business and owner level should be a matter of concern. We argued that in the context of a small open economy a worldwide personal income tax on resident investors and an origin-based tax on businesses would not constitute double taxation, as the incidence of the former is likely to fall on the investor and that of the latter is likely to fall on other factors such as consumers or labour.

The considerations set out in this chapter do not rule out a business-level tax on profit altogether. There is a case for a business-level tax on profit if the tax could be designed that does well in meeting our five criteria. Two elements of such a tax are likely to be that it falls only on economic rent and that it is located in a jurisdiction from which the underlying taxable profit cannot easily be moved. We explore these ideas in more detail in this book.