

8. Tax reform and growth

Stuart Adam and Paul Johnson (IFS)

Summary

- The tax system takes on average £4 of every £10 of income in the economy. Its design matters a great deal for economic welfare and for growth.
- This chapter focuses on reforms that could increase national income in the medium term, not on possible short-term stimulus to promote economic recovery. We emphasise that economic growth (i.e. increases in national income) and increases in welfare are not synonymous. There are many welfare-enhancing reforms to the tax system which should be pursued even if they don't promote growth. And there are growth-promoting but welfare-reducing reforms which should not be pursued.
- In general, a tax system that is significantly more neutral than the current one would do less to distort economic activity, would involve lower administration and compliance costs, and would increase both national income and welfare. The scope for reform in this direction is substantial.
- One set of reforms that would raise levels of economic activity over the medium term would involve strengthening financial work incentives for groups that are particularly responsive to them. We suggest changes that could lead to increased employment among mothers of school-age children and among people aged between 55 and 70, two groups known to be particularly responsive to incentives.
- The design of business taxes is important. By discouraging investment in the UK and favouring some forms of investment and finance over others, corporation tax has direct effects on economic activity. Moving to a system that exempts a 'normal' return to capital from taxation would reduce these problems. Replacing business rates with a land value tax, meanwhile, would remove a damaging bias against property-intensive production.
- We can also improve the design of environmental taxes in the UK in ways that would both boost output and improve their effectiveness in dealing with the externalities they are designed to tackle. Replacing much of fuel duty with a system of congestion charging would have major economic benefits. Reforming and simplifying carbon taxation would help to minimise the cost of reducing emissions.
- International studies suggest that moves away from income taxation and, in particular, corporate income taxes, towards consumption and property taxes would enhance growth. In part, this reflects the structure of corporate taxes which, as currently designed, are relatively damaging to growth. But one of the reasons that consumption taxes may be more growth-friendly than income taxes is that they are generally less progressive. And there is a clear balance to be struck between a focus on progressivity and a focus on growth. In general, reducing the amount of redistribution done in the tax system would increase aggregate income, but at the cost of greater inequality. That is a trade-off that all governments face.

8.1 Introduction

The government is looking for ways to promote economic growth. Given that it takes nearly 40p in tax for every pound generated in the economy, an obvious place to look is the structure of the tax system. When taking this amount, inefficiencies in design clearly have the potential to affect economic performance. In this chapter, we consider what economic research can tell us about how reforms to the structure of the tax system could enhance the UK's medium-run economic performance, drawing particularly on lessons from the recent IFS-led Mirrlees Review of the tax system, the final report of which, *Tax by Design*, was published last year.¹

We should emphasise from the outset that this chapter does not address the question of what could be done to stimulate economic recovery in the short term – the subject of much debate at the moment. We are focusing on how the tax system affects the productive capacity of the economy in the medium run, not on how it might be used to stimulate demand in the short run. The policies that would be called for to stimulate the economy in that short-run sense are not necessarily the same policies discussed here, which are about reforms to the supply side of the economy, which is what determines the long-run income of any nation.

We also eschew any discussion of the effects of the overall level of taxation on the economy. That is a difficult question to answer because the effect of increasing taxes will depend on how the revenue raised is then spent by government, and in any case the total size of the state is at least as much an issue of social preferences as it is economics. We focus on the way the tax system is structured, not on its overall size.

In Section 8.2, we set out some of the key conceptual issues, in particular distinguishing between 'economic growth', the focus of much political discussion, and 'welfare', the real focus of economics. We also draw a distinction between policies that have a one-off effect on the level of economic activity and policies that raise the trend rate of growth.

In Section 8.3, we set out some general guidelines for reforming the tax system in such a way as to increase national income and welfare. We draw heavily on the conclusions of the Mirrlees Review, arguing for a system that minimises undesirable distortions and achieves progressivity in the most efficient way possible. Section 8.4 takes us to a set of specific proposals. First, we indicate how we can use what we know about labour supply responsiveness to suggest reforms to the personal tax and benefit system which could increase employment levels. Second, we consider the structure of business taxation, arguing that it could be improved to reduce its impact on investment decisions. We include proposals to replace business rates with a land value tax. Third, we look at ways in which environmental taxation could be reformed that both increase output and achieve environmental objectives.

Section 8.5 considers the tax mix, and Section 8.6 concludes.

¹ J. Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles and J. Poterba, *Tax by Design: The Mirrlees Review*, Oxford University Press for the Institute for Fiscal Studies, 2011 (<http://www.ifs.org.uk/mirrleesReview>).

8.2 Welfare, output and growth

In any discussion of growth, and especially one focused on the design of the tax system, it is important to recognise that growth of national income (or output)² is not in fact what we, or economists generally, believe we should be trying to maximise. What really matters is welfare. As we shall see, this is a crucial distinction for tax policy. Reforms that will increase welfare will not necessarily have a direct effect on national income, but are nevertheless desirable in themselves. And there are some reforms that would increase national income which would be welfare-reducing. These are not desirable.

First and most obviously, the distribution of national income matters as well as the overall level. Governments care about inequality and poverty; generating an extra pound of national income is less valuable if it accrues to someone who already has a lot. There is a basic trade-off in the tax and benefit system between redistributing income and strengthening work incentives: crudely, taking money off rich people and giving it to poor people reduces the incentive for the poor to become rich. Making the tax and benefit system less progressive and thereby encouraging work is thus a straightforward way to increase national income which is always open to governments. But it is at best arguable whether society would always be better off moving in this direction – richer on average but more unequal.

Second, and perhaps more fundamentally, money is not all that people care about: they care about all sorts of other things, from how hard they have to work to the quality of their environment, which may also be influenced by taxation (in addition, of course, to caring about the quality of the public services financed by taxation). Economists are often unfairly caricatured as valuing only money. But, in fact, the central approach of public economics focuses not on maximising national income but on maximising social welfare – well-being – defined simply as whatever people value for themselves, and taking account of the distribution of welfare as well as its aggregate level. Broadly speaking, this involves interfering with people's choices as little as possible, so that they can arrange their affairs (and make mutually beneficial transactions) in whatever way pleases them best, subject to two important caveats: first, an acknowledged need for some redistribution from those who are born talented or otherwise lucky to those who are less fortunate; and second, a potential role for the government to step in where free markets fail (such as when one person's freely-chosen actions would be damaging to others, as in the case of pollution). Consequently, many of the central recommendations of *Tax by Design* are not reforms that would increase national income, but reforms that would make people better off in other ways – by removing distortions to people's free choices or by correcting market failures.

Consider the abolition of stamp duty land tax (SDLT) on housing. SDLT is charged on – and therefore discourages – property transactions. It is often noted that this reduces labour mobility, discouraging people from moving to where suitable jobs are available and therefore reducing national income. While true, this is only a secondary effect of the tax. Its more fundamental weakness is simply that the transactions it discourages are mutually beneficial, and thus it makes both parties worse off. If a family in a small house want to move to a larger one (because they are having children, for example) while a neighbouring family in a large house want to move to a smaller one (perhaps because

² In this chapter, we use national income and output interchangeably: broadly speaking, under national income accounting rules they are the same by definition.

their children have grown up and left home), SDLT might discourage them from buying each other's houses. National income would not be affected by this, but it is clear that both families could be made worse off.

Conversely, some tax reforms that increase national income may be undesirable. One easy example relates to environmental taxes. Taxes on pollution will discourage the polluting activity and are therefore likely to reduce total measured output. But they may leave people better off overall because of the reduction in pollution, and so their abolition would not necessarily be desirable.

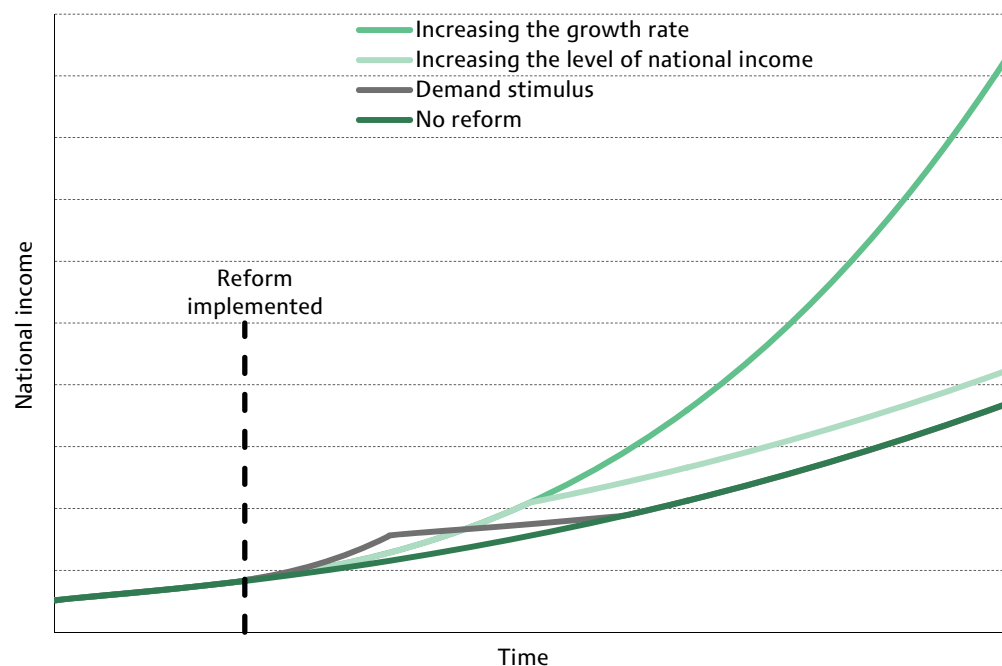
Requiring all adults to work 80-hour weeks until the age of 80 would no doubt increase national income, but it is by no means clear that society would be better off for it.

As well as distinguishing between income and welfare, it is important to understand the distinction between temporary and permanent effects on the growth rate (or, equivalently, between effects on the long-run level of, and the long-run growth rate of, national income).

Policies that permanently increase a country's rate of economic growth are particularly valuable, because the gains get larger and larger over time. Over the long term, the effects can be truly staggering. If real income in the UK grows at 1% a year, it will double in 70 years; if it grows at 3%, it will double in only 24 years. It is this that led Nobel laureate Robert Lucas to declare: 'once one starts to think about [growth], it is hard to think about anything else'.³ Sadly, such policies are as elusive as they are valuable.

While some tax measures might permanently change the trend rate of growth – for example, if tax breaks for R&D increase the rate of technological innovation in a country – in general the most we can hope for is to reallocate resources to more productive uses, and therefore permanently increase the *level* of national income. Because the economy

Figure 8.1. Level and growth effects



³ R.E. Lucas Jr, 'On the mechanics of economic development', *Journal of Monetary Economics*, 22, 3–42, 1988.

takes time to adjust, the rate of growth will be temporarily higher during a transitional period while the economy moves towards this new, higher level of output.⁴ But encouraging more people into work, or increasing the level of investment, would not permanently increase the growth rate of national income.

Policies that have a permanent effect on the level of output (a temporary effect on the rate of growth) can in turn be contrasted with demand stimulus policies, which have only a temporary (albeit rapid) direct effect on the level of output – though may indirectly have longer-run effects when used in a recession if, for example, unemployment damages people's future prospects. Ignoring such indirect effects for simplicity, the differences between these kinds of policy effects are illustrated in Figure 8.1.

8.3 Principles of a good tax system

Focusing for now on welfare, there are several key principles to which a tax system should adhere. *Tax by Design* summed them up by saying we should be aiming for a progressive, neutral system. Those three words – progressive, neutral and system – encapsulate a great deal.

It is important to consider the tax system as precisely that: a whole system. We mean that in two main senses:

- First, not all taxes need to address all objectives. Not every tax needs to be 'greened' to tackle climate change, as long as the system as a whole does so. And not all taxes need be progressive as long as the overall system is.
- Second, the different taxes need to fit sensibly together. For example, personal and corporate taxes need to fit together such that the form in which income is received does not imply very different amounts of tax paid. Otherwise, some forms of activity are favoured over others and people are led to alter the legal form of their activity for tax reasons rather than underlying commercial considerations.

Core to reforming the tax system to increase welfare, and often economic output, is the concept of neutrality – meaning treating similar activities similarly. In general, a system that treats similar economic activities in similar ways for tax purposes will tend to be simpler, avoid unjustifiable discrimination between people and economic activities, and help to minimise economic distortions.

Treating different sorts of saving differently results in much effort being put into choosing savings vehicles on the basis of tax treatment rather than on the basis of underlying merits. Treating different forms of corporate finance differently distorts companies' choices over how to raise capital. Taxing different goods and services at different rates in the way the UK VAT does distorts the choices that consumers make.

Neutrality is a rule of thumb: it is not a good in itself, and is not always desirable. It can be efficient to discriminate between different activities for tax purposes. Higher taxes on alcohol and tobacco and on activities that damage the environment are justifiable. Arguments can also be made for taxing pensions more favourably than other forms of saving. Providing tax advantages for research and development (R&D), and perhaps other

⁴ It is also possible for changes that ultimately increase output to reduce it for a short period while resources are being reallocated to more productive uses – for example, while people retrain to work in ultimately more productive areas.

activities that have clear spillovers into growth, might be an important feature of a good tax system.

But defining and policing boundaries between differently-taxed activities is fraught with difficulty: it increases administrative and compliance costs, and creates perverse incentives to dress up one kind of activity as another. Lack of neutrality is behind many of the problems with the current system. It can create unfairness, complexity, high administrative and compliance costs, inefficient behaviour change and significant welfare loss. It diverts resources away from their most productive uses.

Finally, the tax (and benefit) system needs to be progressive. Quite how progressive is a decision for governments and electorates. But however progressive we want the system to be, it is important that progressivity be achieved as efficiently as possible. Crucially, efficiency-enhancing reforms should not generally be eschewed because of their distributional impact. It is nearly always possible to offset, at least on average, any undesirable distributional effect of an efficiency-enhancing reform by adjusting personal tax and benefit rates.

There is an inevitable trade-off between redistribution and work incentives. One cannot tax the rich, or top up the incomes of the poor, without affecting incentives. But one can design the system carefully to minimise the efficiency loss associated with achieving progressivity. Any desired degree of progressivity is generally best achieved by adjusting the rate schedule for personal taxes and benefits. But the rate schedule still needs to be designed to minimise efficiency costs. This can be achieved by designing a rate schedule that reflects knowledge of the shape of the income distribution and the responsiveness of people to taxes and benefits at different income levels. It also implies taking into account decisions over both whether to be in paid work (including when to retire) and how much to work, in addition to other responses such as tax avoidance and migration.

There are ways in which we can achieve progressivity more efficiently in the tax system. For example, ending differential VAT rates and offsetting the regressive impact through changes in the personal tax and benefit system would achieve this.⁵ Reforming the personal tax and benefit system to improve work incentives for mothers with school-age children and for those around typical retirement ages – two groups that are particularly responsive to incentives – is another route.

A tax system that is neutral except in very specific circumstances, which uses information about people's behaviour in its design, and which is designed to be stable and fit together as a system, will tend to increase both welfare and output. In broad terms, *Tax by Design* identified seven major flaws in the UK tax system when set against these principles:

1. Despite improvements for some groups in recent years, the current system of income taxes and welfare benefits creates serious disincentives to work for many with relatively low potential earning power. The benefit system in particular is far too complex (though the proposed Universal Credit will help to some extent).
2. Many unnecessary complexities and inconsistencies are created by the fact that the various parts of the tax system are poorly joined up. These range from a lack of integration between income taxes and National Insurance contributions (NICs) to a lack of coherence between personal and corporate taxes.

⁵ See chapter 9 of *Tax by Design* for a detailed analysis and discussion.

3. The present treatment of savings and wealth transfers is inconsistent and inequitable. There is no consistent tax base identified, saving is discouraged, and different forms of savings are taxed differently.
4. We remain some way short of having a coherent system of environmental taxes to address imperatives around climate change and congestion. The effective tax on carbon varies dramatically according to its source, and fuel duties are a poor substitute for road pricing.
5. The current system of corporate taxes discourages business investment and favours debt finance over equity finance. Its lack of integration with other parts of the tax system also leads to distortions over choice of legal form.
6. Taxation of land and property is inefficient and inequitable. There is a tax on business property – a produced input – but not on land, which is a source of rents. Taxation of housing involves both a transactions tax and a tax based on 20-year-old valuations.
7. Distributional goals are pursued in inefficient and inconsistent ways. For example, zero and reduced rates of VAT help people with particular tastes rather than being targeted at those with low overall resources; and council tax is regressive for no obvious efficiency-improving reasons.

Addressing all of these issues would dramatically improve the tax system and increase welfare. More often than not, reforms that tackle these problems would also increase economic output, in one of three ways.

First, they can reduce opportunities for tax avoidance and the costs of tax administration and compliance. This will result in resources being devoted to more economically productive activities. Reforms that move towards neutrality will usually have this effect. Alignment of tax rates across different sources of income and legal forms of activity, moving towards a single rate of VAT, integrating income tax and National Insurance, would all achieve this and would improve economic performance as a result.

Second, reforms can promote the devotion of more resources towards production – labour supplied and capital invested. This is likely to involve minimising disincentives to work and invest, especially among those who respond most to incentives.

Third, reforms can ensure that the resources are devoted to their most productive uses. Having different rates of tax on different forms of savings and investments, on different forms of energy use and on different types of corporate activity can all divert resources away from where they could be used most productively.

In the next section, we focus on three particular areas for reform which address the second and third of these. We don't set out the wide range of reforms that would improve economic performance by reducing complexity and increasing neutrality. Rather, we look specifically at how labour supply might be increased by changing the personal tax and benefit system, how the corporate tax system might be reformed, and how dealing more efficiently with environmental externalities could increase national income as well as welfare.

8.4 Reforming individual areas of the tax system

Labour supply and the personal tax and benefit system

At the moment, labour demand may be more of a concern than labour supply, with the priority being to reduce unemployment. This might also have longer-run implications if those out of work see their skills stagnate (or even deteriorate) or their attachment to the labour market weaken.

However, in the long run, increasing output depends more on increasing the amount that people choose to work. In crude terms, the tax and benefit system creates financial disincentives to work because taking money off rich people and giving it to poor people reduces the incentive for the poor to become rich. This disincentive can only be reduced by giving less support to the poor (hurting a vulnerable group) or by taking less from the rich (costing money). Unless tax rates start off so high, and people are so responsive, that cutting tax rates could stimulate a large enough response to pay for itself, raising revenue will involve a trade-off between average work incentives and overall redistribution. (We examine the first possibility in the context of the 50% income tax rate in Chapter 9).

However, the average is not all that matters. Research has shown that some groups are more responsive to work incentives than others. This means that the government could increase overall labour supply – even without strengthening incentives on average – by ensuring that the most responsive groups face the strongest incentives. To a significant extent, it is already true that financial work incentives are stronger for more responsive groups. Nevertheless, there is considerable scope for improvement by making more systematic use of our knowledge about different groups' responsiveness.

In particular, we know that people are typically more responsive to incentives at some stages of the life cycle than at others. Taking advantage of this, reforms can be designed that are neither progressive nor regressive overall – redistributing mainly across the life cycle – but which would nevertheless significantly increase employment rates and thus national income. The Mirrlees Review simulated two illustrative reforms of this kind:⁶

- First, work incentives could be strengthened for families whose youngest child is of school age, reflecting the finding that the mothers of older children are more responsive to the incentives in the tax and benefit system than are mothers of younger children. To illustrate one way this could be done, the Mirrlees Review simulated a reform to Child Tax Credit that would make it more generous (and so means-testing more extensive) for families whose youngest child is aged under 5, and less generous (with less means-testing) for families whose youngest child is aged 5 or over. Although there is substantial uncertainty, Mirrlees et al. estimated that these reforms could lead to a net increase in employment of around 52,000 (or roughly 0.2% more workers) and an increase in aggregate annual earnings of around £0.8 billion. In a life-cycle sense, these reforms would have offsetting effects once in place, with families who receive Child Tax Credit gaining when children are younger and losing later. Effectively, income is shifted earlier in the family's life, to the time when they have pre-school children.

⁶ See section 4.4 of *Tax by Design*.

- Second, work incentives could be strengthened for those in their later working life, aged 55 to 70 – a group that is highly responsive to incentives. To illustrate one way this could be done, the Mirrlees Review simulated the impact of reducing the age at which employee and self-employed National Insurance contributions stop being payable from state pension age to age 55, reducing the age at which a higher tax-free personal allowance is available from 65 to 55, and increasing the age of eligibility for Pension Credit to 70 – all with offsetting reforms for under-55s (increasing NICs rates, reducing the personal allowance and increasing Income Support and Jobseeker's Allowance rates). The simulations pointed to an increase in employment of about 157,000 (or 0.6% of the workforce) and an increase in aggregate annual earnings of just under £2 billion. As with the Child Tax Credit simulations, much of the distributional impact would consist of offsetting effects over the life cycle.

Age-related tax and benefit reforms are not the only area where evidence on people's responsiveness and the tax rates they face could be used to increase labour supply – but the feature that reforms can be balanced out at different points in the life cycle does make it rather simpler than in other areas. Labour supply could also be increased by reducing some of the highest effective tax rates facing some low earners as a result of means-testing, at the expense of increasing them for others, but taking particular account of the mounting evidence that decisions over whether to work are more responsive to incentives than decisions over how much to work. The Mirrlees Review examined one possible reform that involved targeted adjustments to means-tested benefits and tax credits – increasing incentives for responsive groups to take low-paid work by increasing Working Tax Credit rates (except for lone parents), increasing the amount that can be earned before means-tested benefits (and, for two-earner couples, tax credits) start to be withdrawn, and withdrawing tax credits more slowly with income – paid for by a more broad-brush cut in means-tested benefit and tax credit rates and an increase in the basic rate of income tax. With no net revenue cost and no increase in overall inequality, Mirrlees et al. estimated that this reform could lead to a remarkable 1.1 million (or 4.2%) net increase in employment and a £3.5 billion (0.5%) increase in aggregate earnings.⁷ However, unlike the age-related reforms, this reform was targeted at a particular part of the earnings distribution rather than a particular stage in the life cycle, so it cannot escape the trade-offs between incentives and redistribution. In particular, the reform simulated would redistribute to low earners at the expense of both the better-off and the very worst-off; it would also involve extending means-testing to many (around a million) more families than currently face it. The pros and cons of such a reform are finely balanced, and making firm recommendations would require political value judgements that we are not in a position to make. This is just one illustration of how proposals to increase national income by changing the rate schedule of personal taxes and benefits need to be judged against other criteria as well.

Investment and business taxation

The UK's economic output depends directly on the amount of capital invested here. Corporation tax discourages people from investing in the UK by taking a slice of the returns that their investments earn. But not all forms of corporate taxes reduce investment equally and not all investments are equally responsive to taxation.

⁷ See section 4.2 of *Tax by Design*.

Consider first an internationally closed economy where all investment is domestic. In such a world, the investments that government must be most wary of discouraging are those that are only just worthwhile: those whose return is barely enough to persuade investors to part with their money (a level termed the ‘normal return’ to capital). Taxation can easily deter investors from undertaking such projects. By contrast, if an investment offers returns substantially in excess of that, the excess can be heavily taxed and the investment will still be worth undertaking.⁸

This suggests that a corporate income tax will reduce investment least if it is designed to tax only ‘excess’ returns to investments, exempting a ‘normal’ return. *Tax by Design* proposed a reform to corporation tax which would achieve exactly that: introducing an Allowance for Corporate Equity (ACE), broadly along the lines of that currently in place in Belgium.⁹ An ACE is an annual allowance against taxable profits, equal to a risk-free interest rate (representing the normal rate of return) multiplied by a measure of the stock of shareholders’ funds tied up in the firm. With this allowance in place, investments that earned just the normal rate of return would go untaxed; only profits in excess of the normal rate would be taxed.

Of course, we do not live in a closed economy: capital is increasingly mobile across borders. But if we consider the opposite extreme of a pure open economy in which capital can flow costlessly across borders (but labour cannot), the case for exempting the normal return is even stronger. In this world, if UK corporation tax reduces the return to certain investments below that which is available in other countries (which is now the ‘normal return’), the capital simply moves (or stays) abroad, leaving a lower capital stock in the UK. With less capital to work with, UK workers would be less productive and earn lower wages. Thus investors who can earn the same returns elsewhere do not bear the burden of the tax; instead, it is felt by immobile UK workers in the form of lower wages.¹⁰ This is, in effect, a highly inefficient way to tax workers.¹¹ By taxing wages directly, the government could collect the same revenue with more capital per worker, higher productivity and higher output.

Greater international capital mobility thus strengthens the case for an ACE-type reform to exempt the normal rate of return to capital from taxation. But with international mobility of capital, the case for heavy taxation of returns in excess of this becomes weaker. Investments earning high returns may still be worthwhile in the presence of heavy taxation; but if the same investments can be undertaken in other countries where they are *more* worthwhile because of a more favourable tax regime, heavy taxation could be

⁸ We should be cautious about taking this argument for heavy taxation of ‘excess’ returns too far. High returns may partly reflect efforts of entrepreneurs or innovators that are not fully reflected in the compensation paid to them – taxing these activities at very high rates may then be undesirable, although taxing them at rates close to labour income tax rates may still be appropriate.

⁹ See chapters 17–19 of *Tax by Design*. The ACE had previously been proposed in IFS Capital Taxes Group, *Equity for Companies: A Corporation Tax for the 1990s*, Commentary 26, Institute for Fiscal Studies, 1991 (<http://www.ifs.org.uk/publications/1914>), building on work in R. Boadway and N. Bruce, ‘A general proposition on the design of a neutral business tax’, *Journal of Public Economics*, 24, 231–9, 1984.

¹⁰ For recent empirical evidence that standard corporate income taxes depress real wages, see, for example, K. Hassett and A. Mathur, ‘Taxes and wages’, American Enterprise Institute, Working Paper 128, 2006 (<http://www.aei.org/paper/24629>) and W. Arulampalam, M. Devereux and G. Maffini, ‘The direct incidence of corporate income tax on wages’, Oxford University Centre for Business Taxation, Working Paper WP07/07, 2007 (<http://www.sbs.ox.ac.uk/centres/tax/papers/Pages/PaperWP0707.aspx>).

¹¹ R. Gordon, ‘Taxation of investment and savings in a world economy’, *American Economic Review*, 76, 1086–102, 1986.

counterproductive, with implications for capital per worker and domestic wages similar to those outlined above.

The choice of tax rate to apply to above-normal profits therefore depends on how mobile such profits are. Some highly profitable activities may not be easy to shift out of the UK, because they are based on UK natural resources (such as North Sea oil and gas), workers with particular skills, or proximity to final markets, and in those cases a substantial corporation tax rate might still be an efficient source of revenue. Other highly profitable activities may be very mobile, such as a multinational company deciding where to make a unique product for worldwide sale. In some cases, governments may try to tax more and less mobile activities at different rates: the special regime applied to North Sea profits is one example of this, and Chapter 10 discusses whether the reduced tax rate on patent income that the government proposes to introduce – and potentially a lower rate of corporation tax in Northern Ireland – should also be seen in this light. But such examples are rare and often problematic in practice; for the most part, a single corporation tax rate is applied to all types of activity, and the government faces a tension between wanting to tax above-normal returns relatively heavily when they are immobile and relatively lightly when they are mobile. But whatever balance is reached in the choice of corporation tax rate to apply to above-normal profits, this does not weaken the case for introducing an ACE to take the normal return to equity capital out of tax.

As discussed in the previous section, the tax system should be considered as a whole. Economically – albeit perhaps not politically – there is no reason that the revenue cost of introducing an ACE would need to be recouped through the corporate tax system, by raising the statutory rate. If corporation tax on the normal return to capital acts in large part as an inefficient tax on labour income, an ACE financed by increasing labour income taxation or VAT would be an improvement, irrespective of whether the statutory rate of corporation tax was increased or decreased.

So far, we have discussed how corporation tax affects the overall level of investment. But introducing an ACE would have additional – arguably even more important – benefits in reducing inefficiencies in the form that investment takes. It can be shown that introducing an ACE would largely or wholly resolve four substantial problems with the current system:

- a bias towards using debt rather than equity finance – borrowing rather than using the firm's own funds to finance an investment – since the costs of borrowing (i.e. interest payments) are tax-deductible whereas, without an ACE, the cost of equity finance is not;
- distortions to the choice between assets caused by capital allowances being more generous (relative to true 'economic' depreciation) for some assets than others;
- a bias towards current expenditure (which is fully tax-deductible) over capital expenditure (which is not) – an awkward boundary to define and police;
- a lack of any allowance for inflation, which implies a disincentive to undertake equity-financed investment far larger than might be thought from looking at the statutory tax rate, and a correspondingly large bias towards using debt rather than equity finance.

On top of the issues that an ACE would address, other aspects of the corporation tax regime are plausible candidates for reform:

- There is a strong case for phasing out the small profits rate of corporation tax, which makes it more difficult to achieve coherence between personal and corporate taxation by making it more beneficial for people to set up companies purely as a tax-planning device. Other things equal, it is inefficient to disincentivise large firms' activities more heavily than small firms', and there is little evidence that applying a lower rate of tax to small companies brings other benefits such as encouraging entrepreneurship. Indeed, the OECD goes further, arguing that young and small firms are less responsive to corporate tax rates than more established firms, making the case for preferential tax treatment of small firms (such as the UK's small profits rate of corporation tax) doubly weak: as the authors put it, 'special tax reliefs based on firm size could result in economic inefficiencies as resources may be wasted'.¹²
- Risk-taking will be discouraged by the tax system if losses are not relieved to the same extent that profits are taxed. Governments may be wary of providing quite that degree of relief in case it opens up scope for abuse, but there may be potential for moving some way towards the symmetric treatment of profits and losses.
- Encouraging innovation is one of the few ways that the government can really hope to increase the UK's long-run trend rate of economic growth through the tax system. The R&D tax credit and the Patent Box are both aimed (at least partly) at this goal – though the Patent Box in particular is a strikingly ill-designed way to pursue it, as noted in Chapter 10.

So there is a range of reforms to corporation tax that could promote output and efficiency. Apart from specific reforms in these areas, investment would be encouraged by having greater certainty and predictability in the corporate tax regime. And simplification of the system would, of course, be welcome, reducing the resources that are diverted from productive activity into tax administering and compliance.

But there is another tax on businesses, much less discussed than the corporation tax, which is nevertheless large and ripe for reform. Business rates, a tax on the rental value of business property, raise around half as much revenue as corporation tax. They violate one of the most basic tenets of the economics of taxation, and undoubtedly reduce national income.

A mainstay of the economics of taxation is that taxes should not be levied on produced inputs (i.e. inputs to production that are themselves outputs of an earlier production process). If, left to themselves, firms would produce goods and services in the cheapest, most efficient way possible, all that taxes on produced inputs can achieve is to distort firms' choices so that they produce goods and services in more costly ways – a clear waste of resources.

Business rates are a tax imposed on one particular input to production: property. As a result, economic activity in the UK is artificially skewed away from property-intensive production, and development of business property is discouraged (indeed, the current structure of business rates actively encourages demolition of properties – it has been cited as a reason in a number of high-profile cases – which seems particularly perverse). All this could be avoided if business rates were replaced with a land value tax on business property: taxing all sites designated for commercial (or agricultural) use according to the value of the land itself, irrespective of what buildings are on it. Since the same tax would

¹² Paragraph 95 of Å. Johansson, C. Heady, J. Arnold, B. Brys and L. Vartia, 'Taxation and economic growth', OECD Economics Department, Working Paper 620, 2008 (<http://dx.doi.org/10.1787/241216205486>).

be payable regardless of what was built on the land or how it was used, development of business property would not be discouraged. And since land itself is not a produced input but a natural resource in fixed supply, its 'production' cannot be discouraged. With a fixed amount of land available, people would not be willing to pay any more for it than if there were no tax, so (the present value of) a land value tax would be reflected one-for-one in a lower price of land, felt by owners as a windfall loss in the value of their asset (offset by gains from the abolition of business rates, so that overall owners of highly-developed properties would gain while owners of undeveloped land would lose). But unlike with business rates, the incentive to buy, develop or use land would not be affected by the presence of a land value tax.¹³ Economic activity that would be worthwhile without a land value tax remains worthwhile with it. Indeed, a land value tax is a rare example of a tax that does not meaningfully discourage any valuable activity at all – about as 'pro-growth' as it is possible for a tax to be. There are practical obstacles to implementing land value taxation, since assessing how valuable a plot of land would be in the absence of the building on it is not always easy; but it is by no means clear that these practical obstacles are insurmountable, and at the very least a thorough official investigation of the possibility is warranted.

Environmental taxation

Environmental taxation may seem an odd place to look for ways to support growth. But the structure of current taxes on transport and energy could be improved to achieve their environmental ends more effectively and to boost national income.

Congestion imposes obvious costs on the UK economy, in the form of time lost in traffic jams (not to mention the associated stress and misery). Motoring is discouraged by fuel duties (and, to a lesser extent, vehicle excise duty), but the congestion caused by any given journey bears little relation to the amount of fuel burned: the contribution to congestion depends heavily on where and when the journey takes place, while important determinants of fuel consumption (such as the fuel-efficiency of the vehicle) are irrelevant from the point of view of congestion (electric cars do not provide fuel duty revenue, but still contribute to congestion if driven on commuter routes at rush hour). Fuel consumption is, of course, much more closely related to the carbon emissions from motoring, but fuel duties are far higher than could be justified by any plausible estimate of the damage caused by carbon emissions alone. Congestion is by far the largest cost to society imposed by motoring: a study for the Department for Transport put the likely cost of congestion in 2010 at 12.3p per kilometre driven, compared with 1.6p for all other environmental and safety costs put together.¹⁴

An obvious improvement to the tax system would therefore be to relate motoring taxes much more closely to the congestion caused by driving: to replace much of fuel duty by a system of congestion charging that varies by time and place. The potential benefits are large: a study for the Department for Transport suggested that a national road pricing

¹³ While land is in fixed supply (aside from minor issues such as contaminated land and land recovered from the sea), land designated for business use is not; so a land value tax that applied only to business property would leave open the possibility that land might be shifted between business and residential use in response to taxation. However, this can be minimised by ensuring that council tax (which *Tax by Design* argues should be reformed but not abolished) applies to residential land as well as to the houses built on it. Land and property taxation is discussed in detail in chapter 16 of *Tax by Design*.

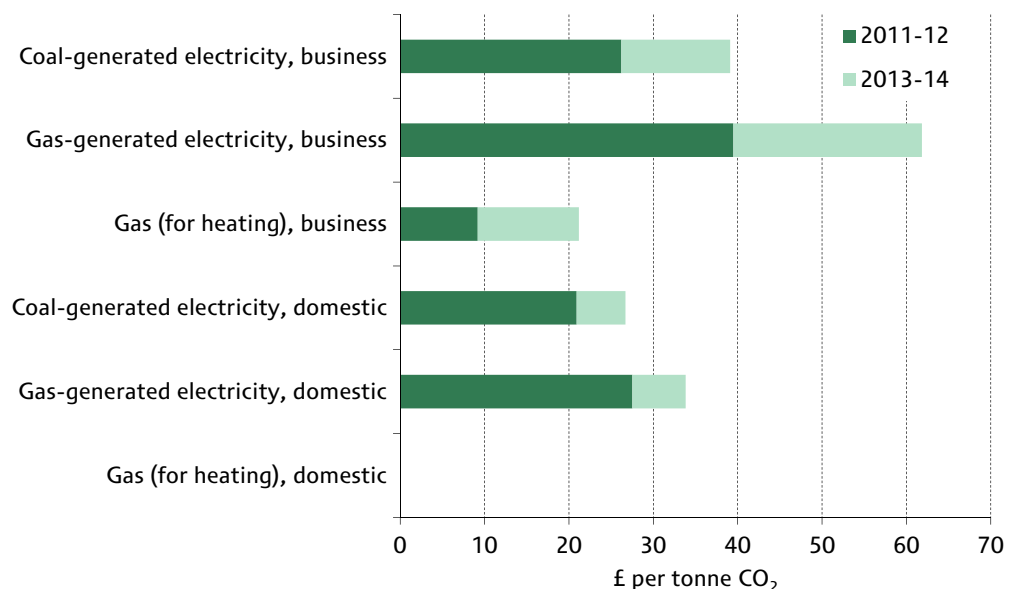
¹⁴ Department for Transport, *Feasibility Study of Road Pricing in the UK*, London, 2004 (<http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/pgr/roads/introtoroads/roadcongestion/feasibilitystudy/studyreport/feasibilityfullreport>).

scheme with charges varying by time and place could bring annual welfare benefits of around 1% of national income by 2025, around half of which would show up in the form of higher national income.¹⁵ The technological and political obstacles to introducing road pricing are formidable, but the economic case for it is overwhelming and it would make sense for the government to start preparing the ground now.

The other major area where reform of environmental taxation could significantly improve economic performance is in establishing a more consistent price for greenhouse gas emissions. Reducing greenhouse gas emissions involves making it more expensive to burn fossil fuels, an increase in production costs which will inevitably reduce output – though if implemented worldwide these costs would be outweighed by the gains from mitigating climate change (some of which would manifest themselves in higher economic output). The economic cost of a given reduction in total carbon emissions would be far lower if the reductions occurred wherever they were cheapest. This would happen almost automatically if policy simply taxed all carbon equally, regardless of where it came from or how it was used: the price increase would mean that polluting activity of marginal value would no longer be worthwhile and would cease (or shift to using alternative fuels), leaving only those activities for which burning fossil fuels was so important that it was worth bearing the higher price.

As it stands, we are far from that position. Figure 8.2 shows that the implicit tax paid for emitting a tonne of carbon dioxide varies widely according to the fuel used and whether it was used by households or businesses. (Emissions from petrol and diesel, not shown, are taxed at a massive £252 and £219 per tonne respectively, but as discussed above, in those cases there is congestion to consider as well as carbon emissions.) This variation arises from the interaction of a bewildering array of overlapping policy initiatives – from the EU

Figure 8.2. Implicit carbon taxes



Note: Thanks to Arun Advani, Peter Levell and George Stoye for providing these figures. For details of sources and calculations, see appendix B of M. Brewer, C. Emmerson and H. Miller (eds), *The IFS Green Budget: February 2011* (<http://www.ifs.org.uk/budgets/gb2011/11apps.pdf>).

¹⁵ Department for Transport, *Transport Demand to 2025 & the Economic Case for Road Pricing and Investment*, London, 2006 (<http://webarchive.nationalarchives.gov.uk/+http://www.dft.gov.uk/about/strategy/transportstrategy/eddinhtonstudy/researchannexes/researchannexesvolume3/transportdemand.pdf>).

Emissions Trading Scheme to the Carbon Reduction Commitment, the Climate Change Levy and the Renewables Obligation – each raising the price of some sources of emissions but not others.¹⁶ Indeed, the variation is greater than that shown in the figure if one includes the large implicit subsidy to domestic energy consumption entailed by applying the reduced (5%) rate of VAT to it rather than the standard (20%) rate. Thus we are in the ludicrous position that the carbon dioxide emissions from domestic gas consumption are not merely untaxed (as shown in the figure) but positively subsidised relative to other goods and services. As shown in the figure, further reforms due to take effect by 2013–14 – an expansion of the Renewables Obligation and the introduction of the Carbon Price Support Rate – will do little to reduce this variation.

As a result, instead of choices being made on the basis of prices that reflect the underlying commercial and environmental costs of different activities, energy-intensive business activity is much more strongly discouraged than household energy use; households and businesses have a strong incentive to use gas rather than electric heating; electricity generation is biased towards coal rather than gas as a fuel; and so on. Heavily penalising some forms of carbon emissions, while leaving others untouched even if they would be much easier to reduce, is an immensely costly way to reduce greenhouse gas emissions.

This is also a good example of unnecessary complexity in the system. Aside from the actual money handed over, complying with all these different schemes is expensive for businesses; administering them is expensive for the government; and their effectiveness is further blunted by the difficulty of translating the raft of complicated incentives and disincentives into a simple price that people ultimately making business decisions can take into account. Since it would be preferable on economic grounds to set a more consistent price for all emissions, as well as its being a simplification, there are clear improvements available.

Finally, policy does have to recognise the international context. If the UK were the only country applying a carbon tax (which it is not), then one obvious consequence would be the movement abroad of industries heavily dependent on energy. This concern explains a number of the special provisions for such industries within the current tax framework and is an undoubted constraint on what can be achieved within the domestic tax structure without damaging output.

8.5 The tax mix

The previous section considered how various parts of the tax system could be reformed to make them more efficient and increase national income. Might a significant shift in the relative contributions of different taxes towards total revenue also deliver a boost to national income?

A widely-cited study for the OECD¹⁷ claimed to establish

¹⁶ Still other initiatives, such as the Carbon Emissions Reduction Target and the Feed-In Tariff, have effects not included in these figures. For more discussion, see A. Leicester and P. Levell, 'Environmental policy', in M. Brewer, C. Emmerson and H. Miller (eds), *The IFS Green Budget: February 2011* (<http://www.ifs.org.uk/budgets/gb2011/11chap11.pdf>).

¹⁷ J. Arnold, 'Do tax structures affect aggregate economic growth? Empirical evidence from a panel of OECD countries', OECD Economics Department Working Paper 643, 2008 (http://www.oecd-ilibrary.org/economics/do-tax-structures-affect-aggregate-economic-growth_236001777843).

a ranking of tax instruments with respect to their relationship to economic growth. Property taxes, and particularly recurrent taxes on immovable property, seem to be the most growth-friendly, followed by consumption taxes and then by personal income taxes. Corporate income taxes appear to have the most negative effect on GDP per capita. These findings suggest that a revenue-neutral growth-oriented tax reform would be to shift part of the revenue base towards recurrent property and consumption taxes and away from income taxes, especially corporate taxes.

While this is only one study, other studies that do exist tend either to point in similar directions to the OECD paper or to be unable to detect clear effects;¹⁸ there are certainly no convincing studies finding, for example, that consumption taxes reduce output more than income taxes, or that corporate taxes are the most growth-friendly of all. Even before the OECD study, a thorough review of existing literature to that time came to the conclusion that ‘A change in the tax mix that increases the importance of consumption taxes relative to income taxes will raise growth’.¹⁹

The ranking proposed in the OECD study – weakly supported by other empirical research – matches what one would expect from economic efficiency considerations such as those discussed in the previous section.

One would expect recurrent taxes on immovable property to be the least damaging to output as the demand for and (especially) supply of immovable property are highly inelastic. Indeed, a large proportion of property values stems from the value of the land, which (as discussed above) is in largely fixed supply and can therefore be taxed with little discouragement to economic activity.

And we have already argued that corporate income taxes, insofar as they apply to the normal return to internationally mobile capital, in effect act like particularly inefficient taxes on workers’ wages, so we should not be surprised if corporate income taxes reduce output more than personal income taxes. More generally, if UK corporate profits respond more to taxation than other tax bases – perhaps because they are more internationally mobile than other tax bases – then corporate income taxes have to be set at higher rates (causing more distortion) for a given revenue yield than other taxes.

It is worth dwelling a little longer on the conclusion that personal income taxes are less growth-friendly than consumption taxes. Crucially this is *not* because consumption taxes do not discourage labour supply. They do. By raising prices, consumption taxes make wages less valuable – just like an income tax – and so make work less worthwhile. But there are three features of consumption taxes that may make them more growth-friendly:

¹⁸ For a recent contribution to the field by researchers at CPB Netherlands, which was unable to find conclusive evidence of an effect of the tax mix, see chapter 11 of *A Retrospective Evaluation of Elements of the EU VAT System: Final Report*, TAXUD/2010/DE/328, European Commission, Brussels, 2011 (http://ec.europa.eu/taxation_customs/resources/documents/common/publications/studies/report_evaluation_vat.pdf).

¹⁹ Paragraph 209 of G.D. Myles, ‘Economic growth and the role of taxation – disaggregate data’, OECD Economics Department Working Paper 715, 2009. See also the two companion papers by the same author, ‘Economic growth and the role of taxation – theory’ and ‘Economic growth and the role of taxation – aggregate data’, published as working papers 713 and 714 respectively. All three are available at <http://www.oecd.org/dataoecd/49/29/48490984.pdf>.

1. Income taxes are more progressive than consumption taxes (they have tax-free allowances and higher rates for those on higher incomes) and so do more to discourage people from increasing their income. So a move from income taxes to consumption taxes may increase incomes, but will tend to be regressive.
2. Income taxes are levied on the full nominal return to many forms of saving and therefore discourage saving and investment.
3. Part of the revenue from consumption tax hikes comes from effectively imposing a windfall tax on existing wealth (the value of which is reduced by the tax levied when it comes to be spent); this component of the revenue does not discourage growth since existing wealth holdings depend on past activities, not on decisions about how to behave in future.

Considering the specific design factors that might explain why some taxes reduce output more than others highlights the fact that how much a tax reduces output depends on how it is designed. For a given revenue yield, an income tax will reduce output less if it is less progressive; a property tax will reduce output less if it is based on land values than if it incorporates the value of buildings too. The likely effects of a tax shift thus depend on the details of the taxes in question, in a way that cannot fully be taken into account in a broad cross-country study.

Similarly, the likely effects of a shift in the tax mix depend on what tax mix the country starts with. The picture in the OECD study may be true on average for OECD countries at present, but that does not mean that shifts from income towards consumption taxes would continue to deliver increases in national income forever. The UK starts from a position where it already raises more than most from property taxes and less than most from social security contributions. As the author of the OECD study acknowledges, 'a closer look at the specific situation of a given country is therefore needed before making policy recommendations on the basis of the empirical analysis presented here'.

Finally, we emphasise – as the OECD author does – that national income should not be the only criterion for judging the merits of a shift in the tax mix. Shifting the tax mix would change the distribution of the tax burden; for example, people might reasonably have strong views on the fairness (or otherwise) of imposing losses on home owners by shifting towards more reliance on property taxes, or on wealth owners by shifting towards consumption taxation.

8.6 Conclusions

Ongoing concerns about the current state of the economy – high unemployment, falling real wages and a large budget deficit – and a Eurozone crisis which threatens further problems ahead, are rightly the focus of most current attention among policymakers and commentators. However, it pays to start planning for the longer term as well – to think now about how economic performance could be bolstered beyond the present crisis. This chapter has suggested how tax reform could make a contribution.

With the government taking nearly 40p in tax for every pound generated in the economy, the tax system inevitably has large effects on the behaviour of individuals and firms. Yet the Mirrlees Review has shown how the tax system could be reformed to do far less damage than it does at present. Many of the reforms would be politically difficult – introducing congestion charging, for example, or shifting away from taxes 'on companies'

towards taxes 'on people' (when in the end the burden of all taxes must be felt by real people). And while adjustments to personal tax and benefit rates can generally offset unwanted distributional effects on average, meaningful reforms always create losers as well as winners. But when the case for reform is overwhelming, governments should have the courage to make the argument.

The government has taken welcome steps towards improving the way in which tax policy is made, including publishing a *Corporate Tax Road Map*,²⁰ consulting on proposals and publishing draft legislation earlier, setting up the Office of Tax Simplification,²¹ providing more analysis of tax reforms in Budget documentation, having policy costings audited by the Office for Budget Responsibility, and the very act of setting out in a series of documents how tax policymaking is to be conducted.²² And the government's *Plan for Growth* did contain some things the government has done and is doing on tax reform that could help to boost output.²³ But in last year's Green Budget, we called for the government to set out a comprehensive strategy for the tax system as a whole.²⁴ We still await one.

²⁰ HM Treasury and HM Revenue & Customs, *Corporate Tax Reform: Delivering a More Competitive System*, 2010 (http://www.hm-treasury.gov.uk/corporate_tax_reform.htm).

²¹ See <http://www.hm-treasury.gov.uk/ots.htm>.

²² See http://www.hm-treasury.gov.uk/tax_policy_making_new_approach.htm.

²³ HM Treasury and Department for Business, Innovation & Skills, *The Plan for Growth*, March 2011 (http://cdn.hm-treasury.gov.uk/2011budget_growth.pdf).

²⁴ P. Johnson, 'Defining a tax strategy', in M. Brewer, C. Emmerson and H. Miller (eds), *The IFS Green Budget: February 2011* (<http://www.ifs.org.uk/budgets/gb2011/11chap9.pdf>).