

10. Corporate taxes and intellectual property

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Summary

- The statutory corporate tax rate is due to fall gradually from 28% in 2010–11 to 24% in 2014–15, a rate lower than currently in most EU15 countries. Increases in the tax base will partially offset this reduction in firms' tax burden.
- The tax rate on small business will be reduced to 20% from April 2011. This is the latest in a series of changes over the last decade that has seen the rate cut, then increased and now cut again. There is little justification for taxing firms that earn low profits differently from those that earn high profits or from unincorporated businesses.
- A Patent Box that reduces the corporate tax rate on the income derived from patents to 10% is to be introduced from April 2013. The policy is poorly targeted at promoting research and will add unnecessary complexity to the tax system. In addition, the government's own estimates predict that the policy will lead to a large reduction in UK tax receipts.
- Consultation on reforms to the Controlled Foreign Companies regime continues with a view to legislating in Finance Bill 2012. The extent to which the government attempts to tax the intellectual property UK firms hold offshore in order to address tax avoidance will be an important aspect of the debate.
- The government intends to consult on reforms to research and development (R&D) tax credits with an aim to make them more narrowly targeted at research activity. It seems likely that reforms will result in a narrowing of the costs eligible for R&D tax credits, and not an increase in the generosity of the small companies' element.
- If all these reforms are enacted, the UK will have a corporation tax rate lower than most European countries currently have, but a system with significant additional complexity and which provides an expensive and distortionary tax break to a handful of firms, largely for activity that would have occurred in the absence of the policy.

10.1 Introduction

Corporate taxes and, in particular, the tax treatment of income that arises from intellectual property are currently at the centre of a package of reforms due to be introduced over the current parliament. These were set out in November 2010 when the government published *Corporate Tax Reform: Delivering a More Competitive System*, henceforth its 'November 2010 document'.¹

¹ See HM Treasury, *Corporate Tax Reform: Delivering a More Competitive System*, 2010 (http://www.hm-treasury.gov.uk/corporate_tax_reform.htm).

The four key planks of the proposals are:

- reductions in statutory corporate rates alongside an increase in the tax base;
- the introduction of a Patent Box – a policy that reduces the corporate tax rate on the income derived from patents to 10%;
- a potential refocusing of the research and development (R&D) tax credit;
- reforms to the Controlled Foreign Companies (CFC) regime.

Consultations on the detail of the latter three will follow during 2011. The government's November 2010 document sets out the broad ambition for the UK corporate tax system to be more competitive, by which it means to offer firms a lower tax burden than other countries, specifically other G20 countries. The proposals, in particular the reductions in the main corporate tax rate and potential refocusing of R&D tax credits, draw on suggestions made in a report by Sir James Dyson for the Conservative Party when in opposition.² The Patent Box and CFC reforms also build on initiatives from the previous Labour government. Specifically, the Patent Box was originally announced by Labour in the November 2009 Pre-Budget Report³ and the reform to CFC rules is a necessary extension of a process started by Labour following the UK's move to an exemption system for the taxation of foreign-source income.

In this chapter, we set out some key issues in designing corporate taxes (Section 10.2) before commenting on the forthcoming rate cuts and base broadening of corporate income tax (Section 10.3), the introduction and implementation of a Patent Box (Section 10.4) and the taxation of offshore intellectual property in relation to CFC reforms (Section 10.5). Section 10.6 concludes.

10.2 Issues in designing corporate taxes

The design of corporate tax is complex. The Mirrlees Review sets out the issues and key areas of reform necessary to bring the UK system into line with current best practice.⁴ One of the difficulties in designing corporate taxes arises because many firms operate globally, which means that they have the ability to shift activity in response to tax and that the taxes set by other governments also affect their decisions. Indeed, governments may use taxes to compete to attract mobile activity.

In theory, there is a set of key principles to which corporate taxes should adhere. Among them are neutrality and stability. Neutrality is the notion that the tax system should not distort firms' decisions over how to organise their activities, how much activity to undertake and where that activity is located, because to do so creates inefficiencies and is therefore costly. However, there are a number of different forms of neutrality, as Box 10.1

² See J. Dyson, *Ingenious Britain: Making the UK the Leading High Tech Exporter in Europe*, 2010 (http://media.dyson.com/images_resize_sites/inside_dyson/assets/UK/downloads/IngeniousBritain.PDF).

³ For details on the initial proposals see R. Griffith and H. Miller, 'Support for research and innovation', in R. Chote, C. Emmerson and J. Shaw (eds), *The IFS Green Budget: February 2010*, IFS Commentary 112, 2010 (<http://www.ifs.org.uk/budgets/gb2010/10chap10.pdf>).

⁴ For a discussion of the conclusions and recommendations drawn by the Mirrlees Review, see chapters 17 and 18 of 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 IFS, 2011 (<http://www.ifs.org.uk/mirrleesReview/design>).

Box 10.1. Neutrality in the tax system

Three types of neutrality relevant to the design of corporation tax in an international setting are capital export neutrality, capital import neutrality and capital ownership neutrality.

Capital export neutrality says that investors from a single location (e.g. the UK) should face the same effective tax rate regardless of where they invest (e.g. in the UK or abroad). *Capital import neutrality* says that investments in a location should face the same effective tax rate regardless of where the investor is located. *Capital ownership neutrality* says that tax should not distort the pattern of ownership; this requires that investments be treated the same for tax purposes regardless of who owns them.

There are many other important ways in which the tax system should be neutral, including with respect to the type of finance firms choose, the legal form they adopt and the types of investments they make.

In practice, it is difficult to achieve all of these forms of neutrality.

discusses. As governments do not set taxes in isolation, it is generally not possible to achieve all of them unilaterally.⁵

Many of the forthcoming tax changes – the cuts to the main statutory rate, the introduction of a Patent Box and modifications to the CFC rules – and the previous move to an exemption system are related to trying to encourage firms to keep activity in the UK instead of moving it to lower-tax jurisdictions. There are some good reasons to want to keep activity in the UK, such as the spillover benefits that arise from research. However, these need to be offset against the costs of distorting firms' decisions; the UK benefits from firms choosing the best place to conduct their activities, if in doing so they become more productive.

Corporate taxes, as with almost all taxes, distort choices. In particular, a source-based corporate income tax (i.e. where the tax base is income earned in the country where productive activity takes place) increases the required pre-tax rate of return⁶ and, in so doing, reduces capital investment. The effect of this is borne largely by domestic workers, who experience a fall in labour productivity and therefore wages. Indeed, the ultimate incidence of corporate tax always lies with households and is borne either by the owners of capital (in the form of lower dividends), by workers (in the form of lower wages) or by consumers (in the form of higher prices). Capital tends to be much more mobile than workers or consumers, and so corporate tax tends to get shifted to domestic factors – and specifically labour – but with a higher associated deadweight cost than if those factors had been taxed directly.⁷

⁵ For a discussion of corporate taxes in an open economy, including type of neutrality and issues surrounding tax competition, see sections 10.3 and 10.4 of R. Griffith, J. Hines and P. Sørensen, 'International capital taxation', in J. Mirrlees, S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles and J. Poterba (eds), *Dimensions of Tax Design: The Mirrlees Review*, Oxford University Press for IFS, 2010 (<http://www.ifs.org.uk/mirrleesreview/dimensions/ch10.pdf>).

⁶ Broadly, because capital is mobile, after-tax returns will equalise across countries. A higher tax rate requires a higher pre-tax return which, given a diminishing return to investment, implies a lower level of investment.

⁷ See, for example, W. Arulampalam, M. Devereux and G. Maffini, 'The direct incidence of corporate income tax on wages', Oxford University Centre for Business Taxation, Working Paper 07/07, 2007 (<http://www.sbs.ox.ac.uk/centres/tax/papers/Pages/PaperWP0707.aspx>), which includes a discussion of relevant research to date and estimates that a corporate tax is largely shifted to wages.

There are, however, some reasons that we may want to levy a corporate tax (rather than simply tax households in a more direct form). The corporate tax plays a withholding role, acting as a backstop to the personal income tax system⁸ and providing the only feasible way of taxing the returns that non-UK shareholders make on UK investments. In addition, a corporate tax can be seen as a charge for location-specific rents – that is, profits that are made as a direct result of being in the UK and accessing services, some of which are provided by the government.

In addition to neutrality, there are benefits from having a stable tax system. Uncertainty over the level or trajectory of taxes can weaken firms' incentive to invest and make them inappropriately cautious.⁹ Since firms' investment decisions are taken with a long-term view that includes expectations about the tax burden, consistency of policy is important.

10.3 UK corporate income taxes

Statutory rates

The main UK rate of statutory corporate tax is currently 28%. This is almost the lowest currently among the G7 countries (Italy has a rate of 27.5%) but at the high end in comparison with many other European countries, as shown in Figure 10.1. Under plans announced by the government in the June 2010 Budget, the statutory rate will be reduced to 27% in April 2011, 26% in 2012, 25% in 2013 and 24% from April 2014.¹⁰ If no other country changed its rate, the UK would have the lowest rate in the G7 when the rate falls to 27% in April 2011 and would be one of the lowest in the EU15 when the rate reaches 24% in April 2014.

The Treasury estimates that, before accounting for any behavioural response, this series of cuts in the corporate tax rate would reduce revenue by £3.5 billion in 2014–15. After accounting for direct behavioural response, namely the UK becoming a more attractive location for profits, the cost is lower, at £2.7 billion.¹¹ A more complete behavioural estimate would also account for the possibility that other countries might respond by also lowering their tax rates, thus offsetting the extent to which the rate cuts make the UK more attractive. We return to this discussion in Section 10.4 in relation to the introduction of Patent Boxes.

The official estimate of the cost of the lower tax rate does not include any impact on tax revenues of firms carrying out more investment as a result of the tax cuts.¹² However, the Office for Budget Responsibility (OBR) forecasts, which do account for such indirect

⁸ Without a corporate tax, companies' earnings would not be taxed until they became dividends or capital gains, providing shareholders with opportunities to shelter such income from tax.

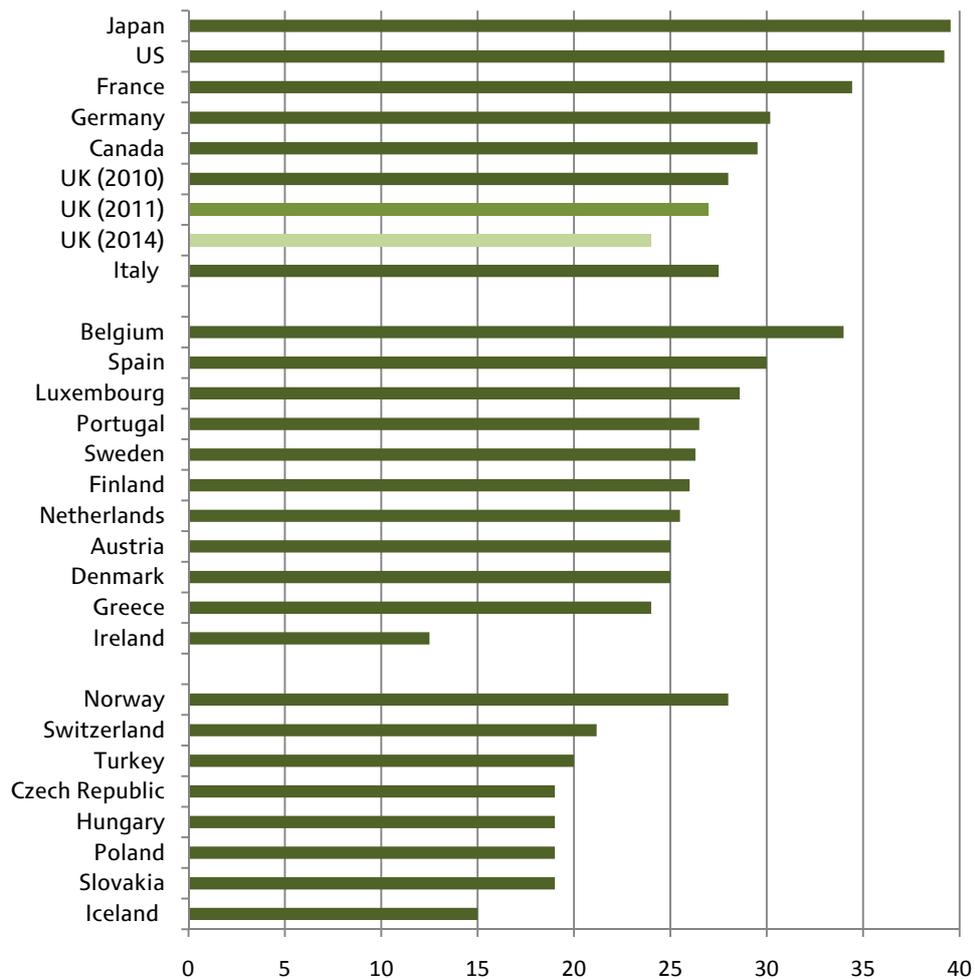
⁹ See, for example, N. Bloom, S. Bond and J. Van Reenen, 'Uncertainty and investment dynamics', *Review of Economic Studies*, 2007, 74, 391–415, which shows that uncertainty reduces the responsiveness of investment to demand shocks, and B. Hall, 'R&D tax policy during the eighties: success or failure?', *Tax Policy and the Economy*, 1993, 7, 1–36, which shows that US R&D tax credits only had an impact when permanent.

¹⁰ See table 2.1 of HM Treasury, *Budget 2010*, June 2010 (http://www.hm-treasury.gov.uk/d/junebudget_complete.pdf).

¹¹ See pages 12–13 of HM Treasury, *Budget 2010 Policy Costings*, June 2010 (http://www.hm-treasury.gov.uk/d/junebudget_costings.pdf).

¹² This does not mean that the Treasury made a mistake with their costing. Their method for producing these costings intentionally excludes any change in revenue arising from 'indirect behaviour changes' by holding constant the post-reform state of the economy. But these indirect effects are then included in the overall fiscal forecast (previously by the Treasury and, under the new arrangements, by the Office for Budget Responsibility) by adjusting the macroeconomic forecast.

Figure 10.1. Corporate tax rates (%), 2010



Notes: This figure shows the statutory corporate tax rate including, where relevant, local corporate income tax rates. Where a progressive (as opposed to flat) rate structure applies, the top marginal rate is shown. The first group of countries is the G7, including the UK's planned rate as of April 2011 and April 2014. The second group is other EU15 countries and the third other European countries included in the OECD Tax Database. Source: Table II.1 (Taxation of Corporate and Capital Income) of OECD Tax Database, 2010 (<http://www.oecd.org/ctp/taxdatabase>).

behavioural effects, state that business investment will be 'around 1 per cent higher in 2014 than in the pre-Budget forecast' as a result of 'measures to reform corporation tax, which are estimated to reduce the cost of capital faced by firms by about 3 per cent'.¹³ Accounting for this would further reduce the estimated cost of the policy.

The reductions in the statutory corporate tax rate are in line with the trend of falling rates across Europe in recent years.¹⁴ Research suggests that part of this fall in rates can be attributed to governments lowering tax rates in response to lower rates elsewhere, in an attempt to attract and retain increasingly mobile capital.¹⁵ The government currently raises a non-trivial amount of revenue from corporate tax – around £43 billion, or 8% of

¹³ For OBR quotes, see paragraphs C.25 and C.26 of the June 2010 Budget.

¹⁴ See section 9.3 of A. Auerbach, M. Devereux and H. Simpson, 'Taxing corporate income', in Mirrlees et al. (eds), *Dimensions of Tax Design* (<http://www.ifs.org.uk/mirrleesreview/dimensions/ch9.pdf>).

¹⁵ See M. Devereux, B. Lockwood and M. Redoano, 'Do countries compete over corporate tax rates?', *Journal of Public Economics*, 2008, 92, 1210–35.

total revenue.¹⁶ Over time, in the face of even more mobile capital and potentially greater tax competition, governments should expect to raise less revenue from corporate tax.

Small profits rate

Businesses with profits below £300,000 per year are currently taxed at a lower *small profits rate* of 21%. In April 2011, the small profits rate will be cut to 20%. The rate of this preferential treatment for companies with low profits – previously called the *small companies' rate* – has changed almost continuously over the last decade. Under the previous Labour governments, it was incrementally reduced from 24% in 1997 to 19% in 2002 (with a now infamous 0% starting rate being introduced in 1999 and scrapped in 2006).¹⁷ In 2008, it changed course and was increased to its current level, 21%. The latest change will therefore see the rate again reverse course.

The oft-cited justification for having a separate and lower small profits rate is to encourage new business formation and, in particular, entrepreneurship. However, there is a lack of compelling evidence that levying a lower rate of corporate tax on the basis of companies' profits achieves this aim. In addition, any benefits associated with additional entrepreneurial activity must be weighed against the revenue forgone by having a lower rate and as a result of tax-motivated incorporations.

Incorporation allows the conversion of labour income into income from capital. The trading profits of unincorporated businesses are essentially earnings of self-employed owner-managers and are therefore subject to income tax and National Insurance. The profits generated by small incorporated firms can be paid as wages to an owner-manager (to take advantage of the tax-free personal allowance) or be subject to the small profits rate. When profits are then taken as dividends, they will be subject to tax, but not to National Insurance, and with a credit given for any corporation tax already paid.¹⁸ A change in legal form can therefore affect the tax burden with no change in economic activity. The relative effective tax rates paid on income earned from unincorporated and incorporated business will depend on the relative statutory tax rates and the circumstances of the taxpayer (for example, whether they are a higher-rate taxpayer). The UK system has provided a long-running tax incentive to be a small incorporated firm, which distorts the choice over organisational form.¹⁹

There is no compelling reason for the tax system to encourage one legal form over another. Therefore, within the tax system as a whole, income derived by operating either a small company or an unincorporated business should face the same tax burden. This in turn requires some alignment of (total) corporate and personal tax rates across different

¹⁶ In 2010–11, total government receipts are due to be £548 billion, of which £43 billion (8%) is attributable to corporation tax. See chart 2 of the June 2010 Budget. The trend in corporate tax revenue is shown in figure 9.3 of Auerbach, Devereux and Simpson, 'Taxing corporate income', in Mirrlees et al. (eds), *Dimensions of Tax Design* (<http://www.ifs.org.uk/mirrleesreview/dimensions/ch9.pdf>).

¹⁷ For further information, see page 16 of R. Griffith and H. Miller, *Productivity, Innovation and the Corporate Tax Environment*, IFS Briefing Note 96, 2010 (<http://www.ifs.org.uk/publications/4839>). For details on the 0% starting rate, see section 9.4 of S. Bond, 'Company taxation', in R. Chote, C. Emmerson, R. Harrison and D. Miles (eds), *The IFS Green Budget: January 2006*, IFS Commentary 100, 2006 (<http://www.ifs.org.uk/budgets/gb2006/06chap9.pdf>).

¹⁸ Dividend income is taxed at 10% up to the higher-rate income tax threshold and at 32.5% thereafter. Accounting for the dividend tax credit effectively reduces these rates to 0% and 25% respectively. Profits can also be retained in the business for reinvestment and therefore sheltered from (higher) personal income taxes. Income gained from the sale of a company is taxed as a capital gain, at 18%.

¹⁹ For a full discussion, see C. Crawford and J. Freedman, 'Small business taxation', in Mirrlees et al. (eds), *Dimensions of Tax Design* (<http://www.ifs.org.uk/mirrleesreview/dimensions/ch11.pdf>). See, in particular, section 11.3.3 for a discussion and appendix 11C for precise calculations of the tax incentives to incorporate.

legal forms to conform to the broad underlying principle that different forms of employment should attract the same overall level of taxation. The Mirrlees Review sets out a number of options for reform.²⁰

The uncertainty over both the level and trajectory of the small profits rate caused by constant changes is unlikely to encourage business and entrepreneurship, and is an unwelcome feature of the tax system. Reducing the rate increases the existing tax incentive to be incorporated rather than unincorporated and is therefore an unwelcome step. Alternatively, an increase in the small profits rate would have been one way to reduce the distortion within the current system, and may have been relatively easy to do politically as part of a wider efficiency and simplification package that included reductions in the main rate.

Base broadening

The cuts in both the statutory and small profits rates will reduce the tax burden faced by firms. However, this is partly offset by restrictions in some allowances, which effectively broaden the tax base. From April 2012, the main rate of capital allowances will fall from 20% to 18%, the special rate from 10% to 8% and the Annual Investment Allowance from £100,000 to £25,000. These changes operate to reduce the proportion of the previous year's capital expenditure that can be deducted from revenue to calculate taxable profits. Broadening the tax base alongside cuts to the rate is a trend we have seen across developed countries for the last 30 years. The Treasury estimates that the 2014–15 revenue gain from reducing allowances, allowing for some changes in behaviour but not accounting for any change in the level of investment, will be £2.8 billion, almost exactly offsetting the estimated cost of reducing the main rate.²¹

The OBR forecast included in the June 2010 Budget sets out its judgement that the cuts in the corporation tax rate will more than offset the reduction in investment allowances such that the 'cost of capital for new investment is lower for all non-financial companies, and the rate of return from the existing capital stock is higher'.²²

The largest beneficiaries from the package of measures will be high-profit, low-investment firms (excluding those subject to the Bank Levy also announced in the June 2010 Budget), which gain more from the rate cuts than they lose from the base broadening. Similarly, the base broadening will have the largest impact on those firms with capital-intensive operations – with long-lasting equipment and machinery – that currently benefit most from the capital allowances. This is likely to apply more to firms in the manufacturing sector, but it may also be true for some capital-intensive service sectors such as transport.

²⁰ For a discussion of the options for aligning the taxation of income across different forms of employment, see chapter 19 of Mirrlees et al., *Tax by Design* (<http://www.ifs.org.uk/mirrleesreview/design/ch19.pdf>).

²¹ This figure is composed of £1.8 billion from reducing capital allowances and £1.0 billion from reducing the Annual Investment Allowance. See page 15 of HM Treasury, *Budget 2010 Policy Costings*, June 2010 (http://www.hm-treasury.gov.uk/d/junebudget_costings.pdf).

²² See paragraph C.57 of the June 2010 Budget. Financial companies are an exception due to the introduction on 1 January 2011 of the bank levy.

10.4 The taxation of innovation and the Patent Box

The government plans to introduce a Patent Box from April 2013 which will reduce the rate of corporation tax levied on the income derived from patents, net of development costs, to 10%. There is now a consultation under way on the form and implementation of the Patent Box with a view to legislating in Finance Bill 2012.²³ The main details of the policy, such as which patents will be eligible and how patent income will be ascertained, are yet to be decided, but indications of the broad approach were set out in the government's November 2010 document.

Intellectual property and the associated innovations represent a key input into production for many firms and are important drivers of growth. There is a clear rationale

Box 10.2. R&D tax credits

The UK currently operates a system of R&D tax credits which reduce firms' tax liability by allowing them to deduct an amount greater than actual R&D expenditure from taxable profits, and thereby reduce their corporation tax bill. The main rate of tax relief is 130%; that is, for each £100 of qualifying costs, a company can reduce the income on which corporation tax is paid by £130. For small and medium-sized enterprises (SMEs), the tax relief is more generous, at 175%.^a In addition, SMEs with insufficient taxable profits can claim a cash payment equal to 24.5% of eligible R&D expenditure. In 2008–09, 8,540 firms claimed R&D tax credits at a direct cost to the Exchequer of £980 million.^b

The June 2010 Budget contained a commitment to review R&D tax credits in light of the following recommendations put forward in the Dyson Review: (i) refocus the scheme towards hi-tech companies, small businesses and start-ups; (ii) increase the rate to 200%, once the public finances allow; and (iii) improve the ease with which credits can be claimed. Underlying these recommendations – the first in particular – is the sentiment that R&D tax credits be 'refocused to those companies where the barriers to a sustained R&D programme are greatest and the potential spillovers to the rest of the economy are greatest'.^c This is in line with the rationale for operating R&D tax credits.

There are currently few details on the likely form of the changes. The government's November 2010 document said that the tax credits will not be restricted to small firms or firms in specific sectors. However, there will be consideration of whether the 'relief is appropriately targeted at those costs that are most closely linked to genuinely innovative activity'.^d In addition, the government has set out the aim to enhance the 'effectiveness of the schemes in addressing the market failure in the provision of R&D' while ensuring that the reforms do not result in additional costs to the Exchequer.^e It looks likely, then, that reforms will seek to reduce the scope of the eligible costs, which currently include expenditure on staff, materials, power and software development.

a. SMEs are defined as those with fewer than 500 employees and either an annual turnover not exceeding €100 million or a balance sheet not exceeding €86 million.

b. See tables RD1 and RD2 respectively at http://www.hmrc.gov.uk/stats/corporate_tax/randdtcmnu.htm.

c. See page 54 of J. Dyson, *Ingenious Britain: Making the UK the Leading High Tech Exporter in Europe*, 2010 (http://media.dyson.com/images_resize_sites/inside_dyson/assets/UK/downloads/IngeniousBritain.PDF).

d. See paragraph 4.16 of part IIB of the government's November 2010 document.

e. See paragraph 4.12 of part IIB of the November 2010 document.

²³ See section 3 of part IIB of the government's November 2010 document.

for governments to enhance the incentives for firms to engage in research: some of the benefits accrue to third parties and, because of this, firms tend to underinvest in research from society's point of view, especially basic research. That the market fails to provide firms with the correct incentives to invest in the optimal amount of research is a justification for government intervention (in cases where the government is able to improve the situation). This rationale is currently explicitly recognised in the corporate tax system through R&D tax credits, which are well targeted at research.²⁴

R&D tax credits are also part of the consultation on the taxation of innovation and intellectual property. One of the key aims of the consultation is to produce reforms that refocus R&D tax credits on hi-tech companies.²⁵ See Box 10.2.

Introducing a Patent Box: not justified

In contrast to R&D tax credits, a Patent Box is poorly targeted at research activity that generates spillovers; the policy targets the income that results from patented technology, not the research itself. The Patent Box will provide only weak incentives for firms to undertake additional research with a view to creating new patentable technologies. In addition, as firms can separate patent income from real activity, it is entirely possible that little additional research will take place in the UK as a result of this policy. As a policy to spur innovation, government intervention using a Patent Box is poorly justified. We have set this out in previous publications.²⁶

Labour's original justification for the Patent Box focused heavily on the desire to 'strengthen the incentives to invest in innovative industries'.²⁷ Under the coalition government, there has been an emphasis on the potentially positive revenue impacts and on encouraging development activities by 'reward[ing] successful technical innovation'.²⁸ Both the Labour and coalition government announcements of a Patent Box highlighted that firms' intellectual property is highly mobile and that a Patent Box would make the UK a more attractive location for holding patents. We consider each of these issues – the likely revenue impact, the type of activity the Patent Box would encourage and making the UK a more attractive location for patents – in turn.

The likely revenue impact

The government's November document suggests that the UK will benefit from the 'additional tax on the consequential profits' associated with patents as a result of the Patent Box.²⁹ However, the revenue gains from increased patenting (and related activities) and attracting patent income to the UK must be weighed against the revenue lost from levying a lower rate.

²⁴ For more information, see section 10.4 of R. Griffith and H. Miller, 'Support for research and innovation', in the February 2010 Green Budget (<http://www.ifs.org.uk/budgets/gb2010/10chap10.pdf>).

²⁵ See section 4 of part IIB of the government's November 2010 document.

²⁶ These arguments were made in R. Griffith and H. Miller, 'Support for research and innovation', in the February 2010 Green Budget (<http://www.ifs.org.uk/budgets/gb2010/10chap10.pdf>) and summarised in R. Griffith and H. Miller, *Productivity, Innovation and the Corporate Tax Environment*, IFS Briefing Note 96, 2010 (<http://www.ifs.org.uk/publications/4839>).

²⁷ See paragraph 4.40 of HM Treasury, *Pre-Budget Report 2009*, December 2009 (http://www.hm-treasury.gov.uk/prebud_pbr09_repindex.htm).

²⁸ See paragraph 3.5 of part IIB of the government's November 2010 document.

²⁹ See paragraph 2.6 of part IIB.

The government's forecast of the policy cost in the June 2010 Budget predicted a revenue loss of £1.1 billion a year.³⁰ We also estimate that the introduction of a Patent Box would lead to a substantial reduction in tax revenues: even though the UK would become a more attractive location for patents, the boost to revenue this would provide would be outweighed by the lower tax rate.³¹ Both these estimates account for the fact that the UK would become a more attractive location for patent income, but neither includes the effect of a potential increase in patenting – which would make the reduction in revenue smaller – or the likely response of other countries, which might also introduce a Patent Box – which would make the reduction in revenue larger. But taking both pieces of evidence together, it seems likely that the policy will entail a significant revenue cost.

Encouraging successful innovation

Much has been made of the Patent Box as a mechanism to encourage the development of patented technologies and, in doing so, promote growth. Two important questions are whether the policy is likely to succeed in this and whether, regardless of the outcome, this is a well-justified policy on these grounds.

The Patent Box will provide firms with an additional incentive to maximise the amount of profit derived from patented technologies and, in doing so, is likely to spur additional development and commercialisation activities. These may include, for example, further R&D on the processes required to manufacture a product that uses a patented technology or advertising to promote sales of a new product.

However, these are activities for which firms currently capture all of the returns. Indeed, a key justification for the system of patents, which provide firms with a legally sponsored monopoly on the use of patented technology, is to ensure that this is the case. Firms will therefore carry out commercialisation activities that maximise the related income stream; a tax incentive to this end is not required. With no market failure, government intervention is not justified.

Of course, any policy that effectively cuts corporate tax will lead to more profit-generating activities taking place. But there are myriad ways in which the government could spend £1.1 billion to encourage activity and support growth. For example, it could cut the corporate tax rate for all businesses.³² The Patent Box is not a sensible choice for at least three reasons. First, the policy unnecessarily distorts the decision to invest in patentable technologies rather than in other activities, including those that result in other valuable forms of intellectual property. Second, to the extent that a Patent Box reduces the tax rate for activity that would have occurred in the absence of government intervention, the policy includes a large deadweight cost. Third, the Patent Box introduces additional complexity to the tax system.

³⁰ See table 2.4 of the June 2010 Budget. The £1.1 billion policy costing includes the effect of the Patent Box in making the UK a more attractive location for patent income but not any indirect behavioural effects (such as increase in the number of patents), which are captured in the OBR's economic forecast.

³¹ See R. Griffith, H. Miller and M. O'Connell, *Corporate Taxes and Intellectual Property: Simulating the Effect of Patent Boxes*, IFS Briefing Note 112, 2010 (<http://www.ifs.org.uk/publications/5361>). This analysis also accounts for the fact that the Benelux countries already operate Patent Boxes and shows that the UK can expect to lose revenue from patent income simply because firms will choose to hold patents in these countries rather than the UK. We estimate that a UK Patent Box will lead to an additional loss in revenue. Accounting for all four of these Patent Boxes, we estimate that the UK would see revenue from patent income halved.

³² As a point of comparison, the 2013–14 revenue cost of a 1% fall in the statutory corporate tax rate in 2011 would be £900 million. See table 1.6 at http://www.hmrc.gov.uk/stats/tax_expenditures/menu.htm.

However, there is a distinction between saying that a policy is poorly justified and saying that no one will benefit. Indeed, those firms that earn a significant profit from patents will benefit from a significant reduction in corporate taxes. However, the holdings of patents are highly skewed, so the largest share of the tax savings entailed in a UK Patent Box will accrue to a small number of firms that account for the majority of patents and are likely to be most able to generate large associated revenue streams from their technologies.³³

Indeed, the Patent Box is predominately a tax break for activity that has been successful and is now making profits. This amounts to a tax break on economic rents – profits from factors of production (land, labour or capital) that are in excess of those needed to keep the factors in their present use. Economic rents mainly arise as the result of market power or entrepreneurial skill. Since they are profits in excess of the required normal return, levying tax on them does not create any efficiency losses. On this basis, it is efficient to tax economic rents. However, this must be balanced against the fact that corporate tax, including on economic rents, can influence corporations' decisions over earning income in high- or lower-tax jurisdictions and can act to discourage foreign investment. We look further at the impact on location choices in the next subsection.

Making the UK an attractive location for intellectual property

The final tenet of the justification of a Patent Box is that the policy should help prevent patents moving offshore. This issue is particularly acute in light of the fact that some other countries in the European Union – currently Belgium, Luxembourg, the Netherlands and Spain – already operate Patent Boxes which incentivise some UK multinational firms to hold patent income offshore. This is a genuine concern for the government, and is an issue with which it will need to engage. To be clear, this issue is not about how much activity firms undertake, but where they conduct it. In light of the mobility of intellectual property and the low tax rates offered by some other countries, is a Patent Box a reasonable way to dissuade firms from holding intellectual property offshore?

To answer this, one must first be clear about why the UK would want to encourage firms to hold patents in the UK. The government's November 2010 document suggests that a Patent Box is justified on the grounds that, while R&D tax credits support research activity, there are 'no specific incentives for companies to retain IP [intellectual property] in the UK during commercialisation'.³⁴ But the fact that there is no special tax treatment for any given activity is certainly not a justification for introducing one.

We explained above that a Patent Box would not prevent the UK from losing tax revenue: even after allowing for firms to respond to the lower tax rate by changing where patents are held, we and the Treasury both think that the policy would entail a significant revenue cost. We therefore assume that the desire to encourage intellectual property holdings in the UK is really a desire to retain and/or attract real activity, including both research and commercialisation activities.³⁵ In light of this, the pertinent question is whether a Patent Box would succeed in preventing firms from holding real activity offshore and, importantly, whether it is the best policy mechanism to achieve this.

³³ See table 1 of R. Griffith, H. Miller and M. O'Connell, *Corporate Taxes and Intellectual Property: Simulating the Effect of Patent Boxes*, IFS Briefing Note 112, 2010 (<http://www.ifs.org.uk/publications/5361>).

³⁴ See paragraph 2.5 of part IIB.

³⁵ A relatively high tax rate operates to deter mobile activities. To the extent that the Patent Box is successful in encouraging real activity that would have located offshore in the absence of the policy to remain or locate in the UK, it could have a positive effect on the overall revenue from corporation tax.

The answer to whether the Patent Box will succeed in attracting real activity will depend crucially on the extent to which firms co-locate intellectual property alongside real activities. There can be both commercial and tax-motivated reasons for doing so.³⁶ However, firms can and do separate intellectual property and associated income from real activity, as the government explicitly recognised in its November document.³⁷ This means that it is far from clear how much real activity would leave the UK in the absence of a Patent Box, and how much activity would be attracted to the UK in the presence of a Patent Box. The decision to conduct activity in the UK is based on many factors aside from tax, including the quality and availability of skills, infrastructure and the regulatory environment. Many of these will be funded from taxation, and firms will be willing to, in effect, pay a tax cost in order to operate in the UK. This also highlights that there are other ways to encourage firms to conduct activity in the UK or dissuade them from leaving, such as investing in high-skilled workers and a strong science base.

The recent introduction of Patent Boxes in other European countries and the forthcoming introduction in the UK raise questions relating to tax competition. Specifically, are European governments using favourable tax policies to attract mobile income, potentially at the expense of other countries, and, if so, what are the consequences? Recent work by IFS researchers shows that if other countries, in addition to the UK and Benelux countries, introduced Patent Boxes, all countries would lose further revenue from patent income.³⁸ This suggests that the successive introduction of Patent Boxes could amount to a 'race to the bottom' in which firms move income in response to lower rates but no government sees revenue gains. Again, for governments to be net beneficiaries, there would need to be real activity that accompanied income. However, as more governments introduce preferential tax regimes, the relative benefit to firms of choosing any given country is eroded. In the longer run, the series of policy reforms could amount to little more than a reduction in tax revenues.

Summary

To answer whether the Patent Box is the best policy, the beneficial effects of any potential increase in UK activity must be weighed against the costs of the policy, as discussed above. In summary:

- The Patent Box will lead to a loss in revenue from patent income, largely to subsidise activity that would have occurred anyway.
- It distorts the decision to invest in patentable technologies and adds additional complexity to the tax system.
- It is unclear how the Patent Box will alter where firms choose to locate real activity.
- Any beneficial effects in terms of being an attractive location for patents could be eroded if other European countries introduced similar preferential tax regimes.

On balance, then, it seems hard to justify the Patent Box on these grounds.

There are concerns that some firms artificially locate intellectual property offshore, but there are already Controlled Foreign Companies rules in place which aim to prevent this.

³⁶ The key elements of the corporate tax system that can produce incentives for firms to co-locate real activity alongside intellectual property are CFC rules, withholding rates, transfer pricing rules and exit taxes.

³⁷ See paragraph 3.3 of part IIB.

³⁸ See R. Griffith, H. Miller and M. O'Connell, *Corporate Taxes and Intellectual Property: Simulating the Effect of Patent Boxes*, IFS Briefing Note 112, 2010 (<http://www.ifs.org.uk/publications/5361>).

Indeed, the government is currently consulting on how to modify the CFC regime to ensure that intellectual property genuinely created in the UK continues to be taxed here; we return to this issue in Section 10.5. Our research shows that the government could mitigate the effects of the Benelux Patent Boxes by operating a CFC regime that taxed income held in these countries. By subjecting patent income held in low-tax countries to UK taxation, the UK could remove the incentives for firms to locate offshore in the first place. In reality, it is unlikely that legislation could prevent all tax-related income shifting, but it would lessen the problem.

Implementing a Patent Box: hard to do

The government is consulting on some specific implementation issues. Notably, operating a Patent Box will require HM Revenue and Customs to define which patents are eligible and, more difficult, to measure the income derived from patents. These are challenging issues. The legislation that implements a Patent Box policy is likely to add significant complexity to the tax system and require policing to ensure that both income and costs are being appropriately assigned to patents.³⁹

Which patents?

The government's November document sets out that the Patent Box will apply from 1 April 2013. It is widely expected that all UK-registered companies will be eligible to make use of the Patent Box. This would include patents filed at patent offices other than the UK Intellectual Property Office (UKIPO), patents that have been invented outside the UK and patents held by UK subsidiaries of foreign multinationals.⁴⁰ Eligibility criteria will need to set out the date from which patents become eligible and which patents can be included.

Date defining eligibility

When originally announced by the previous government, eligible patents were due to be those granted after April 2013. The consultation will now consider basing eligibility on either the date of grant or the date when a patent is first commercialised. The former is a clearly defined date which can be verified by examining the patent document. The date of commercialisation would need to be determined; this would be more straightforward for some patents (e.g. those that protect a new product with a clear launch date) than others (e.g. those that protect a modification to a pre-existing production process). In addition, the government announced that patents commercialised after 29 November 2010 will be included.⁴¹

There are significant lags between creating a new idea, filing a patent, having the patent granted and then commercialising the resulting technology. Even if firms do respond to the Patent Box by creating more patentable technology, it will be many years, and certainly after 2013, before income eligible for the Patent Box results. Including patents from 2013 will therefore mean that the Patent Box will spend the initial years almost exclusively subsidising activity that would have occurred in the absence of the tax break.

³⁹ The Benelux countries' Patent Boxes are implemented with a number of complex caveats and restrictions on the type and amount of income that can be included.

⁴⁰ For a discussion of potential definitions of eligible patents and the distinctions between the location of patent offices, where patents are held for legal purposes (i.e. the location of the firm that holds the patent) and where patents are invented, see page 241 of R. Griffith and H. Miller, 'Support for research and innovation', in the February 2010 Green Budget (<http://www.ifs.org.uk/budgets/gb2010/10chap10.pdf>).

⁴¹ See paragraph 3.12 of part IIB of the government's November 2010 document. This is largely a transitional measure; eventually, all granted and commercialised patents will be included.

This represents a large deadweight cost of the policy, which, in the short term, has been worsened by the inclusion of already-granted patents commercialised after 29 November 2010. As mentioned above, to the extent that the Patent Box covers innovations that would have occurred in the absence of the policy, the deadweight cost will continue throughout the life of the policy. However, introducing the policy at a later date would have the drawback that it might cause firms to delay investment and commercialisation to ensure that their patents were eligible.

Which patents are included

Under European law, eligibility criteria for inclusion in the Patent Box cannot include restrictions that patents must have been created in the UK. It will therefore be possible to hold a patent and associated income in the UK without co-locating any associated real activity. Indeed, although patent ownership is frequently co-located with research, there is an increasing trend towards holding intellectual property separately from real activity, and this type of arrangement is encouraged by tax incentives such as the Patent Box.⁴²

The government has noted the potential and undesirability of purely tax-motivated income holding: 'The Government does not wish to incentivise purely passive holding of IP, or to encourage artificial tax avoidance behaviours'.⁴³ The November document indicates a desire to implement a system that will prevent such abuse. At this stage, there are no precise details of what this will mean in practice. One suggestion is to link 'the amount of income which can be attributed to the Patent Box to the level of ongoing R&D or associated manufacturing activity'.⁴⁴ However, it is unclear how such a measure would be designed or implemented.

How to define patent income?

For the policy to be operational, the government will need to specify how the income derived from patents is to be measured and set out the costs that are to be deducted from gross income to get eligible net income. In doing so, it will need to be mindful that firms will face an incentive to attribute as much income as possible to their patents while allocating costs to activities that are taxed at higher rates.

Attributing income to patents

Perhaps the largest challenge in administering a Patent Box comes in determining how to attribute income to specific patents in order to identify which income qualifies for the reduced rate of corporation tax. When a firm licenses out a patented technology, the income received in licence fees can be clearly identified. This is not true of 'embedded income' – income earned when firms use a technology in the production and sale of goods – which will also be eligible. In such cases, it is non-trivial to determine how much of firms' total income can be attributed to a patent, as opposed to the many other factors that will have contributed to profits. This is especially difficult when a firm creates a product with multiple patents, not all of which are likely to be eligible, or with other intangible assets such as company brands. The government has highlighted two possible

⁴² In the case of a patent, this means that the firm that holds the patent for legal purposes – and is therefore eligible to collect associated income and liable for the resulting tax – can be located in a different country from the inventor(s) who created the underlying technology.

⁴³ See paragraph 3.19 of part IIB of the government's November 2010 document.

⁴⁴ See paragraph 3.20 of part IIB of the government's November 2010 document.

mechanisms for calculating embedded income – the arm’s length principle and a formulaic approach – but has said it currently favours the second.⁴⁵

An *arm’s length principle* aims to measure patent income by determining the value a patent would have if licensed to a third party. Consider the following example. A firm uses a patented technology, say a new microchip, to make and sell mobile phones. How much of the resulting revenue the firm receives can be attributed to the microchip? This can be thought of as asking ‘How much would the firm receive in royalties if it licensed the technology to an unrelated firm?’. In answering this, the arm’s length principle aims to ascertain the true value of the technology, independently of other, often related, intangible assets and processes.

This is obviously a difficult exercise. When technology is not traded on the market, there is no observable price. Calculating the related arm’s length price is both difficult and open to manipulation by firms, which have much more information about their patented technologies than the government. In addition, there can be a more fundamental problem with this approach. Even conceptually, the arm’s length price may not exist. Consider again the example above and say that our firm also has a patent crucial for the production technology that creates the microchip. Each patent is worthless without the other. One could argue that the arm’s length price of both patents is therefore zero – a third party would not be prepared to pay for either one individually. Alternatively, one could calculate the price, conditional on owning the other patent. The problem here is that, if both prices are calculated in this way, the combined price could outweigh the value of the final output. To consider another problem, let’s say our firm is a monopolist supplier of a specific type of mobile technology. This means that there are currently no third parties that would buy the technology and, further, if there were (and the firm no longer had monopoly power), the value of the patents would be different.⁴⁶

Despite such difficulties, the arm’s length principle is currently used in other parts of the tax system, notably to determine transfer prices of transactions made between related entities.⁴⁷ It is also used by the Benelux countries, which require firms to calculate the amount of income eligible for the Patent Box based on the arm’s length principle. The burden of proof is on firms to be able to demonstrate that the embedded income (also often called deemed income) represents the hypothetical amount that a third party would pay to license the technology in order to produce the same product (or provide the same service). This implicitly includes the notion that the product could not be created without the patented technology.

There are currently no details of how the favoured *formulaic approach* would work. We assume it would need to include a mechanism that accounted, at least roughly, for the extent to which patented technologies created income. The government will presumably be keen to ensure that firms are not able to overstate the amount of income created by a patented technology.

⁴⁵ See paragraph 3.15 of part IIB of the government’s November 2010 document.

⁴⁶ As another example, consider a firm that has a strong brand image and a patent on a new product. Without the brand image, third parties may place a very low value on the patent, even though the firm that holds the patent will create large amounts of income as a direct result of the patent-protected product.

⁴⁷ In relation to transfer prices, there are government guidelines for valuing intellectual property via the arm’s length principle; see <http://www.hmrc.gov.uk/manuals/intmanual/intm467160.htm>. The OECD also discusses the arm’s length pricing of intangibles; see chapter 6 of OECD, *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations*, 2010 (<http://www.oecd.org/ctp/tp/guidelines>).

The government's initial intention to adopt the formulaic approach is based on the complexity, both for business and for HMRC, of administering arm's length pricing. Since there is no standard or straightforward way of valuing patents accurately, attempting to do so imposes large costs on businesses in making such calculations and on government in having to assess the accuracy of claims. Depending on its form, the formulaic approach could make it easier to calculate an estimate of income from patents and provide firms with more certainty over how much income would be eligible. However, since the formulaic approach will provide only an approximation of the actual income received, the drawback would be a less accurate measure of the income derived from patents.

Defining net income

The Patent Box will apply to income net of expenses and deductions.⁴⁸ The government will therefore need to define which costs are to be deducted from gross patent income. In practice, firms will face an incentive to understate the level of costs associated with patent income and instead attribute them to other activities which are subject to the higher statutory corporate tax rate. The November document sets out that the expenses will include those incurred before commercialisation, noting that their exclusion would give firms an incentive to delay commercialisation such that the initial costs could be offset against a higher tax rate. However, full-rate relief will be available for the additional deduction offered by R&D tax credits.

Summary

The issues discussed here illustrate that implementing a Patent Box will be difficult and that the choices made have consequences for the effect of the policy. In summary:

- The date from which a patent becomes eligible for the Patent Box will be either the grant date (which is easily verifiable) or the date of commercialisation (which would need to be determined).
- As a result of patents being eligible from April 2013, the Patent Box will spend the initial years almost exclusively subsidising activity that would have occurred in the absence of the tax break.
- The restrictions placed on UK legislation by European law will mean that it is possible to hold a patent and associated income in the UK without co-locating any associated real activity. While the government has expressed a desire to prevent this, it is not clear how it will do so.
- The computation of how much income is derived from a patent will likely be achieved using an (unspecified) formulaic approach, rather than the alternative arm's length approach.

10.5 How to tax offshore intellectual property

The UK recently moved to an exemption system for the taxation of companies' foreign profits wherein offshore income is exempt from UK tax. This reform helps to put UK firms on an equal footing with other firms when operating offshore. In theory, we would like the tax system to treat income earned from the application of intellectual property the same as income from the application of a piece of physical property. However, there are

⁴⁸ The Benelux countries also apply the Patent Box to net income. In Spain, the Patent Box is applied to gross income, before deductions.

concerns that firms might artificially locate intellectual property offshore with a view to reducing tax payments. The legislation that sets out to prevent this is encompassed in the Controlled Foreign Companies regime (anti-avoidance rules that determine how offshore income is taxed).

A broad set of reforms to the current CFC regime was instigated by the UK's 2009 move to an exemption system.⁴⁹ The CFC regime defines which income is taxable in the UK with a view to preventing firms from moving income offshore and then remitting it back to the UK tax-free.

The introduction of the Patent Box has implications for the CFC regime. A Patent Box would reduce the tax incentives firms face to shift patent holdings offshore, thereby reducing the burden on the CFC rules, at least related to that form of intellectual property. Indeed, the government has noted its desire to deter, rather than punish, exit of intellectual property from the UK: 'rather than tightening exit rules, ..., the Government would prefer to encourage businesses to retain and exploit IP in the UK through the introduction of the Patent Box'.⁵⁰

Reforms to Controlled Foreign Companies rules

Broadly, CFC rules define the set of subsidiaries that are located offshore in low-tax countries and deemed to be subject to tax in the UK. The UK regime, as well as those of most countries, focuses on identifying passive income – income resulting from non-commercial activities that can be divorced from real activity and easily moved for tax purposes; this includes patent royalties.

Temporary modifications to the CFC regime will be introduced in Finance Bill 2011. These will outline exemptions for certain kinds of activity and CFCs, and set out some transitional provisions for 2011–12.⁵¹ Looking forward, a full set of reforms will be considered (after a consultation) with a view to introduction from April 2012. The taxation of offshore intellectual property will be a key, although not sole, aspect of the final reforms. That is, in the face of potential tax-motivated income shifting, the government will write legislation (as part of the CFC rules) such that the UK will continue to tax some income from intellectual property held offshore.

Intellectual property

The government explicitly recognises the trade-off between not distorting firms' commercial decisions over where to hold intellectual property on the one hand, and preventing tax-motivated income shifting which erodes the UK tax base on the other. A 2010 discussion document on proposals for CFC reform sets out the objective of exempting intellectual property that is actively managed offshore while mitigating the 'risk that UK tax can be avoided through the artificial movement of IP into a low tax

⁴⁹ The previous government initiated a consultation on proposals for reforms to the CFC regime following the move to exemption. Initial proposals proved contentious; therefore the current government inherited an ongoing consultation. For more details, see R. Griffith, H. Miller and M. O'Connell, 'Business taxation', in R. Chote, C. Emmerson, D. Miles and J. Shaw (eds), *The IFS Green Budget January 2009*, IFS Commentary 107, 2009 (<http://www.ifs.org.uk/budgets/gb2009/09chap12.pdf>) and M. Gammie, R. Griffith and H. Miller, 'Taxation of companies' foreign profits', in R. Chote, C. Emmerson, D. Miles and J. Shaw (eds), *The IFS Green Budget: January 2008*, IFS Commentary 104, 2008 (<http://www.ifs.org.uk/budgets/gb2008/08chap12.pdf>).

⁵⁰ See paragraph 2.6 of part IIB of the government's November 2010 document.

⁵¹ Draft clauses have been published; see page 217 of <http://www.hmrc.gov.uk/budget-updates/autumn-tax/clauses-explan-notes.pdf>. These are also discussed on page 69 of the government's November 2010 document. The document also covers other notable areas of CFC reform which we do not discuss here, including the treatment of monetary assets, interest deductibility and foreign branch taxation.

jurisdiction'.⁵² The interim changes set out to exempt CFCs that exploit intellectual property that can be shown to have a minimal connection to the UK, i.e. where there is a low risk that intellectual property is being held offshore as a mechanism for avoiding UK taxation.

The final workings of the CFC rules are yet to be determined, but the government has provided some indications of the principles on which they will be based in relation to intellectual property.⁵³ Continuing the theme of exemption, the underlying approach will be to define the tax base as the profits from UK activity, rather than the worldwide income of a UK-owned group. Accordingly, the CFC rules will aim to tax intellectual property that has been diverted offshore, rather than all of the intellectual property that UK firms hold offshore.

The key challenge is to define when, and if so how much, income from intellectual property has been artificially diverted. This is especially difficult when there is a connection to the UK (for example, part of the technology was developed here), but also to other countries. Broadly, it seems likely that the CFC rules will operate in the following way. There will be an attempt to identify potentially high-risk entities – i.e. those that may be artificially holding intellectual property offshore – that are located in low-tax jurisdictions. This is in a similar vein to the current rules, which define low-tax jurisdictions as those with a tax rate of less than 75% of the UK's. The CFC rules will set out a framework to ascertain cases where intellectual property has a significant UK connection – i.e. where intellectual property was previously held or was created in the UK – and, in such cases, assess the proportion of profits that have been artificially diverted from the UK and levy the UK corporation tax. In practice, it will be difficult to design a system that only applies UK tax to intellectual property that has been located offshore for tax purposes.

10.6 Conclusion

The coalition government's November 2010 document, which set out a package of corporate tax reforms, starts with a 'Corporate Tax Road Map' which emphasises the aim to create a simpler tax system and 'to ensure greater stability and certainty'.⁵⁴ This sentiment is to be welcomed, as is the attempt to set out the direction of the corporate tax system over the next five years. We now know that the government's view is that the tax system will evolve in the following ways. The corporate tax rate will be lowered and the base broadened (allowances reduced). The CFC regime will be reformed to produce a more territorial system, i.e. the focus of the tax base will be the profits created from UK-based activity and not the worldwide profits of UK companies. And there will be attempts to reduce the tax burden on income derived from intellectual property, with the introduction of a Patent Box and specific modifications to the CFC regime to exempt intellectual property that is held offshore for commercial reasons.

There are often balances to strike in setting corporate taxes. A single government cannot unilaterally achieve neutrality with respect to all firms' decisions. Distortions will remain

⁵² See chapter 4 of HM Treasury and HM Revenue and Customs, *Proposals for Controlled Foreign Companies (CFC) Reform: Discussion Document*, January 2010 (http://www.hm-treasury.gov.uk/d/cfc_discussiondoc_260110.pdf).

⁵³ Chapter 3 of part IIA of the government's November 2010 document.

⁵⁴ See paragraph 1.4 of part IA of the government's November 2010 document.

and the benefits of stability and certainty should be weighed against the desire for reform and consultation. Even with this in mind, the package of reforms that will be introduced over the coming parliament has some unwelcome characteristics. The Patent Box in particular will significantly increase the complexity of the tax system, while doing little to promote real research activity in the UK. The small profits rate – which will have changed seven times since 1997 – will continue to distort decisions over organisational form.

The key changes and how each measures up against the broad principles that underlie good corporate tax policy can be summarised as follows:

- Over the next four years, the statutory corporate rate will be reduced incrementally from 28% in 2010 to 24% in 2014, lower than rates currently in place in many EU countries. Broadening of the tax base will partially offset this reduction in firms' tax burden. This is in line with long-term trends of falling statutory tax rates and broadening tax bases in developed countries, and will help reduce some of the distortions inherent in levying a corporation tax on mobile capital.
- The small profits rate will be reduced from 21% to 20% in 2011. There is no compelling reason to either (i) tax profits differently according to whether they are earned by a low- or high-profit firm or (ii) tax the income earned in an unincorporated business differently from that earned in an incorporated business. The cut in the small profits rate will increase the incentive to be incorporated rather than unincorporated, thereby increasing the distortion with respect to organisational form. The large number of recent changes to the small profits rate creates uncertainty; if a change was to be made, an increase in the rate to bring it closer to the tax rate on labour income would have been better.
- Under a Patent Box to be introduced in 2013, the rate of corporation tax levied on the net income derived from patents will be reduced to 10%. This policy is poorly targeted at promoting research, and unnecessarily distorts the decision to invest in patentable technologies rather than in other forms of intellectual property. A substantial part of the cost of the Patent Box represents a subsidy to activity that would have occurred in the absence of the policy and which will accrue to a handful of large firms. The legislation required to operate and police the policy will add significant additional complexity to the tax system.
- Reforms to the CFC regime, which are required following the UK's move to an exemption system, are under way. It is too early to pass judgement on the treatment of intellectual property, where the government is trying to strike a balance between preventing tax-motivated income shifting and not distorting firms' genuine commercial decisions to locate intellectual property offshore.