6. Tax policy and companies

Raising productivity is once again at the top of the Chancellor's agenda. The first section of this chapter briefly discusses the potential role of tax policy in increasing productivity, including the possibility of the introduction of a further R&D tax credit open to large firms.

Since it came to power, the government has made a series of changes to the UK corporation tax system. Section 6.2 reviews these developments and sets them in the context of changes to corporation tax systems in other countries. The internationalisation of corporate activity creates pressures on governments to subsidise desirable mobile activities such as research and development (R&D), and on the structure and viability of corporation tax in general. As a result, tax policy for firms will need to consider this international dimension. Developments in corporation tax systems abroad will increasingly drive domestic corporation tax changes.

Sections 6.3 and 6.4 discuss two areas of company taxation that have received recent interest: double taxation relief and the taxation of North Sea oil.

6.1 Productivity and fiscal incentives

The November 2000 Pre-Budget Report and an accompanying document, *Productivity in the UK: The Evidence and the Government's Approach*, have highlighted differences in labour productivity between the UK and the US, Germany and France. In 1999, labour productivity, measured by output per worker, was 45% higher in the US than in the UK, 18% higher in France and 11% higher in Germany.[1] As shown in Figure 6.1, the difference with the US measured by total factor productivity (TFP), which accounts for both labour and capital inputs, is narrower but not negligible.

The government rightly points to three major factors that are likely to explain the labour productivity gap: low UK investment in physical capital, in human capital and in innovative activity. Effective competition has also been highlighted as playing an important role in productivity growth. Each of these issues is considered briefly in turn. Evidence suggests that the UK has had low levels of aggregate investment in physical capital as a proportion of GDP, relative to other industrialised countries.[2] Capital intensity, measured by capital per hour worked, is lower in the UK than in the US, France and Germany.[3]

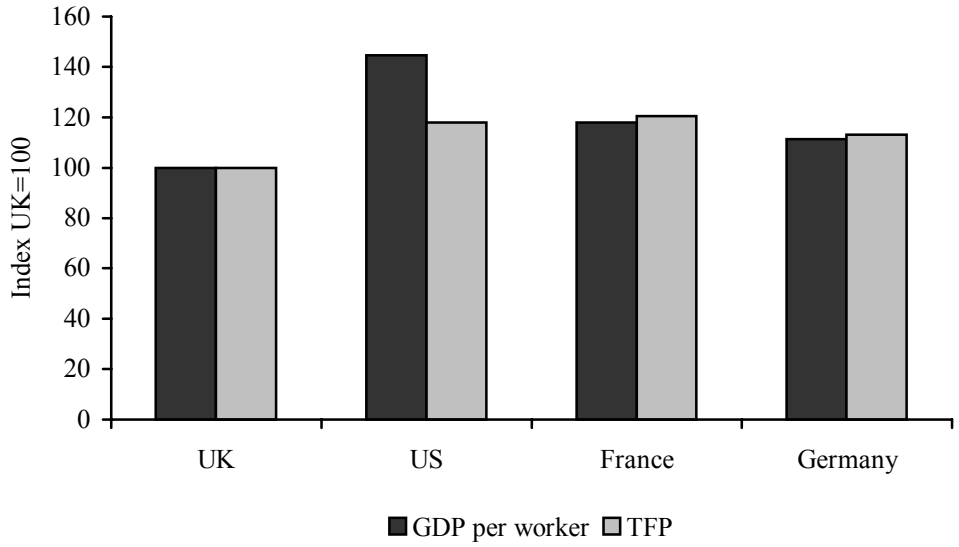
---

[1] HM Treasury, *Productivity in the UK: The Evidence and the Government's Approach*, November 2000. The difference with the former West Germany is around 20%.

[2] See S. Bond and T. Jenkinson, 'The assessment: investment performance and policy', *Oxford Review of Economic Policy*, vol. 12, no. 2, pp. 1–29, 1996.

[3] M. O'Mahony, *Britain's Productivity Performance 1950–1996: An International Perspective*, National Institute of Economic and Social Research, London, 1999.

Figure 6.1. The productivity gap, 1999



Source: HM Treasury, *Productivity in the UK: The Evidence and the Government's Approach*, November 2000.

Improvements in skill levels will increase labour productivity, and, with a more skilled work-force, firms will be better able to take advantage of technological advances. The skills distribution in the UK differs from that in the US, where a larger proportion of the work-force have high-level skills, and differs from that in Germany, where a larger proportion of the work-force have intermediate-level skills. Firm-level evidence that compares UK-owned firms located in the UK with foreign-owned firms located in the UK finds that foreign-owned firms have higher labour productivity and points to the use of a more highly skilled work-force as well as higher investment in physical capital as underlying the labour productivity advantage.[4] Industry-level evidence suggests that an increase in the proportion of workers undertaking training in an industry is associated with higher wages and higher labour productivity.[5]

A particular area of concern is that, over the last two decades, total expenditure on R&D as a share of GDP has been either falling or static in the UK. The capacity of firms to innovate and to capitalise on innovations generated elsewhere is of central importance to productivity growth. Analysis of labour productivity growth in the US over the latter half of the 1990s has pointed to investment in information and communications technology (ICT) and TFP growth in the high-tech ICT sector as having been important contributory factors. But there is an ongoing debate over the extent to which

[4] N. Oulton, 'Why do foreign-owned firms in the UK have higher labour productivity?', in N. Pain (ed.), *Inward Investment, Technological Change and Growth: The Impact of Multinational Corporations on the UK Economy*, Palgrave, Hampshire, 2000.

[5] L. Dearden, H. Reed and J. Van Reenen, 'Who gains when workers train?', IFS, Working Paper no. WP00/04, 2000.

any TFP-enhancing benefits of ICT are spilling over into other sectors of the economy.[6] Evidence on the UK's innovative performance is discussed below.

Comparisons of plant-level productivity within the UK find that labour productivity varies substantially between plants, even within industrial sectors.[7] But this observation is not unique to the UK, as dispersion in productivity across plants has been found in many studies.[8] The entry and exit of firms have been shown to have made an important contribution to productivity growth. New entrants may replace lower-productivity firms and can also be a source of competitive pressure. Competition, by creating incentives for firms both to increase efficiency and to innovate, is an important driver of productivity growth.

Fiscal incentives to increase productivity

The government's strategy to increase productivity has two strands: providing macroeconomic stability and improving the functioning of markets through microeconomic reforms. The government sees policies, such as the reforms to competition policy, as important in creating an environment in which there are the appropriate incentives for firms and individuals to improve productivity, and where resources are efficiently allocated. While, in some cases, intervention is warranted, stability is also important at the microeconomic level.

Any policy intervention at the microeconomic level should be carefully designed to address a specific market failure or to correct an existing distortion. In some markets, such as in the production of knowledge, there is an established rationale for government intervention. The social returns to R&D are generally found to be greater than the private returns to knowledge producers. This implies a role for government in aligning private incentives with social rates of return to increase investment in R&D. Similarly, the market may underprovide education and training if individuals being trained and their employers do not appropriate all the gains from education and training.

Intervention through the tax system in order to change incentives and affect behaviour will be most effective when a market failure has been clearly identified, when there is evidence that it is significant and when a policy exists that will improve upon the outcome. The government has sought to rationalise specific policies, such as tax incentives for employee share ownership, as addressing market failures. While it is the case that such forms of

[6] R. J. Gordon, 'Does the "New Economy" measure up to the great inventions of the past?', National Bureau of Economic Research, Working Paper no. W7833, August 2000. D. Jorgenson and K. Stiroh, 'Raising the speed limit: US economic growth in the information age', *Brookings Papers on Economic Activity*, August 2000. UK productivity comparisons with the US are not straightforward due to differences in the construction of price indices for ICT outputs and inputs.

[7] M. Barnes and J. Haskel, 'Productivity in the 1990s: evidence from British plants', draft paper, Queen Mary and Westfield, University of London, 2000.

[8] E. Bartelsman and M. Doms, 'Understanding productivity: lessons from longitudinal microdata', *Journal of Economic Literature*, vol. 38, pp. 569–94, September 2000.

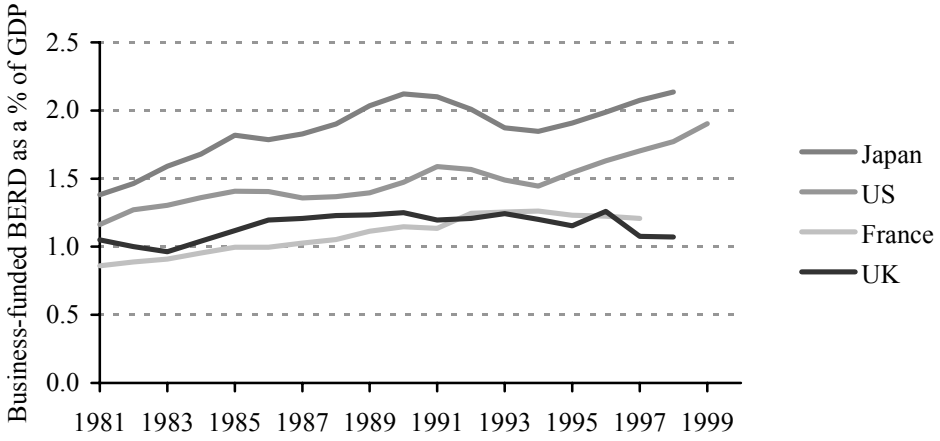
remuneration may help align the incentives of employees and shareholders, it is not clear why it is not in the interest of firms to provide such remuneration in the absence of any tax incentives. It is important that changes to the tax system do not create unwelcome distortions to economic activity. The possibility of introducing distortions is discussed in more detail below, in the context of the design of an R&D tax credit open to large firms.

Many of the business tax reliefs introduced by the government since the July 1997 Budget have been aimed at small and medium-sized enterprises (SMEs) and at investors in these firms. They include changes to first-year capital allowances, changes to the capital gains tax taper for business assets, the introduction of the Enterprise Management Incentives scheme and the R&D tax credit for SMEs. While the tax measures introduced for smaller companies will not cost the government much in terms of forgone tax revenue, they are also unlikely to have a significant effect on aggregate levels of investment and R&D in the UK. This is because large firms carry out the majority of investment and R&D expenditure. It should also be noted that the rationale outlined above for subsidising R&D applies to large firms as well as to small firms. As is discussed next, the government is now considering introducing an R&D tax credit available to large firms.

An R&D tax credit for large firms?

The November 1998 Pre-Budget Report discussed two possible tax credits for R&D. The first was based on the volume of R&D spending for SMEs. This refundable, volume-based credit was introduced from April 2000. The second R&D tax credit discussed was open to all firms and based on their incremental increase in R&D spending. Consultation over the introduction of a general credit, potentially of this incremental form, was initiated by the Chancellor in the November 2000 Pre-Budget Report. This section discusses recent trends in UK business expenditure on R&D, the rationale for introducing a broader R&D tax credit and important design issues in the context of an R&D tax credit for large firms.

Figure 6.2. Business-funded business-conducted R&D as a percentage of GDP



Source: OECD, *Main Science and Technology Indicators Statistics*.

Total expenditure on R&D in the UK as a proportion of GDP has been falling or static since the 1980s. Part of this decline can be attributed to a decline in government expenditure on R&D, but concerns have also been raised that business expenditure on R&D (BERD) as a percentage of GDP is low in the UK compared with other countries. BERD can be split into that funded by industry and that funded by government. Figure 6.2 shows that, while business-funded BERD as a proportion of GDP has remained static in the UK, it has been increasing in other countries. This increase is particularly notable since 1994 in the US and Japan.

The UK's track record of R&D investment lies behind calls for the extension of R&D tax credits from SMEs to all firms. The extension of R&D tax credits is also supported by concerns that, in the absence of government interventions, firms will undertake too little R&D because of the difficulty of containing new ideas and innovations. Innovations generate spillover benefits – once a discovery has been made, it can be imitated and used by competing firms – so that firms engaging in R&D may not be able to appropriate fully the returns on their investment. So while their R&D expenditures may benefit the economy as a whole, individual firms will not stand to gain to the same extent. The introduction of a tax credit aims to address this by raising firms' returns to undertaking R&D, and thereby bringing firms' private returns more in line with the economy-wide benefits of additional R&D. It is worth noting that there is already significant government intervention in this area – for example, through public funding of R&D and through the patent system. Like the patent system, R&D tax credits may have an advantage in that they allow the market to choose research projects and thus avoid picking winners. Evidence also shows that R&D tax credits can be effective in generating additional R&D.[9]

In considering the introduction of a tax credit, there are some key design features that the government will have to consider.[10] In particular, the government needs to decide whether it wants to extend the current volume tax credit for SMEs, which credits the entire volume of R&D undertaken by firms, or use an incremental tax credit, which would only credit incremental R&D above a certain base.

Volume-based credits give firms a subsidy on every pound of R&D they undertake. This includes both the R&D they would have done in the absence of the R&D tax credit and the incremental R&D induced by the credit. As such, a volume-based tax credit can be an expensive way of subsidising marginal R&D. But, by providing a subsidy for small firms, which might potentially face financing constraints, a volume-based credit can also assist in financing R&D.

Rolling this volume-based credit out to all firms would involve large additional revenue costs, since SMEs undertake only a small proportion of

[9] B. Hall and J. Van Reenen, 'How effective are fiscal incentives for R&D? A review of the evidence', *Research Policy*, vol. 29, pp. 449–69, 1999.

[10] There are many design and implementation issues not considered here, such as compliance costs, legislative issues and restriction of the tax credit to R&D performed in the UK.

total BERD.[11] Incremental tax credits, however, are designed to provide a subsidy only on the additional R&D expenditure, not on the R&D firms are already undertaking. If this is done effectively, it will increase firms' incentives to do R&D in the same way as with volume-based credits but at a much lower exchequer cost. A problem arises in defining precisely what is 'incremental' R&D. In order to do this, we have to define a base level of R&D. The two methods currently in use are to define the base as a rolling average of past R&D expenditure or to define the base by reference to some fixed point.

A rolling-average-base design was used initially in the US and is currently used in the French and Canadian tax credit systems. A base level of R&D is defined as the average firm-level expenditure on R&D over the preceding three years. A firm's incremental or marginal R&D is then defined as the difference between current R&D expenditure and this base. But this system can lead to reduced and sometimes perverse R&D incentives. In a dynamic setting, firms will take into account the fact that increasing their current R&D expenditure will also increase their future incremental base. This will significantly reduce the incentive effect of the credit. This rolling-average-base credit can also lead to a pro-cyclical tax credit, with the potential for some firms to face a temporarily negative effective credit rate.[12]

In order to target incremental R&D but overcome these negative dynamic effects of using a rolling-base credit, some countries have used a fixed definition of base R&D. One such system would be an inflation-indexed fixed base. The base used is the level of R&D undertaken by a firm in a specific year – for example, the year before the credit is introduced. This is then updated each subsequent year by inflation. R&D above this inflation-indexed base is then eligible for the credit. As the inflation-indexed base moves away from a firm's true marginal base, the credit will become less efficient in terms of subsidising only marginal R&D. This means that, over time, the fixed-base credit can become less effective. One modification might be to update the base level of R&D, for example every five years. However, adverse dynamic incentives, similar to the problems with the rolling-average base, can then arise.

For the last decade, the US has used an alternative system that defines each firm's R&D base as a percentage of its sales. Using the firm's R&D/sales ratio in one year, the R&D base can be updated in subsequent years in line with sales. The base therefore expands and contracts in line with total sales. So long as a firm's R&D/sales ratio is constant over time, this base will target the marginal R&D expenditure whether the firm is expanding or contracting. To the extent that the R&D/sales intensity does change over time, however, this will reduce the efficacy of the credit. For firms whose R&D/sales intensity rises, so that the base is too low, the tax credit will be given on marginal and non-marginal R&D. As a result, the credit will become less tax-revenue-efficient as more non-marginal R&D is subsidised. For firms whose

[11] In 1997, small companies with fewer than 400 employees contributed around 23% of total business expenditure on R&D (http://www.dti.gov.uk/ost/setstats/data/4/index.htm).

[12] For more details, see N. Bloom, R. Griffith and A. Klemm, *Issues in the Design and Implementation of an R&D Tax Credit for UK Firms*, IFS Briefing Note, forthcoming, 2001.

R&D/sales intensity falls, so that the base is too high, their marginal R&D will not be eligible for any tax credits. Since the firm's base is completely fixed in relation to current sales, negative dynamic effects will, to a large extent, be avoided.[13]

An incremental tax credit could be introduced to operate in addition to the current-volume-based tax credit for SMEs. The more generous SMEs tax credit would continue to provide R&D incentives and financing assistance for smaller firms and start-ups. The wider incremental tax credit could then target larger firms, providing similar incentives to undertake additional R&D but at a lower revenue cost. If this credit were to be set at 33%, for example, then, given a corporation tax rate of 30%, it would provide a similar 10% effective tax incentive to the volume-based tax credit for SMEs.[14] Maintaining the volume-based credit for SMEs would also address problems of defining an R&D base for start-up firms which have no R&D track record.

There are indications that R&D is becoming increasingly internationalised. Large firms incorporated in the UK appear to undertake an increasing share of their R&D expenditure abroad – usually in the US or Europe – so that targeting these UK firms would involve providing tax credits for R&D undertaken overseas. In reverse, a significant amount of R&D undertaken within the UK is carried out by foreign firms with large UK subsidiaries.[15] This raises questions about the location of R&D expenditure that we might want to subsidise. Evidence suggests that the spillover benefits to R&D are higher in the location in which R&D is carried out.[16]

6.2 Recent UK corporate tax reforms

The government has made a number of significant changes to the UK corporate tax system over the course of the current parliament. The July 1997 Budget announced major changes. The repayment of dividend tax credits was abolished immediately for pension funds and certain other companies (notably insurance companies in relation to their pension business), and abolished from April 1999 for all tax-exempt shareholders.[17]

Prior to the July 1997 Budget, the UK had a partial imputation system, in which part of the corporation tax payment on the profits underlying dividends

[13] Other than the extent to which current R&D affects future sales. In general, the negative dynamic effects will be less, the weaker the relationship between a firm's current R&D and its base in the future.

[14] The SMEs credit, by providing a additional 50% R&D expenditure deduction against their 20% corporation tax, provides a 10% effective tax incentive.

[15] In 1999, 23% of total UK BERD was funded from abroad. See National Statistics First Release, *Business Enterprise Research and Development 1999*, 2000.

[16] See, for example, R. Henderson, A. Jaffe and M. Trajtenberg, 'Geographic localisation of knowledge spillovers as evidenced by patent citations', *Quarterly Journal of Economics*, vol. 108, pp. 577–98, 1993.

[17] Charities receive compensation for this loss, which is scheduled to be phased out by 2003–04. Personal Equity Plans (PEPs) and Individual Savings Accounts (ISAs) receive a 10% dividend tax credit until March 2004.

was imputed to shareholders and creditable against their income tax liability on dividends. This continues to be the case for taxpaying shareholders, but is no longer the case for tax-exempt shareholders. So far as tax-exempt shareholders are concerned, the UK now has a less generous classical system, under which corporate tax liabilities and income tax liabilities are quite separate. In theory, this change removed a distortion that encouraged firms to pay profits out as dividends and finance investment from other sources, in so far as they were concerned about the tax implications for tax-exempt shareholders.

The abolition of repayable dividend tax credits also raised around £5 billion per annum for the exchequer. In the same Budget, the main corporation tax rate was reduced from 33% to 31%, and the small companies' rate was reduced from 23% to 21%. Nevertheless, the net effect of these changes was to increase taxes on company profits by around £3 billion per annum.[18]

In the March 1998 Budget, further changes were announced, including the abolition of advance corporation tax (ACT) with effect from April 1999. ACT was paid by the firm at the time it distributed dividends and had the effect of bringing forward part of the firm's corporation tax payment. The remainder, called mainstream corporation tax, was paid nine months after the end of the firm's financial year.

For most firms, ACT only affected the timing of tax payments, but it amounted to an additional tax in cases where firms paid ACT in excess of their total corporation tax liability. This 'surplus ACT' could be carried forward, but with no compensation for the delay before it was reclaimed. This problem could occur when profits were temporarily low but firms chose not to cut dividends in proportion, or more seriously where firms earned a substantial proportion of their profits abroad. In these cases, a firm with high total profits and hence high dividends could nevertheless face a low UK corporation tax liability, in recognition of taxes paid abroad. Between 1994 and 1999, the foreign income dividends (FIDs) scheme provided some relief for firms in this position. Under the FIDs scheme, the Inland Revenue repaid ACT where dividends were declared to be paid out of foreign-source income. There was no tax credit available to shareholders, and the take-up of the scheme was predictably limited.

ACT was replaced by a system of quarterly instalments for the payment of corporation tax. This could easily have been designed to be revenue-neutral, if, on average, it had brought forward around 40% of total corporation tax payments by around nine months. However, the system actually implemented has the effect of accelerating corporation tax payments by rather more than this, on average, and so raises additional revenue of some £1–2 billion per annum during a four-year transitional period.[19] Smaller companies are excluded from this payments system, so they gain from the change if they pay any dividends.

---

[18] HM Treasury, *Financial Statement and Budget Report*, July 1997. This Budget also implemented the windfall tax.

[19] HM Treasury, *Financial Statement and Budget Report*, March 1998.

A further twist is caused by companies that still have surplus ACT. To avoid accelerated repayment of the stock of surplus ACT, a system of 'shadow' ACT was designed. Even though no ACT is now paid, the amount that would have been paid under the old rules is calculated and called shadow ACT. Surplus ACT accumulated in the past can then only be recovered against current corporation tax payments in excess of this level of shadow ACT. The effect is that firms will be able to recover past surplus ACT at the same rate as they would have done if the ACT system had not been abolished.

The 1998 Budget also continued the trend of cutting the main corporation tax rate. From April 1999, this fell another percentage point to 30%, and the small companies' rate fell to 20%. The cost of these rate cuts was around £1 billion per annum.[20] There were no major changes to corporation tax in the 1999 and 2000 Budgets, although new measures were introduced or announced for smaller companies. April 2001 will see the introduction of the climate change levy (CCL) and 100% first-year capital allowances for investment in energy-saving technologies. The CCL is designed to be revenue-neutral for the business sector.[21] No further changes to company taxation are expected other than the possible introduction of an R&D tax credit available to large firms.

The striking feature of the changes that have been introduced since 1997 is that the headline rate of corporation tax was reduced, whilst government receipts from taxes on company profits were substantially increased. Additional government revenue is estimated at around £3–4 billion per annum during the transitional period, as a net result of the changes to dividend taxation and the payments system and the cuts in corporation tax rates.

International perspective

Over the same period as the current Chancellor has reduced UK corporation tax rates, there has also been a move towards lower corporation tax rates in other countries. This common trend is indicative of increasing economic integration and of competition between countries to attract mobile investment. Several OECD countries have implemented reforms of company taxation in the last five years. Box 6.1 gives further details of some of these reforms.

The trend of the reforms is one of base-broadening and rate-cutting. Like the UK reforms, those in Australia, Germany and Ireland have either reduced the value of existing allowances or increased taxes on dividends to finance cuts in the corporate tax rate.

Whilst the UK continues to have a relatively low corporate tax rate in comparison with most industrialised countries, it consistently raises a relatively high share of GDP in corporate tax revenues. In part, this reflects the relatively limited value of allowances available for capital investment and R&D. Thus far, the current government has only extended these allowances for smaller companies, although, as discussed in Section 6.1, a more significant change may be introduced in relation to R&D. If the government wishes to use the tax system to achieve its aim of raising the level of company

[20] HM Treasury, *Financial Statement and Budget Report*, March 1998.

[21] This is discussed in more detail in Chapter 5.

investment, it may eventually need to consider further reductions in the rate of corporation tax or other reforms that reduce the cost of capital for firms.

Box 6.1. Examples of recent reforms to corporate tax systems

Australia is a typical example of base-broadening, rate-cutting reform. A new business tax system was announced in 1999, lowering the corporate tax rate from 36% to 34% for the 2000–01 tax year, and to 30% in the following year. At the same time, tax allowances for depreciation were made less generous to finance this cut in the tax rate.

Germany implemented a major reform of its corporate income tax in 2000. This included big cuts in the federal corporate tax rates, from 30% on distributed profits and 40% on retained profits, to a uniform rate of 25%. Local trade tax for companies was not affected. The reductions were financed by reducing the generosity of depreciation allowances and by an increase in personal taxes on dividend income. Germany will abolish its current full imputation in January 2002, and replace it by a modified type of classical system, called a 'half-income system'. Under this system, no credits are given to shareholders for corporate tax paid, but only half of any dividend income will be taxable for income tax purposes. Another important feature of the German reform was that capital gains resulting from cross-holdings of company shares will be exempted from tax (subject to anti-abuse conditions).

Ireland has recently reformed its corporate income tax in a way that extends the very low rate currently charged for manufacturing and certain types of business to all trading income, and complies with the EU code of conduct on business taxation. For firms not eligible for the current 10% rate, the corporate tax rate on trading income will be cut in four stages, from 28% to 12.5% by 2003. For eligible firms, the 10% rate will remain in place until 2010, after which they will also be subject to the same 12.5% rate on trading income. From April 1999, Ireland has also switched from a partial imputation to a classical treatment for dividend income.

Italy announced a corporate tax reform in 1996, which took effect in 1998. The local corporate income tax, previously charged at 16.2%, was replaced by a new tax at a very low rate (4.25%) on a much broader base, business value-added. A distinction was introduced between 'ordinary income', taxed at a preferential rate of 19%, and residual profits, which continue to be taxed at 37%. In the long term, 'ordinary income' will approximate what economists refer to as 'normal profits' or 'the required rate of return on capital', calculated by applying a nominal interest rate to a measure of equity invested in the firm. In the short term, this principle is compromised, since only retained profits and new equity issued since 1996 are included in the measure. The overall tax liability is also subject to a minimum of 27% of total profits, although abolition of this minimum rate is currently being discussed. Whilst this Italian reform contains an element of base-broadening and rate-cutting in relation to the local tax, it stands out from the pattern in introducing a new allowance related to the opportunity cost of equity-financed investment.

6.3 Double taxation relief

In 1998, the Chancellor announced that the Inland Revenue would conduct a detailed review of the system of double taxation relief for companies. Residents of a country who invest abroad risk taxation both in the country where they locate their investment and in their country of residence. This acts as a disincentive to foreign investment. Residence countries resolve this problem either by exempting foreign income from domestic taxation or by allowing credit for foreign tax against domestic tax liabilities.

The development of the UK foreign tax credit regime

The UK operates a credit rather than an exemption system, and its current credit system dates from 1945. The system has been modified since 1945 in piecemeal fashion, in response to changes in the taxation of foreign income and changes in dividend taxation and to curb tax avoidance, for example through the sale of foreign tax credits.

The 1945 system was a curious affair. Some aspects were very restrictive. Its 'item-by-item' basis, for example, meant that foreign tax suffered on an overseas dividend could be credited against the UK tax on that dividend only. Thus a UK company that received two foreign dividends in an accounting period would be unable to use excess credits on the first dividend against tax due on the second dividend, even if they were both paid by the same company.[22] In addition, it could not use the excess credits against UK tax on any other income in that or any other accounting period.

Other elements of the 1945 system were, on the other hand, extremely liberal. UK companies could claim credit on a dividend for the foreign tax, ('underlying tax') borne on the profits out of which a foreign company paid its dividends. Also, relief for underlying tax extended through any number of tiers of foreign companies, provided that at each level there was a minimum 10% voting control.

Inevitably, over time, UK companies found ways of bypassing the restrictive elements of the 1945 system while taking the benefit of its more liberal aspects. Thus few UK-based multinational companies own their foreign subsidiaries directly from the UK. Conventional planning involves owning such subsidiaries through a foreign holding company, based for example in the Netherlands. The UK company remits foreign profits through its Dutch holding company, 'mixing' low- and high-taxed dividends in the Dutch company to produce an average foreign tax rate on the Dutch company's dividends. The Inland Revenue accepted this use of 'mixer' companies as an appropriate way for UK companies to circumvent the outdated item-by-item limitation.

[22] For example, a foreign subsidiary pays dividends of 150 and 100 to its UK parent company. The foreign tax attributable to the dividends is 90 and 20 respectively. Taxable foreign dividends are therefore 240 and 120, and UK tax at 30% on each is 72 and 36. There is further tax to pay of 16 on the second dividend, but no tax to pay on the first, and there are excess credits of 18 (72 – 90). The parent could not use the excess credits on the first dividend to eliminate the UK tax on the second dividend.

The UK, in common with other credit countries, does not allow taxpayers to claim credit for foreign tax in excess of the domestic tax liability on the income in question. As the UK has lowered its corporate tax rate to 30%, it has increased the likelihood that foreign tax credits, including underlying tax, will exceed the UK tax liability. Mixer companies have allowed UK multinationals to mix offshore high-taxed profits, for example from Germany, with low-taxed profits, for example from a tax haven, so avoiding both excess foreign tax credits on the former and tax under the UK's controlled foreign company regime on the latter.[23]

The Finance Act 2000 proposals

The March 2000 Budget eliminated this particular use of mixer companies but, in doing so, proposed to reform credit relief along lines that would have made the UK less competitive as a location for foreign investment. The Budget proposals departed from the anticipated outcome of the 1998 review and, after sustained pressure from UK multinationals, the Finance Act 2000 enacted modified proposals. In essence, these modified proposals, which will operate from 31 March 2001,

- remove the UK tax advantages of offshore mixer companies;
- prevent excess tax credits on high-taxed foreign dividend income from eliminating UK tax on tax-haven profits;
- permit 'onshore pooling', so that excess foreign tax credits on foreign dividends (capped at a 45% rate as compared with the UK 30% rate) can be set against low-taxed foreign dividends (provided they are not derived from a tax haven);
- allow excess foreign tax credits on foreign dividends to be carried back to earlier accounting periods, carried forward to later accounting periods or set against UK tax on other foreign dividends on a company or group basis.

These revised proposals were inevitably produced in haste, given the change of tack between the Budget and the Finance Bill. Mature reflection since their enactment has, not surprisingly, revealed a number of technical problems, which the Chancellor has said he will correct in his 2001 Budget.

An assessment of the foreign tax credit reforms

The Chancellor stated his objectives for the review of the 1945 system as being 'to remove or reduce the disincentive that double taxation represents to

[23] Company *A* owns a tax-haven subsidiary *X* that is taxed at 10% on its income and a subsidiary *Y* that is taxed at 50%. The UK's controlled foreign company rules require *A* to pay UK tax on the tax-haven profits whether remitted to the UK or not. If *A* owned both subsidiaries through an offshore mixer company, *B*, it could remit the profits of both through the mixer, allowing the tax rates to be averaged. *X* pays a dividend of 90 (tax credit 10), *Y* pays a dividend of 50 (tax credit 50) and the mixer, *B*, pays a dividend of 140 (tax credit 60). *A* has no UK tax to pay because the averaged foreign tax credits eliminate its UK liability on *B*'s dividend of 140.

overseas investment by addressing the juridical double taxation of income from overseas investments, while

- reducing distortions in the international allocation of savings and investment;
- ensuring that the United Kingdom receives a fair share of international tax revenues;
- ensuring fairness to all taxpayers and, subject to the above
- minimising compliance and administrative costs'.[24]

It is far from clear, however, that the 2000 reforms meet any of these objectives, even assuming that the further changes in 2001 do succeed in eliminating the technical deficiencies of the new legislation. The 2000 reforms made many detailed changes that improve the 1945 system, and the greater flexibility in using excess foreign tax credits on foreign dividends brings the UK more in line with other foreign tax credit systems. Onshore pooling, however, introduces very considerable complexity to the whole area of foreign tax credit planning. As such, it represents a greater boost for the UK tax professions than it does for the neutrality, fairness or administrative simplicity of the tax system.

It must also be uncertain whether the changes will secure for the UK a 'fairer share' of international tax revenues, assuming that we know what the UK's 'fair share' is. Any multinational company will take a global view of its tax liabilities. A UK-based company's strategy will be to secure the maximum credit for foreign taxes paid and, to the extent that credit is not available, to avoid receiving foreign dividends that create unnecessary UK tax liabilities.

From a policy perspective, there is no particular reason why the UK should subsidise UK investment in countries with high-tax regimes by allowing tax on profits earned in those countries to reduce UK tax that would otherwise be due on low-taxed foreign profits earned elsewhere. But if this was an offensive aspect of offshore mixer companies, it must be an equally offensive aspect of the onshore pooling system.[25]

By penalising offshore mixer companies but allowing similar averaging of foreign tax rates through onshore pooling, the 2000 reforms may do little more than impose restructuring costs on UK multinationals that benefit no one other than foreign revenue authorities, who may collect tax on the restructuring, and professional advisers. In any event, the EC Treaty may not allow the UK to treat mixer companies based elsewhere in the European Union less favourably than onshore pooling companies.

[24] Inland Revenue, *Double Taxation Relief for Companies: Outcome of the Review*, March 2000, paragraph 1.4.

[25] Though excess foreign tax credits are capped at 45% under the onshore pooling regime while pre-2001 offshore mixer companies were uncapped.

Policy assessment

The distortion in the international allocation of savings and investment arises mainly through the existence of several different tax systems, each seeking to tax a highly mobile commodity – in this case, investment capital. The outcome of the double taxation review illustrates what should have been well known: that if the UK wants to be seen as a favourable location for foreign investment by multinational companies, it cannot choose less favourable options than those adopted by comparable regimes elsewhere.

We can observe tax competition at work in other current proposals to exempt from tax, or to defer tax on, gains arising from substantial shareholdings.[26] They recognise the UK's comparative international disadvantage in seeking to tax gains on corporate shareholdings in other companies when many countries exempt such gains. But these proposals have implications for how UK companies structure and finance their foreign investment, if it were decided that UK companies should pay no tax on share gains in foreign companies but should continue to be taxed on foreign dividends subject to credit relief.

Ultimately, competition between different tax systems for highly mobile international investment capital has only one likely outcome, and that is the elimination of taxation on that capital. It would mean the demise of corporation tax in its current form. The alternative would be for countries to integrate their corporate tax systems on an agreed basis, so that savings and investment face the same taxation at home and abroad. But while this approach may be the one that minimises distortions, the overwhelming problem, apart from reaching agreement on a common system, is that it needs only a few countries to decline to co-operate for any agreement by the rest to be undermined.

On a parochial level, it would be difficult to think of a more unsatisfactory outcome to this review. UK multinationals face a more complex foreign tax credit system, while the government may have done little more than strengthen its anti-tax-haven legislation, which it could have achieved in simpler ways. Meanwhile, the positive improvements to the 1945 regime have been lost sight of in the general commotion over offshore mixer companies and onshore pooling.

The net effect of this exercise has been a loss of confidence by international companies in the UK's policy formation process. At the same time, the UK corporate tax system has a very unstable appearance internationally. The Inland Revenue may have to 'tweak' the new foreign tax credit regime over several years before it functions satisfactorily, and the regime may still be subject to challenge under EC law. Furthermore, if the government enacts measures to exempt from tax, or defer tax on, gains on corporate shareholdings in other companies, it may be necessary to revisit the taxation of foreign dividend income and foreign tax credit relief.

[26] Inland Revenue, *Corporation Tax: Chargeable Gains: Deferral Relief for Substantial Shareholdings, A Technical Note*, June 2000; Inland Revenue, *Corporation Tax: Relief for Gains on Substantial Shareholdings, A Technical Note*, November 2000.

6.4 Taxing North Sea oil

In the 1998 Budget, a consultation with the oil industry on the future of North Sea oil taxation was announced. In September of 1998, however, the Chancellor decided not to proceed with the consultation, because of low oil prices.[27] At the time of the November 2000 Pre-Budget Report, the oil price had roughly tripled, but it was made clear that changes to North Sea oil taxation are not currently on the government's agenda.[28] The reasons given were that the future of the oil price is uncertain and that investment should not be discouraged. Nevertheless, this issue could arise again if the oil price remains high for longer than expected.

The current tax regime is the result of the complex history of changes that have occurred in North Sea taxation. As some of these changes were only applied to fields approved after the reform, the taxes applied today to a particular oilfield's profit depend on its initial date of approval. Fields approved after 15 March 1993 pay only corporation tax at the standard rate. The only difference compared with onshore profits is that this tax is 'ring-fenced', i.e. losses made elsewhere cannot be offset against profits of a UK continental shelf oilfield. Fields approved before that date are subject also to petroleum revenue tax (PRT). This is currently charged at a rate of 50%. Fields approved prior to 31 March 1982 are additionally liable to licence royalties, a revenue-based tax, currently charged at 12.5%. Each of these taxes has its own allowances. They also interact with one another, as royalties can be set off against PRT, and both can be set off against corporation tax. As a result of different tax structures across fields, the marginal tax rate that applies to an additional pound of revenue resulting from an increase in the oil price ranges from 30% to 69.4%.[29]

The aim of the abandoned consultation was to ensure that the North Sea tax regime takes 'an appropriate share of profits … while continuing to maintain a high level of oil industry interest in the future development of the UK's reserves'.[30] According to the economic theory of resource taxation, taxation should primarily be targeted at the economic rents earned from oil production. These are profits over and above the minimum rate of return required to justify the investment, which accrue due to the scarcity value of oil. Taxing economic rents rather than conventional measures of profits or revenues ensures that the tax is neutral with regard to investment. Developments that are commercially viable in the absence of tax would continue to be viable in the presence of tax. Marginal fields, which earn no rents, would pay no tax over their lifetimes, and revenues would be focused on intra-marginal or rent-earning fields.

The current system's performance according to these criteria depends on a field's tax liability. Corporation tax is charged at the standard rate on a

[27] Inland Revenue Press Release 124/98, 7 September 1998.

[28] Statement of the Chancellor of the Exchequer on the Pre-Budget Report, 8 November 2000.

[29] Inland Revenue, *Taxation of UK Oil Production* (www.inlandrevenue.gov.uk/international/ns-fiscal2.htm).

[30] Inland Revenue Budget News Release, 17 March 1998.

conventional measure of profits. It thus takes a low share of economic rents and deters marginal investment decisions, although this distortion is no greater than for onshore investments. Petroleum revenue tax, which is charged at a higher rate and provides more generous allowances for investment expenditures, is closer to a rent tax in principle, and takes a larger share of economic rents. However, the actual rules of PRT differ from a pure rent tax in significant respects, which introduce arbitrary distortions between fields according to the length of their payback periods and the rate of inflation, for example. Licence royalties are essentially revenue-based and therefore discourage investment in marginal fields. A related disadvantage is that they take a large share of profits when oil prices and profits are low, but only a small share when oil prices and profits are high.

It is difficult to analyse the performance of the whole regime, because of interactions between the different taxes and their allowances and because of the differential treatment of fields developed at different dates. While views can be taken on whether investment neutrality or high tax revenue is more important, it is hard to see any rationale for taking different shares of profits or for distorting investment decisions to different degrees across fields.

It would be wrong to assume that the inefficiency associated with licence royalties no longer matters because investments in older fields are sunk costs. As oilfields reach the end of their lifetime, incremental investment often becomes necessary to extract the remaining oil. If such investment is discouraged, this leads to inefficiently early abandonment of fields. Once abandoned, the cost of recovering remaining quantities of oil becomes prohibitive.

In recent public debate, especially in the light of high fuel prices, a lot of attention was drawn to the high profits oil producers have recorded in 2000, as a result of the high oil price. In the second quarter of 2000, net profit rates averaged 33% for North Sea oil companies as opposed to 6% for manufacturing industry.[31] This led to demands that these profits should be taxed more highly. The Chancellor, on the other hand, stressed that he was 'determined not to make short term decisions based on short term factors'.[32] Concerning the price of oil, the only sensible prediction that can be made is that it will remain volatile. A more compelling argument for reform is thus that the tax system for North Sea oil should be appropriate under a wide range of oil prices. This is precisely the advantage of a rent tax, which would automatically take a higher share of profits when oil prices are high and rents comprise a high share of total profits than when oil prices are low.

Countering this case for reform is the importance of stability in the tax system for the planning of long-term investments by firms. On the other hand, it can be argued that the current system is so unbalanced that there is already considerable uncertainty concerning when and how the system will next be changed. One major, coherent reform could thus reduce tax uncertainty in these circumstances. Certainly, the oil and gas sector continues to play a major role in the UK economy. While its share of GDP dropped from 7% in 1984 to

[31] Reported in the *Financial Times*, 25 October 2000.

[32] Statement of the Chancellor of the Exchequer on the Pre-Budget Report, 8 November 2000.

under 2% in 1998, investment in that year was 19% of total industrial investment.[33] At the same time, production increased and reached an all-time high in 1999. Estimates of reserves still remaining are usually in the range of a third to two-thirds of total reserves,[34] so that production will continue for many years to come. The debate on the North Sea tax regime and possible reforms is not likely to disappear soon.

The history of North Sea taxation is an unfortunate example of some of the weaknesses in tax policymaking in the UK. When significant oil deposits were first discovered, the government had a clean sheet on which to design a tax system, unconstrained by the legacy of previous decisions. Rather than introducing a coherent rent tax that automatically adjusts tax liabilities to changing economic conditions, significant departures from this principle were introduced into petroleum revenue tax, in response to short-term revenue considerations. These have required successive governments to raise tax rates or introduce new taxes when profits are high and to lower tax rates or abolish taxes when profits are low. This culminated in the arguably premature abolition of PRT itself for new fields after 1993. As no government has been willing to introduce a fundamental reform of the North Sea tax system, the current government finds itself with a similar dilemma to that faced by its predecessors whenever oil price rises have led to high North Sea profits. Whether it will find a more coherent solution to this dilemma remains to be seen.

Nicholas Bloom, Stephen Bond, Malcolm Gammie,
Alexander Klemm and Helen Simpson

[33] DTI, *UK Energy Indicators*, 1999.

[34] DTI, *Digest of UK Energy Statistics*, 2000.