

8. Productivity policy

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Summary

- The government is considering a number of potential changes to the R&D tax credit for small and medium-sized enterprises (SMEs). None of the options that we discuss is without potential drawbacks.
- Any change is also likely to increase the uncertainty and/or complexity associated with claiming relief. Given the long-term nature of R&D investment decisions, this seems to be an area where policy stability is particularly desirable. Thus implementing no changes may well be the best option.
- The 2005 Pre-Budget Report confirmed the launch of the National Employer Training Programme (NETP) from April 2006, now branded 'Train to Gain'. The evidence for the NETP's likely effectiveness in improving productivity is not very strong so far.
- Whether the public funding directed towards the NETP provides value for money in terms of fulfilling its key productivity aims will ultimately depend on its effectiveness in terms of generating both additional take-up of training and positive returns to the qualifications acquired through the policy.
- In the 2005 Pre-Budget Report, the Chancellor and the Deputy Prime Minister asked Kate Barker to lead a review of how the planning system can better deliver economic goals. We discuss some aspects of the relationship between planning and productivity, and present some evidence from the retail sector.

8.1 Introduction

Long-term increases in prosperity and living standards depend on sustained growth in labour productivity (output per worker). In recent decades, the level of labour productivity in the UK has been low compared with the USA, France and Germany, and the government has set itself a target of increasing the rate of labour productivity growth and narrowing the productivity gap.¹

This chapter discusses three areas of government policy aimed at improving Britain's productivity performance. First, the government is considering a number of potential changes to the R&D tax credit for small and medium-sized enterprises (SMEs). We describe the background to the R&D tax credits and discuss the merits of various options for change.

¹ For further discussion of the government's record on productivity, see L. Abramovsky, S. Bond, R. Harrison and H. Simpson, *Productivity Policy*, IFS Briefing Note no. 60, 2005, http://www.ifs.org.uk/publications.php?publication_id=3362.

Second, the 2005 Pre-Budget Report confirmed the launch of the National Employer Training Programme (NETP) from April 2006, now branded ‘Train to Gain’. We summarise recent evidence on the likely effectiveness of this policy in improving productivity. Finally, we discuss some of the issues raised by the forthcoming review of planning and economic performance that was announced in the 2005 Pre-Budget Report.

8.2 R&D tax credits

In July 2005, HM Treasury, the Department for Trade and Industry (DTI) and HM Revenue and Customs (HMRC) published a discussion document on potential improvements to the research and development (R&D) tax credits.² The government’s response to the discussion process was published in December 2005,³ and in the Pre-Budget Report (PBR) the Treasury announced a number of changes to the administration of the existing scheme for small and medium-sized enterprises. The most significant of these was the creation of dedicated R&D units in HMRC to develop specialist R&D expertise and handle all SME R&D tax credit claims. The PBR also stated that the government ‘will continue to review whether there is a case for further enhancements to the existing structure of the SME R&D tax credit’, with any conclusions to be announced in Budget 2006.⁴

This section briefly describes the background to the R&D tax credits and discusses the options for changes to the SME credit. None of the options we consider is without potential drawbacks, and, given the long-term nature of R&D investment decisions, this seems to be an area where policy stability is particularly desirable. Thus implementing no changes may well be the best option. At the very least, it would be desirable if the recent consultation were the last for some time, in order to give the policy time to ‘bed down’.

Background

The R&D tax credits are the largest single policy initiative introduced by the present government aimed at increasing private sector innovation activity. The SME R&D tax credit was introduced in April 2000, and the large company credit followed in April 2002. Both schemes operate by allowing companies to deduct more than 100% of qualifying current expenditure on R&D from their taxable profits (150% for SMEs and 125% for large firms), thus reducing the after-tax cost of the R&D. The SME credit is not only more generous than the large company credit but also includes a payable aspect, whereby SMEs with insufficient taxable profits to benefit from enhanced relief can claim a cash payment equal to 24% of eligible R&D expenditure. This payable credit is particularly attractive to small R&D-intensive start-ups that have not generated any taxable profits.

² HM Treasury, DTI and HMRC, *Supporting Growth in Innovation: Enhancing the R&D Tax Credit*, 2005, http://www.hm-treasury.gov.uk/media/2FA/E9/RDtax_credit.pdf.

³ HM Treasury and HMRC, *Supporting Growth in Innovation: Next Steps for the R&D Tax Credit*, 2005, http://www.hm-treasury.gov.uk/media/E7A/1B/ent_r&d021205.pdf.

⁴ Paragraph 3.80 of HM Treasury, *Pre-Budget Report 2005*, 2005, http://www.hm-treasury.gov.uk/media/FA6/22/pbr05_chapter3_269.pdf.

HMRC statistics show that the cost of the SME credit in 2004–05 was £264 million, with over 80% of this accounted for by the payable credit. The annual number of claims for the SME credit is running at more than 4,000 a year. According to HMRC, the cost of the large company credit in 2004–05 is expected to be about £440 million, but this number is subject to a wide margin of error, and may turn out to be considerably larger, given that the SME credit has cost more than originally forecast.⁵

There is evidence from several other OECD countries that R&D tax credits are effective in generating additional R&D, although this evidence suggests that it could take as long as 10 years for the full effects to materialise.⁶ One reason for this is that R&D investment decisions are made with long time horizons, and it may take some time for changes in the price of R&D to feed through into companies' decision-making processes. Hence it is still too early to evaluate fully the effectiveness of the UK R&D tax credits. As interim evidence, the government's response to the recent consultation cited a survey in which 55% of companies that had made a successful claim said the tax credit had had some impact on either their level of R&D spending and/or the type of R&D projects they undertook.⁷ This could be consistent with a significant impact from the R&D tax credits but it is by no means sufficient evidence.

However, even if the R&D tax credits have their expected effect on levels of R&D expenditure, they are unlikely on their own to contribute significantly to achieving the government's ambition to increase total UK R&D expenditure to 2.5% of national income by 2014.⁸ Figure 8.1 shows spending on business enterprise R&D (BERD), the largest component of total R&D, as a percentage of national income over the period from 1981 to 2004 for the USA, Germany, France and the UK. From 2004 to 2014, the figure also shows the increase in BERD intensity that would probably be required for the government's ambition to be met.⁹ A generous estimate is that the existing R&D tax credits might raise UK BERD intensity by up to 0.1% of national income.¹⁰ This is less than one-quarter of the 0.5% of national income increase that would be required to meet the government's 2014 ambition.

⁵ Source: HM Revenue & Customs, *Corporate Tax Statistics*, http://www.hmrc.gov.uk/stats/corporate_tax/menu.htm.

⁶ See, for example, N. Bloom, R. Griffith and J. Van Reenen, 'Do R&D tax credits work? Evidence from an international panel of countries, 1979–1994', *Journal of Public Economics*, vol. 85, pp. 1–31, 2002.

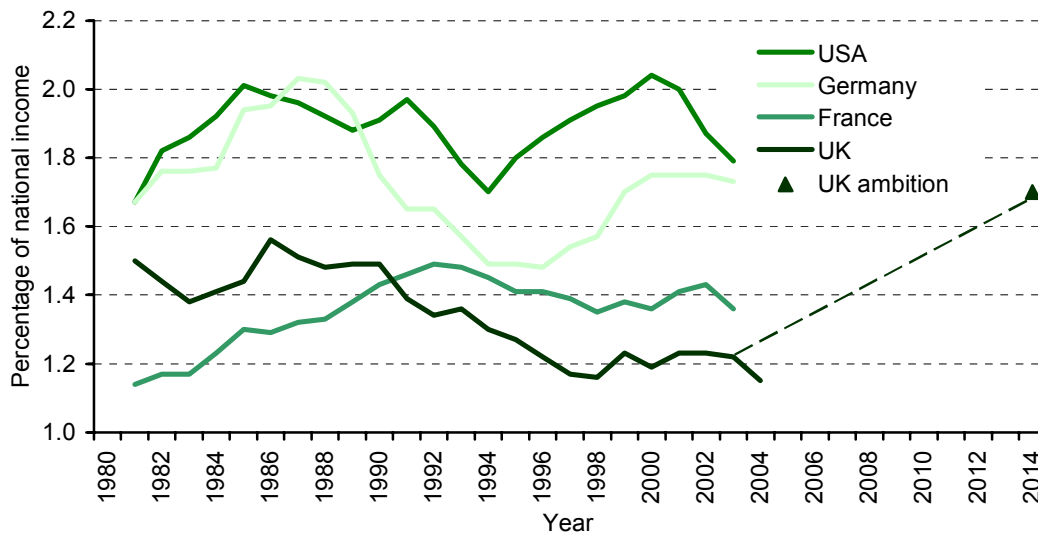
⁷ Box 2.1 of HM Treasury and HMRC, *Supporting Growth in Innovation: Next Steps for the R&D Tax Credit*, 2005, http://www.hm-treasury.gov.uk/media/E7A/1B/ent_r&d021205.pdf.

⁸ The 2.5% ambition was introduced in HM Treasury, DTI and DfES, *Science & Innovation Investment Framework 2004–2014*, 2004, http://www.hm-treasury.gov.uk/spending_review/spend_sr04/associated_documents/spending_sr04_science.cfm.

⁹ The ambition for 2014 was introduced prior to the publication of the 2004 figures for the UK, so the dotted line indicating the required trend path starts in 2003. The decline in 2004 was disappointing, but we should not read too much into a single year of data. The 2014 ambition of 1.7% for BERD as a percentage of national income is taken from the indicative scenario in table 4.1 of HM Treasury, DTI and DfES, *Science & Innovation Investment Framework 2004–2014*, 2004, http://www.hm-treasury.gov.uk/spending_review/spend_sr04/associated_documents/spending_sr04_science.cfm.

¹⁰ This is based on consensus estimates of the responsiveness of R&D spending to changes in the price of R&D. For further assumptions underlying this calculation, see L. Abramovsky, S. Bond, R. Harrison and H. Simpson, *Productivity Policy*, IFS Briefing Note no. 60, 2005, http://www.ifs.org.uk/publications.php?publication_id=3362.

Figure 8.1. Business enterprise R&D spending, 1981–2004, and the government’s ambition for 2014



Notes: The ambition for 2014 was introduced prior to the publication of the 2004 figures for the UK, so the dotted line indicating the required trend path starts in 2003; the dotted line is an indication of the trend path BERD would need to follow to reach the ambition, but should not be read as suggesting that the ambition needs to be met each year. Sources: OECD Main Science and Technology Indicators, 2004, updated for UK using ONS Business Enterprise Research and Development, 2004; authors’ calculations.

Of course, this does not indicate that the tax credits do not represent value for money, merely that they are unlikely on their own to have a dramatic impact on UK levels of business R&D. It is also worth pointing out that the existence of a government ambition for the level of R&D as a percentage of national income does not have a solid economic rationale, and the 2.5% figure is essentially arbitrary.

Potential changes to the SME R&D tax credit

It is useful to start by emphasising a few economic principles that should form the basis of any discussion of changes to the SME R&D tax credit. The main economic rationales underlying government support for business R&D are that companies may not always capture the full returns from their R&D (the ‘spillovers’ rationale) and that information constraints may result in a shortage of external finance for companies investing in risky R&D, especially for SMEs (the ‘credit constraints’ rationale). Both these types of market failure may result in companies underinvesting in R&D relative to the socially optimal level.

R&D tax credits are a form of government support that allows companies to maintain decision-making over how much to spend and which R&D projects to pursue, on the basis that companies are likely to have better information about potential payoffs than governments. Given the long-term nature of R&D investment decisions, stability, consistency and simplicity are particularly valuable characteristics of any system of government support for R&D, and any potential benefits from changing the structure of the SME R&D tax credit should be set against the complexity and uncertainty that might result from frequent changes to the policy. We return to this point below.

The main issue raised in the government's discussion document was whether support through the R&D tax credits should or could be targeted at smaller and growing innovative companies, particularly in emerging sectors such as software. However, the response to the consultation process, published along with the PBR, stated that the government accepted the majority view of respondents that any additional support should be targeted on small companies generally rather than specific sectors or groups of companies.¹¹ A number of potential changes have been explicitly ruled out, including any significant expansion of the definition of qualifying costs and an increase in the large company credit rate. Given these constraints, we discuss a range of potential changes to the SME scheme, some of which have been explicitly raised as possibilities, while others seem to be implied by the objectives expressed by the government.

i. Increase the SME credit rate

Increasing the SME credit rate would be the simplest way of providing additional support for SMEs. Evidence on the extent to which companies' private incentives to invest in R&D fall below the returns to society as a whole could be read as justifying a more generous credit than exists at present, and more generous rates currently exist in other countries (e.g. Canada). However, there is no clear evidence on whether spillovers are more significant for smaller companies, and increasing the divergence between the SME and large company rates might create harmful distortions. In particular, it would exacerbate any difficulties experienced by growing companies as they make the transition from SME to large company (see point iii below for more discussion of this). Changes to the generosity of the credit could also reduce the stability and certainty that are particularly important for companies making long-term R&D investment decisions. To the extent that the change is to a more generous credit, this could be seen as less of a problem, but the effectiveness of the policy would be reduced if changes to the rate became a regular occurrence.

ii. Raise the SME size threshold to allow larger companies to benefit from the higher credit rate and the payable credit

In its response to the recent consultation, the government stated that it would consider a number of recommendations made by the Cox Review of creativity in UK business.¹² One of these recommendations was that the upper size threshold for eligibility for the SME tax credit be raised from 250 employees to 500 employees. In support for this, the Cox Review cited evidence from the Third Community Innovation Survey that UK companies with fewer than 500 employees are significantly less likely to invest in R&D than larger companies. As the Review recognised, this change could be constrained by EU state aid rules, which use a common definition of SMEs across EU countries.¹³ Even if approval for the policy could be negotiated, it is possible that the SME tax credit might then interact in complex ways with other forms of support that differentiate between SMEs and large companies. However, it is difficult to know in advance whether this is likely to be a significant problem.

¹¹ Paragraph 1.16 of HM Treasury and HMRC, *Supporting Growth in Innovation: Next Steps for the R&D Tax Credit*, 2005, http://www.hm-treasury.gov.uk/media/E7A/1B/ent_r&d021205.pdf.

¹² *Cox Review of Creativity in Business: Building on the UK's strengths*, 2005, <http://www.hm-treasury.gov.uk/media/B91/B7/coxreview-chap5providingsupport.pdf>.

¹³ As well as the number of employees, the definition of an SME includes upper limits on sales and assets.

The largest impact of raising the size threshold would be on companies with between 250 and 500 employees that do not have sufficient taxable profits to benefit from the existing enhanced relief under the large firms scheme. These companies would become eligible for the payable aspect of the SME tax credit, which currently accounts for 80% of the SME credit's cost. While symmetry between companies with positive and negative profits is an attractive feature of the SME credit, the justification for the payable credit appears to be strongest for recent start-ups that have not yet generated sufficient cash flow to break even. The 'credit constraints' rationale for government support for business R&D is particularly relevant for these companies. The question then becomes whether there are a significant number of companies in this situation with more than 250 employees.

iii. Extend the transition period from SME to large firm so that growing companies could continue to claim under the SME scheme for longer

The government's response to the consultation process stated that 'the Government will continue to consider the evidence presented by the Cox Review, including on the difficulties facing companies as they make the transition from SME to large company'.¹⁴ When growing firms cease to be SMEs, they are no longer eligible for the more generous relief and payable credit under the SME tax credit, and become eligible instead for the less generous large companies scheme. However, the current system already includes a one-year grace period, so that companies must be classified as a non-SME for two consecutive periods before they cease to be eligible for the SME tax credit. One option would thus be to extend this period to two or more years, so that growing companies would be able to continue claiming under the SME scheme for longer after they had ceased to qualify as an SME. In most cases, however, this would merely postpone any difficulties caused by switching from the SME credit to the large companies scheme.

At any one time, this change would focus additional support on a relatively small number of growing companies and would also introduce a discrepancy in the tax treatment of similar companies according to whether they were growing or not growing. Since it is unlikely that growing companies find it harder to gain access to external finance than companies that are not growing, any economic rationale for this discrepancy would have to be based on the argument that growing companies are more likely to generate spillovers from their R&D. We are aware of no strong evidence on this point.

iv. Introduce an additional incremental element on top of the existing volume-based scheme

This was another of the Cox Review's recommendations. Before the SME tax credit was first introduced, there was extensive discussion of whether the UK should adopt a volume-based or incremental credit.¹⁵ A volume-based credit reduces the after-tax price of all R&D conducted by a firm, irrespective of the historical path of the firm's R&D expenditure, whereas an incremental credit reduces the after-tax price of any additional R&D above some

¹⁴ Paragraph 3.23 of HM Treasury and HMRC, *Supporting Growth in Innovation: Next Steps for the R&D Tax Credit*, 2005, http://www.hm-treasury.gov.uk/media/E7A/1B/ent_r&d021205.pdf.

¹⁵ For further discussion of these issues, 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 no. 15, 2001, http://www.ifs.org.uk/publications.php?publication_id=1766.

base level, which could be, for example, the firm's R&D expenditure in some base year or a rolling average of the last few years' R&D expenditure. Incremental credits generally provide higher incentives for firms to raise their R&D spending for a given amount of cost to the exchequer, but a volume-based approach was chosen in the UK, not least due to its greater simplicity and certainty. Under some circumstances, it is also possible for incremental credits to provide perverse and even negative incentives, particularly if the base level is defined using some combination of recent years' expenditure, since raising R&D expenditure in one year reduces the value of the credit in future years.

The government's response to the recent consultation states that 'discussions with business have reinforced the Government's view that the volume-based structure is most effective'.¹⁶ This suggests that the government is not particularly receptive to the idea of an additional incremental element for the SME tax credit. Given the added complexity and uncertainty that an incremental element would introduce, this judgement seems sensible.

Another option that could be seen as a particular form of incremental credit would be to provide more generous relief to first-time claimants. This is potentially attractive given the administrative fixed costs of applying for relief for the first time, and would also focus additional support on encouraging first-time innovators, which is one of the stated priorities in the government's response to the consultation.¹⁷ However, providing more generous relief for first-time claimants might also create avoidance problems that could be difficult to police. In particular, it could create incentives for companies to set up new R&D vehicles each year in order to benefit from more generous treatment. This option was not explicitly mentioned in the government's response to the consultation, which may indicate that it is seen as unworkable.

Conclusion

Clearly, none of these options is without potential drawbacks. Raising the SME credit rate (option i above) is probably the simplest change to administer, but, as discussed above, it would exacerbate any difficulties faced by growing companies as they cross the threshold from SME to large company. Extending the grace period in this transition (option iii above) might reduce these difficulties, but in most cases it would merely postpone them.

Any change is also likely to increase the uncertainty and/or complexity associated with claiming relief. As discussed above, given the long-term nature of R&D investment decisions, this seems to be an area where policy stability is particularly desirable. Thus implementing no changes may well be the best option. At the very least, it would be desirable if the recent consultation were the last for some time, in order to give the policy time to 'bed down'.

¹⁶ Paragraph 3.23 of HM Treasury and HMRC, *Supporting Growth in Innovation: Next Steps for the R&D Tax Credit*, 2005, http://www.hm-treasury.gov.uk/media/E7A/1B/ent_r&d021205.pdf.

¹⁷ Paragraph 3.22 of HM Treasury and HMRC, *Supporting Growth in Innovation: Next Steps for the R&D Tax Credit*, 2005, http://www.hm-treasury.gov.uk/media/E7A/1B/ent_r&d021205.pdf.

8.3 The National Employer Training Programme

The 2005 Pre-Budget Report confirmed the launch of the National Employer Training Programme from April 2006, now branded ‘Train to Gain’. This is a policy designed to encourage employers to provide work-related training to low-skilled employees in order for them to acquire basic skills and Level 2 vocational qualifications (NVQ2).¹⁸ The NETP will offer free training, either to a basic skill qualification or a Level 2, to employees who lack basic literacy, numeracy or language skills, or who do not possess a Level 2 qualification or above. In addition to free training, employees will receive a number of hours of paid time off for training during working hours, and employers with fewer than 50 employees will receive wage compensation for these hours – available at least in 2006–07 and 2007–08. The package also includes an independent brokerage service to help employers identify their training needs and source appropriate training provision. The NETP is expected to cost £268 million in 2006–07 and £437 million in 2007–08 (of which around £38 million in each year will pay for the wage compensation to small businesses).¹⁹

In this section, we consider the potential rationale behind introducing a subsidy for employer-provided training and examine the available evidence from the evaluation of the Employer Training Pilots, which trialled elements of the NETP. In light of this, we then discuss the extent to which the NETP is likely to be effective in increasing productivity and the scope for future evaluation of the policy.

Why intervene in the provision of employer-provided training?

The government’s stated aim for the Employer Training Pilots, the predecessor to the NETP, has been to ‘[stimulate] the demand for work-based training for low-skilled employees where market failures that reduce investment in skills are most acute’.²⁰ What are these market failures and what is the evidence for them?

The most important possible market failure in this context arises because the skills acquired in basic skills and Level 2 training are likely to be largely transferable across jobs. This means that employers run the risk that, having paid for the training, the employee will then be poached by another firm. In the case where employees are unable to pay for such training themselves, this could lead to underprovision. There may also be informational failures, or firms themselves (especially small firms) may be credit constrained, both also leading to underprovision.

There is remarkably little evidence on the magnitude of these potential market failures. On the one hand, it is certainly the case that workers with low or no qualifications are substantially less likely to receive employer-provided training than workers with higher qualification levels. For example, just 12% of employees with no qualifications, and 23% of those who

¹⁸ For information, Level 1 qualifications are equivalent to fewer than five GCSEs grades A*–C; Level 2 qualifications are equivalent to five GCSEs grades A*–C; Level 3 qualifications are equivalent to two or more A level passes; and Level 4 and above qualifications are equivalent to at least a first degree.

¹⁹ Department for Education and Skills.

²⁰ Paragraph 3.98 of HM Treasury, *Pre-Budget Report 2005*, 2005, http://www.hm-treasury.gov.uk/media/FA6/22/pbr05_chapter3_269.pdf.

have qualifications below Level 2, report having received job-related education or training in the last three months. This compares with 30% of those whose highest qualification is at Level 2, 34% of those at Level 3, and 43% of those qualified to Level 4 or above. Small firms (those employing fewer than 50 workers) are significantly less likely than larger firms to provide training to their low-qualified staff.²¹

However, the lack of training among this section of the workforce might arise not because of market failures, but simply because the returns may be insufficient to justify the investment. For example, the evidence on the private wage returns to holding Level 2 qualifications compared with having a Level 1 or no qualification at all suggests that NVQ2s offer little or no wage benefit to most recipients, although it should be noted that individuals who receive their NVQ2s through their employers (rather than through government training schemes or at a school or college) do, on average, experience some positive financial returns. Individuals with a Level 2 qualification are also more likely than similar individuals without a Level 2 qualification to go on to acquire higher qualifications.²²

As well as the market failures frequently cited by the government, there may also be equity arguments for intervention to provide training for less-advantaged groups. For example, it may be considered an issue of social justice that individuals who left school without any qualifications be given opportunities to gain qualifications, regardless of the long-term pay-offs. This is certainly a part of the motivation behind the government's newly introduced 'Level 2 Entitlement', which guarantees that the government will meet the full tuition cost for a first Level 2, whether obtained through the employer or by other routes.²³

Finally, the government has set itself an ambition to see 2¼ million adults achieve functional competence in literacy, language and numeracy, and over 3 million adults achieve their first full Level 2 qualification, by 2010.²⁴ NETP will provide additional avenues through which individuals can gain these qualifications and so will potentially help the government to meet its targets.

Has the policy been effective so far?

NETP has been developed following three years of piloting a number of different policy variants through the Employer Training Pilots (ETPs) that have been in operation in a number of Local Learning and Skills Councils (LLSCs) since September 2002. There is evidence available on the impact of the ETPs in their first year of operation on the take-up of training by eligible employers and employees, as a result of an evaluation conducted at IFS.²⁵

²¹ Authors' calculations based on Spring 2005 Labour Force Survey. Calculations cover employees in England aged between 19 and 64.

²² See L. Dearden, L. McGranahan and B. Sianesi, *An In-Depth Analysis of the Returns to National Vocational Qualifications Obtained at Level 2*, 2004, Centre for the Economics of Education, London, <http://cee.lse.ac.uk/cee%20dps/ceedp46.pdf>.

²³ See DfES, *Skills: Getting On in Business, Getting On at Work*, Cm 6483, 2005, <http://www.dfes.gov.uk/publications/skillsgettingon/docs/SkillsPart1.pdf>.

²⁴ See DfES, *Skills: Getting On in Business, Getting On at Work*, Cm 6483, 2005, <http://www.dfes.gov.uk/publications/skillsgettingon/docs/SkillsPart1.pdf>.

²⁵ See L. Abramovsky, E. Battistin, E. Fitzsimons, A. Goodman and H. Simpson, *The Impact of the Employer Training Pilots on the Take-Up of Training among Employers and Employees*, DfES Research Report no. 694, 2005,

The evidence suggests that the pilots appear to have had small positive effects on the take-up of training amongst employers and employees, but that the associated levels of ‘deadweight’ (i.e. training that would also have been undertaken in the absence of the ETP) are relatively high. For example, the evaluation findings suggest that in the early years of the pilots, the proportion of eligible employers providing Level 2 training to low-qualified workers has risen from approximately 8% to around 8½% as a result of the policy. Our ‘back-of-the-envelope’ calculations on the basis of these evaluation results suggest that about 10–15% of the ETP training is ‘additional’ training and that about 85–90% is ‘deadweight’.

Such levels of deadweight are perhaps to be expected amongst training programmes of this kind. Given that the ETP was universally available, widely marketed, and offered employers financial incentives to provide training, we would expect the programme to attract a considerable number from the minority of employers who would have provided this type of training without the ETP offer. It should also be noted that this evaluation focused mainly on the first-year effects of the ETP programme. It might be the case that additional training generated by the policy increases beyond its initial levels, since the numbers of employers and employees participating in ETP have increased considerably over time. For example, in the first six LLSC areas in which the ETP was piloted, the number of new employers and employees signing up to ETP increased from around 2,400 and 17,000 respectively in the first year to 4,800 and 43,000 in the second year, and approximately 4,000 and 41,000 in the first 11 months of the third year of operation.²⁶

Conclusion

The evidence for the NETP’s likely effectiveness in improving the UK’s productivity performance is not very strong so far. As we have noted, there is some limited evidence on the existence of positive returns to NVQ2 obtained through the employer, as measured by employees’ wages.²⁷ However, the evaluation of the Employer Training Pilots found that in their first year of operation, they did not appear to raise the levels of training much beyond what would have occurred in any case. If this remained the case under the NETP, the net gain to productivity would probably be very small.

The government has suggested that in the light of these findings, it will work hard to improve the additionality of the national policy, and promises to monitor this.²⁸ However, given that the policy will be in place nationwide, it will be extremely difficult to find adequate comparison groups to allow the impact of the NETP on the take-up of training to be evaluated effectively. Nevertheless, it may still be possible to evaluate the longer-term impact of this

<http://www.dfes.gov.uk/research/data/uploadfiles/RR694.pdf>. This report formed part of a wider programme of evaluation of the ETP, led by the Institute of Employment Studies.

²⁶ These figures are derived from the ETP Management Information data, provided by the Institute for Employment Studies. The first-year figures cover September 2002 to August 2003, and the second year covers September 2003 to August 2004. Note that the third-year figures are provisional as they presently only cover September 2004 to July 2005.

²⁷ Note that this measure could be underestimating the effect on productivity since it does not take into account any productivity gains captured by firms. Note also that these findings are based on general research on the gains to NVQ2s, but that there has been no specific research on the wage gains amongst participants in the ETP programme.

²⁸ See the ministerial foreword to L. Abramovsky, E. Battistin, E. Fitzsimons, A. Goodman and H. Simpson, *The Impact of the Employer Training Pilots on the Take-Up of Training among Employers and Employees*, DFES Research Report no. 694, 2005, <http://www.dfes.gov.uk/research/data/uploadfiles/RR694.pdf>.

national policy on participating employees, by measuring the returns to a Level 2 qualification obtained through the NETP.²⁹ Whether the public funding directed towards the NETP provides value for money in terms of fulfilling its key productivity aims will ultimately depend on its effectiveness in terms of generating both additional take-up of training and positive returns to the qualifications acquired through the policy.

8.4 Planning regulation and economic performance

In the 2005 Pre-Budget Report, the Chancellor and the Deputy Prime Minister asked Kate Barker to lead a review to consider ‘how, in the context of globalisation, planning policy and procedures can better deliver economic growth and prosperity alongside other sustainable development goals’.³⁰ As well as examining ways to improve the efficiency and speed of the planning system, the Review will also examine the relationship between planning and productivity. This section briefly discusses some aspects of the relationship between planning regulation and productivity, and presents some evidence from the retail sector.

Planning and productivity

Planning regulation has a direct effect on productivity. In the absence of regulation, businesses design buildings and choose sites to minimise their own cost and maximise their own revenue. Without government intervention, businesses are not likely to take account of the impact that their activities have on others – for example, through pollution, congestion or a reduction in recreational space. The aim of regulation should be to ensure that these externalities are taken into account. The direct impacts of planning regulation on productivity could work through various channels, including inefficient building design, lower entry rates of new businesses, or lower rates of adoption of new technologies that are associated with new building.

In addition, irrespective of planning outcomes, the planning process represents a fixed cost associated with land development, and the outcomes of the planning process are not completely predictable for applicants. Both fixed costs and uncertainty may reduce or delay investment. Other things equal, reducing any unnecessary costs and uncertainty associated with the planning process should thus be a goal of policy.

As well as the direct impacts of planning outcomes on productivity, there may be indirect impacts through competitive effects. For example, the threat of entry by a local rival may encourage incumbent firms to increase their efficiency or invest in innovation. If the planning system makes entry unlikely, this effect will be reduced. The Competition Commission

²⁹ Ideally, we would also try to measure the impact on the productivity of participating workplaces. However, this poses considerably greater methodological challenges. Note that the quantitative evaluation of ETP did not consider the returns to participation for employers or employees.

³⁰ Paragraph 3.128 of HM Treasury, *Pre-Budget Report 2005*, 2005, http://www.hm-treasury.gov.uk/media/FA6/22/pbr05_chapter3_269.pdf.

inquiry into the supermarket industry discusses the competitive implications for planning policy in some detail.³¹

Why should government intervene in land use?

The main rationale for government intervention in the use of land is that there may be externalities from land use that are not taken into account by users of land. Some types of activities will affect not only the companies undertaking them and their staff and customers, but also other people living, working or undertaking other activities in the vicinity. For example, a cement factory that generates frequent traffic of large lorries opening up next door to a primary school will have a negative impact on the children, parents and staff at the school. The local authority may want to impose an additional (in this case, prohibitively high) cost on the cement factory of driving heavy lorries past the primary school when children are coming to and from school. Without some form of intervention, the cost to the children, parents and teachers will not be borne by the company when deciding where to locate the cement factory and so will not affect its decision.

The ideal intervention would price these externalities by levying additional costs so that users of land face the full cost of their location decisions when deciding where to locate economic activity. However, such interventions can be difficult to design and implement. In general, planning authorities are unlikely to have very precise information about the monetary value of these externalities.

Instead, under the current system, companies must seek permission to locate certain categories of activity in certain areas (or buildings have to be designated for certain uses). This system of planning regulation also requires the planning authority to have sufficient information in order to weigh up various costs and benefits. Without sufficient information, regulation can lead to distortions in economic activity. A problem with many forms of regulation is that it can be costly (and perhaps infeasible) for planning authorities to collect sufficient information.

It is worth commenting on the high price of land in the UK. For example, estimates from the Competition Commission's supermarket investigation suggest that the price of retail land is substantially lower in France, Germany and the Netherlands than in the UK.³² However, the high price of land is not in itself a rationale for government intervention if the price accurately reflects the scarcity of a resource. The UK is densely populated and, since land is relatively scarce, it will be optimal for companies to use less land and more of other inputs, relative to countries such as the USA, France and Germany, where land is more abundant. A high price of land relative to other inputs sends a signal to companies to do exactly this.

³¹ Competition Commission, *Supermarkets: A Report on the Supply of Groceries from Multiple Stores in the United Kingdom*, 2000, http://www.competition-commission.org.uk/rep_pub/reports/2000/446super.htm.

³² Competition Commission, *Supermarkets: A Report on the Supply of Groceries from Multiple Stores in the United Kingdom*, 2000, http://www.competition-commission.org.uk/rep_pub/reports/2000/446super.htm.

An example: supermarkets

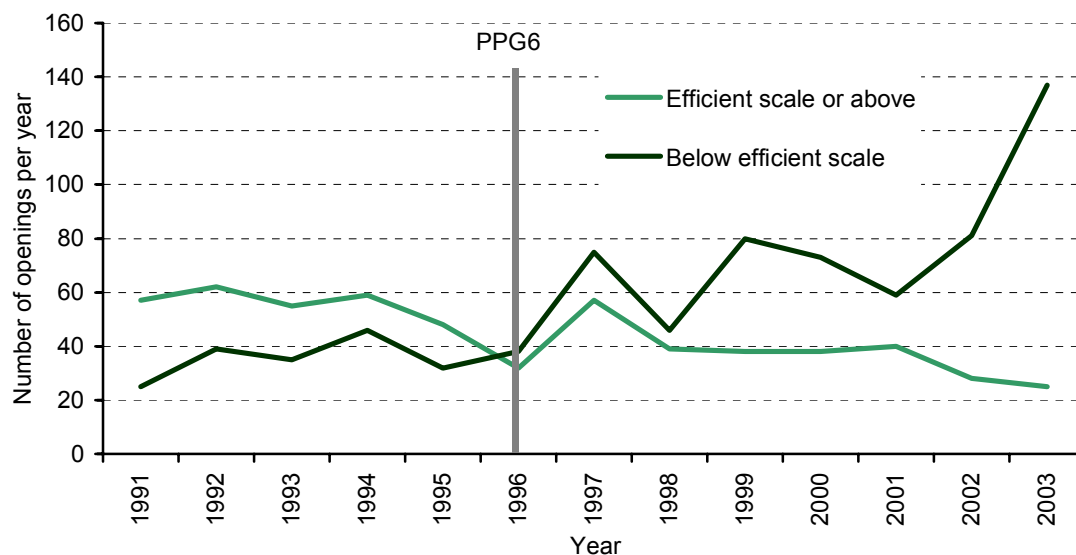
A prominent example of businesses affected by planning regulation is supermarkets. From the 1970s to the mid-1990s, there was a decline in the proportion of retail space in town centres (and edge-of-town sites) and an increase in out-of-town developments. National planning controls on retail development were minimal over this period. Concern was expressed about the vitality of town centres and about issues around social exclusion of people without cars.

Reforms in 1993 and 1996 resulted in the current legislation and introduced the ‘sequential approach’.³³ The main features of this system are as follows:

- Local authorities should have a Regional Spatial Strategy, which includes an assessment of the need for additional floor space for retail (among other activities).
- Local authorities follow a sequential approach in which they decide whether local needs can be met by (1) sites within existing town centres, (2) sites on the edge of town and, only then, (3) sites out of town.

What effect has planning regulation had on the food retail industry? Figure 8.2 shows the number of supermarket openings each year in the UK for the period between 1991 and 2003, split into establishments that are above and below 30,000 square feet, which is approximately minimum efficient scale for a supermarket.³⁴ The share of openings that were below efficient scale increases over the period, especially after 1996, the year in which the main planning regulation, Planning Policy Guidance 6 (PPG6), was introduced.

Figure 8.2. Supermarket openings in the UK by store size



Note: PPG6 = Planning Policy Guidance 6.

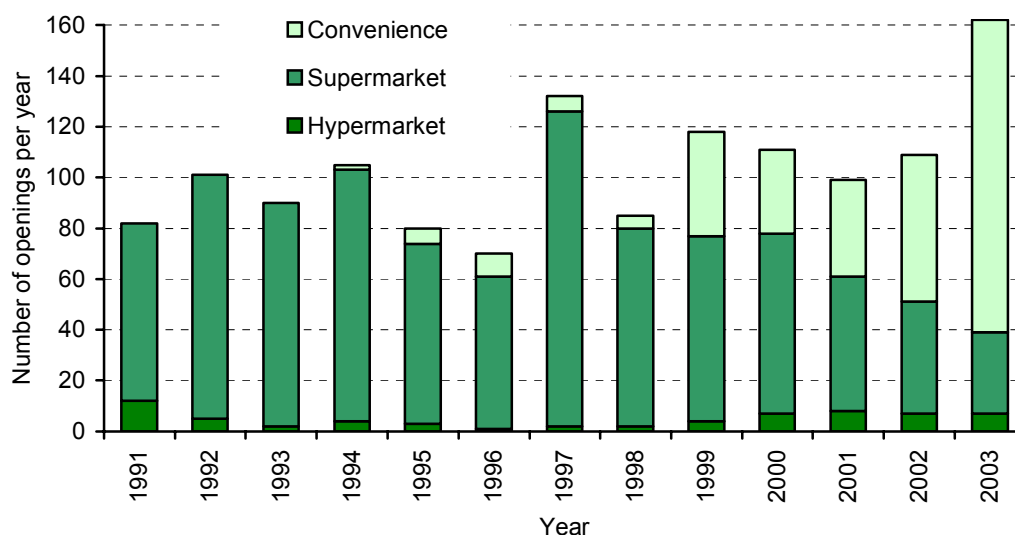
Source: Authors' calculations using Institute for Grocery Distributors data.

³³ ODPM, *Planning Policy Guidance 6: Town Centres and Retail Development*, <http://www.odpm.gov.uk/index.asp?id=1143926>, and ODPM, *Planning Policy Statement 6: Planning for Town Centres*, <http://www.odpm.gov.uk/index.asp?id=1143820>.

³⁴ The Competition Commission's supermarkets investigation estimates that there are increasing returns to scale up to around 3,000 square metres, or around 30,000 square feet.

Based largely on the information contained in Figure 8.2, the Office of the Deputy Prime Minister has concluded that planning regulation has been effective in stemming the increase in out-of-town stores (which are largely above efficient scale).³⁵ However, if we look at the composition of these new stores (Figure 8.3), it is clear that growth in new stores is largely due to convenience stores, driven by expansion of the Tesco's Express and Metro brands (and of Sainsbury's Local). One question that arises is whether growth in these brands was as much a response to changes in consumer preferences as a response to planning regulation.

Figure 8.3. Supermarket openings in the UK by type of store



Source: Authors' calculations using Institute for Grocery Distributors data

How might these changes to the planning regime relate to productivity outcomes? Productivity in the retail sector in the UK is low compared with that in the USA – the sector is responsible for around 20% of the UK–US productivity gap.³⁶ Several commentators, including McKinsey and the Competition Commission, have attributed this, at least in part, to restrictive planning regulations.³⁷ The thrust of this argument is as follows:

- Planning regulations hinder entry of large stores and the result is that the UK has a larger number of stores below minimum efficient scale.
- Planning regulations hinder the entry and exit of stores. It is hard to introduce new technologies in old stores (refitting is expensive), but easier to integrate them into new stores, so less store turnover means stores are slower to take up new technologies.
- Planning regulations hinder entry by new low-cost stores (e.g. Asda/Walmart) and thus stifle competition.

³⁵ ODPM, *Policy Evaluation of the Effectiveness of PPG6*, 2004, http://www.odpm.gov.uk/pub/442/Policyevaluationoftheeffectivenessofppg6PDF474Kb_id1145442.pdf.

³⁶ R. Griffith, R. Harrison, J. Haskel and M. Sako, *The UK Productivity Gap and the Importance of the Service Sectors*, IFS Briefing Note no. 42, 2003, http://www.ifs.org.uk/publications.php?publication_id=1790.

³⁷ McKinsey Global Institute, *Driving Productivity and Growth in the UK Economy*, 1998, <http://www.mckinsey.com/mgi/publications/uk.asp>; Competition Commission, *Supermarkets: A Report on the Supply of Groceries from Multiple Stores in the United Kingdom*, 2000, http://www.competition-commission.org.uk/rep_pub/reports/2000/446super.htm.

However, there are a number of problems with this simple story. First, output per capital input in the UK is still relatively low, but significantly less so than output per worker.³⁸ For a country where land is in relatively short supply to use less land and more labour seems hardly surprising, and may simply be the optimal response of companies to different factor endowments.

Second, the most profitable firm in the UK is Tesco, which has many small stores (below minimum efficient scale). Tesco is widely cited as an innovative firm that has used information and communication technologies (ICT) in creative ways that suit its small-store business model, and is now applying its approach in other countries and other markets.³⁹

Both these facts suggest that the relationship between planning and productivity in the retail sector is by no means simple. While retail is in some respects a special case, many of these insights apply to other sectors of the economy. The forthcoming planning review should thus be wary of drawing conclusions without considering these complexities in some detail.

³⁸ McKinsey Global Institute, *Driving Productivity and Growth in the UK Economy*, 1998, <http://www.mckinsey.com/mgi/publications/uk.asp>.

³⁹ See, for example, <http://news.bbc.co.uk/1/hi/business/1263694.stm>.