Foundation for Science and Technology: 'Science and the City'
1 December 2004
Stephen Timms MP

I'm delighted to be able to join you this evening, and to take part in this debate on business innovation and investment in R&D. Its an area for me of particular interest, given my current responsibility for policy on the City and my former responsibility as Minister at the DTI for e-commerce for two and a half years until September.

Some examples of achievement

I think we can take heart from UK experience on e-commerce. Our mobile communications industry is one of the most competitive in the world – it includes the biggest mobile service provider in the world – and it has led the world in innovations like pre-pay. We had one of the first 3G mobile services in Europe.

On broadband, two and a half years ago, it is etched on my memory that an article in the computing press the week I arrived at DTI said that UK achievements on broadband were on a par with those of Croatia. Today the position has been transformed. Take up still lags behind some other countries, notably Japan and Korea, whose President is in the UK today, and where the communications industry's main worry about broadband is what you do once saturation take up has been achieved. But take up in the UK is growing very fast now, we are seeing very rapid growth of e-commerce, and we will be one of the first countries anywhere where it will be possible to access a broadband service from almost anywhere. And we need to make sure as Ofcom completes its review of the telecommunications market that we can maintain the success we have seen of investment delivering an advanced infrastructure meeting the needs of Britain's residential and business users

Raising R&D intensity

John Kingman, the Director of the Treasury's Enterprise and Growth Unit, addressed this group in July. Tonight I would like to concentrate on one strand of the Government's priorities for science and innovation over the next decade – one of the central aims of the investment framework – our determination to raise R&D intensity in the UK to 2.5% by around 2014. The current level is around 1.9%, so its a challenging goal, but one it is important to deliver.

R&D intensity is an indicator of innovation in an economy – itself a key driver of productivity. Studies show that a significant proportion of our gap on productivity with the US is due to lower levels of R&D expenditure. Achieving the goal of 2.5% would place us in a strong position against our competitors – including the US, Germany and France. That goal will require action from both public and private sectors. Business R&D accounts for the largest part of the total R&D, so a positive business response is essential.

In our investment framework we sketched out a possible scenario to help us to reach our aim, which assumed equal growth in both private R&D and public funds going into the science base. The scenario would require growth in funding on both sides of 5 ¾ % in real terms each year over the coming decade.

We took the first steps towards achieving that in the Spending Review in July, announcing a £1 billion funding increase for the science base over the period to 2007/08 – an average annual growth rate of 5.8%. We also set out a ten-year framework for investment in the science base, which will increase at least in line with the trend growth rate of the economy, in order to help raise science spending as a proportion of GDP.

We are keen to work with R&D employers to understand their investment plans better, as well as potential barriers to increasing their investment. I would be interested in ideas on this tonight.

The business case for increasing R&D

There are very good reasons for businesses themselves to be keen to invest more in R&D. In the first place, harnessing technological innovation will play a crucial role in a business's ability to succeed in the global economy in the future. There is now barely a product or a service that does not face global competition.

As globalisation continues apace, competition can only get fiercer. It is estimated that by 2025, half of all global manufacturing exports will be produced in today's developing countries – up from around a quarter today. At the same time, rising education standards and skills levels are enabling many emerging economies to move further up the value-added chain. Already China and India are *each* producing around 2 million graduates a year. I shall be spending Christmas this year with family in Singapore and research and development spending there is growing at 15 % a year. So the competitive imperative for innovation and for investment in R&D is very strong.

Research also shows that business investment in R&D generates substantial returns – with various economic estimates of private returns ranging from 10-40 %. More concretely, the latest DTI R&D scoreboard shows that the portfolio of R&D intensive companies on the London stock market has seen share price growth of 57 % since 1997, while the FTSE 100 as a whole has fallen by 11 % over the same period.

The Government role

All of us benefit from R&D and there is a government role. We fulfil that by funding the public science base, and by providing incentives for businesses to invest in R&D. But we still have got a way to go.

R&D intensity fell in the UK during the 1980s and 1990s as GDP growth outstripped growth in R&D, partly due to falls in defence R&D. There are now welcome signs that this trend is reversing. Since the 1980s, UK business investment in R&D has risen in real terms, with the biggest increases in the chemicals and transport equipment sectors. There have also been large increases in the services sector.

Our investment framework identified the four things we need to do to deliver the R&D target:

1. to maintain or grow R&D in sectors where the UK is strong.

2. to attract more R&D investment from multinationals. We want the UK to be the partner of choice in Europe for global R&D.

3. to increase R&D intensity in firms or sectors where it is not currently strong.

4. to develop new R&D intensive sectors and improve the creation rate of R&D intensive SMEs.

The principal responsibility of Government is to deliver the stable macroeconomic conditions and supportive regulatory environment that makes the UK an attractive place for innovative businesses to locate. So when the Chancellor delivers his pre-budget report tomorrow, his first priority will continue to be stability and steady growth, within a framework of low inflation, low interest rates, sound public finances and high employment.

Building on that, there are fiscal measures we can use to incentivise greater investment in R&D. R&D tax credits were introduced for SMEs in 2000 and extended to large companies in 2002. By May this year, over 10,000 tax credit claims had been received from SMEs, and £570 million pounds worth of support provided since the inception of the credit.

DTI is introducing a Technology Strategy to focus resources on areas of key technology potential for the UK, through funding R&D in businesses and encouraging more collaborative work between the science base and businesses. On Monday, DTI announced a new £80 million fund, available for companies to carry out Collaborative Research and Development in nine high-priority technology areas.

We also intend to work more closely with businesses. For example, DTI has brought together from industry Innovation and Growth Teams to look intensively and strategically at a number of sectors, to gain the top-level commitment of the industry, and to draw on the expertise of the major stakeholders. The aim is to look, sector by sector, at the competitive challenges that each faces now and will face in the future, and to see how best we can respond to them. Innovation and Growth teams have been created for aerospace, biotechnology, chemicals and the one I launched for the electronics industry.

Finally, we need to do more to improve access to finance – often a factor holding back company growth, particularly for small companies.

We have already made substantial fiscal reforms to address the market failure which can reduce the supply of risk capital to smaller firms with growth potential: closing the so called equity gap. We have already introduced Capital Gains tax business assets taper relief for investment in unquoted companies. We have enhanced the Enterprise Investment Scheme and Venture Capital Trusts. And we will be piloting Enterprise Capital Funds, aimed at growing the early stage venture capital market.

Our investments in science are aimed at supplying the economy with the skills and research it needs, and our targeted investments in venture capital and knowledge

transfer are designed to close gaps in the private market. In addition, DTI has set up knowledge networks to speed up the commercial application of science, and to enable a quicker transfer of knowledge from laboratories to businesses.

The City role

But only companies can create for themselves a destiny. As shareholders become more assertive, we need the City to explain better the case for medium and long-term investment in science. The City is in an ideal position to do so. It employs a large number of science graduates. And London is the third largest Stock Market in the world after the US and Japan. There is an enormous amount of liquidity available for R&D if it is handled correctly.

The challenge is for the City to persuade investors that R&D is an asset as well as a risk. Business leaders must be well placed to articulate their future strategies, and the R&D and capital investment plans to deliver them. They need to secure City backing to deliver these plans – demanding dialogue, with both parties using the same language and evidence. Investors and equity analysts must take an active role in assessing growth potential from R&D within UK firms. They also need to take an informed and broad view of the long-term growth potential from investing outside the main equity markets – in private equity and venture capital for example.

Expectations on both sides are clearly still adjusting after the market peak in 2000. While technology venture capital investment in the UK did turn up in 2003, it remains a difficult climate for raising funds to support the next wave of growth firms.

Paul Myners, supported by eminent corporate and investor experts, is looking for us at the impact of the pre-emption guidelines on equity capital raising, particularly by technology firms, and he published a discussion paper earlier this month. At the heart of this, again, is the responsibility for technology companies to explain their growth potential to investors, and for investors and analysts to understand and respond to the evidence presented to them.

More broadly, we have taken steps to improve the operation of capital markets – in particular, to strengthen the efficiency of the institutional investment chain, linking institutional saving to investment in companies. We are working towards a more integrated European capital market, to open up greater opportunities for British businesses in Europe.

The role of universities

The last area I would like to mention is the need for greater collaboration between our business base and our academic base. We want businesses to improve their engagement with universities and research establishments – working more closely together to transfer technology from the lab into commercial application, with both becoming more responsive to the needs and experience of the other.

In the ten-year framework, we responded to the Lambert review of business-university collaboration, which concluded that business, the science base, and the economy as a whole would benefit from improved collaboration between the sectors.

We are taking steps to address the barriers identified in the Review. We are producing a protocol and model contracts for Intellectual Property agreements between universities and industry, being developed by a group chaired by Richard Lambert. Again with the full involvement of representatives from both business and university sectors. They hope to report back next Spring.

Lambert also recommended an enhanced role for Regional Development Agencies in funding and facilitating business-relevant research. This is being taken forward by the RDAs themselves – with their greater responsibility reflecting their knowledge of regional strengths and potential. The three Northern RDAs have already agreed a substantial additional funding commitment to this activity, and we will continue our dialogue with the RDAs as their involvement increases.

Central Government will also invest more in helping universities and public sector research establishments build capacity in knowledge transfer activities. For example, the Higher Education Innovation Fund will reach £110 million a year by 2007-08.

Conclusion

So, taken together, the measures we have introduced to increase R&D investment in the UK do represent important progress. Many of them, the R&D tax credits for example, are already demonstrating positive results.

But we know that we have a way to go, and we are determined not to be complacent. That is why, in the pre-Budget report tomorrow, the Chancellor will announce further measures to strengthen the dialogue between business and government, in taking forward the 10 year framework. We will also make it our business to examine and where necessary remove the tax and regulatory barriers to enterprise – such as those that have been holding back university spin-off companies from turning research excellence into business success.

I see the kind of dialogue we are able to have this evening as important in making the right judgements about the steps to take and I am grateful for the opportunity to engage with you on these fascinating and important challenges.

Thank you.