Benchmarking UK productivity performance:

The Government's response to the consultation on productivity indicators

October 2004

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This document has been prepared by HM Treasury and the Department of Trade and Industry, with additional assistance from the Department for Education and Skills, the Office of the Deputy Prime Minister and the Office for National Statistics.

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1 Introduction

1.1 This report outlines the Government's response to the consultation document 'Productivity in the UK 5: Benchmarking UK productivity performance: A consultation on productivity indicators' published by the Department of Trade and Industry (DTI) and HM Treasury on 15th March 2004. The consultation closed on 4th June 2004.

1.2 This report should be read in conjunction with the consultation document, which is available from www.dti.gov.uk/economics and www.hm-treasury.gov.uk. Printed copies of the consultation document can be obtained from: Correspondence and Enquiry Unit, HM Treasury, 1 Horse Guards Road, London, SW1A 2HQ, Tel: 020 7270 4558.

1.3 The DTI and HM Treasury share a Public Service Agreement (PSA) target to improve productivity in the UK relative to our key competitors.[1] Increasing productivity is central to achieving the Government's long-term goal of high and stable rates of economic growth. The Government draws on a wide range of evidence to analyse the UK's productivity performance. An important component is the analysis of progress on the *drivers* of productivity. 'Productivity indicators', which can be used to monitor performance, are the focus of this consultation.

1.4 The DTI has published 'UK Productivity and Competitiveness Indicators' since 1999,[2] which provide a rich and broad assessment of the strengths and weaknesses of the UK economy. This consultation explored the proposal to simplify this approach by developing a more focussed set of productivity indicators, to help monitor progress towards narrowing the UK's productivity gap. As with the DTI's Productivity and Competitiveness Indicators, these would be structured around the 'five drivers' of productivity: investment, innovation, skills, enterprise and competition.[3] Views were invited on the merits of this proposal and on the indicators that could potentially comprise this focussed set.

1.5 The consultation document also invited views on developing a set of productivity indicators at a regional level. Raising productivity in every region will raise overall UK productivity. A set of regional productivity indicators can assist in monitoring progress towards the goal of increasing economic performance in the regions.[4]

1.6 Finally, the consultation document invited views on the methodology used to benchmark the UK's productivity performance.

1.7 Twenty-eight written submissions were received in response to the questions posed in the consultation document. In addition, the DTI and HM Treasury hosted two roundtable discussion events, attended by twenty-eight participants. Views were collected from other interested parties through a number of bilateral meetings. Further detail about the conduct of the consultation is available in Annex A.

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[1] "Demonstrate progress by 2008 on the Government's long-term objective of raising the rate of UK productivity growth over the economic cycle, improving competitiveness and narrowing the productivity gap with our major industrial competitors."

[2] http://www.dti.gov.uk/competitiveness/ and DTI (2003), 'UK Productivity and Competitiveness Indicators 2003'.

[3] The five drivers of productivity provide an organising framework for thinking about the underlying factors driving productivity performance, as set out in HM Treasury (2000), 'Productivity in the UK 1: the evidence and the Government's approach'.

[4] HM Treasury, the DTI and the Office of the Deputy Prime Minister share a PSA target to, "Make sustainable improvements in the economic performance of all English regions by 2008 and over the long term reduce the persistent gap in growth rates between the regions demonstrating progress by 2006".

1.8 This report is structured as follows. Chapter 2 describes how the Government will use the indicators in the future, and how those with an interest in UK productivity performance can access the indicators. Chapter 3 summarises the responses received to the questions posed in each chapter of the consultation document, and outlines the action that the Government will take as a result.[5]

1.9 A summary of the consultation process is presented in Annex A, a list of the questions posed in the consultation document is included in Annex B, and Annex C outlines further useful information for readers of this report.

[5] The summary of responses generally includes points made by more than one respondent. Space does not permit reference to the content of each response in full.

2 How the Government will use the productivity indicators

National productivity indicators

2.1 The Government will monitor changes in the national productivity indicators outlined in Chapter 3 and summarised in Box 1 of this report. They will serve to highlight how the UK is performing relative to its major competitors on key dimensions of each of the five drivers of productivity.

2.2 The new set of national productivity indicators will be used to help monitor progress on productivity performance and provide early warning of where more policy action may be needed. They will provide supplementary information as part of the Public Service Agreement (PSA) monitoring process as set out in the 2004 Spending Review (SR2004) Technical Note underpinning DTI PSA 1/HM Treasury PSA 4. The Government recognises that the smaller set cannot capture all of the dimensions of each driver. However, the relevant PSA targets for each driver (e.g. DTI PSA 2 on science and innovation) have similar monitoring frameworks that provide a much broader assessment.

2.3 This focussed set of national productivity indicators provides one component of a much wider evidence base that the Government uses to understand UK productivity performance. Other analysis – such as sectoral breakdowns and comparisons with a wider range of countries, as well as the extensive academic literature – are also considered by the Government when formulating productivity policy. Both departments will continue to make the evidence base publicly available through the publication of DTI, 'Economics Papers' and HM Treasury's 'Productivity in the UK' series.

2.4 The focussed set of national productivity indicators and the underlying data can be viewed at www.dti.gov.uk/competitiveness from 1st November 2004. The indicators will be updated regularly and will benchmark the UK's performance against the US, France, and Germany.

2.5 The Government will continue to publish periodic assessments of the UK's productivity performance. As with the previous editions of the UK Productivity and Competitiveness Indicators, this analysis will draw primarily on the focussed set of indicators, but will also include other relevant and timely information as supporting evidence.

Regional productivity indicators

2.6 The Government will monitor changes in the regional productivity indicators, outlined in Chapter 3 and summarised in Box 2 of this report, for each of the UK nations and regions. These indicators will be made available at www.rcu.gov.uk/reppsa.

2.7 As with the national set, these indicators form only one part of a wider evidence base on regional economic performance. This regional set will form part of the monitoring framework as set out in the technical note underpinning the regional PSA target, and will be used to judge progress. The Regional Development Agencies (RDAs) will be held accountable under the new 'Tasking the RDAs' arrangements. It is for RDAs and PSA owners to agree metrics and targets under the Tasking framework. Some of the regional indicators identified here will be useful in providing appropriate measures.

Box 1: The Government's new set of UK productivity indicators

Following the consultation on productivity indicators at the national level, the following have been selected to form the new set of productivity indicators to benchmark the UK's performance against the US, France and Germany:

Investment

- Volatility in GDP growth rate
- Volatility in short-term interest rates
- Business investment as a per cent of GDP
- Government investment as a per cent of GDP

Innovation

- Publications and citations of research in academic journals
- Gross Domestic Expenditure on Research and Development as a per cent of GDP
- Business Enterprise Research and Development as a per cent of GDP
- Patents granted in the US Patent and Trademark Office
- Proportion of enterprises with co-operation arrangements on technological innovation activities with other enterprises or institutions
- Proportion of sales accounted for by new or improved products

Skills

- International comparisons of the overall level of qualifications
- Highest qualifications of adults in the UK
- Business executive perceptions of management quality

Enterprise

- Entrepreneurial context
- Cost and time to register a firm
- Total entrepreneurial activity
- Total entrepreneurship activity by gender
- Venture capital investment as a per cent of GDP
- Productivity growth of small and medium sized enterprises

Competition

- Trade in goods and services as a per cent of GDP
- Product market regulation
- Competition regime peer review – a survey of competition experts relating to the effectiveness of the competition regime in different countries

Box 2: The Government's new set of productivity indicators for the regions and nations of the UK

Following the consultation on productivity indicators at the regional level, the following have been selected to form the new set of productivity indicators to benchmark the performance of the regions and nations of the UK:

Productivity

- Gross Value Added (GVA) per worker and per hour

Investment

- Business investment as a per cent of GVA by broad sector for UK and foreign owned companies

Innovation

- Business Enterprise Research and Development as a per cent of GVA
- Gross Domestic Expenditure on Research and Development as a per cent of GVA
- Proportion of enterprises with co-operation arrangements on technological innovation activities with other enterprises or institutions
- Proportion of sales accounted for by new or improved products

Skills

- Highest qualifications of adults
- 16/19 year olds qualified to NVQ Level 2 and 19/21 year olds qualified to NVQ Levels 2 and 3.
- Proportion of employees receiving training in last 4 weeks

Enterprise

- Total entrepreneurial activity
- Business start-ups (VAT registrations) per 10,000 adult population

Competition

- Exports as a per cent of GVA

3 Summary of responses to the consultation

Chapter 1: Benchmarking UK productivity performance

3.1 Understanding relative productivity performance requires an assessment of the size of the 'productivity gap' between the UK and our main competitors. The consultation document considered two approaches to monitor the productivity gap over time:

- the 'current Purchasing Power Parity approach' – the methodology presently used by the Office for National Statistics to calculate the International Comparisons of Productivity; and
- the 'constant Purchasing Power Parity approach' .

There was general agreement among the respondents that the existing methodology was preferable as it was said to be more robust and timely (**Question 1.3 and 1.4**).

3.2 Productivity is conventionally measured in terms of 'output per worker' and 'output per hour worked'. The consultation also proposed measuring 'output per person of working age' as an indicator of how well an economy uses all of its available labour resources. Respondents tended to agree that it was important to consider employment performance alongside productivity (**Question 1.1**). However, there was a mixed reaction to the proposed measure of 'output per person of working age' (**Question 1.2**). In general respondents thought that this measure was helpful in providing contextual information about productivity performance. They cautioned, however, that this is not a measure of productivity. The Government acknowledges this point and will not use 'output per person of working age' as a productivity indicator.

3.3 In conclusion, the Government will continue to use the 'current Purchasing Power Parity approach' as its principal measure of the UK's relative productivity performance. 'Output per working age' and the 'constant Purchasing Power Parity approach' can provide additional contextual information.

Chapter 2: Selecting a focussed set of productivity indicators

3.4 The rationale for a focussed set of indicators was set out in the consultation document. There was a wide range of responses to this proposal. Many agreed that a focussed set would offer a clearer picture of how the UK economy is performing in the key areas, using indicators that are well-know and easy to understand within a coherent framework. However, respondents were concerned that relevant information would not be monitored by government and would therefore not influence policy development. (**Question 2.1**).

3.5 The Government acknowledges this concern. However, as Chapter 2 sets out, the Indicators do not constitute the entirety of the Government's evidence base on productivity. In developing policy, the Government considers all available evidence. Other information will be considered, where relevant, to gain a more detailed picture of the UK's relative productivity performance. Nonetheless, these indicators are being developed for the specific purpose of benchmarking progress under the PSA monitoring framework. Consequently, the Government will establish a focussed set of productivity indicators.

3.6 Views were also invited in this chapter on the value of benchmarking the UK's performance with countries other than those specified in the Government's PSA target on productivity – namely, France, Germany and the US (**Question 2.2**). Many respondents favoured a wider comparison including Japan, Italy, the Netherlands and China, for example. However, because the PSA target is expressed in terms of key industrial competitors (defined as France, Germany and the US), the indicators will use those countries as comparators. As noted above, the Government will continue to look beyond France, Germany and the US to inform its wider evidence base on productivity.

3.7 Respondents also suggested examining de-compositions by sector or region. The Government does not propose to produce such breakdowns. Regional analysis will be captured under the regional indicators, and sectoral issues will be picked up in wider work on productivity.

CHAPTER 3: INVESTMENT

3.8 By increasing the amount of machinery and equipment available to each worker, and by bringing new technology to the production process, investment in physical capital increases productivity levels and growth. The Government identified a number of dimensions to investment - the investment environment for business, investment rates in the economy, and investment in infrastructure. Consultees agreed that these were appropriate elements of investment for the Government to monitor (**Question 3.1**).

3.9 In the consultation document, the Government proposed the following indicators to measure these dimensions:

- Hurdle rates – required rates of return for a business to invest;
- Business investment as per cent of GDP;
- Government investment as per cent of GDP; and
- Perceptions of the quality of infrastructure.

Investment environment for business

3.10 It is widely understood that volatility in the macro-economy tends to lead to lower levels of investment because businesses demand greater expected returns from their spending to compensate for the greater risk. This has the effect of choking-off marginal projects leading to lower investment overall. 'Hurdle rates' are one way of capturing how the macroeconomic environment impacts on investment decisions. Hurdle rates refer to the expected rate of return firms require on their investment for the project to proceed. The consultation document suggested measuring the volatility of the macroeconomic environment as an alternative to hurdle rates.

3.11 Responses to the consultation questioned the reliability of the hurdle rate data and raised concerns over the partial view this indicator may give, as the measure chosen covered only manufacturing (**Question 3.2**). Respondents tended to favour an indicator that referred more directly to macroeconomic conditions. The Government will take forward this recommendation. The Government will not use hurdle rates and instead will monitor volatility in GDP growth and short-term interest rates as part of its new set of indicators.

Investment rates in the economy

3.12 Business investment directly impacts on the amount of capital and technology available to each worker, and is strongly correlated with productivity growth. It is therefore a highly relevant indicator. Government investment is also a significant contributor to the economy's capital stock, especially through infrastructure. Public investment in health, education and housing also impact directly and indirectly.

3.13 The consultation proposed using both business investment as a share of GDP, and government investment as a share of GDP (both in current prices), in the focussed set of indicators (**Question 3.3**). There was wide support for these indicators; the Government will include both measures in the new set.

3.14 Some respondents noted the value of a sectoral breakdown of investment (**Question 3.4**). The Government acknowledges the relevance of sectoral approaches, and will continue to consider sectoral data as part of the wider work on productivity. However, following the explanation set out above, the Government will not use sectoral decompositions in the new set of indicators.

Infrastructure quality

3.15 Government investment can directly influence productivity through improvements to infrastructure. Good transport infrastructure, such as effective roads, railways and airports, can improve productivity by lowering transport costs, and by permitting greater specialisation and economies of scale. It also allows workers to travel more easily, increasing labour market flexibility and facilitating easier access to a range of employment opportunities.

3.16 The World Economic Forum's (WEF) survey measure of 'infrastructure quality' was proposed in the consultation document, and the Department for Transport's measure of transport investment was suggested as an alternative (**Questions 3.5 and 3.6**). Many responses noted a preference for the outcome measure of infrastructure quality rather than an input measure, such as investment spending, in recognition of the possibility to invest too much, or in ways that are poor value for money. However, concerns were raised over the reliability of a survey based measure and, specifically, the ambiguous nature of the underpinning survey question.

3.17 A more useful infrastructure indicator would be the level of congestion on the road network. Following Spending Review 2004, the Department of Transport is developing better measures of urban and inter-urban congestion. Once these measures have been finalised the Government will look to include them in the set of indicators.

CHAPTER 4: INNOVATION

3.18 Productivity growth relies on a continual stream of innovative technologies, new products and processes, as well as novel services and means of delivery. The consultation document proposed using the following indicators to monitor the innovation driver as part of this exercise:

- Publications and citations of research in academic journals;
- Business Enterprise Research and Development as a per cent of R&D;
- Triadic Patents – patents granted in the US, and patents applied for in the EU and Japan;
- Proportion of enterprises with co-operation arrangements on technological innovation activities with other enterprises or institutions; and
- Proportion of sales accounted for by new or improved products.

3.19 Respondents to the consultation broadly accepted that the Government had identified the right elements of the UK innovation system and that the indicators were reasonable proxies (**Question 4.1**). The Government recognises that a focussed set will not be able to capture the full extent of the UK innovation system and, as a result, the Government will continue to monitor a broader set of indicators as part of its framework for monitoring progress towards its PSA target for science and innovation (DTI PSA target 2).[1]

Sources of new technological knowledge

Publications and citations

3.20 The number of publications and citations of research in academic journals was proposed as an indicator of the effectiveness of a country's science and engineering base. An effective science and engineering base generates new technological information and ideas, upon which potential innovators can draw. It also provides the trained scientists and engineers that can adopt and adapt scientific breakthroughs generated in other countries.

3.21 Whilst it is important to understand a country's capacity to generate new knowledge, respondents agreed that this indicator requires careful interpretation for the reasons outlined in the consultation document. In particular, the Government agrees that the number of citations is likely to be biased upwards for the UK, because English is usually the language of scientific discourse. However, it was clear that this was the best summary measure of the UK science base, so the Government will continue to monitor this indicator to help understand the UK's performance at generating new knowledge.

Research and development

3.22 Respondents to the consultation supported the inclusion of at least one indicator of research and development (R&D) activity, and there was a significant level of demand to include both Gross Domestic Expenditure on R&D and Business Expenditure on R&D (**Question 4.2**).

[1] The DTI has a Public Service Agreement target to, "Improve the relative performance of the UK's science and engineering base, the exploitation of the science base, and the overall performance of the UK economy".

3.23 Hence the Government intends to monitor Gross Domestic Expenditure on R&D and, within that, the level of Business Expenditure on R&D. Respondents noted the value of breaking down R&D spending by industrial structure. However, as noted above, whilst the Government will consider sectoral aspects of productivity as part of the wider evidence base, it will not include sectoral decomposition as part of the new set of indicators.

Patents

3.24 There was also support amongst respondents to include an indicator of patent activity. The consultation document invited views on whether the benefits of the more *comprehensive* triadic patents data outweigh the benefits of the more *timely* data available from national patent offices (**Question 4.4**).

3.25 The majority of respondents preferred the more timely data collected at national patent data offices. The most common suggestion was to analyse data supplied by the US Patent & Trademark Office (USPTO), which refers to patents granted by the USPTO. This is likely to overstate the patenting performance of the US due to the 'home country bias', but allows a fair comparison of the patenting performance of EU countries.

3.26 The Government accepts this recommendation and will use USPTO data in the focussed set of indicators; triadic patent data can provide supporting retrospective evidence.

Networks and collaboration, and innovation outcomes

3.27 The consultation document proposed including two further indicators of innovation, both based on information drawn from the Community Innovation Survey (CIS). The first is the *proportion of enterprises with co-operation arrangements with other enterprises or institutions*, which proxies the strength of networks and collaboration agreements. The second is the *proportion of firms' sales from new and improved products*, which is designed to capture the extent to which firms are developing new commercially successful products, processes or services.

3.28 Respondents to the consultation supported the inclusion of indicators that attempt to capture each of these aspects of the innovation system. Since information from the CIS is not timely, and does not cover the US, the consultation document invited ideas on alternative sources of information in these areas (**Questions 4.6 and 4.8**). A limited number of suggestions were received.

3.29 The louder call from respondents was to increase the frequency and timeliness of the CIS (**Question 4.11**). The UK Government welcomes the recent announcement that the CIS will be conducted on a two-yearly basis. This improves its attractiveness as a data source for this exercise. The CIS is judged to be the best source for indicators of 'networks and collaboration' and 'innovation outcomes' available at present.

3.30 The Government will therefore monitor the proportion of innovators with co-operation arrangements on technological innovation activities, and the proportion of sales from new or improved products in the set of innovation indicators.

CHAPTER 5: SKILLS

3.31 Skills play a key role in supporting productivity growth. Higher skill levels allow workers to generate new ideas, adapt to the changing economic environment and facilitate the implementation of new technology.

3.32 In the consultation document, the Government proposed the following indicators to monitor the skills driver:

- International comparisons of the overall level of qualifications;
- Highest qualifications of adults in the UK; and
- Business executive perceptions of management quality.

3.33 The first two of these indicators are designed to capture the stock of skills in an economy, whilst the third indicator reveals information about the quality of management, which is a vital driver of organisational performance and productivity.

3.34 The consultation document also identified that, ideally, this set of skills indicators would also capture the extent to which firms and individuals engage in valuable lifelong learning or training. To be productive in the knowledge driven economy, firms and workers need to invest in training employees throughout their working lives.

3.35 Respondents to the consultation agreed that the set of skills indicators should include measures of the stock of skills in each country, indicators of management quality and of lifelong learning and training (**Question 5.1**).

3.36 Respondents also highlighted that it is important to consider the demand for skills as well as the supply of skills in the economy. The Government recognises this point which is discussed below.

Stock of skills

3.37 There was general support for the proposal to include comparisons produced by the Organisation for Economic Co-operation and Development (OECD) of the overall level of qualifications in the UK, the US and Germany, and to supplement this with UK data showing the proportion of adults in the UK qualified below Level 2, at Level 2, at Level 3, and above Level 3. The UK data provides richer information about the qualifications held by adults in the UK than the OECD data, but it is not internationally comparable. The OECD data is based on an internationally agreed framework of classifying national qualifications (the international standard of classification of education - ISCED) and so it can be used to benchmark the stock of skills in the UK with that in other countries. The Government will therefore monitor both of these indicators in the new set of indicators.

3.38 The consultation yielded a series of specific suggestions. Many respondents argued for monitoring particular types of skill – such as basic skills or graduates. These will be picked up in the proposed indicator outlined above. Others suggested considering vocational skills or apprenticeships. The Government acknowledges the importance of this type of skill, but data limitations mean that it is not possible to provide meaningful international comparisons. It was also noted by many that outcome indicators were preferable to input measures such as qualifications. However, the absence of outcome measures means that this exercise necessarily has to rely on input measures. Nevertheless, the Government is aware of the problem, and will continue to work to develop more outcome-focussed indicators of the human capital stock.

Lifelong learning

3.39 The consultation document presented three potential sources of data on which to base indicators of lifelong learning or training: the European Labour Force Survey; the OECD International Adult Literacy Survey; and the Continuing Vocational Training Survey.

3.40 Many respondents agreed that a measure of lifelong learning was crucial to understanding the formation of human capital in the economy. However, there was no agreement as to the preferred measure. Moreover, respondents were clear that a lifelong learning indicator needed to be timely, comparable and a good proxy for the underlying concept. As a result, none of the indicators discussed came up to standard. The IALS and the CVT were both too old and insufficiently frequent, while the ELFS was not judged to provide sufficiently comparable data for the purpose of this exercise. (**Question 5.2**).

3.41 Consequently, although the Government acknowledges the importance of the concept, it will not propose a measure of lifelong learning because none of the current options provide adequate indicators. The Department for Education and Skills (DfES), however, will continue to work with colleagues in the OECD and in other international fora to generate a superior measure that can be included in the new set of indicators.

Quality of management

3.42 Effective management drives organisational performance and helps to ensure that workers use their skills productively in the workplace. Respondents supported the inclusion of an indicator of management and there was a generally positive reaction to the proposal to monitor the results of the International Institute for Management Development's (IMD) survey. This was largely on the grounds that since the IMD surveys experienced business executives, they are likely to be in a strong position to offer informed and credible opinions on the quality of management in their country. The proportion of the workforce with an MBA was suggested as an alternative indicator, but it was judged that overall, a measure of the perception of management outcomes was preferable to an input indicator (**Question 5.4**). The Government will therefore include the IMD measure in the new set of productivity indicators.

Demand for skills

3.43 As noted above, some respondents advised inclusion of an indicator that provides information about the demand side of the labour market, such as a measure of the gap between the demand and supply of skills in the economy (**Question 5.1**). The Government acknowledges that this is important, and the recent White Paper, '21st Century Skills: Realising Our Potential', sets out a strategy to improve the demand for skills in the UK economy. There are, however, conceptual and data limitations associated with translating this concept into a single unambiguous indicator. Conceptually, indicators of 'the demand side' are usually expressed as imbalances between demand *and* supply, such as vacancies or skills gaps. The problem with such measures is that they could be signalling problems in supply, not only increases in demand. As such, it is not possible to draw clear inferences from the data. Furthermore, in terms of the data, the most promising source – the Employers Skills Survey data on skills shortage vacancies – tends to reflect short term, transient and frictional features of the labour market rather than long term, structural imbalances. Consequently, the Government will not use an indicator of demand for skills or of overall skills shortages.

CHAPTER 6: ENTERPRISE

3.44 The consultation document noted four dimensions of enterprise that affect productivity growth: the presence of a positive entrepreneurial culture; ease of starting-up and overcoming the barriers to enterprise; a sustainable stock of enterprise activity in an economy; and the ability of firms to grow.

3.45 Responses to the consultation suggested that it would be more helpful to distinguish between barriers to *starting* a firm and barriers to *growing* a firm (**Question 6.1**). The Government accepts this recommendation, and it will now consider the enterprise process in the following five stages: the presence of a positive entrepreneurial culture; ease of overcoming the barriers to starting-up; new entrepreneurial activity in the economy; ease of overcoming barriers to growth; and ability of firms to increase productivity growth.

3.46 The consultation document used the OECD definition of enterprise; defining it as "… the seizing of new business opportunities", and entrepreneurs "… are those individuals or groups who seek out and successfully exploit those opportunities". Most respondents were content with this definition, but some identified a distinction between enterprise that is based on start-up activity, and enterprise arising from existing firms. The Government acknowledges that enterprise is not purely about start-up activity.

3.47 In the consultation document, the Government proposed the following indicators to measure the enterprise driver:

- Fear of failure;
- Venture capital investment as a per cent of GDP;
- Cost and time to register a firm;
- Total entrepreneurial activity; and
- Difference between the productivity growth of small and medium sized enterprises and of all firms.

A positive entrepreneurial culture

3.48 If society is not supportive of entrepreneurs and their activities, fewer people will be prepared to take business risks. Cultural attitudes towards failure are also important as entrepreneurs can learn valuable lessons from their mistakes that allow them to subsequently establish successful businesses. Hence, a measure of the 'fear of failure' was proposed in the consultation document (**Question 6.2**).

3.49 There was a mixed response to the specific measure proposed. Some argued that, since a positive enterprising culture is being sought, it would be more appropriate for the indicator to be a *positive* measure of attitude, the status attached to undertaking enterprise, for example. Other comments referred to the amorphous nature of a concept such as entrepreneurial culture.

3.50 The Global Entrepreneurship Monitor (GEM), the Eurobarometer and the Small Business Service (SBS) Household Survey each gather survey-based data to monitor the attitudinal drivers of the UK's entrepreneurial culture. Based on this evidence the key drivers are the:

- **desire to make money and to be their own boss**: the SBS Household survey 2003 found that the motivations for those running their own businesses were as follows: 90 per cent wanted the freedom to adopt their own approach; 75 per cent wanted to be their own boss; 74 per cent wanted to challenge themselves and 71 per cent wanted to earn more money;
- **the fear of debt and bankruptcy**; was a considerable attitudinal barrier to entrepreneurship;
- **status of entrepreneurs in society:** 71 per cent of GEM respondents believe entrepreneurs have a high status and 86 per cent of Household Survey respondents admire entrepreneurs;
- **ability to start up**: 54 per cent of GEM respondents believe they have the skills to start up; and in addition
- **awareness of opportunities:** only 39 per cent of GEM respondents perceived the opportunity to start up.

3.51 GEM 2003 analysed the relationship between such factors and their principal measure of entrepreneurship,[2] to develop a measure of 'entrepreneurial context'. This measure is based on whether an individual:

- knows an entrepreneur;
- sees good business opportunities; and
- perceives that they have the skills to start and manage a new business.

This measure captures the broader range of information necessary to properly capture the entrepreneurial culture. Consequently, the 'entrepreneurial context' indicator will replace 'fear of failure' in the focussed set of indicators.

[2] GEM have developed the Total Entrepreneurial Activity (TEA) index. This is described in paragraphs 3.54 of this document and in Chapter 6 of the consultation document.

Barriers to starting a business

3.52 The OECD highlights the relatively low costs of start-up and regulation in the US, and notes that, consequently, entrepreneurs are more likely to test the market and, if successful, expand rapidly. The OECD also recommends that to boost productivity and medium term growth, regulation for firm entry should be eased. The consultation document thus proposed the World Bank's measure of the cost and time to register a firm.

3.53 The indicator cost and time to register a firm was widely supported (**Question 6.3**). Some argued that the measure should be refined to remove the cost and time of incorporation since not all new and small firms needed to register. Although this is a widely accepted measure of the cost and time to *start* a firm, it is not, at present, feasible to compute such a measure on an internationally comparable basis from existing data. The Government will therefore monitor cost and time to *register* a firm on the World Bank measure in its new set of indicators.

Entrepreneurial activity in the economy

3.54 The consultation proposed using GEM's Total Entrepreneurial Activity (TEA) index for capturing entrepreneurial activity. The TEA index measures those active in the *start-up* phase of a business or in *managing a business up to 42 months old*. A commonly used alternative is VAT registrations (**Question 6.4**).

3.55 Responses concurred with, and added to, the discussion of the relative merits of the TEA index and VAT registrations as indicators of entrepreneurial activity. In summary:

- the TEA index is a broader measure of activity, it is comparable both internationally and over time, but subject to survey-based limitations;
- VAT is from a reliable data source but does not capture activity of small firms and is not internationally comparable.

In light of this discussion, the Government favours the use of the TEA measure in the focussed set of indicators.

3.56 Eurostat data on firm demographics has recently become available but, at present, no data exists for US, France or Germany. However, when the full data becomes available the Government will reappraise the most suitable indicator of entrepreneurial activity.

3.57 The research literature suggests that 'churn' – firms entering and exiting the market – is important for productivity. The consultation did not propose including such a measure because of the absence of suitable data (**Question 6.5**). Few respondents disagreed with this assessment and therefore the Government will not include a 'churn' indicator in the new set of productivity indicators.

3.58 Consultees also noted the importance of gender differences in entrepreneurship: societal attitudes may influence the relative ease and attractiveness of enterprise as an option. The Government recognises this point and will therefore monitor the gender breakdown of the GEM's Total Entrepreneurship Activity (TEA) measure.

Barriers to growth

3.59 In countries with well-developed capital markets, such as the UK, the majority of businesses have few problems in accessing finance to operate their business. Nevertheless, market imperfections mean that a minority face difficulties in raising the finance they need to support the early stages of growth. In particular, equity-based finance is often most appropriate for innovative, high growth firms, and measures of venture capital provide the best proxy for measuring the availability of this type of finance (**Question 6.3**).

3.60 A number of responses pointed out that venture capital accounts for only a small proportion of business financing, and is highly cyclical. It was suggested that a measure of venture capital should include 'informal capital' – capital provided by family and friends. By its very nature, informal financing is not accurately and consistently recorded. Furthermore, formal venture capital is targeted at those very firms that have real potential for rapid productivity and employment growth. Consequently, the Government will continue to monitor venture capital as a share of GDP in the new set of indicators.

Ability of firms to increase productivity growth

3.61 There was widespread support for a measure of firm growth, however many found the indicator proposed in the consultation document difficult to interpret (**Question 6.6**). The Government accepts this, and will therefore replace the measure of SME productivity growth relative to all firms, with a simple measure of SME productivity growth. The Government recognises that this indicator does not capture the extent of fast growing firms in the economy, and will continue to work to develop suitable proxies.

CHAPTER 7: COMPETITION

3.62 Vigorous competition enhances productivity by encouraging firms to strive for efficiency gains. Competition may also spur firms to innovate, although the relationship between competition and innovation is multi-faceted in practice. The consultation document proposed using the following indicators to monitor the competition driver:

- Trade in goods and services as a per cent of GDP;
- Product market regulation; and
- Competition regime peer review – a survey of competition experts relating to the effectiveness of the competition regime in different countries.

3.63 Respondents to the consultation agreed that the broad areas which these indicators attempt to measure - openness to international trade and investment, regulation and the competition regime respectively – are each important dimensions of the competition driver (**Question 7.1**).

Openness

3.64 The consultation document proposed including a measure of the openness of an economy to international trade, since international trade can increase competitive pressure, and encourage firms to seek efficiency and productivity gains. It was proposed to monitor the level of imports and exports in goods and services as a per cent of GDP (**Question 7.2**).

3.65 The consultation document suggested that a measure of the barriers to international trade might be a more accurate measure of openness than the observed levels of trade, and a number of respondents agreed. However, regularly produced, whole economy estimates of tariff and non-tariff barriers to trade in goods and services are not readily available.

3.66 For the purposes of this exercise, the Government will continue to monitor the level of imports and exports in goods and services as a per cent of GDP as an indication of the openness of an economy to international trade. The Government recognises that factors such as country size can affect the extent to which a country engages in international trade, and will continue to interpret this measure with care.

Regulation

3.67 The consultation document proposed using the OECD's composite indicator of product market regulation to help monitor the efficiency of the regulatory system. This was included because it was judged to be more reliable than the results of surveys of individuals' perceptions of regulations.

3.68 A number of responses to the consultation considered it more appropriate to focus on the quality of regulation, rather than on the level. High quality regulation is proportionate, targeted, consistent, accountable and transparent. The European Commission is currently undertaking work relating to indicators of regulatory quality. At this time, however, the work is not sufficiently developed to provide indicators for the purposes of this exercise. Furthermore, it is the Government's view that both the quantity and quality of regulation are important.

3.69 In the absence of a suitable indicator relating to regulatory quality, the OECD's composite indicator of product market regulation will be included in the focussed set of productivity indicators. Although the current measure is not timely, the indicator is included on the basis that the OECD is currently updating the indicator and that it will be regularly produced. The Government will also take a close interest in the European Commission's final report on indicators of regulatory quality.

Competition Regime

3.70 A strong and effective competition framework provides the conditions under which efficient, productive firms can flourish. The consultation document proposed using independently commissioned surveys of competition experts to indicate the effectiveness of the UK competition regime relative to its counterparts in other countries.

3.71 Such surveys, or 'peer reviews', come from two main sources – the Global Competition Review (GCR) and an international peer review of competition regimes commissioned by the DTI. The consultation document invited views about the strengths and weaknesses of both sources (**Question 7.5**).

3.72 Competition experts, who participated in the consultation, generally felt that both of the peer reviews yielded valuable and interesting information about the effectiveness of a competition regime. Some reservations were expressed, however, about the degree to which the results of each survey are comparable over time.

3.73 The Government will therefore continue to monitor both peer reviews when assessing the effectiveness of the UK competition regime. The results of the DTI-commissioned peer reviews will be included in the new set of productivity indicators, and the DTI will ensure that these are suitable for tracking changes over time. The findings of GCR's peer review of competition regimes will provide useful supplementary information.

Measuring the competitive intensity of markets

3.74 Ideally, a set of indicators that aims to provide information about the relative strength of UK competition would include a direct measure of the extent to which firms are competing vigorously in the UK. However, experts agree that competition does not occur within national boundaries; rather it is a dynamic process that takes place within economic markets. For this reason, the consultation document did not focus on potential indicators of the competitive intensity of the UK economy. The vast majority of respondents agreed that measures of structure and performance do not provide suitable indicators of the competitive intensity of national economies (**Question 7.7**).

3.75 Although this prevents the inclusion of an internationally comparable measure of the competitive intensity of the UK economy in this set of indicators, the Government remains keen to develop the best possible set of tools to better its understanding of the competitive intensity of UK markets. Views were invited on evidence and innovative approaches that could be used to help assess the strength of competition at the level of the economic market (**Question 7.9**).

3.76 As part of the consultation process, a roundtable discussion on competition identified a range of possible approaches which could be used to better understand the operation of competition in UK markets and might tell us more about competition in the economy more generally. Respondents were clear that the analysis of competition is best undertaken at the level of the market and that market level analysis might add to our understanding of the impact of reform in the UK. In forthcoming work to examine the effectiveness of the competition regime the Government will be examining a range of factors at the level of the market, including data on prices and survey evidence, to better understand the effects of policies to promote competitive markets.

CHAPTER 8: REGIONAL LEVEL PRODUCTIVITY INDICATORS

3.77 The Government cannot meet its national productivity PSA target, or its central long-term economic objective to raise the rate of sustainable growth, unless every nation and region of the UK performs to its potential. That is why a strong regional policy is at the heart of the productivity and growth agenda, and why the Government intends to adopt a short set of productivity indicators at regional as well as at national level.

3.78 The assumption in the consultation document was that the national productivity indicators, and the aspects of each driver on which they are based, provide the starting point for a set of regional indicators.

3.79 The majority of responses to the consultation supported the concept of developing productivity indicators based around the five driver framework at regional as well as at national level (**Question 8.1**). Respondents also commented on the list of indicators proposed suggesting additional indicators that may be relevant at the regional level (**Questions 8.2 and 8.3**) and the conclusions are set out below. There was consensus that Scotland, Wales and Northern Ireland should also be included in this set of regional productivity indicators (**Question 8.4**).

3.80 There was wide agreement that an overall productivity measure at the regional level should be included. The Government agrees and consequently these indicators will be presented alongside the headline measures of productivity for each region, namely Gross Value Added or output per worker and per hour. At present these are measured at current prices, however a real prices series is under-development following the implementation of the recommendations in the Allsopp review.[3]

3.81 There was strong support for analysis by sector. The Government accepts that analysis by sector may be more useful at a regional rather than a national level. Sectoral analysis can be helpful in understanding regional productivity performance and the Government will use this in interpreting results where data are available.

Investment

3.82 The consultation document proposed the following indicators to measure the investment driver at regional level:

- Business investment;
- Government investment; and
- Overall infrastructure quality.

3.83 The importance of business and government investment was recognised in the consultation document. There was support for including both measures in a set of indicators. However Government Gross Fixed Capital Formation is only available for 1998 based on experimental data and there are currently no plans to update it. The Government will therefore include an indicator of business investment but will not adopt a measure of government investment.

3.84 A number of respondents suggested using a measure of Foreign Direct Investment but this indicator is not available at regional level. An alternative measure is business investment by UK owned and foreign owned companies for manufacturing, services, and other sectors combined, taken from the Annual Business Inquiry. The Government will include this indicator in its set of regional indicators.

3.85 The quality of a country's infrastructure will impact on productivity growth, but as with national indicators, there is no relevant and reliable measure currently available. Following the Spending Review 2004 settlement, the Department of Transport is developing better measures of urban and inter-urban congestion. Once these measures have been finalised the Government will consider whether to include them in the new set of indicators.

[3] http://www.hm-treasury.gov.uk/consultations_and_legislation/allsopp_review/consult_allsopp_index.cfm

Innovation

3.86 The consultation document proposed the following indicators to measure the innovation driver at regional level:

- Business Enterprise Research and Development;
- Networks and collaboration indicator; and
- Innovation outcomes indicator.

3.87 There was general support during the consultation for including Business Enterprise R&D in the regional productivity set. There was also strong support for including Gross Domestic Expenditure on R&D. However, respondents suggested that the interpretation of these measures could be informed by the performance of individual sectors as well as the sectoral distribution across regions. The Government accepts these recommendations, and will monitor trends in Gross Domestic Expenditure on R&D and Business Enterprise R&D as a per cent of GVA at the regional level, taking into consideration the sectoral dimension.

3.88 The indicators proposed in the consultation document on networks and collaboration and innovation outcomes were drawn from the Community Innovation Survey (CIS). Some respondents questioned the reliability of the CIS data when disaggregated to the level of the region. It was also recognised that CIS is not timely. However data in the future is likely to be available on a two-yearly basis and this improves its attractiveness as a data source for this exercise. The CIS is judged the best source for indicators of networks and collaboration and innovation outcomes available at present.

3.89 Respondents also suggested measures of strength of the science base, for example the number of 5 and 5* Higher Education Institutions (HEIs), and of knowledge transfer from HEIs, for example the number of spinouts. While the Government wishes to see RDAs take an enhanced role in promoting knowledge transfer, the diversity of activity in this area makes it difficult to identify simple measures at a regional level

Skills

3.90 The consultation document proposed the following indicators to measure the skills driver at a regional level:

- Overall level of qualifications;
- 16/21 and 19/21 year olds educated to NVQ level 2/3; and
- Employees receiving training in last 13 weeks. [4]

[4] This appeared in the consultation document as *3 weeks* owing to a typographical error.

3.91 Respondents broadly welcomed the inclusion of the overall levels of skills (highest qualification of adults) and the flow of young adults into level 2 and level 3 qualifications. It was suggested that these indicators could be supplemented by measuring flows of graduates into the workforce. Whilst the first destination of graduates is available, the pattern of migration of graduates between regions is not known. The Government will therefore include the following indicators: highest qualification of adults; and the share of 16 to 19 year olds with level 2 and the share of 19 to 21 year olds with levels 2 and 3.

3.92 There was no clear consensus on the better measure of training: employees receiving training in the last 13 weeks and employees receiving training over the past 4 weeks. The 4 week figure is a widely used and reliable measure of training; the Government will therefore adopt this as an indicator in the regional set.

3.93 There was consensus among respondents that the quality of management was an important aspect of the skills driver. However, the regional equivalent of the national indicator (business executive perceptions of management quality) is unavailable. The alternatives, the proportion of managers with degrees and the number of workers engaged in off the job training, are unlikely to capture management quality sufficiently well. The Government will therefore not be including a management indicator in the set of regional indicators.

Enterprise

3.94 The consultation document proposed the following indicators to measure the enterprise driver at regional level:

- Business angels;
- Total Entrepreneurship Activity;
- Start-ups per 10,000 population; and
- Business survival rates.

3.95 Respondents noted that an indicator of Business Angels was a narrower measure than the venture capital measure used for the national indicators. It may be possible to create a more representative measure of the availability of venture capital from the GEM 2004 survey or other sources. However, based on present data, the Government will not monitor Business Angels.

3.96 The consultation document proposed monitoring GEM's Total Entrepreneurial Activity (TEA) Index and VAT registrations to capture the degree of entrepreneurial activity at regional level. A small number of respondents suggested that VAT registration data alone would be an adequate measure. The Government believes that very small businesses, which are captured by the TEA but not by the VAT data, are an important cohort of entrepreneurial activity. The Government will therefore retain both of these measures in the set of indicators.

3.97 Though there was some support for the measure of business survival rates it was noted that the impact on productivity is ambiguous: the measure does not distinguish between those firms which have been forced to close (possibly because of low productivity) and those which have been taken over (possibly because of high productivity). The Government will not include this measure in the set of regional indicators.

3.98 A number of respondents suggested that new firm productivity growth should be monitored at the regional level. The Government agrees and it will explore whether an indicator of SME productivity growth can be developed at regional level similar to the indicator proposed at national level. A measure of productivity of small sites within a region from the Annual Business Inquiry may be possible.

Competition

3.99 The consultation document noted that the regulatory and competition regime do not vary regionally, and hence proposed that the regional indicators did not include the competition driver. A number of respondents suggested that competitive forces might vary regionally. One of the factors that would influence the degree of competition is the degree of openness of the regional economy. An indicator that attempts to capture this would, ideally, cover both exports and imports to a region. There are various issues about allocating UK trade to regions, for example the 'headquarter distortion' effect.[5] Export data by region mitigates against this, as information is sought from multi-site exporters on the distribution of their exports across UK regions. The Government will therefore include the level of exports by region, as a per cent of regional GVA.

SUMMARY

3.100 Box 1 and Box 2 above summarise the indicators that have been selected to form the new set of productivity indicators at the national level and the set of regional level indicators.

[5] The headquarter distortion effect refers to the situation where an activity, in this case importing, is scored against the region where is reported – often where the headquarters offices are located – which is not necessarily where the activity takes place.

A SUMMARY OF THE CONSULTATION PROCESS

A.1 Twenty-eight written submissions were received in response to the consultation, and twenty-eight people attended the two round-table events. Respondents included academics, stakeholders and representatives from economic consultancy practises, local and national Government departments and international organisations.

A.2 The first of the round-table events brought together fifteen external parties in two discussion sessions: one focusing on national indicators of productivity and the other on regional indicators of productivity. Ken Warwick, Deputy Chief Economic Adviser at the Department of Trade and Industry, chaired the event.

A.3 The second of the round-table events focussed on indicators of the competition driver, and was chaired by Paul Geroski, Chairman of the Competition Commission. Thirteen external competition experts from business, government and academia attended the event.

A.4 Other interested parties provided input to the consultation through bilateral meetings.

A.5 The list below shows the names of the people and organisations that participated in the consultation. The DTI and HM Treasury would like to thank them all for their valuable input.

Acquisition Brokerage Ltd
Andrew Glyn
Ashurst Morris Crisp
Association of Regional Observatories
BIFFA Waste Services
Cambridge Econometrics
Centre for Economic Performance
Charles River Associates
Dr. Christine Greenhalgh
Competition Commission
Confederation of British Industry
Department for Education and Skills
Department for Environment Food and Rural Affairs
Department for Transport
Department of Enterprise, Trade and Investment, Northern Ireland
Dr. Mark Rogers
DTZ Pieda Consulting
Engineering Employers Federation
Equal Opportunities Commission
Eurostat
Experian
Friends of the Earth Trust
GLA Economics

Global Entrepreneurship Monitor
Institute for Fiscal Studies
Intellect
Julian Frankish
London Economics
NERA Economic Consulting
North East Regional Information Partnership
Northwest Devoplement Agency
Office of Fair Trading
Organisation for Economic Co-operation and Development
OXERA Consulting
Oxford Intellectual Property Research Centre
PricewaterhouseCoopers
Prof James Foreman-Peck
Prof Michael Waterson
Profit Impact of Market Strategy Associates
RBB Economics
Regional Development Agency Performance Management Group
Scottish Executive and Scottish Enterprise
Sector Skills Development Agency
Skills for Business
South West of England Regional Development Agency
Trade Union Congress
University of East Anglia
University of Sheffield

B LIST OF QUESTIONS IN CONSULTATION DOCUMENT

Chapter 1: Benchmarking UK productivity performance

Question 1.1: In your view, is it useful to consider relative employment performance when benchmarking productivity performance for monitoring purposes?

Question 1.2: Is 'output per person of working age' a useful indicator to monitor to assess overall UK performance on employment and productivity?

Question 1.3: What are your views of the relative advantages and disadvantages of:

- the 'current Purchasing Power Parity' approach
- the 'constant Purchasing Power Parity' approach?

Question 1.4: What, in your view, is the best way to monitor the UK's productivity performance in relation to its main competitors?

Chapter 2: Selecting a more focussed set of productivity indicators

Question 2.1: Do you agree that a focussed set of national productivity indicators is desirable to assist the Government with monitoring progress towards the productivity Public Service Agreement target?

Question 2.2: The indicators in this document, where possible, benchmark the UK's performance with that in the US, France and Germany, because these are the countries specified in the productivity Public Service Agreement target. Do you believe there is additional benefit in benchmarking UK's performance with other countries'? If so, which countries are most relevant?

Chapter 3: Investment

Question 3.1: Do you agree that a focussed set of investment indicators should cover the following areas: investment environment for business, investment rates in the economy, and investment in infrastructure? Are there any other areas that should be captured?

Question 3.2: Do you agree that hurdle rates (the rate of return required for an investment project to proceed) are the best available indicator of the investment environment? If not, what alternatives would you suggest?

Question 3.3: Do you agree that indicators of business and government investment are sufficient as indicators of investment rates in the economy?

Question 3.4: In a focussed set of indicators do you believe that it would be worthwhile to break down aggregate investment measures by sector?

Question 3.5: Do you believe that the Global Competitiveness Report's survey-based measure of infrastructure quality is sufficiently reliable to indicate infrastructure quality?

Question 3.6: Do you believe that the Department for Transport's measure of transport spending is a better of measure of infrastructure quality than the Global Competitiveness Report's survey-based measure?

Chapter 4: Innovation

Question 4.1: Do you agree that a focussed set of innovation indicators should cover the following areas: sources of new technological knowledge, networks and collaboration and innovation outcomes (such as new products, processes and services)? Are there any other areas that should be covered?

Question 4.2: Do you believe that this set of innovation indicators should include:

- Business Enterprise R&D;
- Gross Domestic Expenditure on R&D;
- Business Enterprise R&D and Gross Domestic Expenditure on R&D;
- another R&D measure - please specify; or
- no R&D measure?

Question 4.3: In a focussed set of indicators do you believe that it would be worthwhile to break down aggregate R&D measures by (a) source of finance and/or (b) by sector?

Question 4.4: Do you believe that the benefits of the more comprehensive triadic patent data (patents granted in the US, and patents applied for in the EU and Japan) outweigh the benefits of having more timely data available from national patent offices?

Question 4.5:

1. Patents data, especially triadic patent data, is not timely. Do you believe that this undermine its usefulness for the purposes of this exercise?
2. Are there any other measures that could provide similar information as patent data but on a more timely basis?

Question 4.6: What other sources of information besides the Community Innovation Survey and data relating to joint authorship of articles by universities and businesses could be used to develop indicators of the strength of network relationships?

Question 4.7: In your view, which of the following serves as a better indicator of the extent to which firms are developing new commercially successful products, processes or services:

- The proportion of sales in businesses accounted for by new or improved products (goods and services); or
- The proportion of enterprises that have brought new products or services to market, or have developed new process technologies?

Question 4.8: What other sources of information besides the Community Innovation Survey could be used to develop indicators of innovation outcomes?

Question 4.9: Is the Community Innovation Survey sufficiently timely to be exploited as a data source for constructing indicators of innovation for the purposes of this exercise?

Question 4.10: To what extent does the fact that the Community Innovation Survey does not cover the US undermine its usefulness as a data source for constructing indicators of innovation for the purposes of this exercise?

Question 4.11: Should the Community Innovation Survey or other surveys be adapted, or made more regular, to provide information for the purposes of this exercise?

Chapter 5: Skills

Question 5.1: Do you agree that a focussed set of skills indicators should cover the following areas: the stock of skills, the flow of skills, and management skills? Are there any other areas that should be covered?

Question 5.2: Do you agree that the measures based on the European Labour Force Survey, the Adult Literacy Survey or the Continuing Vocational Training Survey are not currently sufficiently timely or precise to monitor lifelong learning as part of this exercise?

Question 5.3: Are there any other useful approaches or sources that could be used to develop a reliable, timely and internationally comparable indicator of lifelong learning?

Question 5.4: Do you believe that the International Institute for Management Development's survey of business executive perceptions of management quality adequately captures management performance?

Question 5.5: Are you aware of any other existing indicators of management skills?

Chapter 6: Enterprise

Question 6.1: Do you agree that a focussed set of enterprise indicators should cover the following areas: enterprise culture, barriers to enterprise, entrepreneurial activity and firm growth? Are there any other areas that should be covered?

Question 6.2: Do you agree that 'fear of failure' is the best available indicator of enterprise culture? If not, which other measure(s) would you suggest?

Question 6.3: Do you agree that the 'cost and time to register a firm' and 'venture capital' are the best available indicators of the key barriers to enterprise? If not, which measure(s) would you suggest?

Question 6.4: Do you agree that the Total Entrepreneurial Activity Index is a better measure of entrepreneurial activity than VAT registrations?

Question 6.5: Do you agree that an indicator of firm closure would not add value to the set of enterprise indicators?

Question 6.6: Do you agree that a measure of firm growth is important to this set of indicators? If so, do you believe the difference between the growth of small and medium sized enterprises and the growth of all firms, provided by the ONS, is suitable? What other measure would you suggest?

Chapter 7: Competition

Question 7.1: Do you agree that a focussed set of competition indicators should cover the following areas: openness, regulation and the competition regime?

Questions 7.2: Do you agree that the level of trade in goods and services is the best available indicator of openness?

Question 7.3: Do you agree that the OECD's product market regulation indicator is the best available indicator of the regulatory environment, if it were updated regularly?

Question 7.4: What other sources of information or innovative approaches could be used to develop a reliable, timely and internationally comparable indicator of the regulatory environment?

Questions 7.5: What do you believe are the relative strengths and weaknesses of the GCR and DTI-commissioned peer reviews of the competition regime?

Question 7.6: More generally, views are welcomed on how to assess the effectiveness of the UK competition framework.

Question 7.7: The Government believes that measures of structure and performance do not provide suitable indicators of the competitive intensity of national economies. Do you agree?

Question 7.8: What other evidence, or innovative approaches, can be used to help us assess the relative strength of UK competition for the purposes of this exercise?

Question 7.9: What other evidence, or innovative approaches, could be used to assess the relative strength of competition at the level of the economic market?

Question 7.10: How should the Government best assess the impact of the recent introduction of the Competition Act 1998 and the Enterprise Act 2002?

Chapter 8: Regional Indicators of Productivity

Question 8.1: Do you believe that the concept of developing productivity indicators based around the 'five drivers' framework, in order to complement analysis of the headline productivity figure, is also relevant at a regional level?

Question 8.2: Do you believe that the list of regional indicators proposed in box 8.2 provides a useful framework for measuring the drivers of growth at a regional level?

Question 8.3: Are there any additional indicators that may be relevant at a regional level even if not at a national level?

Question 8.4:

1. Should Scotland, Wales and Northern Ireland be included in this exercise?
2. Are there additional indicators that should be considered for Scotland, Wales and Northern Ireland?

C Further information

C.1 This report is available at http://www.hm-treasury.gov.uk and www.dti.gov.uk/economics. Printed copies of this report are available from:

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C.2 If you have any comments or complaints about the way this consultation has been conducted, these should be sent to:

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