

The UK economy: analysis of long-term performance and strategic challenges

March 2008



HM TREASURY



HM TREASURY

The UK economy: analysis of long-term performance and strategic challenges

March 2008

© Crown copyright 2008

The text in this document (excluding the Royal Coat of Arms and departmental logos) may be reproduced free of charge in any format or medium providing that it is reproduced accurately and not used in a misleading context. The material must be acknowledged as Crown copyright and the title of the document specified.

Any enquiries relating to the copyright in this document should be sent to:

Office of Public Sector Information

Information Policy Team

St Clements House

2-16 Colegate

Norwich

NR3 1BQ

Fax: 01603 723000

e-mail: HMSOlicensing@opsi.x.gsi.gov.uk

HM Treasury contacts

This document can be found in full on our website at:

hm-treasury.gov.uk

If you require this information in another language, format or have general enquiries about HM Treasury and its work, contact:

Correspondence and Enquiry Unit

HM Treasury

1 Horse Guards Road

London

SW1A 2HQ

Tel: 020 7270 4558

Fax: 020 7270 4861

E-mail: public.enquiries@hm-treasury.gov.uk

Printed on at least 75% recycled paper.

When you have finished with it please recycle it again.

ISBN 978-1-84532-431-5

PU354

CONTENTS

	Page
Executive summary	3
Chapter 1 The long-term performance of the UK economy	11
Chapter 2 The strategic challenges facing the UK economy	51
Chapter 3 Responding to the strategic challenges	73
Bibliography	91

EXECUTIVE SUMMARY

E.1 The global economy is in a period of far-reaching transformation. Demographic trends mean that in most developed economies there will be more retired people relative to those of working age in future. There is increasing pressure on global resources and the environment, with climate change in particular demanding immediate action. Technological change and the rise of emerging markets are creating increasingly competitive and integrated global markets.

E.2 The Treasury last published a full analysis of long-term economic challenges in November 2006¹ to inform the 2007 Comprehensive Spending Review (CSR). This report updates analysis of these challenges in order to assess the implications for the UK of new evidence and recent developments in the global economy. For example, recently updated projections, although highly uncertain, show the UK population growing more quickly than previously projected. Building on the evidence in the Stern Review,² the Government has set an ambitious new framework of binding targets to reduce carbon emissions. The recent financial market disruption has demonstrated some of the risks to financial stability from ever more integrated international capital markets.

E.3 In the context of the current uncertain global economic environment this report also examines the long-term performance of the UK economy. Combining this with updated analysis of the challenges ahead provides a basis for assessing where the UK is well placed to respond, and identifying those areas where the Government will focus its programme of economic policy development.

THE LONG-TERM PERFORMANCE OF THE ECONOMY

E.4 Chapter 1 of this report considers the performance of the UK economy over the past few decades drawing on a broad range of evidence, including analysis by the OECD and the IMF.³ This is a period characterised by increasing global economic integration and by a number of significant global economic shocks, for example the rapid oil price increases in the 1970s and 1980s, the bursting of the dotcom bubble in 2000, and the energy price increases of the past six years and the recent increase in food prices.

Resilience and stability

E.5 At the macroeconomic level the most striking trend is the significant increase in the resilience and stability of the UK economy over this period. The UK was one of the least stable economies in the G7 between the early 1970s and the early 1990s. External shocks such as oil price increases led to episodes of very high inflation and negative growth. Swings in output and inflation also impacted on employment, with the number of people out of work rising steeply to more than 3 million during the recessions of both the 1980s and early 1990s.

E.6 Evidence suggests the UK is now more resilient to economic shocks – which have a less severe impact than in the past and from which the economy recovers more quickly. Part of this improvement can be attributed to the reform of the macroeconomic

¹ *Long-term opportunities and challenges for the UK: analysis for the 2007 Comprehensive Spending Review*, HM Treasury, November 2006. Other recent Government analysis of the strategic challenges ahead includes: *Long-term Public Finance Report*, HM Treasury, March 2008; *Productivity in the UK 7: Securing long-term prosperity*, HM Treasury and BERR, November 2007; *Global Europe: meeting the economic and security challenges*, Cabinet Office and Foreign and Commonwealth Office, October 2007; *Realising Britain's Potential: Future Strategic Challenges for Britain*, Strategy Unit, Cabinet Office, February 2008.

² *Stern Review on the Economics of Climate Change*, Sir Nicholas Stern, 2006.

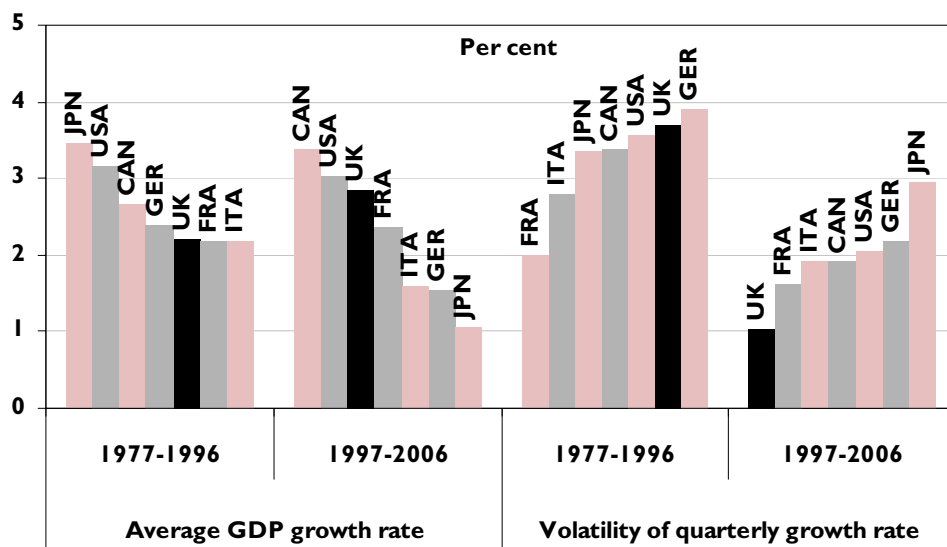
³ For example see: *Staff report on the 2006 Article IV consultation*, International Monetary Fund, March 2007; *Economic survey of the United Kingdom, Volume 2007/17*, Organisation for Economic Cooperation and Development, September 2007.

policy frameworks since 1997, which has helped deliver low and stable inflation and sustainable public finances. Long-term reforms to create flexible product, labour and capital markets have also been key to building resilience – allowing the economy to adjust to change with minimal disruption to output and employment. As the IMF has stated: “*the United Kingdom has absorbed domestic and global shocks well, thanks to the economy’s flexibility and the strong positioning of macroeconomic and financial policies. Ensuring that policies can continue to contribute to resilience remains a challenge.*”⁴

E.7 Since the mid-1990s, macroeconomic stability has improved significantly and the UK economy is now the most stable in the G7. Alongside this stability has come sustained GDP growth and record levels of employment. The UK’s GDP per capita has increased faster than in any other G7 economy in the past decade.

E.8 Macroeconomic stability and low interest rates have given households the confidence to borrow and invest. This has led to concerns over the size of household debt in the UK. However, the size of household financial balance sheets relative to GDP has expanded on both the asset and liability side. Total household debt outstanding has more than doubled in real terms over the past decade to £1.4 trillion, but this should be compared with households’ holdings of £3.7 trillion of housing assets and over £4 trillion of financial assets.

Chart E.1: UK GDP growth has become stronger and more stable



Source: OECD and Treasury calculations

Regional performance

E.9 In recent years, strong and stable growth for the UK as a whole has been matched by improvements in living standards across all countries and regions, and there is emerging evidence of progress on reducing the persistent gap in growth rates between the regions. While improvements have been made in terms of regional unemployment rates, with the gap between the highest and lowest rate falling to 2.9 percentage points in 2007, the poorer performing regions continue to suffer from lower

⁴ International Monetary Fund, *op. cit.*

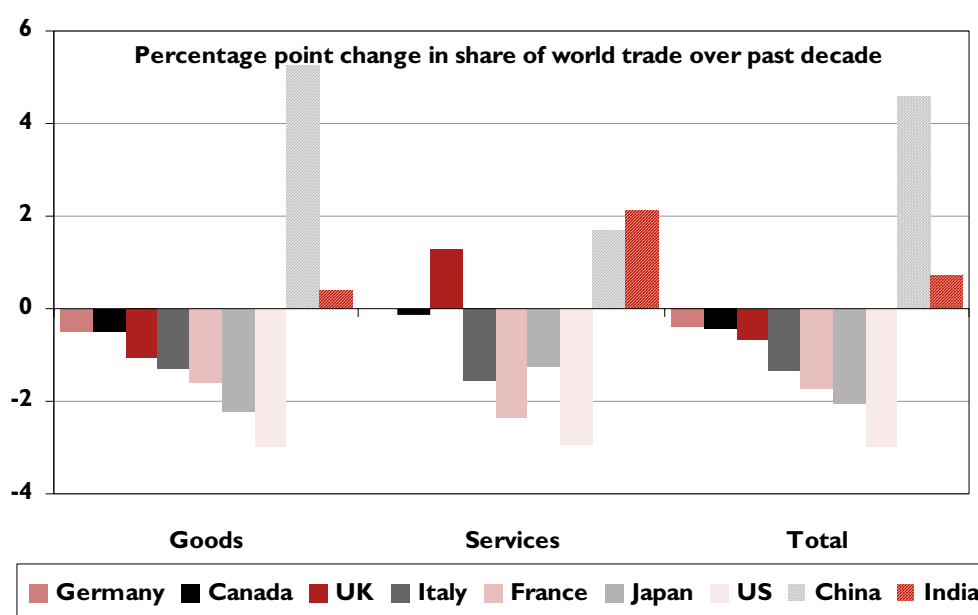
participation rates and there remain significant regional differences in the proportions of highly-skilled workers.

Structural adjustment E.10 The past decades have seen important changes to the structure of the UK economy. These have been driven in particular by two developments in the global economy:

- technological advances have reduced transport and communication costs affording business greater choice in locating their operations; and
- the integration of emerging markets into the world economy has seen a rapid increase in trade and investment flows.

Flexible markets E.11 The UK's flexible markets have allowed the UK economy to adapt relatively smoothly to these changes. For example, the composition of UK output has changed significantly over recent decades. Services accounted for 75 per cent of output by 2006, an increase of more than 20 percentage points since 1975. Over the past decade this shift has been larger in the UK than in any other G7 country. The UK economy's flexibility means that while its share of world goods trade has fallen in the context of dramatic increases from emerging markets, it is the only G7 country that has achieved a rising share of global trade in services. The share of high technology manufacturing in the UK's total manufacturing output has also increased in recent years.

Chart E.2: The changing structure of world trade



Source: WTO and HM Treasury calculations

Product markets E.12 Because of their central role in building resilience and smoothing structural change, Chapter 1 considers in detail the performance of product, labour and capital markets. Flexible product markets allow the economy to adjust to change while providing opportunities for firms and consumers. Product market flexibility is enhanced by competitive markets with appropriate regulation. The UK's competition regime generally scores highly in international comparisons – KPMG's latest peer

review⁵ ranked the UK third overall. The OECD ranks the UK regulatory environment as less restrictive than all OECD countries except Australia.

E.13 Openness to international trade is key to success in the global economy. UK exports to India and China respectively have grown at an average of 12 and 17 per cent per year so far this decade, but the EU remains the UK's key trading partner. Membership of the EU provides significant benefits for the UK economy. By focusing on the priority areas for action, the EU can also play a key role in creating the right business environment for growth through areas such as regulation and competition.

Labour markets **E.14** A strong labour market must be able to adjust to changing economic conditions in a way that keeps unemployment and inflation low, and ensures continued growth in real incomes. The 1970s and 1980s saw periods when unemployment increased to high levels as the UK economy struggled to respond to structural changes and to the oil price shocks. More recently, greater flexibility and increased stability have seen claimant count unemployment fall to its lowest level since the mid-1970s. However, as noted by the OECD,⁶ further progress needs to be made in improving the skills of the workforce. It will also be important to continue to raise labour market participation rates.

E.15 Open labour markets are another important driver of resilience in the UK economy. Migration has contributed significant numbers to the UK workforce in recent years. Over the five years to mid-2006, that contribution to workforce growth was around 0.5 percentage points per year, which the Treasury estimates has increased the sustainable rate of growth of the economy by around 15 to 20 per cent. Recent migration flows have led to concern about the impact of migrants on public services. While overall migrants are net contributors to the economy it is important that migration is properly managed to ensure that the benefits can continue to be realised.

Capital markets **E.16** Capital markets play a crucial role in allowing an economy to adjust flexibly to the challenges and opportunities of a changing global economy. The UK's comparative advantage in financial services makes a significant contribution to the economy, generating close to 10 per cent of output and directly accounting for over 1 million jobs. Global capital markets allow firms and individuals to better diversify risk. However, recent events have also shown how financial market disturbances can spread rapidly from one region of the world to another.

Productivity **E.17** In addition to creating resilience and facilitating structural change, flexible markets also contribute to productivity growth. Productivity growth is the key determinant of long-run growth and together with employment growth leads to higher prosperity. The UK has historically had a productivity gap with other developed economies – producing less output per hour worked than elsewhere. Some progress has been made in recent years in narrowing this gap. Output per hour growth in the current economic cycle averages 2.4 per cent per year, compared with 1.9 per cent over the previous two cycles. However, more still needs to be done for the UK to catch up with the productivity performance of countries such as the US.

Challenges ahead **E.18** Overall, this performance suggests the UK economy is well placed to deal with the long-term challenges facing the global economy. Its flexible and open markets have been able to respond effectively to changes in the world economy. The economy has shown resilience and remained stable in the face of shocks. However, there are areas where more needs to be done. UK productivity performance still lags behind some

⁵ Peer review of competition policy, KPMG report to the DTI, June 2007.

⁶ OECD, *Op. cit.*

other developed economies and it will be important to continue to improve the skills of the UK workforce and raise labour market participation rates. There are also remaining regional disparities to be addressed. The next section of the report shows that in the face of the challenges ahead it is vital that progress is made in these areas.

THE STRATEGIC CHALLENGES FACING THE UK ECONOMY

E.19 Chapter 2 of this report considers the strategic challenges facing the UK economy. This draws on recent analysis by the Strategy Unit in the Cabinet Office and uses the framework developed ahead of the 2007 CSR, updated in the light of new evidence and recent events:

- **Demography** – recently updated population projections have important implications for the projected growth and structure of the UK population;
- **Environment** – the Government has set a challenging framework of binding targets to reduce carbon emissions, and evidence on the opportunities of moving to a low-carbon economy has developed further;
- **Globalisation** and **technical change** – the intensification of global economic activity and rapid pace of technological diffusion has continued; and
- **Global uncertainty** – recent financial market disruption shows how developments in one region of the world can be quickly transmitted to other regions.

Demography E.20 Long-term population projections are highly uncertain, but on the basis of their latest analysis of trends the ONS has published projections that show that the UK population will grow to 70 million by 2030 – driven by increases in life expectancy, higher fertility and continued positive net migration. This would create additional demands for housing, services and infrastructure. Alongside this overall increase in population is a projected increase in the economic dependency ratio – the proportion of population that must be supported by the working population – driven by projected increases in the numbers of retired people and children.

E.21 The increase in retired people relative to those of working age emphasises the importance of maintaining a flexible labour market that supports people to stay in, or return to, work. While population growth increases the absolute size of the economy, increases in labour productivity or employment rates are necessary for growth in per capita output. An ageing population also has important implications for the demand for public services such as pensions, health and long-term care.

Environmental change E.22 Environmental change is a key challenge for the world and the UK, with climate change in particular requiring coordinated action. The Stern Review concluded that the costs of stabilising the climate are significant but manageable, whereas delay will be costly and dangerous. The Review estimated that temperature increases associated with current business as usual emissions could lead to damage equivalent to as much as 5 to 20 per cent of global GDP.

E.23 Alongside climate change there will be increasing pressures on the UK local environment. For example, the UK is likely to need to manage pressures on water and land supply and a continued increase in levels of waste, from both households and businesses, as the economy and population grow. It is important to ensure the right incentives are in place so that households and businesses will utilise resources so as to minimise waste.

E.24 Environmental pressures have important economic and social consequences, but also present opportunities for business and the economy. As set out in the Stern Review, with strong, deliberate policy choices it is possible to reduce emissions on the scale necessary for stabilisation in the required range while continuing to grow. The transition to a low carbon economy will require the development of new energy efficient technologies and cleaner energy supplies.

**Globalisation
and
technological
change**

E.25 The current wave of global integration has been characterised by the rapid growth of large emerging economies and rising flows of goods, services and capital between countries. Technological change has both helped to drive, and in turn been shaped by, globalisation. For example, developments in the field of information and communications technology have had a very significant impact on transaction costs with dramatic falls in the price of telecommunications and transport.

E.26 As an open, flexible economy the UK stands to benefit from the opportunities of global economic integration. To do this the UK will need strength in activities higher up the value chain, such as high-technology manufacturing and knowledge-intensive services. There will be an increasing premium on skills and rewards to innovation. Skills affect the capacity of economies to respond flexibly to changing patterns of demand and skill levels are an important factor in attracting foreign direct investment. In the competitive global market firms need to foster innovative activities and adopt and apply new technologies.

**Global
uncertainty**

E.27 The recent wave of globalisation has also been characterised by increased investment flows and capital market integration. Open, integrated capital markets play a crucial role in creating flexibility, by allowing a more efficient allocation of capital within and between countries and greater diversification of risk.

E.28 However, the increasing complexity and interconnectedness of markets has meant that developments in one market can easily be transmitted to others, as shown by the recent financial market disruption. This creates new challenges in continuing to promote openness, mitigating financial stability risks and protecting consumers, and in ensuring the UK economy is flexible enough to respond to such developments. It will also be vital to maintain the openness of UK and EU markets and to continue to champion openness to trade and investment.

RESPONDING TO THE STRATEGIC CHALLENGES

E.29 Chapter 3 links the assessment of the performance of the economy with the updated analysis of strategic challenges, and outlines the Government's ongoing programme of economic policy development in this context.⁷ In responding to the strategic challenges, the Government will need to use its policy levers and work in partnership with individuals, communities, businesses and all levels of government. A number of measures to address these challenges are also set out in Budget 2008.

E.30 Central to ensuring economic prosperity is the importance of maintaining macroeconomic stability and sustainable public finances. This requires striking the right balance between delivering further investment in public services, while maintaining macroeconomic stability and ensuring that spending and taxation impact fairly within and between generations. The 2008 *Long-term public finance report*

⁷ While this report covers the whole of the UK, in Scotland, Wales and Northern Ireland the devolved administrations are responsible for certain areas of policy. The Government will continue to work with the devolved administrations to promote increased prosperity for all in the UK.

published alongside Budget 2008 shows that the UK is equipped to deal with the fiscal challenges arising from demographic change over the coming decades. It will be vital that the public finances continue to be managed in a prudent and sustainable way so the UK remains well placed to deal with the potential fiscal impacts arising from other long-term trends.

**Demography:
infrastructure
and a flexible
and open
labour market**

E.31 While highly uncertain, the projected increase in population size and rising economic dependency ratio highlights the need for labour market flexibility and suggests that demands on housing, services and infrastructure will increase. The UK's robust macroeconomic framework means the economy is fundamentally well-placed to respond to these changes. However, the Government will continue to closely monitor and analyse the impact of demographic changes on future infrastructure needs. Demographic changes are also likely to continue to put pressure on the planning system and land use. Building on the current set of reforms the Government will keep the planning system and land use under review to ensure they meet its economic, social and environmental objectives.

E.32 The Government will also focus on ensuring that labour market flexibility is maintained, with further analysis and policy to help more people into work, support changes in working patterns, and develop skills and training. The Government's aim is for everyone in society to have the opportunity to develop their talent and realise their full potential. The Government will also continue to ensure migration is properly managed so that the significant benefits to the economy can be realised.

**Climate
change: the
transition to a
low carbon
economy**

E.33 The UK's success in adjusting to the changing global economy suggests it is well placed to benefit from the economic opportunities of the transition to a low carbon economy. The Government has put in place a binding system of targets for UK carbon emissions, and is taking action internationally and domestically to price in the damage caused by emissions, promote innovation in low-carbon technologies and encourage behavioural change. It is also responding to local environmental pressures, with a new waste strategy, measures to manage water supply and demand, and a review of how to improve competition and innovation in the water sector.

E.34 Climate change is a priority area and the Government will take significant further action this year towards making the transition to a low carbon global economy. At the international level, the UK will engage closely in EU and international negotiations to secure an international climate change agreement and effective and flexible EU policies. Domestically, the Committee on Climate Change will advise the Government before the end of the year on the UK's carbon budget for 2008-12 and its 2050 target.

E.35 The Government will also seek to ensure that the UK makes the most of the potential economic benefits of the transition to a low carbon economy. It will undertake further analysis on this issue and will engage further with business to ensure that the UK capitalises on its strengths in the low carbon technology, goods, services and financial markets, through the Carbon Markets Experts Group and a Low Carbon Economy Summit. It will also develop a low-carbon energy technology strategy to maximise the cost-effective potential for cutting emissions in the UK and internationally.

Globalisation and technology: creating the right business environment

E.36 The UK's flexible and open markets provide a solid base from which to take advantage of the opportunities presented by globalisation and technical change. However, it will be important that further progress is made in narrowing the productivity gap, improving skills and creating the right business environment in the UK and in the EU, allowing firms to respond effectively to the challenges of globalisation and succeed in the technologies and sectors of the future. The Government will focus on ensuring the UK is equipped with a skilled and flexible workforce, has sustained investment in the public science base, that appropriate tax and regulatory frameworks contribute to an attractive business environment, and that infrastructure continues to support growth.

E.37 In addition, the Government aims to ensure that all countries, regions and localities of the UK can succeed in the global economy. The Government will undertake further work to build on the analysis and recommendations in the *Review of sub-national economic development and regeneration*,⁸ to ensure that decisions are taken at the most appropriate spatial level to best meet the economic challenges and needs of different regions, sub-regions, cities and localities.

E.38 The Government will also work through the EU to deliver economic prosperity, by championing a more outward-facing EU that sets an agenda for globalisation that emphasises openness, fairness and the importance of cooperation between countries. The UK will continue to make the case for open markets in the EU and internationally and resist moves toward protectionism.

Global uncertainty: dealing with financial market disruption

E.39 The recent financial market disruption highlights how developments in one market or region can quickly be transmitted to others. The UK's large and open financial markets mean it will never be fully insulated from the impact of this kind of disruption. However, the UK's recent track record of resilience suggests such the wider economy should be able to respond and adjust to such shocks relatively smoothly.

E.40 The Government will pursue an agenda to promote global financial stability and continued openness. It will continue to work with the financial sector in discussing its proposals to strengthen the current UK framework for financial stability and depositor protection. Over the longer term, the Government will work to ensure that there are effective systems in place at an international level to monitor the international financial system and to address any emerging risks. It will also engage fully with the ongoing work of the IMF and OECD on sovereign wealth funds. The UK will also continue to champion competitive and open markets, working through multilateral organisations and bilateral relationships, and will be considering the next stage of the reform of international financial institutions.

⁸ *Review of sub-national economic development and regeneration*, HM Treasury, BERR, Communities and Local Government, July 2007.

THE LONG-TERM PERFORMANCE OF THE UK ECONOMY

INTRODUCTION

1.1 The Government's economic objective is to build a strong and stable economy and a fair society, where there is opportunity and security for all. In a world of rapid technological change and competitive global markets, meeting these objectives requires a flexible and resilient economy where firms and individuals are able to respond quickly and smoothly to new challenges and opportunities. To meet these aims the Government has over the past decade introduced a new macroeconomic framework to promote stability, and undertaken microeconomic reforms aimed at improving flexibility in product, labour and capital markets.

1.2 This chapter explores developments in the UK economy over recent decades. It concludes that the economy has a solid foundation from which to meet the longer-term challenges of demographic, environmental, and global and technological change discussed in the following chapters of this paper. In particular, there has been a significant improvement in resilience, as the new macroeconomic framework and the flexibility of the UK economy has allowed it to cope successfully with economic shocks and to adapt to the longer-term structural changes affecting the world economy. This has contributed to a significant improvement in macroeconomic stability, alongside which has come record high employment and strong growth of GDP per capita.

1.3 The chapter also highlights areas where more needs to be done. For example, further progress needs to be made in narrowing the productivity gap between the UK and other major economies. The skills of the UK workforce must be enhanced. Although progress has been made in recent years to narrow the gap in growth rates between regions, historic gaps remain in employment, skills and enterprise. To meet the challenges ahead it will be important to maintain an open and competitive business environment in the UK and in the EU.

Structure of the chapter **1.4** The chapter examines the recent performance of the economy in its historical context to underpin analysis of the key strategic challenges that are discussed in more detail in the subsequent chapters. Part I of this chapter examines two key trends that have characterised the UK economy over the past couple of decades:

- the improvement in resilience and macroeconomic stability; and
- changes in the structural composition of UK output, in particular in response to globalisation.

1.5 Improved resilience and structural change are both connected to flexibility in product, labour and capital markets. Part II describes in more detail the key developments in each of these markets.

PART I: RESILIENCE, STABILITY AND STRUCTURAL CHANGE

RESILIENCE AND STABILITY

Why resilience and stability matter

1.6 Macroeconomic stability, characterised by sustainable rates of output growth and low inflation, allows businesses, individuals and the Government to plan more effectively for the long term, improving the quality and quantity of investment in physical and human capital, and helping to raise productivity. Maintaining macroeconomic stability provides the best foundation from which the Government can make structural reforms. Key to achieving and maintaining stability are the flexibility of product, labour and capital markets, which underpin the resilience of economies to shocks, such as the disruption to global financial markets currently facing the world economy. Resilience is the capacity of an economy to maintain levels of employment, and to keep actual output close to its potential level, in the face of shocks that can affect both the demand-side and the supply-side of the economy.

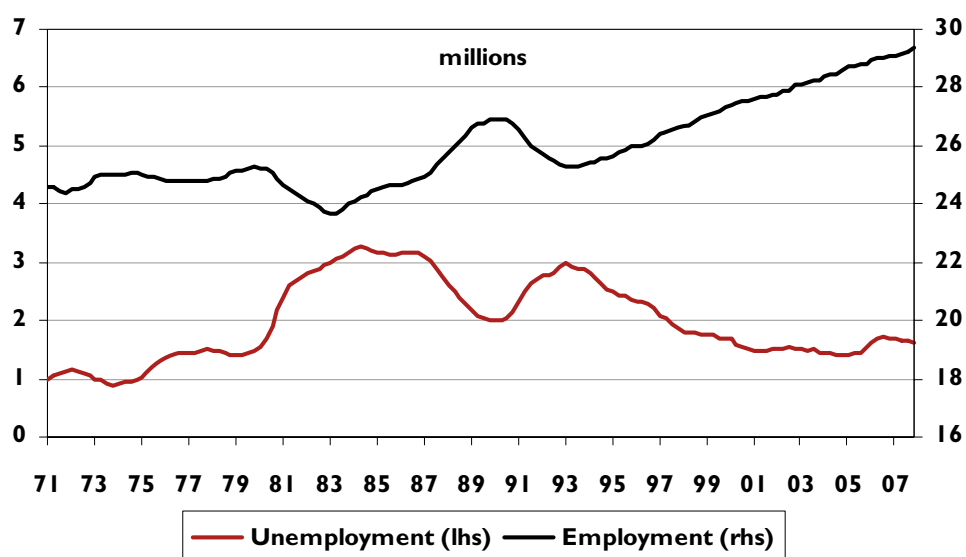
1.7 High and variable inflation is widely recognised to impact negatively on an economy's growth potential by obscuring relative price signals that ensure resources are allocated efficiently to their most productive use. Low and stable inflation is therefore a crucial objective of any successful economic strategy.

Instability in UK macroeconomic history

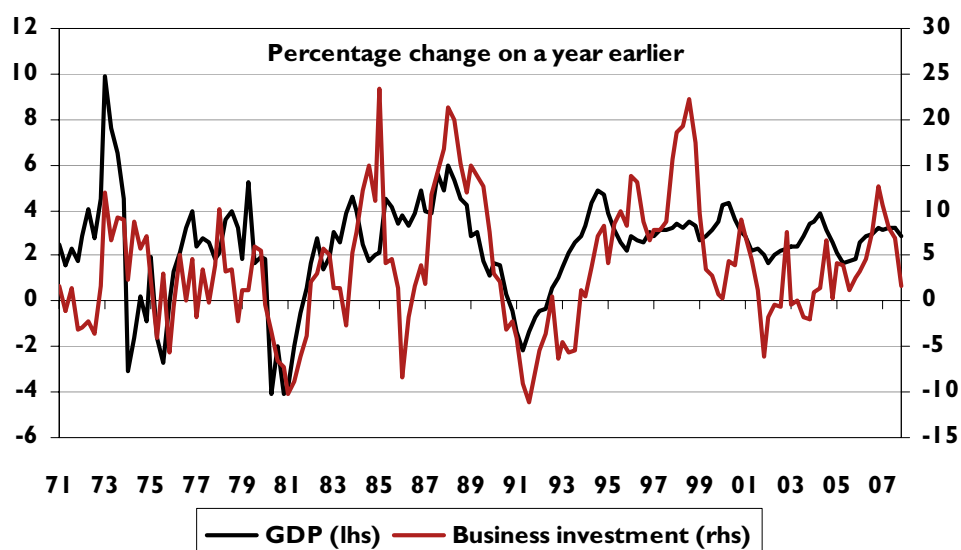
1.8 From the 1970s to the early 1990s, the UK economy was characterised by a lack of resilience to shocks and by macroeconomic instability on a greater scale than in most other G7 countries. This coincided with relatively poor economic performance including weaker GDP growth, higher inflation and higher short and long-term interest rates than in other G7 countries. Between 1970 and 1995, UK growth averaged around 2¼ per cent compared with 2¾ per cent in France and Germany, 3 per cent in the US and 4 per cent in Japan.

1.9 The UK suffered severe recessions in the mid-1970s, early 1980s and early 1990s, and repeated episodes of high inflation, reaching more than 25 per cent in 1975, 20 per cent in 1980 and almost 10 per cent in 1990. Often these episodes were caused by the impact of external shocks, for example the episodes of high inflation were associated with global oil price shocks shown in Chart 1.4, although UK inflation was generally higher than in many advanced economies. Of even greater cost to the economy was the high volatility of inflation, increasing uncertainty and the costs associated with unanticipated inflation. Interest rates were also high, remaining above 10 per cent for the majority of the 1980s. As a result of this relatively poor performance, by the early 1990s UK income per head had dropped to the lowest of all G7 economies.

1.10 Swings in output and inflation also impacted on employment, with the number of people out of work rising steeply during the recessions of the early 1980s and early 1990s to more than 3 million on both occasions. In addition, investment in the capital stock was hampered by price and output volatility: business investment fell by 12 per cent in the early 1980s recession and by 17 per cent in the early 1990s.

Chart I.1: Employment and unemployment

Source: ONS

Chart I.2: GDP and business investment growth

Source: ONS

I.11 An inflation-targeting regime for monetary policy was introduced for the first time in October 1992, and the rate of inflation declined through the mid-1990s. In part this fall was due to the lingering effects of the deep recession of 1990 to 1991 and interest rates that had been kept above 10 per cent from July 1988 to May 1992. Despite

actual inflation falling, inflation expectations in financial markets remained above the inflation target range of 1 to 4 per cent throughout its operation from 1992 to 1997.

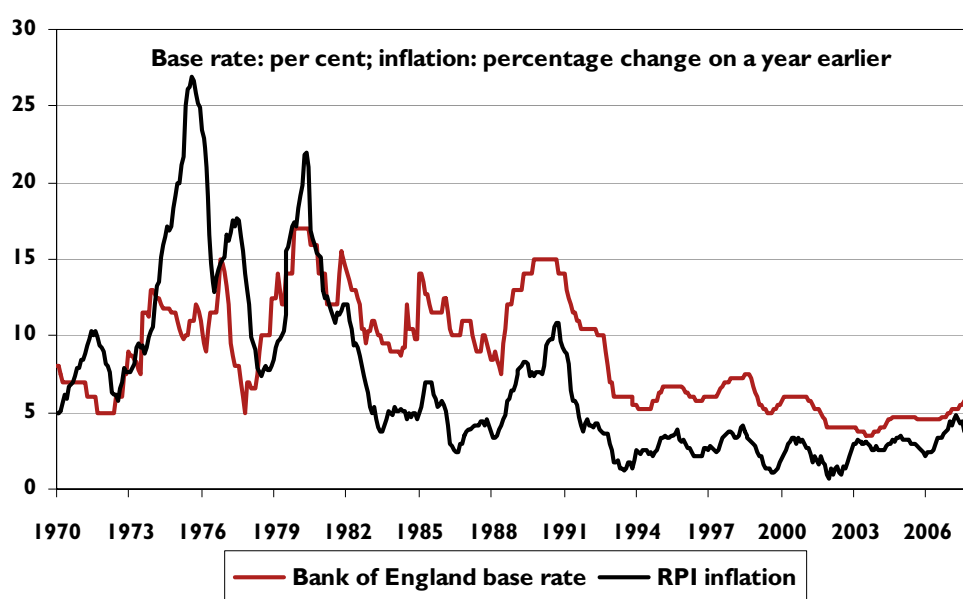
Reforming the macroeconomic policy framework

1.12 Against this backdrop, in 1997 the Government put in place a new macroeconomic policy framework, described in Box 1.1, designed to deliver macroeconomic stability. In addition, the Government introduced microeconomic reforms to enhance resilience by increasing the flexibility of product, labour and capital markets, discussed in more detail in subsequent sections of this chapter.

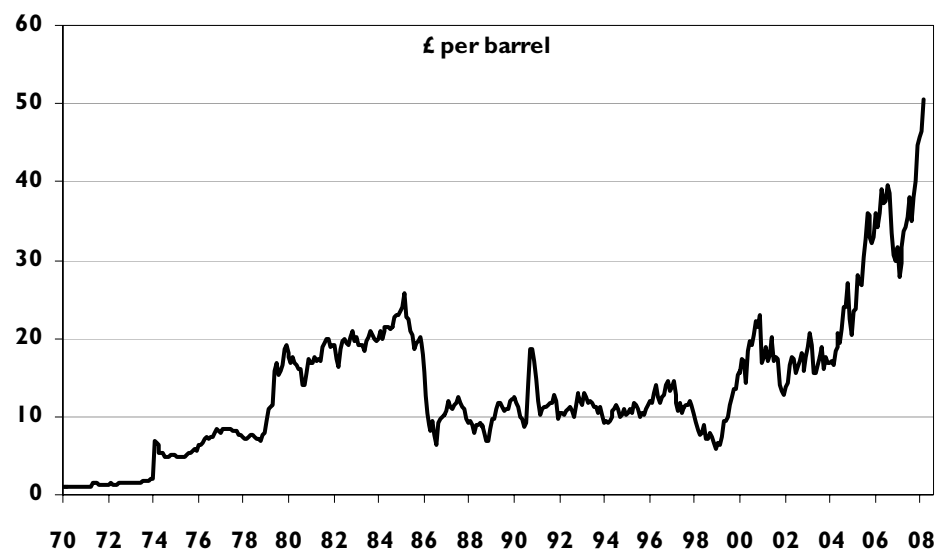
Low and stable inflation

1.13 Since the introduction of the new monetary policy framework, inflation has averaged close to the Government's symmetric target, with RPIX inflation averaging 2.4 per cent from May 1997 to November 2003, and CPI inflation averaging 2 per cent since December 2003. Moreover, inflation in the UK has been lower than in any other G7 economy with the exception of Japan, which has suffered deflation for much of the past decade. Nominal interest rates have averaged around half the levels prevailing in the previous two decades and have been significantly more stable. This record of low and stable inflation has been achieved despite the sustained rise in global oil prices that has accompanied strong energy demand from emerging markets, shown in Chart 1.4, and the more recent significant increases in global agricultural commodity prices.

Chart 1.3: Inflation and interest rates



Source: Bloomberg and ONS

Chart I.4: Sterling oil prices

Source: Bloomberg

Box 1.1: The Government's macroeconomic policy framework

The Government's macroeconomic framework is based on the principles of transparency, accountability and responsibility. The framework sets clear objectives for monetary and fiscal policy, and embodies the principle of 'constrained discretion', by which policymakers are afforded short-term flexibility in order to meet credible long-term goals.

The monetary policy framework gave full operational independence to the Monetary Policy Committee (MPC) of the Bank of England to meet the Government's symmetric inflation target, presently 2 per cent for the 12-month rate of increase in the Consumer Prices Index (CPI). Subject to that, the remit also gives the Bank an objective to support the economic policy of the Government, including its objectives for growth and employment.

Openness, transparency and accountability are enhanced through the publication of MPC members' voting records, prompt publication of the minutes of monthly MPC meetings, and publication of the Bank's quarterly *Inflation Report*. The open letter system is an integral part of the monetary policy framework, allowing the MPC to respond in a flexible and transparent way in the event of economic shocks causing deviations of inflation from its target rate by more than 1 percentage point.

The *Code for fiscal stability* sets out a clear framework and set of obligations constraining how Government conducts fiscal policy. It specifies the key principles for the formulation and implementation of fiscal policy as well as the reporting requirements, including independent audit, incumbent on the Government. The Code requires the Government to state clearly its fiscal policy objectives and the rules through which policy will be operated, increasing the transparency and accountability of fiscal decision-making.

The Government's fiscal policy objectives are:

- over the medium term, to ensure sound public finances and that spending and taxation impact fairly within and between generations; and
- over the short term, to support monetary policy and, in particular, to allow the automatic stabilisers to help smooth the path of the economy.

These objectives are implemented through two fiscal rules:

- the golden rule: over the economic cycle, the Government will borrow only to invest and not to fund current spending; and
- the sustainable investment rule: public sector net debt as a proportion of GDP will be held over the economic cycle at a stable and prudent level. Other things equal, net debt will be maintained below 40 per cent of GDP over the economic cycle.

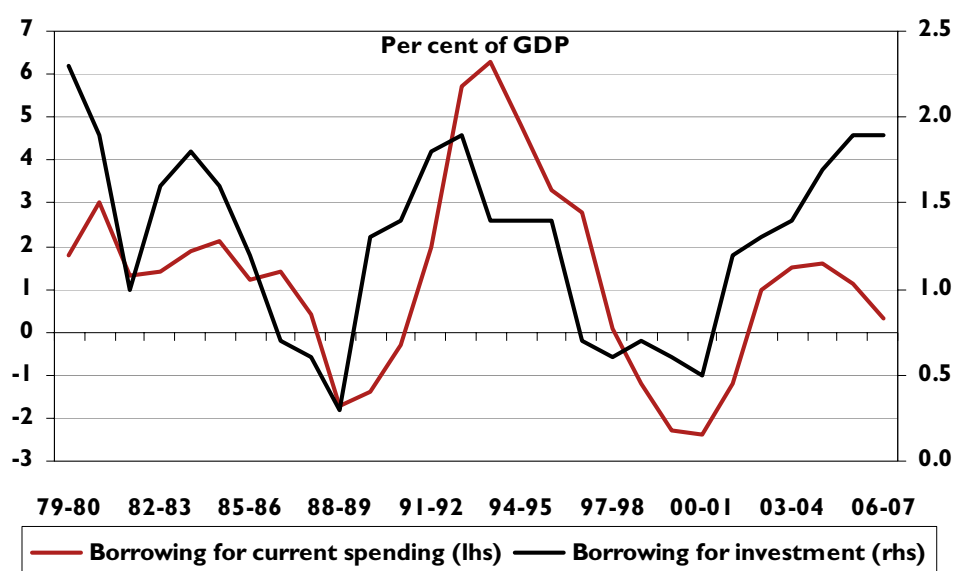
The institutional framework, along with the Government's own fiscal policy objectives and rules, allows for action in the face of economic shocks while maintaining confidence in the Government's commitment to long-term stability. The IMF has stated that "*Macroeconomic performance in the United Kingdom remains impressive... macroeconomic policy frameworks are supportive: they have contributed to the good performance and are guiding policies in ways that are responsive to the requirements for strong growth with low inflation*".^a

^a Staff report on the 2006 Article IV consultation, International Monetary Fund, March 2007.

Sustainable public finances and greater public investment

1.14 The fiscal policy framework has ensured sustainable public finances and supported the stabilisation role of monetary policy. It has also protected public investment by removing the bias against capital spending that had been a feature of UK public spending in previous decades. In 1996, the IMF argued that, “...while the control total framework has been successful in disciplining overall spending, total spending to GDP has not fallen significantly and adjustment has come disproportionately from public investment. [This is] in line with historical experience... that periods of restraint in public spending have been associated with significant (and often unsustainable) cuts in capital spending.”¹ The success of the golden rule in eliminating the bias against capital spending has been clearly illustrated by the break in the relationship between borrowing for current spending and borrowing for investment, as shown in Chart 1.5. Public sector net investment is now over three times higher as a share of GDP than it was in 1997-98, affording significant growth in priority areas.

Chart 1.5: Public sector borrowing for investment



Source: HM Treasury

Improved resilience to shocks

1.15 The Government’s macroeconomic framework, and the flexibility of product, labour and capital markets promoted through microeconomic reforms, has created a more resilient economy, which has helped the UK to absorb and recover from a number of global shocks over the past decade. During the Asian, Russian and Long-Term Capital Management crises of 1997 and 1998, UK GDP growth remained robust and inflation remained close to target. Following the bursting of the dotcom bubble in 2000 and in the aftermath of the terrorist attacks of 11 September 2001, the UK economy continued to expand while many other major economies experienced recession.

1.16 A Treasury Economic Working Paper published alongside Budget 2008² analyses economic resilience in the UK and OECD countries over the past 25 years. While this is an ongoing area of research, its findings support the view that resilience in the UK has improved in the past decade. The paper considers factors that might explain some of

¹ Staff report for the 1996 Article IV consultation, International Monetary Fund, December 1996.

² Resilience in the UK and OECD economies: Treasury Economic Working Paper No.2, HM Treasury, March 2008.

the improvements in economic resilience, in particular the relationship between resilience and reforms to product and labour markets.

I.17 The paper finds evidence that all countries except Ireland exhibited an improvement in resilience between the two periods, 1982 to 1993 and 1994 to 2005. Its findings suggest that the UK moved from being the eighth most resilient economy in the first period, to being the most resilient economy during the second period. On average, shocks were found to have been smaller in the second period than in the first, but there is also evidence that the subsequent effect on output was less persistent in the more recent period, implying that economies had become more resilient.

I.18 The Working Paper examines the relationship between improvements in economic resilience, improvements in macroeconomic policy, and reforms to enhance the flexibility of product and labour markets. The paper finds some evidence to suggest that better macroeconomic policy and product and labour market reforms may have contributed to improved resilience in the countries studied. This finding underlines the importance of policy settings that allow product and labour markets to adjust efficiently to economic shocks.

Box 1.2: Resilience in the UK and OECD economies

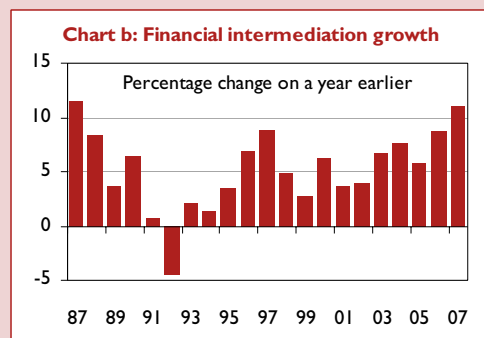
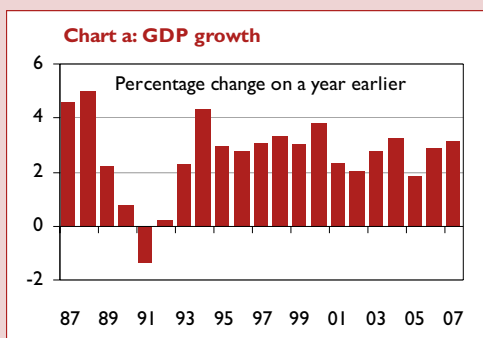
Economic shocks are a regular feature of developments in an open economy like the UK. Whether a shock is positive – for example, advances in information and communications technologies – or negative – for example, oil prices rising to \$100 a barrel – the economy must adjust to the changing economic landscape. The greater the resilience of an economy in the face of shocks, the shorter the time taken to adjust, and the lower the costs incurred while that adjustment takes place.

Over the past decade, the UK economy has demonstrated much improved resilience, delivering macroeconomic stability and positive growth despite a number of significant global economic shocks:

- the Asian crisis of 1997, and the Long-Term Capital Management hedge fund collapse and the Russian debt crisis of 1998, created considerable volatility in global financial markets. UK financial sector output slowed, falling briefly, but overall GDP growth remained strong. Financial sector growth recovered quickly in late 1999;
- following the bursting of the dotcom bubble in 2000, and the terrorist attacks of September 2001, global equity prices fell by around 50 per cent. Again, UK financial sector output slowed, and briefly fell, before rebounding strongly. UK GDP growth remained positive throughout, with slower growth of 2¼ per cent in 2001 and 2 per cent in 2002 followed by stronger growth of 2¾ per cent in 2003 and 3 per cent in 2004; and
- more recently, the combination of the sharp rise in oil prices, euro area weakness and a subdued housing market contributed to measured growth slowing in 2005 to 1¾ per cent, although the cyclical indicators monitored by the Treasury are not consistent with such a significant slowdown between 2004 and 2005. The economy rebounded quickly, with slightly above-trend rates of growth of 3 per cent in both 2006 and 2007.

The Treasury Economic Working Paper published alongside Budget 2008 builds on OECD analysis exploring evidence of resilience in the UK and 13 other OECD countries over the past two decades. The paper finds that most economies demonstrated improved resilience in the 1994 to 2005 period compared with 1982 to 1993. For the UK, the analysis suggests the improvement was particularly marked, with the UK estimated to have been the most resilient of the economies studied in the latter period. The paper finds some evidence that improvements in product and labour market flexibility have contributed to greater resilience in the UK and other advanced economies.

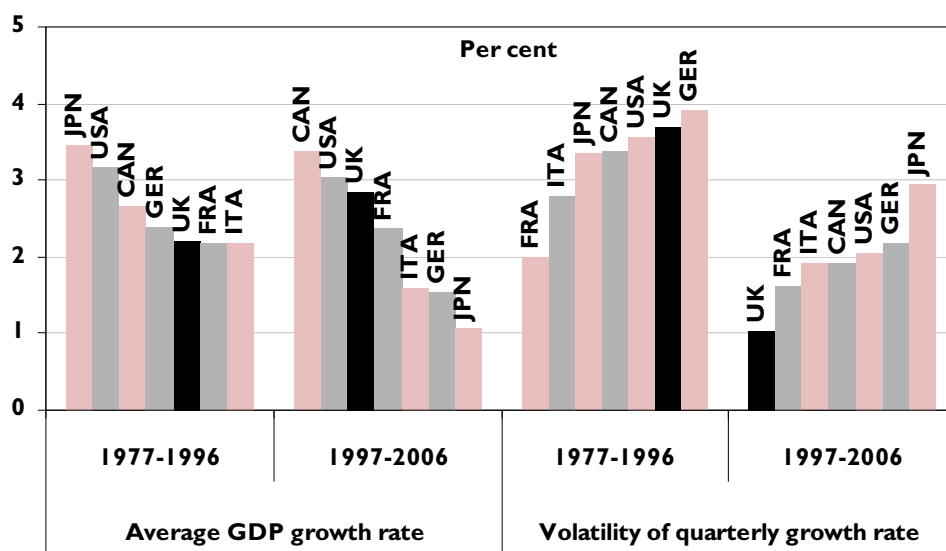
After a decade of sound macroeconomic policy and the promotion of flexible and open product, labour and capital markets, there is clear evidence that the UK economy is more resilient than in the past. The pay-off has been seen in much enhanced macroeconomic stability and provides a strong foundation from which to deal with current economic shocks.



Improved growth performance

1.19 As Chart 1.6 shows, greater resilience and macroeconomic stability has coincided with a significant improvement in the UK's growth performance. The UK economy is now the most stable in the G7, and is the only G7 economy to have avoided any quarters of negative output growth this decade, having now expanded for 62 consecutive quarters, the longest expansion since quarterly National Accounts began more than 50 years ago. GDP growth averaged close to 3 per cent in the decade from 1997 to 2006 compared with 2½ per cent in the decade from 1987 to 1996 and 2 per cent from 1977 to 1986. Stronger growth has been achieved alongside low and stable inflation, and high levels of employment. As the OECD noted last year, “*strong performance is not only due to the willingness to embrace the opportunities offered by globalisation, but also to sound institutional arrangements for setting monetary and fiscal policy*”.³

Chart 1.6: UK GDP growth has become stronger and more stable

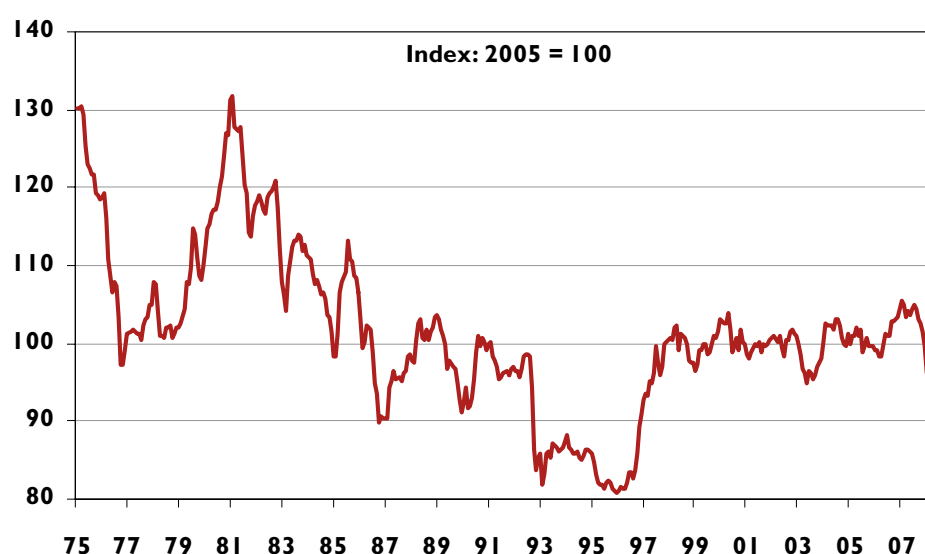


Source: OECD and Treasury calculations

Exchange rate

1.20 The stability of GDP growth and inflation in recent years has also been reflected in the exchange rate, which has been relatively stable. Over the past decade, the sterling effective exchange rate has remained in a relatively narrow range, contrasting with the exchange rate volatility of the 1980s and early 1990s. The recent depreciation of sterling, though marked in the context of the past decade, is still relatively small in comparison to some of the episodes of depreciation or appreciation seen during previous decades, including the significant appreciation of late 1996 and early 1997.

³ Economic survey of the United Kingdom, Volume 2007/17, Organisation for Economic Cooperation and Development, September 2007.

Chart I.7: Sterling effective exchange rate index

Source: Bank of England and Treasury calculations

Household sector balance sheets

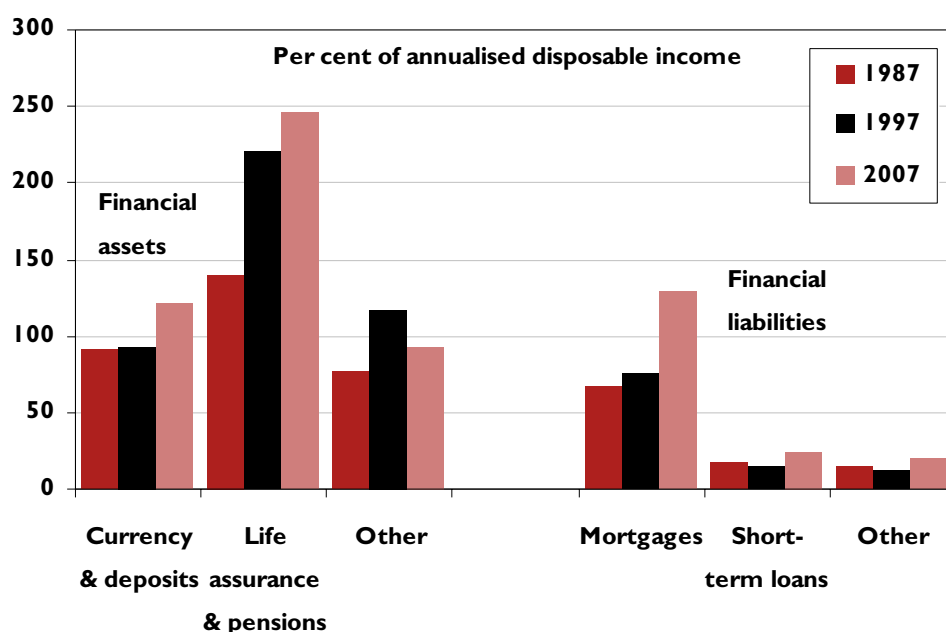
1.21 Over the past decade, macroeconomic stability and low interest rates have given households the confidence to borrow and invest. This has led to concern over the size of household debt in the UK. However, the size of household financial balance sheets relative to GDP has expanded on both the asset and liability side, with growth in borrowing for the most part underpinned by rising employment and household incomes, and low and stable interest rates.

1.22 Total household financial debt outstanding has more than doubled in real terms over the past decade to £1.4 trillion, equivalent to around 160 per cent of total household disposable income. This ratio has increased as strong house price growth has driven increases in mortgage debt. The value of housing assets underpinning this debt has increased by over 150 per cent in real terms since 1997, and is now estimated to be worth £3.7 trillion. Households' financial debt is outweighed by a total of over £4 trillion of financial assets, including over £1 trillion of cash and bank deposits and more than £2 trillion worth of net equity in life assurance and pension funds' reserves. Total financial assets have increased by over £1.8 trillion in nominal terms over the past decade, compared with an increase in debt of around £850 billion. Total net worth of households, the value of all financial and non-financial assets less financial liabilities, stood at just under £7 trillion at the end of 2006.

1.23 It is important to note that developments in macroeconomic balance sheets will not have been uniform across households, which can present challenges for a small minority of people that experience problems when they take on too much debt. In the 2007 Pre-Budget Report and Comprehensive Spending Review, the Government set out

five specific areas of targeted action necessary to help those at risk or already in difficulty.⁴

Chart 1.8: Developments in household financial balance sheets



Source: ONS and Treasury calculations

Regional economic performance

Growth in all countries and regions

1.24 An essential element of achieving the Government's economic objectives is to improve the economic performance of every part of the UK, and to ensure that no one is disadvantaged by where they live. To boost growth in the English regions, the Government set up nine Regional Development Agencies, and has since increased their responsibilities and flexibility to respond to the economic opportunities and challenges in their regions. In recent years, strong and stable growth for the UK as a whole has been matched by significant improvements in living standards across all countries and regions. In nominal terms, per capita GVA growth averaged between 4¼ and 6 per cent a year in every country or region over the past decade.

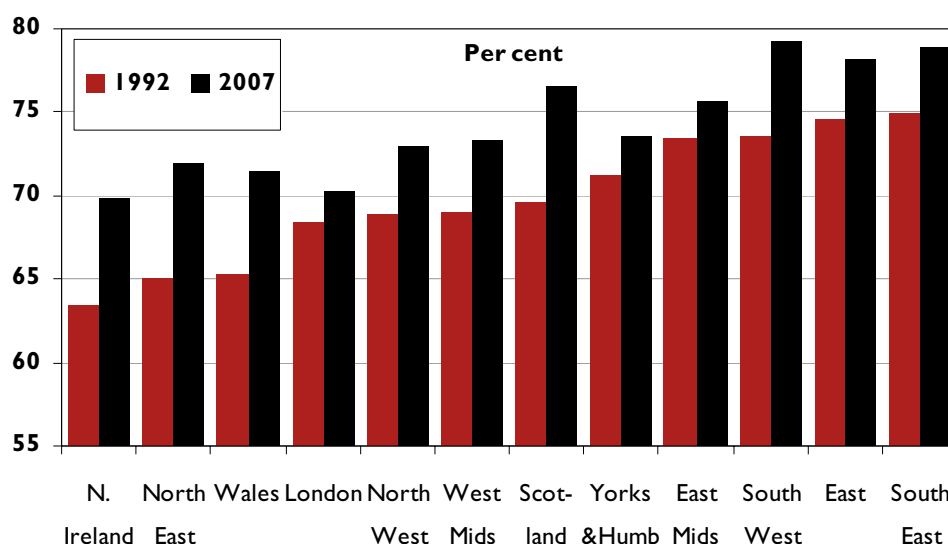
1.25 There is emerging evidence of progress on reducing the persistent gap in growth rates between regions. The most recent data suggest that progress is being made to reduce the gap in GVA per head growth rates between the top performing regions (London, South East and South) and the bottom performing regions (North East, North West, Yorkshire and the Humber, West Midlands, East Midlands and the South West). In 1998, the top performing regions grew 2.3 percentage points faster than the bottom performing regions; in 2006, the gap was 0.1 percentage points.

⁴ See Box 5.2 of the 2007 Pre-Budget Report and Comprehensive Spending Review.

Improved labour market performance

1.26 At the end of 1992, following the recession of the early 1990s, employment rates across the countries and regions of the UK varied by 11.5 percentage points, from a low of 63.4 per cent in Northern Ireland to a high of 74.9 per cent in the South East of England. Since then, while working-age employment rates have increased by at least 2 percentage points in all regions outside London, increases have been far greater in those regions that started with lower employment rates. The North East, Northern Ireland, Wales and Scotland have all seen employment rates rise by between 6 and 7 percentage points. Similar improvements have been achieved in terms of regional unemployment rates, with the gap between the highest and lowest rate falling from 4.5 percentage points in 1997 to 2.9 percentage points in 2007, though the poorer performing regions continue to suffer from lower participation rates.

Chart 1.9: Working-age employment rates by country and region



Source: ONS

1.27 There is also evidence that gaps in the drivers underpinning the regional differentials are narrowing. Differences in regional skills levels have narrowed. The proportion of the working-age population without basic skills (qualifications equivalent to at least NVQ2) has fallen in all regions, with the gap between the best and worst region narrowing from 11.3 to 9.8 percentage points. However, significant regional differences in the proportions of highly-skilled workers remain. Although entrepreneurial activity in all regions has grown in recent years, the three Northern regions still lag in terms of the ratio of VAT registrations to the adult population, and in terms of total entrepreneurial activity.

1.28 While economic disparities have narrowed across the country, significant disparities exist within as well as between regions. Within the North West, Greater Manchester South grew by over 76 per cent between 1995 and 2004, compared with less than 31 per cent in Greater Manchester North and less than 23 per cent in West

Cumbria. The 2007 Index of Multiple Deprivation⁵ shows that the London region contains many of the country's most deprived communities: Hackney, Tower Hamlets and Newham are among the five most deprived local authority areas in the UK. These disparities may be more marked at the neighbourhood level.

Challenges ahead

1.29 The delivery of macroeconomic stability and improved resilience over the past decade leaves the UK well placed to meet the challenges of the coming decade. As set out in more detail in subsequent chapters, in order to continue to enjoy rising prosperity, it will be crucial to maintain stability and resilience in an increasingly integrated global economy. Stability provides the economic foundation to enable business and individuals to make the most of the opportunities from new markets and technologies in the global economy. It also allows the economy to adapt and deal effectively with global shocks, a challenge that has been brought to the fore by the recent disruption in global financial markets. As the IMF has stated, “*the United Kingdom has absorbed domestic and global shocks well, thanks to the economy's flexibility and the strong positioning of macroeconomic and financial policies. Ensuring that policies can continue to contribute to resilience remains a challenge.*”⁶ At the regional level, the challenge for Government is to ensure every region, sub-region and locality has the tools to promote economic development and reduce disparities across the country. The demographic changes set out in Chapter 2 also underline the importance of ensuring macroeconomic stability and sustainable public finances over the long term.

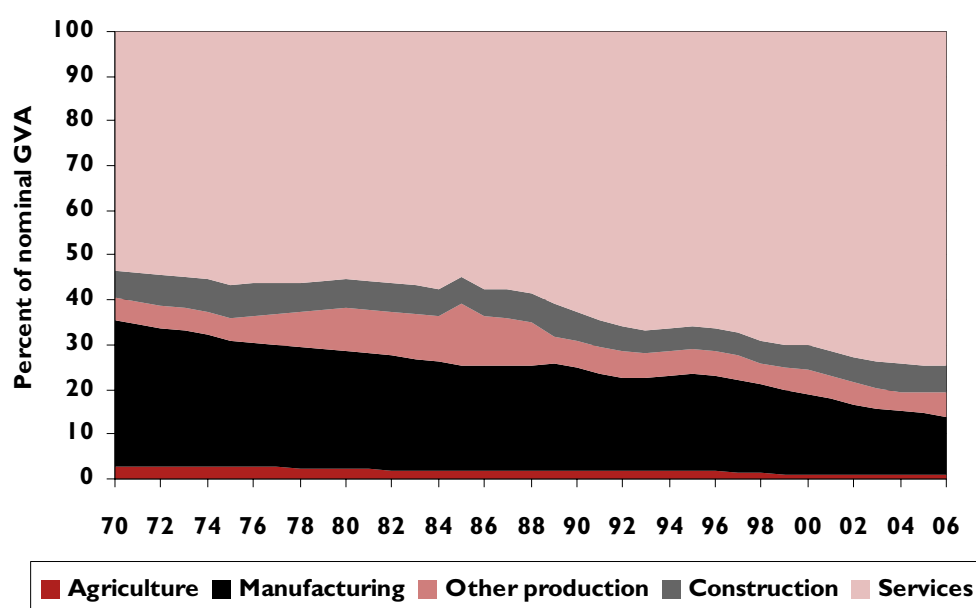
1.30 The next section of this chapter sets out key structural changes that have affected the UK economy over past decades – in particular those driven by globalisation and technological change. The UK has so far adjusted effectively, but as subsequent chapters show, these trends are likely to intensify in the future.

GLOBALISATION, STRUCTURAL CHANGE AND PRODUCTIVITY

1.31 Changes in industrial structure are a constant feature of life in market economies, where changing economic circumstances prompt businesses to adjust their production and households their consumption to take best advantage of new opportunities. In the UK, the post-war economic experience has been one of steady shifts away from agriculture and manufacturing towards services, and towards greater openness in terms of trade, investment and migration.

⁵ The Index of Multiple Deprivation 2007, compiled by the Department of Communities and Local Government, combines a number of indicators, chosen to cover a range of economic, social and housing issues, into a single deprivation score for each small area in England.

⁶ Staff report for the 2006 Article IV consultation, International Monetary Fund, March 2007.

Chart I.10: The changing structure of the UK economy

Source: ONS

Globalisation and technological change

I.32 The past decade has been characterised by two major global economic developments. Technological advances have reduced the cost of undertaking activities at far distance from the ultimate consumer, facilitating the unbundling of production processes and affording firms greater choice in locating their operations, including the ‘offshoring’ of non-core activities abroad. Alongside this has been an acceleration of the integration of the world’s economies, with increasing cross-border flows of goods, services, capital and people. The greater competition brought by these increased flows has afforded great benefits to consumers worldwide. Globalisation has also presented challenges to those industries facing new competitors, and opportunities to those gaining access to new markets. Advanced economies have adapted to these changing circumstances by shifting resources between sectors. As discussed in the next chapter, these trends are likely to intensify in the coming decades.

I.33 International organisations cite the UK’s willingness to seize the opportunities afforded by these developments as crucial to ensuring UK businesses maintain their competitive edge. The OECD concluded that the UK “*has embraced globalisation and been rewarded with a strong growth performance*”,⁷ while the IMF noted that “*openness and flexibility continue to position the United Kingdom to benefit from the opportunities of globalisation and absorb shocks.*”⁸

Structural change**Shifting to services**

I.34 As noted above, the UK economy has seen a significant increase in the share of services in overall activity over recent decades. As shown in Chart 1.10, services

⁷ *Economic Survey of the United Kingdom*, Volume 2007/17, Organisation for Economic Cooperation and Development, September 2007.

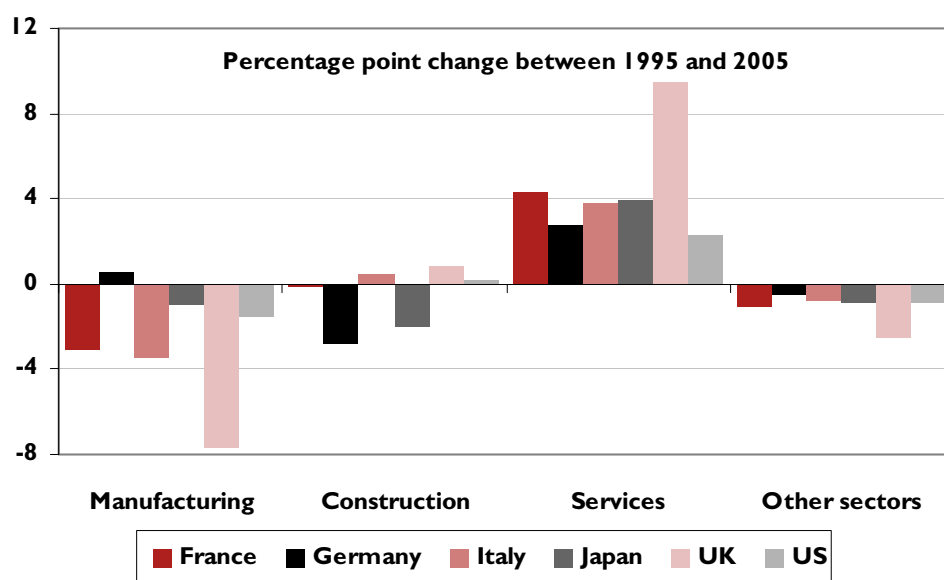
⁸ *Concluding statement of the 2006 Article IV Consultation*, International Monetary Fund, December 2006.

accounted for 75 per cent of output by 2006, an increase of almost 9 percentage points since 1995 and more than 20 percentage points since 1975. Some of this increase in the share of services will have involved little change in actual activity as it will simply reflect contracted out services activity previously carried out in-house by non-services firms.⁹ However, most of the change will have involved real shifts across sectors. In the 1970s and early 1980s, due to structural rigidities in the economy, these shifts commonly involved extended periods of unemployment for those involved.

I.35 The shift to the service sector over the past decade has occurred within an expanding economy, so does not reflect an absolute contraction in manufacturing. Over the past decade, service sector growth has averaged just over 3½ per cent a year compared with around ½ a per cent a year in manufacturing. Unemployment, and particularly long-term unemployment, has fallen significantly over the period, demonstrating the pay-off from improved labour market flexibility, discussed further below.

International comparison **I.36** All developed economies have had to become more services-oriented, but the shift over the past decade has been larger in the UK than in other G7 economies. In part this reflects the UK's comparative advantage in financial and a number of other business services, and the creative industries. Compared with the US, where the share of services in total output is also around 75 per cent, the development of services in the UK has been more recent.

Chart I.11: Composition of gross value added in major advanced economies



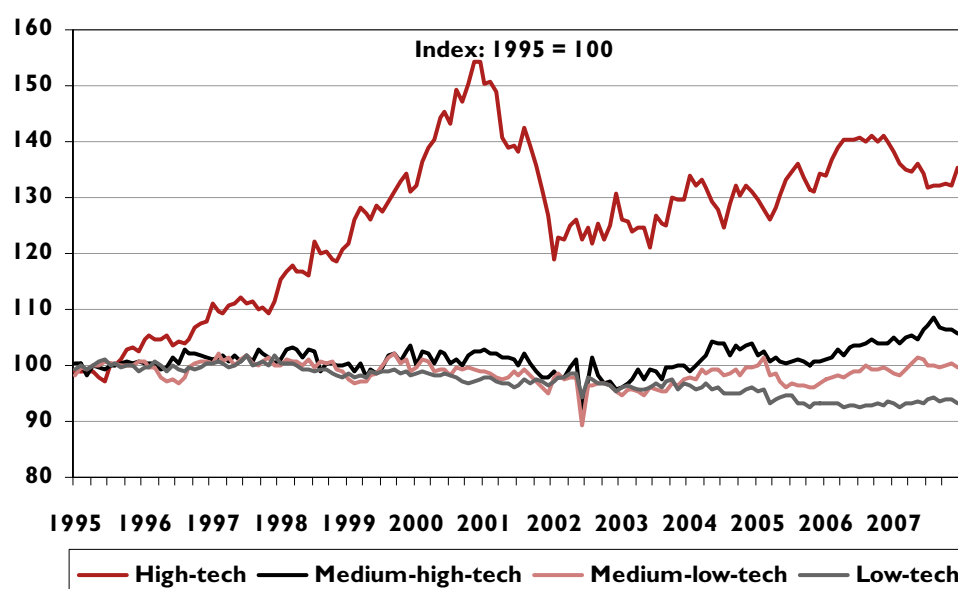
Source: OECD and Treasury calculations

High value-added manufacturing **I.37** While services account for the largest share of UK output, the manufacturing sector continues to play an important role, in particular in the high value-added areas

⁹ The gross value added (GVA) to the economy by a given sector largely comprises the sum of wages and salaries paid to employees and profits earned by companies in that sector, with companies classified to a sector based on their main activity. As a result, the sectoral classification of wages and salaries relating to, for example, catering or cleaning in a factory, would be to the manufacturing sector if carried out in-house, but the service sector if contracted out.

where the UK continues to have a comparative advantage. Chart 1.12 shows how growth in high-technology industries, such as aerospace, pharmaceuticals, and computer manufacturing has outpaced growth in other manufacturing sectors, despite the slowdown in the information and communications technology sectors that followed the bursting of the dotcom bubble in 2000.

Chart 1.12: Manufacturing output in the UK



Source: ONS and Treasury calculations based on OECD classification of manufacturing industries according to technology intensity

International trade, investment and migration

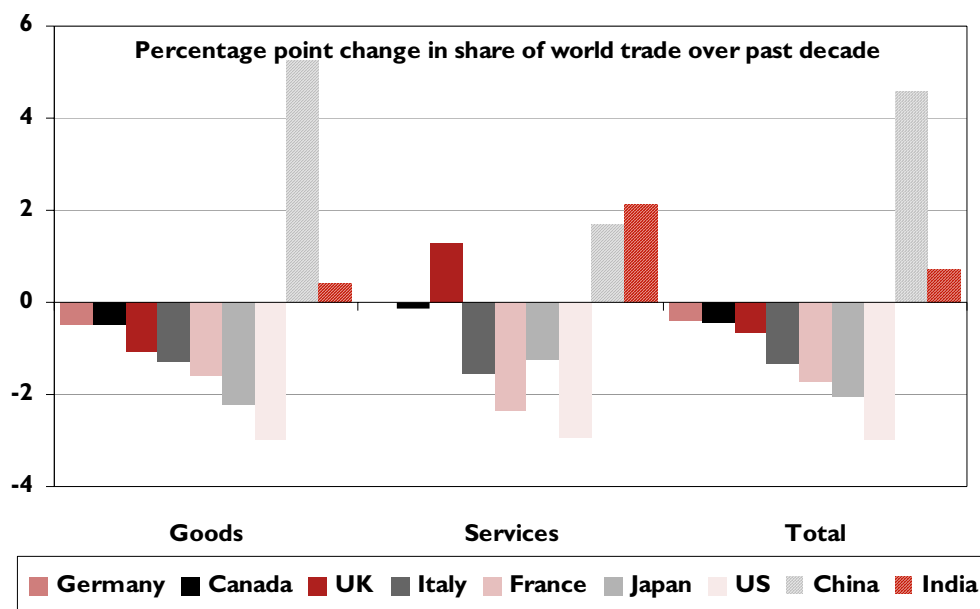
World trade growth **1.38** As trade barriers have been reduced and emerging economies have integrated into the world trading system, trade has consistently grown faster than overall GDP. Since 1950, the world economy has expanded by around 7 times in real terms, compared with a 28-fold increase in trade volumes. Confining the comparison to manufactured goods the disparity is even more dramatic, with world output expanding around 11 times but world goods trade expanding almost 60-fold.

1.39 The integration of emerging markets has been a feature of world trade growth over the past decade. For example, China's goods exports increased by 20 per cent a year on average, increasing its share of world exports by over 5 percentage points to 8 per cent in 2006. Over the same period, India's services exports increased by 26 per cent a year, increasing its share of world exports by more than 2 percentage points to 2¾ per cent. Since 1997, the volume of G7 trade growth has increased by almost 60 per cent.

The UK's comparative advantage in services **1.40** Against this backdrop, the slower growth of G7 countries' trade has naturally led to their share of world trade declining, but the UK economy has responded flexibly to the new challenges and opportunities of world trade. The changing structure of the UK economy has meant that while the UK's share of world goods trade has fallen, it is the only G7 country that has achieved a rising share of global trade in services. Services exports accounted for 38 per cent of UK exports in 2007, compared with 27 per cent in

1975. As a share of GDP, services exports have increased in size from 7 per cent in 1975 to almost 10 per cent last year.

Chart 1.13: The changing structure of world trade



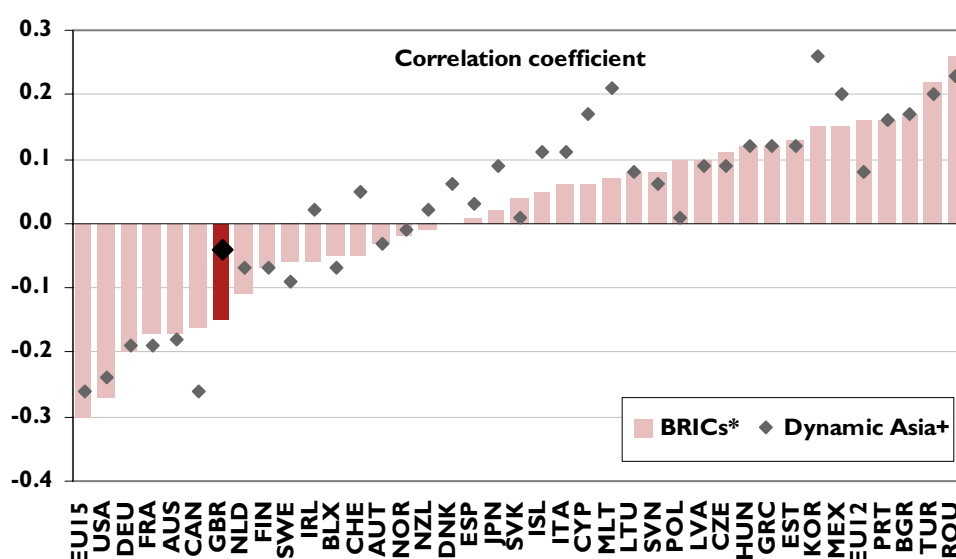
Source: WTO and HM Treasury calculations

1.41 The structure of UK exports has also changed in terms of destination, reflecting strong growth in a number of major emerging economies. The EU remains the UK's key trading partner, accounting for more than half of the value of UK trade, although exports to India and China respectively have grown at an average of 12 and 17 per cent a year so far this decade. Within Europe, UK exports to the central and eastern European countries that joined the EU in 2004, have, as a group, grown at a similar rate as those to China or India, but accounted for a larger share of UK exports in 2006 than either of those economies.

1.42 Analysis by the OECD shows how the UK has largely specialised in areas that complement emerging economies, a factor that has helped the UK economy to benefit from globalisation. Chart 1.14 shows the OECD's estimate of the revealed comparative advantage¹⁰ of advanced economies in relation to major emerging markets. It shows how similar or dissimilar advanced economies' trade structures are to those of a number of fast-growing emerging markets. The UK's position towards the left of the chart shows how the structure of UK exports, like that of most G7 economies, is currently negatively correlated with the emerging markets' export structures. In order to continue benefiting from globalisation, the UK will need to continue to respond flexibly to new challenges and opportunities as producers and service providers in emerging markets move up the value chain.

¹⁰ Since comparative advantage is not directly observable, a country's 'revealed comparative advantage' can be deduced by comparing a country's export patterns with the composition of world exports. If a country's export share of a product or service is significantly above the equivalent world export share, the country has revealed its comparative advantage in producing and exporting that product or service. OECD estimates are taken from Rae, D. and M. Sollie (2006), *Globalisation and the European Union: Which countries are best placed to cope?*, OECD Economics Department Working Paper No. 586.

Chart I.14: Comparison of trade specialisation in OECD economies and major emerging markets



Note: In this chart, a positive correlation coefficient shows that the country on the horizontal axis has a trade structure that is similar to that of the BRICs or Dynamic Asian countries. A negative correlation coefficient shows that the country's trade structure is dissimilar.

* Brazil, Russia, India and China.

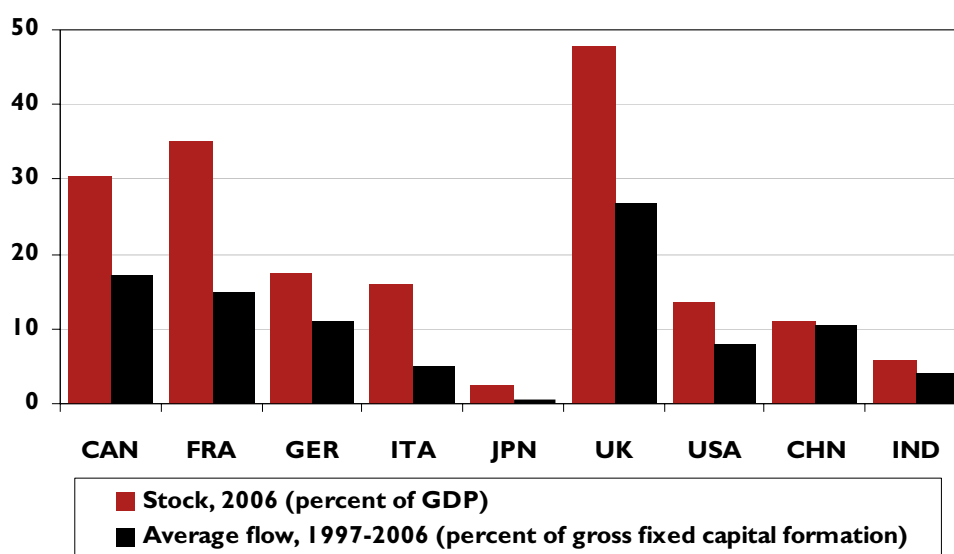
+ China, India, Taiwan, Hong Kong, Indonesia, Malaysia, Philippines, Singapore and Thailand.

Source: OECD Economic Department Working Paper No.586

Foreign direct investment

1.43 The UK has traditionally been one of the key hosts for global business. By maintaining macroeconomic stability, and promoting open and flexible markets, the UK has attracted increasingly large flows of inward investment. As a result, the stock of foreign investment in the UK is much larger in relation to total output than in other G7 economies, and in absolute terms is second only to the US. Studies consistently show that foreign investment enhances productivity growth.¹¹ The Government is committed to ensuring the UK remains an attractive place to do business and has a significant reform agenda to meet this goal, described in Chapter 3.

¹¹ See for example, Pain, N., *Inward investment, technological change and growth: The impact of multinational corporations on the UK economy*, December 2000.

Chart I.15: Inward foreign direct investment

Source: IMF and UNCTAD '2007 World Investment Report'

Current account **1.44** The UK's role as a major global financial centre and host for global business means that the size of its external balance sheet, both in terms of gross assets and liabilities as a percent of GDP, is much larger than other advanced economies. As such, gross income flows are also relatively large. Following recent revisions to estimates of investment income flows in 2007, the UK current account deficit is estimated to have increased from 3¾ per cent of GDP in 2006 to an average of 5 per cent of GDP in the first three quarters of 2007. Changes in the UK's net investment income flows were driven by the appreciation of sterling, and lower rates of return. This highlights how small changes in the structure or valuation of assets and liabilities, or rates of return, can cause relatively large changes in net investment income flows and consequently in the current account balance. External forecasters on average expect the UK current account deficit to narrow in 2008, and again in 2009.

International migration **1.45** Alongside increased flows in international capital and goods there has also been an upturn in international economic migration. Migration deepens the pool of talent that companies can recruit from, increasing labour market flexibility, meeting skills gaps and improving job matching. Over the past decade, and particularly in recent years, the UK economy has benefited from significant net inflows of migrants. Net inward migration increased from around 100,000 a year during the mid-1990s to an average of more than 200,000 a year from 2004 to 2006. The latest projections published by the Office for National Statistics (ONS) assume continued strong inflows of migration, and that around 95 per cent of inward migrants will be of working age. However, these projections are subject to a high level of uncertainty and there is a wide range of possible outcomes, above and below the central projection, as discussed further in the 2008 *Long-term public finance report*.¹²

1.46 Migration contributes significant numbers to the UK workforce, increasing overall growth of the economy. Over the five years to mid-2006, that contribution to

¹² 2008 *Long-term public finance report*, HM Treasury, March 2008.

workforce growth was around 0.5 percentage points a year compared with around 0.2 percentage points a year from natural population change. The Treasury estimates that migration has increased the sustainable rate of growth of the economy by around 15 to 20 per cent, equivalent to around £6 billion in 2006.

1.47 There is evidence of additional economic benefits from migration in terms of enterprise, innovation and investment. Business surveys indicate that employers particularly value migrants because of their skills, and their consequent positive impact on firm-level productivity.

1.48 As highlighted in a recent Cross-Departmental submission to the House of Lords Select Committee on Economic Affairs, *“In the long run, it is likely that the net fiscal contribution of an immigrant will be greater than that of a non-immigrant. For migrants of working age who enter the country this is relatively clear; the UK is receiving the fiscal contribution of their work, without paying for the education and training that enables them to work.”*¹³ The Institute for Public Policy Research found that migration had a positive influence on the public finances, and that the impact was growing.¹⁴ The authors estimated that between 1999-2000 and 2003-04 revenue from migrants grew by 22 per cent in real terms as opposed to 6 per cent for the UK-born population.

Innovation and the knowledge economy

The knowledge economy

1.49 The dynamic changes in the economy discussed above highlight the growing importance of the knowledge economy and of innovation. The Sainsbury review of Science and Innovation¹⁵ estimated that the knowledge-intensive sector as a proportion of GDP had increased by 5 percentage points over the past decade. As set out in *Creative Britain – New Talents for the New Economy*,¹⁶ the creative industries are an increasingly important part of the UK economy, growing by an average of 6 per cent a year between 1997 and 2005, and accounting for more than 7 per cent of GDP. With modern developed economies moving towards knowledge-based activities and shifting to the production of higher value-added manufactured goods and services, the importance of skills and innovation is increasing. There is also a growing consensus that the nature of investment may be changing, with firms spending an increasing amount of money on activities such as research and development, branding, training and organisational change.

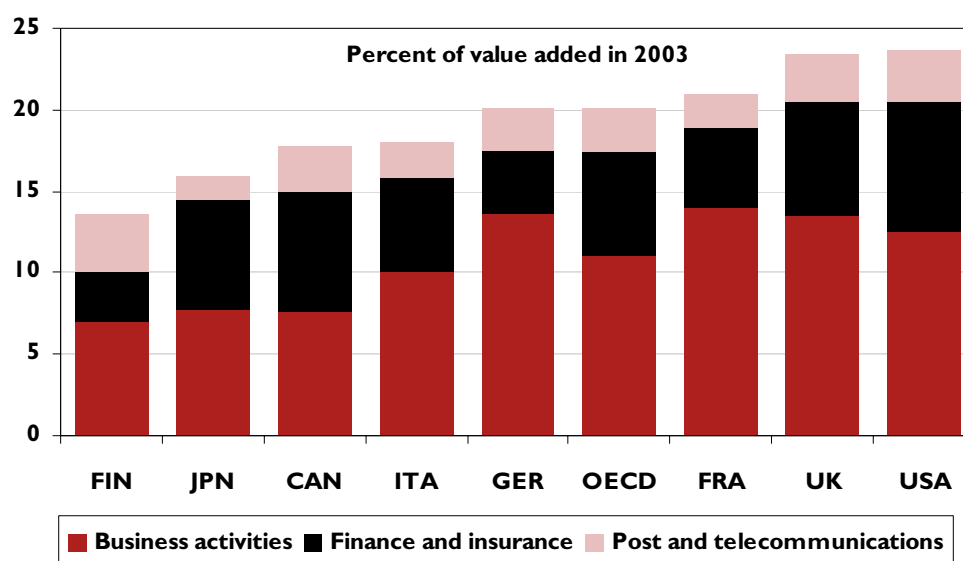
1.50 The expansion of the UK services sector has not arisen solely through domestic demand, but also through a focus on tradable, knowledge-intensive services in which low-wage economies with less skilled labour are less able to compete. Chart 1.16 shows that the UK has a greater proportion of value added arising from knowledge-intensive services (defined by the OECD as ‘high-growth’ services) than any other major OECD economy except the US.

¹³ *The economic and fiscal impact of immigration*, Cross-Departmental submission to the House of Lords Select Committee on Economic Affairs, Home Office in partnership with the Department of Work and Pensions, October 2007.

¹⁴ Srisandarajah, D., Cooley, L. and Reed, H., *Paying their way: the fiscal contribution of immigrants in the UK*, Institute of Public Policy Research, 2005.

¹⁵ Lord Sainsbury of Turville, *The race to the top: A review of Government’s science and technology policies*, October 2007.

¹⁶ *Creative Britain – New Talents for the New Economy*, BERR, DCMS and DIUS, 2008.

Chart 1.16: Value-added by the knowledge-intensive services sectors

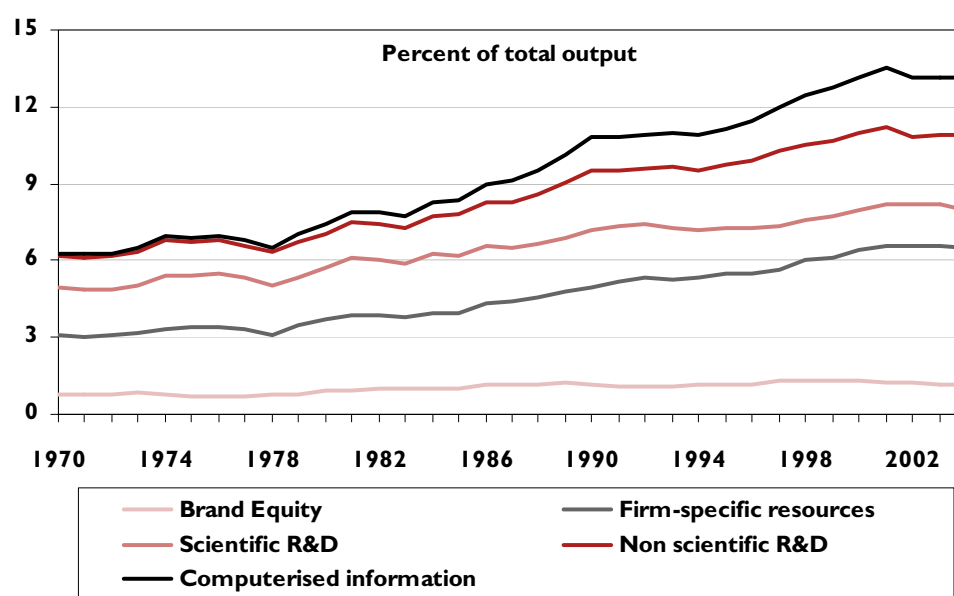
Source: OECD

Intangible investment

1.51 A recent Treasury Economic Working Paper¹⁷ explored the impact of the knowledge economy on recent UK economic performance by considering the consequences for a range of macroeconomic variables, including productivity, of treating spending on knowledge as investment. The results suggest that conventional measures of investment and productivity growth may not be capturing the dynamic changes in the economy that are taking place. Chart 1.17 shows the growing importance of intangible investment in the market sector of the UK economy, rising from around 6 per cent of output in the 1970s to 13 per cent in 2004, during which time more than £130 billion was invested in intangibles. This was around 1.2 times the amount spent on tangible investment, up from a ratio of 0.4 in 1970. Comparable estimates for the US¹⁸ show that the share of intangible investment in output has been similar to that of the UK in recent years.

¹⁷ *Intangible investment and Britain's productivity: Treasury Economic Working Paper No. 1*, HM Treasury, October 2007.

¹⁸ Corrado, C. Hulten, C. and D. Sichel (2006), *Intangible capital and economic growth*, NBER Working Paper No. 11948.

Chart I.17: Intangible investment in the market sector of the UK economy

Source: Treasury Economic Working Paper No.1, October 2007

R&D as a basis for technological change

I.52 A significant driver of innovation and technological change is the research that takes place within firms and universities. The Government's strategy has been to reverse the long-term under-investment in the UK's science base, support knowledge transfer between institutions and firms, and address market failures in business investment and R&D. Market failures can discourage firms from innovating and so the Government has introduced policies such as R&D Tax Credits and protections for intellectual property. Good progress has already been made on this agenda, for example knowledge transfer activity from UK universities has increased significantly since 2000.

I.53 R&D is just one element of the broader innovation undertaken by firms. The UK innovation survey shows that around one third of business innovation spending is R&D.¹⁹ Chapter 3 outlines further measures to support innovation across all sectors of the economy.

Environmental goods and services

I.54 Innovation is playing, and will continue to play, a crucial role in providing solutions to some of the challenges presented by climate change, as discussed in the following chapters. The UK is well placed to take the lead in that process, with an environmental goods and services industry that has grown from £16 billion, 170,000 jobs and 7,000 companies in 2001, to £25 billion, 400,000 jobs and 17,000 companies in 2004.²⁰ As the sector continues to expand, the UK's offshore wind, tidal and wave resources represent a significant natural comparative advantage, while the UK also has a foundation of expertise in the waste management and water treatment sectors from which to build. The UK is already emerging as a centre for environmental consultancy and financial services, including carbon trading.

¹⁹ *Innovation in the UK: Indicators and insights*, DTI Occasional Paper No.6, July 2006.

²⁰ *Bridging the gap between environmental necessity and economic opportunity*, DTI in association with Defra, November 2006.

Productivity

I.55 Productivity growth is an important indicator of economic performance. It is the key determinant of long-run growth, and together with employment growth leads to higher prosperity. As set out in *Productivity in the UK 7: Securing long-term prosperity*²¹ the UK has had a long-standing and well-documented productivity gap with the US, France and Germany. Crafts²² estimates that while the UK had one of the highest GDP per hour worked levels in the world at the turn of the 20th century, by 1950, it was ranked 5th (behind both the US and Australia). By 1973, the UK had slipped to 11th, falling behind most European countries.

Recent progress **I.56** The UK has made some progress over the past decade in raising the rate of productivity growth and narrowing the gap with comparator countries. Output per hour productivity growth in the current economic cycle averaged 2.4 per cent a year, compared with 1.9 per cent over the previous two cycles.

Table I.1: Trend output per hour worked¹

	Underlying ²	Actual
1978Q1-1986Q2	1.6	1.9
1986Q2-1997H1	2.1	1.9
1997H1-2006H2 ³	2.5	2.4

¹ The decomposition of HM Treasury's trend growth estimates and projections into labour input make allowances for employment and hours worked lagging output as explained in Table B2 of Budget 2008.

² Underlying productivity refers to the productivity rate adjusted for employment rate growth. New workers are estimated to be 50 per cent as productive as average workers, an assumption informed by econometric evidence and LFS data on entry wages.

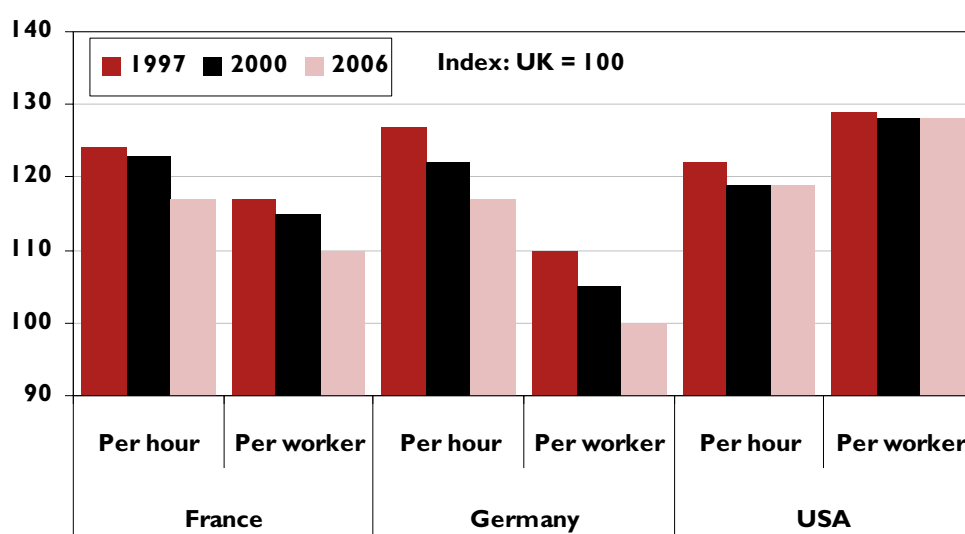
³ Estimates based on the assumption that the economy passed upwards through trend in 2006H2.

I.57 The historic productivity gap with comparator countries has also been reduced. On comparisons of output per hour worked, since 1997 the UK has narrowed the gap with France (from 24 index points to 17) and Germany (from 27 index points to 17), and is the only G7 country to keep pace with the US's impressive productivity performance (22 index points to 19). While a number of factors are likely to have contributed to this, including the UK's policy of openness to trade and investment, the economy's resilience and the maintenance of macroeconomic stability, improved performance has coincided with significant reform structured around the Government's productivity framework.

²¹ *Productivity in the UK 7: Securing long-term prosperity*, HM Treasury, November 2007.

²² Crafts, N. (1997) *Some dimensions of the 'quality of life' during the British Industrial Revolution*, The Economic History Review.

Chart I.18: Output per hour worked and per worker relative to the UK



Source: ONS

1.58 There can be trade-offs between productivity growth and employment growth because new workers are typically less productive until they develop new skills. However, since the mid-1990s improvements in productivity growth have been accompanied by strong growth in employment, and, as outlined above, the UK has made progress relative to comparator countries both in terms of productivity, and in terms of employment. A recent cross-country analysis by the Centre for Economic Policy Research²³ found evidence that in the period from 1995, the UK and Ireland had achieved relatively strong productivity performance alongside employment growth, whereas some other European countries, notably Continental and Mediterranean economies, experienced a negative trade-off between employment growth and productivity.

1.59 Despite the progress made in increasing the productivity growth rate and reducing the productivity gap, there remains more to be done. A gap remains with a number of major comparator economies and it will be crucial that the UK continues to narrow the gap as the global economy becomes more competitive. *Productivity in the UK 7* set out a number of factors that may explain the remaining gap: the different distribution of economic activity between countries may have implications for overall productivity; limitations in comparability and coverage of data means that UK productivity performance may be under-measured; and some structural reforms may take time to feed through to aggregate productivity. Crucially, there are also likely to be specific market and regulatory failures that result in the UK having a lower level of productivity than other countries. The key microeconomic factors that drive productivity performance are discussed further in Part II of this chapter on product, labour and capital markets.

²³ Dew-Becker, I. & Gordon, R., *The role of labour market changes in the slowdown of European productivity growth*, Centre for Economic Policy Research, February 2008.

Challenges ahead

1.60 The UK will need to continue to adjust to changing economic circumstances, so that all countries and regions are equipped to succeed in the global economy. As set out in the next chapter, key structural changes ahead are likely to come from continued globalisation and technological change, and from the transition to a low-carbon economy.

1.61 This means it will be important to ensure the UK business environment remains attractive and open to trade and investment, to improve skill levels to create a more flexible, productive and innovative workforce, and to ensure that the benefits of inward migration are realised. The UK economy will also need to adjust effectively to a low-carbon environment. This will require accelerated technological innovation and the deployment of new clean technologies and lowering the barriers to behavioural change.

PART II – FLEXIBLE MARKETS

1.62 A key factor in the UK's improved resilience, effective structural change and improving productivity performance described in Part I, has been the flexibility of product, labour and capital markets. The following sections look at developments in each market in more detail.

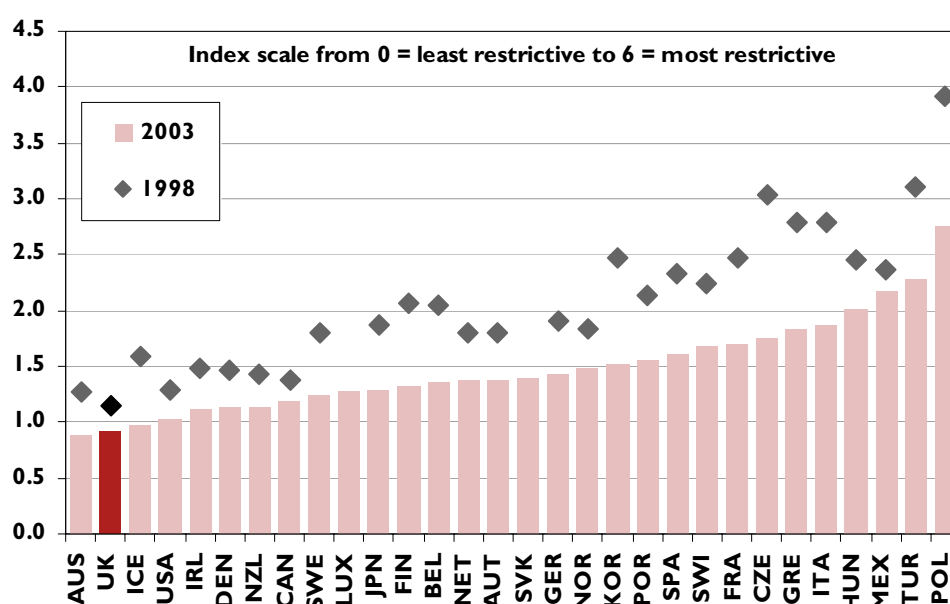
LIGHTLY-REGULATED, COMPETITIVE PRODUCT MARKETS

1.63 Competitive product markets create flexibility and drive productivity growth through a number of channels. In a competitive market, customers are able to choose freely what, and from whom, they purchase. To stay ahead of their competitors firms strive to innovate and develop new products and services so that they can compete on quality and price, and to look for new markets to generate profits.

1.64 A competitive market with low barriers to entry gives entrepreneurs the opportunity to set up business and succeed in new markets. In competitive markets, the most productive, and therefore most profitable, firms are able to increase market share; the least productive lose market share or exit the market altogether. These mechanisms increase the flexibility of the economy and the productivity of individual firms.

International comparisons **1.65** The OECD produces an indicator of the competitive impact of product market regulation. The UK ranks highly among OECD countries on this measure, with the regulatory environment found to be less restrictive than those in all countries other than Australia. The US, Germany and France rank 4th, 18th and 24th respectively.

Chart I.19: Product market regulation in OECD economies



Source: OECD

Reforms to bolster competition and reduce regulation

A world-class competition regime

1.66 The Government has made a number of reforms to strengthen the UK competition regime. The 1998 Competition Act made fundamental reforms to the competition regime, introducing prohibitions of anti-competitive behaviour and abuse of dominant position, and tough new powers for the Office of Fair Trading (OFT). The 2002 Enterprise Act built on these reforms by increasing the independence of the competition authorities and giving the OFT new and wider powers to promote consumer interests. The Government has also reformed the independent economic regulators that protect consumers against potential abuse of monopoly power in sectors where there are significant barriers to entry, including the utilities sectors.

1.67 The UK's competition regime generally ranks highly in international comparisons. KPMG's latest peer review of competition policy regimes in major economies²⁴ ranked the UK third overall. The competition regime has achieved significant consumer savings. Between 2000 and 2006-07, the competition authorities are estimated to have generated direct consumer savings of at least £870 million.²⁵ Recent work commissioned by the OFT suggests that competition enforcement action also has a significant deterrent effect, producing additional benefits to consumers that may be worth at least a further £600 million a year.²⁶

The role of regulation

1.68 Regulation is a key determinant of competitiveness, impacting on a number of the drivers of productivity, particularly enterprise and competition. Studies consistently find linkages between regulation and economic performance.²⁷ Following the Hampton review, *Reducing administrative burdens*,²⁸ in 2005, the Government has been undertaking a radical reform of Britain's regulatory system aimed at delivering genuine reductions in the burden on business while continuing to deliver necessary regulatory outcomes. This includes reducing administrative burdens by 25 per cent by 2010. There is also an important role for forward-looking and clearly communicated regulation in stimulating innovation, as has been demonstrated in the UK's environmental goods and services industry.

The EU Single Market and trade with Europe

The benefits of EU membership

1.69 Europe is the largest market in the world accounting for 20 per cent of world trade. Membership of the EU provides significant benefits for the UK economy. The share of the UK's trade with the EU has risen from just over 40 per cent in 1973 when Britain joined the Union, to around 55 per cent today. The Government estimates that around 3½ million jobs in the UK may be linked, directly or indirectly, to the export of goods and services to the EU.

1.70 EU membership has been beneficial in terms of attracting FDI to the UK, and has enabled important investment opportunities in EU countries. The UK attracted over a quarter of total EU FDI inflows in 2006, while the EU received more than half the flow of outward FDI from the UK and generated around a third of the UK's net earnings

²⁴ Peer review of competition policy, KPMG report to the DTI, June 2007.

²⁵ *Positive impact An initial evaluation of the effect of the competition enforcement work conducted by the OFT*, Office of Fair Trading, December 2005 and *Approach to calculating direct benefits to consumers*, Office of Fair Trading, September 2007.

²⁶ *The deterrent effect of competition enforcement by the OFT: A report prepared for the OFT by Deloitte*, Office of Fair Trading, November 2007.

²⁷ For example, comparing different degrees of regulation between the 1980s and 1990s, Nicoletti & Scarpetta (2003) find that product market reforms are positively correlated with productivity growth.

²⁸ Hampton, P., *Reducing administrative burdens: effective inspection and enforcement*, HM Treasury, March 2005.

on overseas investments. In addition, integration and openness have underpinned more competitive European markets that have encouraged efficiency, enterprise and innovation in Member States, including the UK

The Single Market **1.71** The Single Market has been one of the EU's defining achievements, delivering jobs, growth and greater choice and prosperity for Europe's citizens and businesses. By removing cross-border barriers to the free movement of goods, services, capital and people, and strengthening competition, the Single Market has helped deliver considerable economic benefits. The European Commission estimates these have amounted to around €225 billion in terms of additional national income across Europe in 2006, the creation of an additional 2¾ million jobs, and played a crucial role in the quadrupling of FDI in the first ten years.²⁹

The EU regulatory and competition regimes **1.72** The EU's regulatory and competition regimes also have a significant influence on the functioning, competitiveness and productivity of UK markets. The Government has supported the committed action in recent years by the European Commission to embed better regulation principles into EU policymaking.³⁰ The Government has also supported the significant progress made by the Commission in adopting a more proactive approach to exercising its competition powers. The competition cases that have emerged from the Commission's sector enquiries provide a good example of the reform that can be achieved using non-legislative actions. This progress must continue and there is still more to be done.

Challenges ahead

1.73 Maintaining lightly regulated, competitive product markets is crucial to the UK's future success in meeting the challenge of technological change in a global market and ensuring entrepreneurs are free to find innovative solutions to the environmental challenge of the coming decade. The Government will need to continue to ensure the UK competition regime remains strong and establish a modern risk-based approach to regulation. At the EU level, it will be important to ensure the competition regime is robust, and prioritise reform in those areas where economic benefits are greatest, in particular on energy and telecoms liberalisation, implementing the Services Directive and establishing a modern risk-based approach to regulation. The UK through its economic links would benefit from more open and competitive EU product markets that are supported by appropriate action at the EU and national level.

A FLEXIBLE, RESILIENT LABOUR MARKET

1.74 The Government's goal is employment opportunity for all. A flexible labour market is a vital component of a stable, resilient economy, allowing firms and households to adjust smoothly to changing economic circumstances, while maintaining high levels of employment and low levels of unemployment.³¹ Strong labour market performance over the past decade has helped to deliver employment opportunity for a greater proportion of the UK population, with many of the previously most disadvantaged groups and regions demonstrating the most significant improvements.

²⁹ European Commission (2007) *Step towards deeper economic integration: The internal market of the 21st century* and (2003) *The macroeconomic effects of the Single Market programme after 10 years*.

³⁰ These have included screening of all pending legislation, the use of impact assessments, simplifying the *acquis communautaire*, and measuring and reducing administrative burdens.

³¹ For further detail on labour market flexibility in the UK see *EMU and labour market flexibility*, HM Treasury, 2003.

Performance of the UK labour market

High and stable employment

1.75 As set out at the start of this chapter, unemployment in the UK increased sharply during the recessions of the early 1980s and early 1990s, rising to more than 3 million on both occasions before starting to decline in the mid-1990s. Over the past decade, employment in the UK has increased by nearly 3 million to almost 29½ million, while unemployment has declined by around 400,000. The employment rate has risen by 2 percentage points over the past decade to 74¾ per cent among people of working age and 60¼ per cent among the entire adult population. Fluctuations in both measures have been considerably smaller than during the previous two decades, providing further evidence of improved macroeconomic stability. Long-term structural reforms aimed at increasing labour market flexibility have contributed to this improved economic performance. The Department of Business, Enterprise and Regulatory Reform's recently developed Indicator of Labour Market Adaptability³² shows it to have increased through the 1990s and stabilised at a high level thereafter.

1.76 The flexibility of the UK labour market has enabled the economy to absorb the strong net inflows of migrant labour described above. Inflows of migrants into the UK have increased in recent years, though the number of migrants joining the workforce in any quarter is much smaller than the number of available jobs. Migrants have therefore been able to make significant contributions to employment and economic growth without harming the ability of British workers to find work.³³ Indeed, working-age employment rates of both British and foreign-born workers have increased since 1997. The employment rate for the British-born population has increased from 74.5 per cent to 76.8 per cent now, having stabilised at a high rate in recent years. The employment rate for the foreign-born population has increased from 63.8 per cent in 1997 to 68.8 per cent now.

International comparisons

1.77 The UK's labour market has performed well relative to other advanced economies. In part this has reflected the general improvement in macroeconomic stability in the UK, but empirical analysis carried out by the OECD³⁴ suggests the impact of policy reforms over the past 25 years has also been significant. The study estimated that policy reforms accounted for a reduction of around 6 percentage points in the UK's unemployment rate. The study also found that product market regulation in the UK was more conducive to low unemployment than in any other OECD country. The World Economic Forum ranks the UK above all the G7 economies apart from the US in terms of labour market efficiency and technological readiness.³⁵

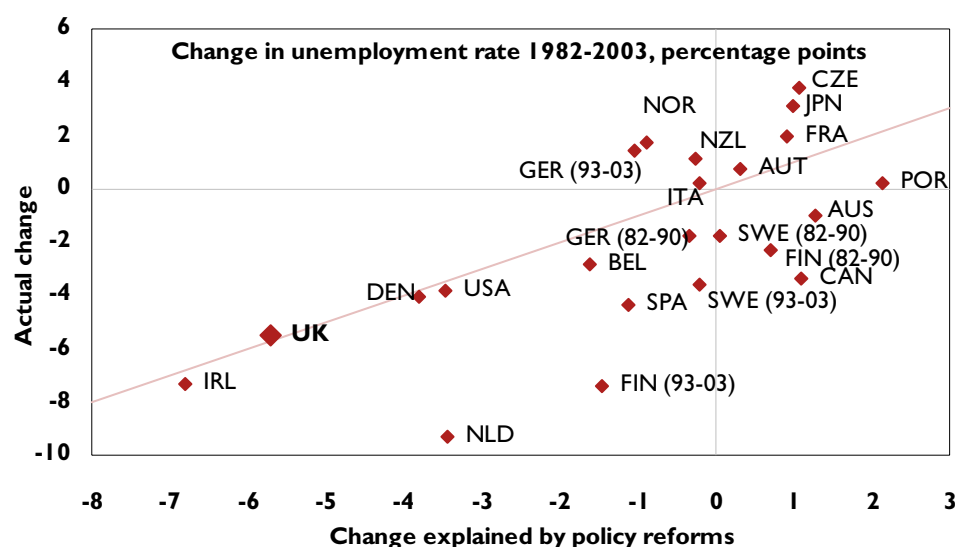
³² This is a summary indicator of 24 measures relating to labour market flexibility, divided into three domains, relating to flexibility in production, labour supply and labour costs. For further information, see Tinsley D., and Monastiriotis V. (2007) *Developing an Index of Labour Market Adaptability for the UK*, Employment Relations Research Series No.85, Department of Business, Enterprise and Regulatory Reform, November 2007.

³³ Research by academics and international bodies have not found any evidence that migration has negatively affected national unemployment or pay growth. For example, Blanchflower (2007) stated that: "The empirical literature from around the world suggests little or no evidence that immigrants have had a major impact on native labour market outcomes such as wages and unemployment. Recent work by a number of other authors for the UK is also consistent with this view." A full description of the effect of immigration on the economy and the labour markets can be found in the Government submission to the House of Lords Economic Affairs Select Committee, *Economic and fiscal impact of immigration*, Home Office and DWP, October 2007.

³⁴ Bassanini, A. and R. Duval "Employment patterns in OECD countries: Reassessing the role of policies and institutions" (2006), cited in OECD Employment Outlook, 2006.

³⁵ *The Global Competitiveness Report 2007-2008*, World Economic Forum, 2007.

Chart 1.20: Policy reform and unemployment in OECD countries

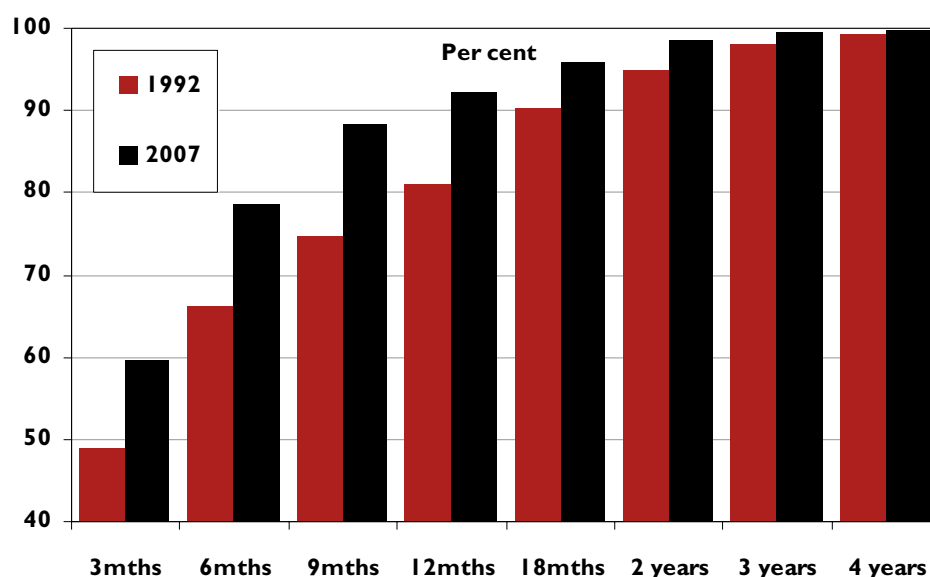


Source: OECD Employment Outlook, 2006

Evidence of a flexible labour market

1.78 The UK's flexible labour market is characterised by high flows between jobs, and between benefits and work. In recent years, there have typically been more than 600,000 job vacancies in the economy, and each quarter around 1.5 million people, over 5 per cent of the UK's workforce, start a new job. Typically, a little over half of those people will move into work from either inactivity or unemployment, with the remainder moving from one job to another. Most of those leaving a job do so voluntarily, or due to the end of fixed-term contracts. Only a very small proportion of people, around 10 per cent, leave their job because of redundancy, and an even smaller proportion due to compulsory redundancy.

1.79 Jobcentre Plus provides a wide range of support for those who are unemployed, aimed at enabling a swift return to work, preventing long-term detachment from the labour market, and improving the efficiency of the labour market. Jobseeker's Allowance (JSA) is available for people who become unemployed but remain active in the labour market. It is designed to provide financial support in a way that encourages a quick return to work and has been a critical factor in maintaining the high flow off benefits. As Chart 1.21 shows, around 60 per cent of new claimants move off benefit within 3 months, and 80 per cent within 6 months.

Chart 1.21: Rate at which claimants move off Jobseeker's Allowance

Source: DWP and Treasury calculations

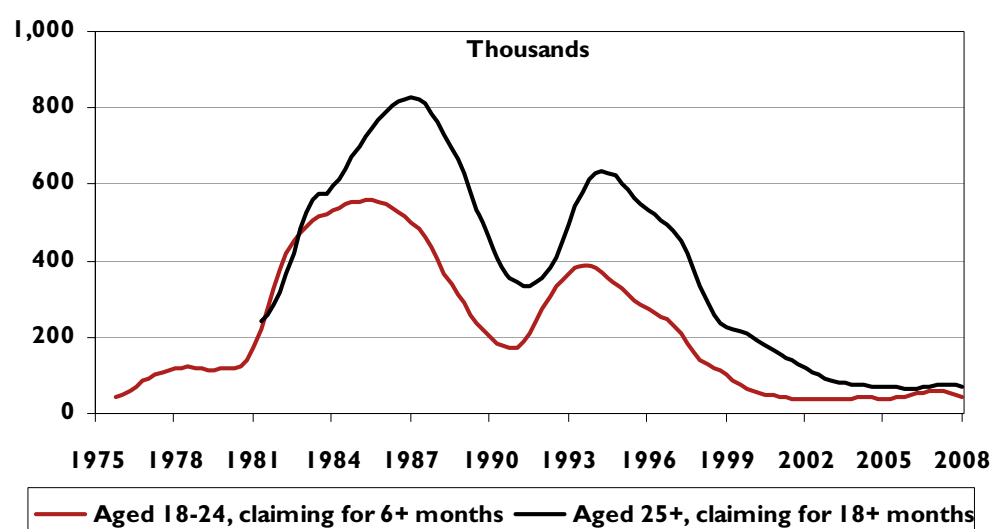
Tackling long-term unemployment and inactivity

1.80 Reductions in long-term unemployment and economic inactivity have been key contributors to growth of the labour supply over the past decade, playing an important role in promoting growth and extending employment opportunity to a greater proportion of the population.

Lower long-term unemployment

1.81 The Government's New Deal programmes have been successful in extending employment opportunity to the long-term unemployed. Over the past decade, the New Deal has found over 2 million jobs for participants, and long-term unemployment has fallen significantly.³⁶ In Budget 2007, the Government introduced Local Employment Partnerships to help to support long-term benefit claimants into work through partnerships between Jobcentre Plus and employers at the local level.

³⁶ Independent evaluations have repeatedly highlighted the New Deal's success and cost effectiveness in getting people into jobs. For example, The National Institute of Economic and Social Research concluded in 2003 that the level of long-term unemployment would have been twice as high without the New Deal for Young People, and that the economy as a whole was better off by £500 million as a result. More recent evidence suggests the need to increase the focus on sustaining jobs, for example, *Sustainable employment: supporting people to stay in work and advance*, National Audit Office, November 2007.

Chart I.22: Long-term unemployment

Source: DWP and ONS

Reducing inactivity

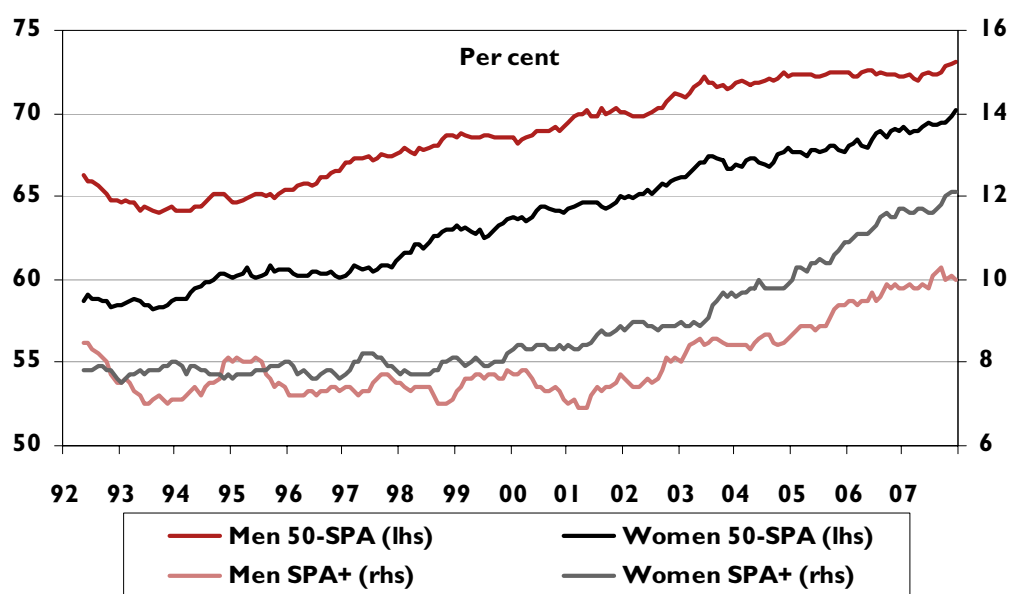
I.82 The overall inactivity rate has declined slightly in recent years. There has been a fall in those inactive due to long-term sickness or looking after the home or family, partially offset by an increase in student numbers. Excluding students, the inactivity rate has fallen to its lowest rate since detailed Labour Force Survey data were first compiled in 1993. With employment rates generally higher among those with higher levels of education, the increase in student numbers over recent years should play a positive role in sustaining high levels of employment in the years ahead.

People with health conditions and disabilities

I.83 During the 1980s and early 1990s, the welfare system did little to support people with a health condition or disability to get back to work. As a result, many drifted onto long-term incapacity benefits (IB) with the number of claimants more than trebling between 1980 and 1995. Only around half of the 5¾ million people of working age with a disability are in employment. The rising trend in the number of claimants has gradually been halted and reversed, with annual inflows to IB down by a third since the mid-1990s.

Lone parents and older workers

I.84 The Government has also been successful in reaching other groups that have historically had lower levels of labour market participation. The New Deal for Lone Parents has so far helped over half a million lone parents into work. There have also been significant increases in the employment rates of those aged 50 and over. Since 1992, the employment rate for men and women aged between 50 and State Pension Age (SPA) has risen by more than 6 and 10 percentage points respectively. Since 2001, employment rates above SPA have risen by 3 percentage points for men and almost 4 percentage points for women.

Chart I.23: Rising employment rates among older people

Working Tax Credit **I.85** The Government introduced the Working Tax Credit in 2003 as part of the new Tax Credit system. Designed to top up wages for those in low-paid jobs, WTC works in tandem with the National Minimum Wage to ensure a guaranteed minimum income from work for all those eligible. A Treasury Economic Working Paper published alongside Budget 2008³⁷ explores the effectiveness of the 2003 WTC for childless people. As set out in Box 1.2, it finds evidence of improved labour market performance among those targeted by the WTC.

³⁷ Working Tax Credit and labour supply: Treasury Economic Working Paper No.3, HM Treasury, March 2008.

Box 1.2: Working Tax Credit and labour supply

Working Tax Credit and labour supply: Treasury Economic Working Paper No.3 measures the employment effect of the 2003 Working Tax Credit (WTC) for childless people. This was the first time that a national programme of in-work support for people without children had been attempted in the UK. Previous in-work financial support policies had been aimed at families with children, as part of the Government's attempts to tackle child poverty. The WTC for childless people was aimed at tackling poverty and worklessness by providing financial incentives to enter employment.

The paper analyses the impact of the WTC on the labour supply of childless individuals by exploiting the age-based eligibility requirement, as entitlement begins when claimants are 25 years old. Two estimation strategies are used to identify the effect of policy on the eligible group. First, the paper uses the introduction of the WTC to compare the outcomes of the target group (those over 25) with those for a group that is not affected by the policy (those under 25). This empirical method is known as difference-in-difference estimation, and it can isolate the effect of the WTC alone. Using this approach, it is found that the introduction of the policy had a small positive effect on the number of people employed. The WTC is estimated to have increased the employment probability of eligible people by 2.4 percentage points, with no evidence of any change in total hours worked among those eligible for the policy.

Second, a 'regression discontinuity approach' is taken to measure the net effect of all changes in financial support eligibility at age 25, including WTC. Prior to introduction of the new policy, it is found that the wider policy environment induced a substantial decline in employment probability, of around 3.2 percentage points, when people became 25. The introduction of the WTC ameliorates this pre-existing deterioration in work incentives at age 25, with no evidence of a sudden drop in employment probability found following the introduction of the new policy.

This evaluation shows that the policy was effective in encouraging people into work. As such, the WTC for childless people points the way to a sustainable strategy for tackling worklessness and poverty by creating cost-effective work incentives, without the need for substantially higher minimum wages.

The UK's skills profile

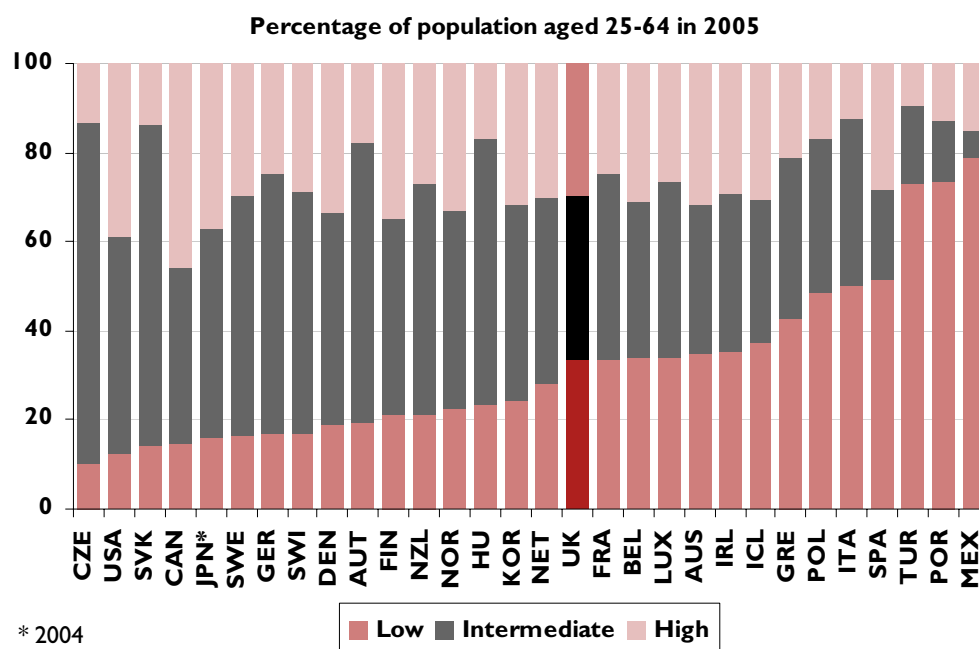
1.86 While the evidence shows the UK has made good progress in raising employment and participation rates, its labour force skills lag behind other developed economies. The UK benefits from a strong higher education sector with some world-class universities, and attracts investment from firms in knowledge-intensive industries. However, the Leitch Review of Skills³⁸ found that, although the UK skills profile has improved over the past decade, the UK does not have a world-class skills base. In particular, as set out in Chart 1.24, the UK has a relatively large proportion of the workforce with low skills.

1.87 Relatively low skills have been a contributor to the UK's lower productivity levels, as well as having wider impacts on social welfare and inequality. Globalisation and technological change are increasing pressure on the low-skilled, and growth in higher-skilled activities and competition from emerging markets are set to continue. In this respect, the OECD has noted that "*Despite offshoring, employment has grown steadily and unemployment is low. But the labour market position of many low-skilled*

³⁸ Leitch Review of Skills: *Prosperity for all in the global economy – world class skills*, December 2006.

workers needs to be further improved”.³⁹ Continuing to improve the UK skills performance in science, technology and numeracy will be vital in developing a future high skilled, specialist workforce.

Chart I.24: Skills levels in OECD countries in 2005



Source: OECD Education at a glance 2007

Challenges ahead

1.88 The Government is committed to ensuring the UK has a strong, flexible, open and highly-skilled labour market. Maintaining the strong labour market performance represents a key challenge in the decade to come. Raising participation, and the continued promotion of an open and flexible labour market, will be crucial to successfully addressing the demographic challenges set out in Chapter 2. The UK faces significant challenges to improve its profile of economically useful skills, and to ensure that all its countries and regions are equipped to continue to benefit from globalisation and technological change.

OPEN, INNOVATIVE CAPITAL MARKETS

1.89 Capital markets can enhance economic resilience by allowing an economy to adjust flexibly to changes in the global economy. Capital markets and the financial system match the resources of savers to the needs of borrowers, allowing businesses, households and government to finance investment and savers to manage their finances over their lifetime. They also allow firms and individuals to manage their exposure to risk through insurance and other financial products.

³⁹ Policy Brief: Economic Survey of the United Kingdom, 2007, Organisation for Economic Cooperation and Development, September 2007.

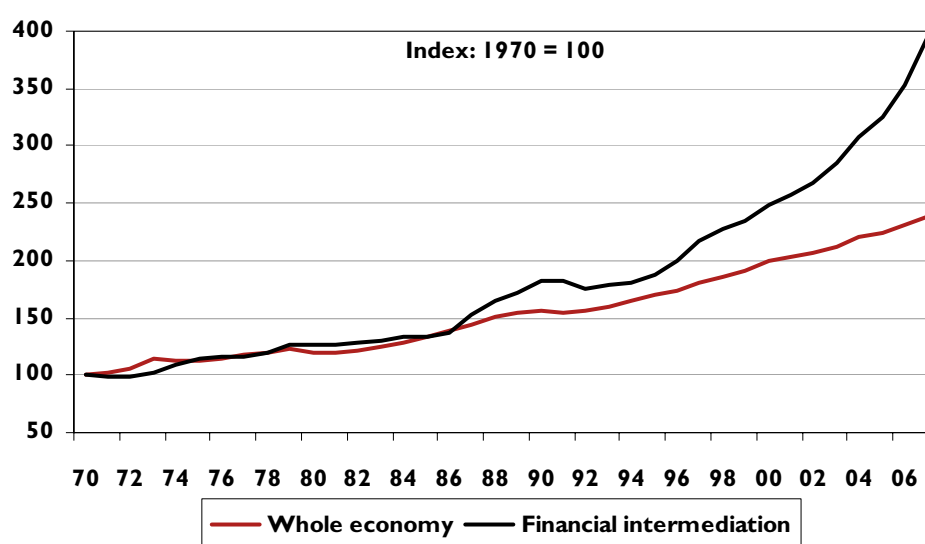
The benefits of open capital markets **1.90** The matching of savers' resources to investors' needs promotes economic efficiency by channelling money to its most productive use. Well functioning capital markets therefore promote the efficient allocations of resources across the economy, facilitating the structural change that, as set out above, has allowed the UK economy to benefit from the opportunities of globalisation. The internationalisation of capital markets has brought considerable benefits, by allowing increased access to finance, wider diversification of risk and more efficient allocation of capital within and between countries.

1.91 While open and flexible capital markets bring a wide range of economic benefits, Chapter 2 discusses how the interconnectedness of these markets means that developments in one area of the world can be quickly transmitted elsewhere. The ongoing disruption to global financial markets has shown how innovative new types of assets can spread rapidly across the global financial system to meet the demands of investors, but equally that unexpected problems with such assets can spread instability across global financial markets.

Benefits for the UK economy

1.92 The UK's comparative advantage in financial services makes a significant contribution to the economy, generating close to 10 per cent of output and directly accounting for over 1 million jobs. Net exports of financial services excluding insurance increased from £3bn in 1991 to £23bn in 2006 and are now the UK's largest service export. Since 1970, the UK economy has expanded 130 per cent in real terms, while output of the financial intermediation sector has almost trebled.

Chart 1.25: Financial sector and whole economy output growth

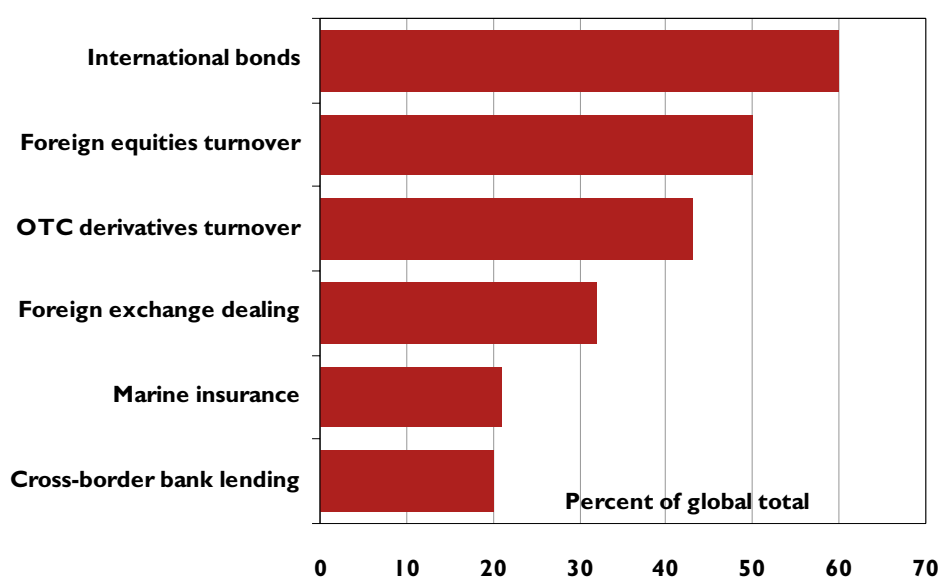


Source: ONS

The world's leading international financial centre **1.93** Market participants cite the quality of the regulatory environment in the UK as a key contributor to the financial sector's performance. This has helped the UK to maintain its position as the world's leading centre for financial services and international banking. According to figures compiled by the Bank of International

Settlements, the external positions of banks based in the UK amount to almost \$7 trillion, twice as large as that of banks based in the US and accounting for more than a fifth of global cross-border banking. The UK was home to 50 per cent of global foreign equities turnover in 2006, up from 43 per cent in 2005, and 43 per cent of over-the-counter (OTC) derivative trading. London is home to more foreign banks than New York, Paris or Frankfurt.

Chart I.26: UK share of international financial markets in 2006



Source: International Financial Services, London

I.94 Recent work by the IMF⁴⁰ has investigated how differences in financial system structure may affect the behaviour of households and firms over the economic cycle. The IMF characterise the financial systems of the UK and US as having arms-length capital markets, in contrast to countries such as France and Germany where capital markets rely more on relationships between borrowers and lenders. The IMF analysis shows that arms-length capital markets give households greater access to finance allowing them to smooth their consumption more easily. They conclude that arms-length capital markets tend to attract more FDI, which is consistent with the UK's experience described above.

Reforming the framework for financial regulation

UK framework for financial regulation

I.95 In 1997, the Government introduced a new system of financial regulation in the UK. The Financial Services and Markets Act 2000 created a single financial regulator in the UK, the Financial Services Authority (FSA), with powers to regulate a wide range of markets and financial institutions independently, while requiring it to act in a risk-

⁴⁰ *How do financial systems affect economic cycles*, published in *World Economic Outlook: Financial systems and economic cycles*, International Monetary Fund, September 2006.

based and proportionate manner. In parallel, a Memorandum of Understanding between HM Treasury, the Bank of England and the FSA has provided the framework for tackling disruptions to financial stability.

1.96 This model of financial regulation and supervision has helped steer the UK's financial markets through periods of disruption over the past decade, including the fallout from the Asian crisis in 1997, the collapse of the Long-Term Capital Management hedge fund, and the Russian debt crisis in 1998, the collapse of the dotcom stock market bubble in 2000, and the aftermath of the terrorist attacks of 11 September 2001. The financial stability framework in the UK has recently been faced with the challenge of the financial market disruption triggered by problems in the US sub-prime mortgage market. These developments have had direct impacts across the world, and have posed significant domestic and international challenges to policymakers, discussed further in Chapter 2. In the UK, the most visible impact has been the funding difficulties faced by Northern Rock, and the subsequent decision by the Government to take the bank into temporary public ownership.

Challenges ahead

1.97 The financial sector is a significant area of comparative advantage for the UK economy, and will play an important role going forward in ensuring the UK continues to benefit fully from the opportunities of globalisation and technological change. The Government aims to ensure that financial sector regulation is effective, proportionate, and risk-based, protecting investors and consumers appropriately and ensuring market integrity while encouraging innovation and keeping pace with market developments. Chapter 3 outlines the Government's approach to ensuring the UK financial services sector remains competitive.

1.98 The recent and ongoing disruption in global financial markets has shown how problems in one market or region can be quickly transmitted around the world. Problems in the US sub-prime mortgage market spilled over with unexpected speed and force into financial markets globally, and a number of markets, notably that for residential mortgage-backed securities, remain effectively closed. The increasingly integrated nature of global financial markets, with product innovation rapidly spreading across international markets, will be an ongoing challenge to policymakers. The Government's response to these challenges is discussed in Chapter 3.

SUMMARY AND CONCLUSION

1.99 The analysis in this chapter sets out how the Government's macroeconomic framework and promotion of open and flexible product, labour and capital markets has helped the UK economy to become more resilient leading to greater macroeconomic stability. The UK has moved from being one of the least stable economies in the G7 to being the most stable, while employment has risen to record highs and public investment has trebled as a share of GDP over the past decade. The flexibility of the UK's product, labour and capital markets has meant the UK economy has coped successfully with economic shocks in recent years and has also allowed the economy to adapt to the longer-term structural changes affecting the world economy.

1.100 The analysis also highlights areas where further progress needs to be made. For example, it is vital that the UK continues to narrow the productivity gap with other major economies. The skills of UK workers still lag behind other countries and must be improved to ensure the economy is equipped to compete in high-value added sectors in

the future. It will be important to continue to extend labour market participation. Although progress has been made in recent years to narrow the gap in growth rates between regions, there remain gaps in employment, skills and enterprise.

I.101 The economy will face a number of significant strategic challenges in the years ahead from continued globalisation and from demographic, environmental and technological change. In the face of these challenges it will be vital that the UK build on the successes of recent years in entrenching stability, resilience and flexibility, and that it makes further progress in key areas such as narrowing the productivity gap and reducing regional disparities. Chapter 2 analyses in more detail the likely shape of the challenges facing the UK economy in the coming decades. Chapter 3 sets out the Government's strategy for dealing with these challenges.

INTRODUCTION

2.1 This chapter updates recent work on the strategic challenges facing the economy in the years ahead. A detailed analysis of the long-term opportunities and challenges facing the UK over the next decade was published by the Treasury in November 2006, to inform the 2007 Comprehensive Spending Review.¹ More recently, the Strategy Unit in the Cabinet Office published a wide-ranging examination of the key strategic challenges facing the UK, including economic, social, constitutional and international issues.² The Treasury also published *Productivity in the UK 7: Securing long-term prosperity*, (November 2007) which set out the Government's approach to raising productivity to help meet the long-term challenges.

Structure of the chapter

2.2 It is inevitable that challenges to the UK's economic prosperity will evolve and change, and the UK must be prepared to respond flexibly. This chapter links the updated analysis of the strategic challenges ahead with the discussion of the recent performance of the UK economy in Chapter 1. This provides a better understanding of the priority areas where the UK needs to do more to respond at the national, regional and local levels. The main challenges facing the economy were identified at the time of the 2007 Comprehensive Spending Review and are updated in light of new evidence and recent events:

- **Demography** – recently updated population projections have important implications for the projected growth and structure of the UK population;
- **Environment** – the Government has set a challenging framework of binding targets to reduce carbon emissions, and evidence on the opportunities of moving to a low-carbon economy has developed further;
- **Globalisation and technical change** – the intensification of global economic activity and rapid pace of innovation and technological diffusion has continued; and
- **Global uncertainty** – recent financial market disruption shows how developments in one region of the world can be quickly transmitted to other regions.

DEMOGRAPHY

2.3 The size and structure of the UK's population has implications for economic growth and employment. The analysis carried out in advance of the 2007 Comprehensive Spending Review and recently by the Strategy Unit discussed these and wider socio-economic trends. This section sets out projected growth in the UK population, its distribution across the UK, and its changing age profile. Since the Treasury's previous analysis of long-term challenges was published in November 2006, the Office for National Statistics (ONS) have updated their population growth

¹ *Long-term opportunities and challenges for the UK: analysis for the 2007 Comprehensive Spending Review*, HM Treasury, November 2006.

² *Realising Britain's Potential: Future Strategic Challenges for Britain – main report*, Strategy Unit, Cabinet Office, February 2008.

projections, increasing assumed levels of life expectancy, fertility and net migration.³ As this section describes, this has important implications for the projected rate of population growth and age profile of the population.

Population size

2.4 The UK population has grown steadily from around 40 million in 1900 to 50 million in 1951, reaching 60 million in 2005.

2.5 In the updated ONS projections the UK population is now projected to grow more quickly than shown previously. The population is projected to be over 70 million by 2030, more than 30 years earlier than in the previous projection. Overall growth is accounted for by assumed increases in:

- life expectancy – largely a result of greater than expected falls in mortality over recent years;
- the level of fertility – which has recently been growing for the first time since the 1960s; and
- the long-term assumption for positive net migration – which has been increased from 145,000 to 190,000 per year.

2.6 Around half of the growth by 2030 is projected to be due to the increases in life expectancy and fertility and the other half to the increased net migration assumption. However, these assumptions and consequent projections are subject to substantial uncertainty. Therefore, in addition to the principal population projections, the ONS produces an extensive set of variant projections. The projections are discussed in more detail in Chapter 2 of the *2008 Long-term public finance report*.⁴

Opportunities and challenges from population growth

2.7 Population growth tends to increase the size of an economy but does not directly lead to increases in living standards. This is because increases in labour productivity or employment rates are the main drivers of growth in per capita output. However, by expanding the size of domestic markets, population growth may provide additional opportunities for small business and, by generating greater competition, may drive product innovation.

2.8 If population growth is not matched by the development of infrastructure, productivity growth can be constrained. For example, unless extra stress on the transport network is managed and the network developed then it can cause a disproportionately large impact on journey times and reliability. More generally, population growth will lead to increased demand for some public services.

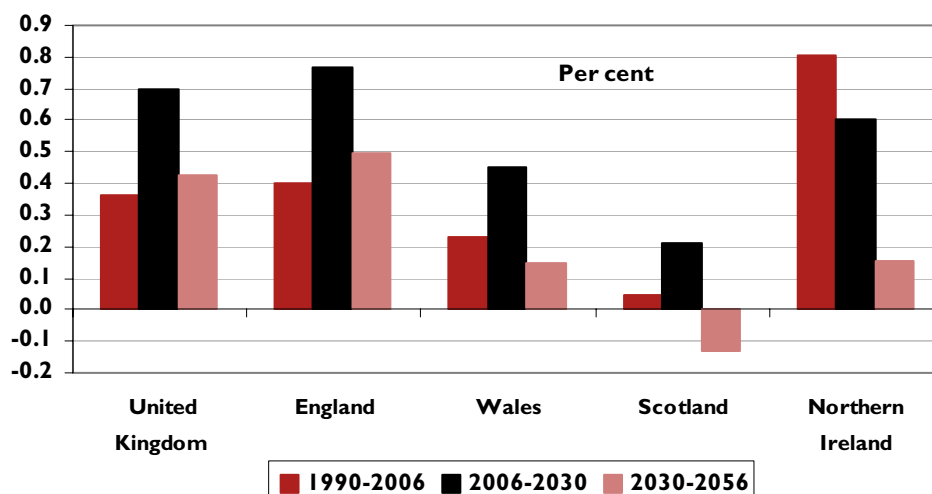
National and regional changes

2.9 Population growth is not projected to be uniform across the UK. England and Northern Ireland are projected to have higher average annual population growth rates than Wales or Scotland. Overall, this implies that the population in England is projected to grow by around 18 per cent and Northern Ireland by around 15 per cent between 2006 and 2030. In Wales, projected population growth is around 10 per cent over the same period, while in Scotland the population growth is projected to be around 5 per cent.

³ 2006-based and earlier population projections can be found at <http://www.gad.gov.uk/Demography/SFData/Population/Index.asp>.

⁴ *2008 Long-term public finance report: an analysis of fiscal sustainability*, HM Treasury, March 2008.

Chart 2.1: Average annual population growth rates for UK countries

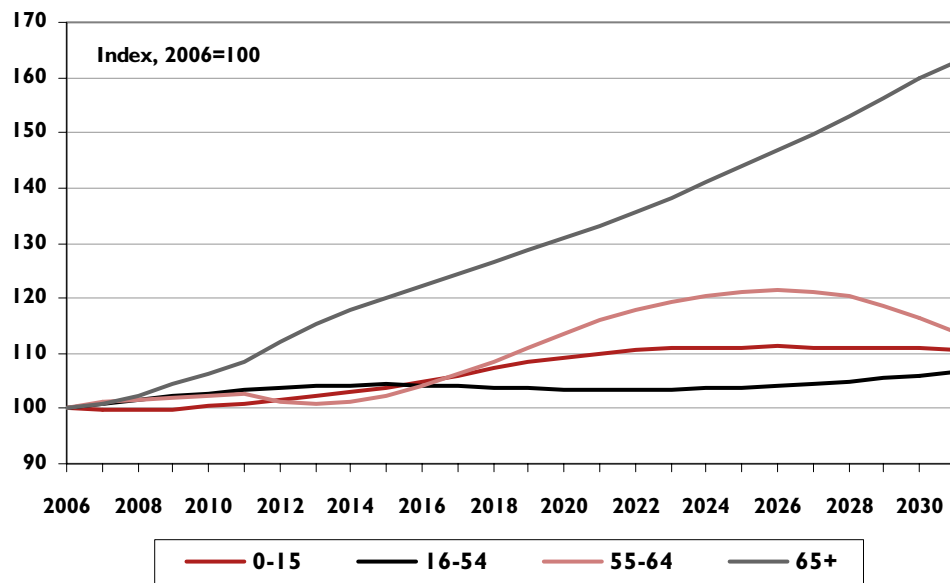


Source: ONS – 2006-based projections

2.10 The ONS's 2006-based projections for the English regions have not yet been published. However, the 2004-based projections indicated that the largest increases in population could be in the East, South East and London. These projections combined assumptions about internal migration between the English regions. In the period to 2020, the East, East Midlands, South East and South West were assumed to observe a net internal inflow, while London and the West Midlands were assumed to observe a net internal outflow. These regional differences in population growth will need to be factored into regional economic development and spatial planning.

Population structure

2.11 The factors driving overall population growth are also projected to drive changes in the structure of the population. In particular, the age profile of the UK population is projected to change with implications for the composition of the UK labour force. Chart 2.2 shows the projected change in age groups from 2006.

Chart 2.2: Population indices by age group

Source: ONS/GAD – 2006-based projections

An ageing population

2.12 Improvements in health mean that people are living longer and spending a larger proportion of their lives in retirement. When the 1908 Old Age Pensions Act introduced pensions for people over the age of 70, life expectancy at birth was around 49 for men and 53 for women. By 2006, the State Pension Age (SPA) was 65 for men and 60 for women, but life expectancy had reached 77 for men and 82 for women. By 2056, when the SPA for all will be 68, life expectancy is projected to reach 86 and 89 for men and women respectively.⁵

2.13 As Chapter 1 described, the labour market participation rate of those above SPA has also been increasing in recent years (see Chart 1.23) and firms may well need to adapt working patterns and processes to accommodate a larger proportion of older workers. However, the Government and society will also need to continue to develop support for those older people who are unable to work.

2.14 People who have retired rely on support from the working population and on savings made during their working life. These challenges were well documented in the work of the Pension Commission.⁶ They concluded that the existing system of voluntary private pensions would deliver increasingly inadequate and unequal outcomes over time. Particular issues identified as needing to be addressed included: the inherent behavioural barriers to people making rational long-term savings decisions without encouragement; the long term withdrawal of employers from workplace pension provision; and the cost barriers that prevent lower-moderate earners from being well served by the pensions industry. Chapter 3 sets out the Government's response to these challenges.

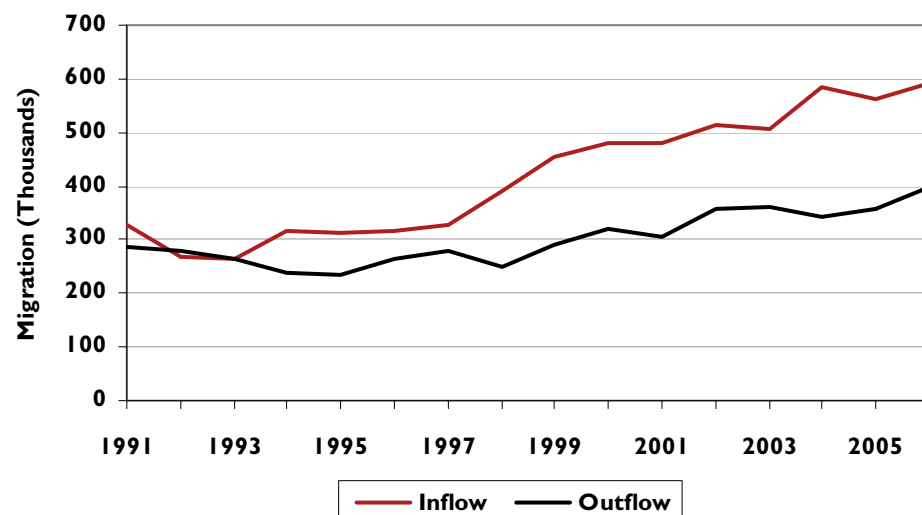
⁵ Source: ONS. These are period life expectancies at birth.

⁶ *Pensions: Challenges and Choices*, The Pensions Commission, 2004; *A New Pension Settlement for the Twenty-first Century*, The Pensions Commission, 2005.

Increasing fertility 2.15 Alongside increases in life expectancy, the fertility rate in the UK has recently been increasing, in contrast to a downward trend since the 1960s. Although it is impossible to be certain whether this trend will continue, the assumed fertility rate used by the ONS in their 2006-based population projections was raised to 1.84 children per woman, an increase of 0.10 compared with the 2004-based projections. This is a significant contributor to the projected increase in the number of people over the age of 16 in the mid-2020s (see Chart 2.2).

Migration 2.16 International migration has been growing in recent years and the UK has shared in this process. As Chart 2.3 shows, migration to and from the UK has been increasing over the past decade. Estimating future migration flows is extremely difficult because of the many factors that influence an individual's decision to migrate. The ONS official 2006-based population projections assume net long-term migration of 190,000 per year, although there is inevitably a wide range of possible outcomes around this central projection.

Chart 2.3: UK migration 1991 to 2006



Source: ONS

Opportunities from immigration 2.17 As discussed in Chapter 1, immigration can make an important contribution to economic growth and to meeting skills gaps in the labour market. Because in recent years most migrants have been of working age, they also help to reduce the economic dependency ratio in the short term (discussed below). Recent migration flows have led to an increase in public concern, particularly about the impact of migrants on public services. As discussed in Chapter 1, migrants are net contributors to the economy, but it is important that migration is properly managed to ensure that the benefits can continue to be realised.

2.18 The Treasury's own analysis in the *2008 Long-term public finance report* provides sensitivity analysis of future spending and revenue trends based on a range of population variants. The report finds that over the next 20 years different migration assumptions have only a very small impact on government spending and revenue as a share of GDP. This is because in all of the projection variants migrants remain a relatively low proportion of the overall population.

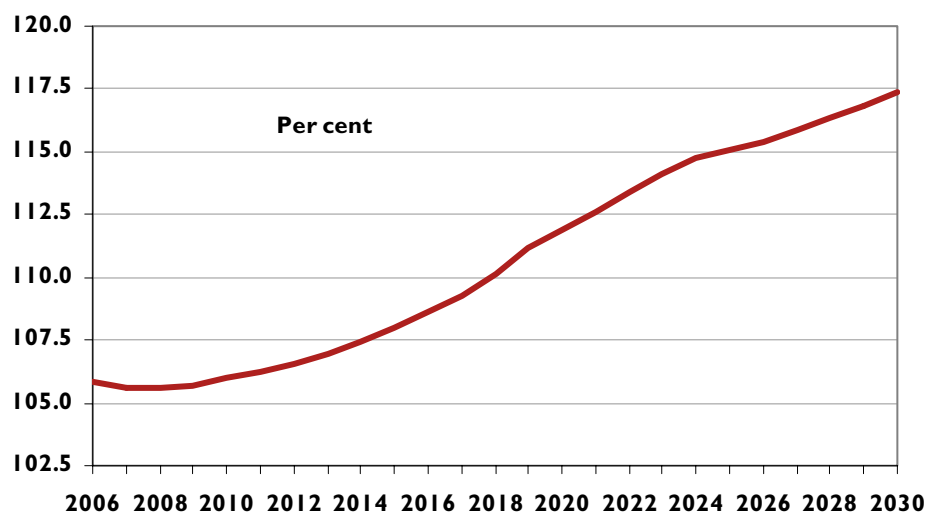
Changing household structure

2.19 Household numbers in England are expected to increase from 21 million in 2003 to over 24 million by 2021.⁷ This is partly due to overall population growth, but also because the number of adults living alone is expected to increase. More working age people are opting to live alone, divorce and separation rates are rising, and the number of old people living alone (following death of a partner) is increasing.⁸ The increase in the number of households is likely to lead to additional demand for housing. To limit upward pressure on prices, it will be important that housing supply is responsive to changes in demand.

Implication for the dependency ratio

2.20 The implication of the projected trends in life expectancy, fertility and migration is an increase in the economic dependency ratio: the proportion of the population projected to be not in work compared with the proportion in work.⁹ Chart 2.4 shows how this ratio is growing as higher fertility and life expectancy increase the proportion of the population under the age of 16 and over the SPA. By 2010, the number of people not in work is projected to be around 6 per cent more than the number in work, rising to more than 17 per cent by 2030. The increasing labour market participation rate of those above SPA limits the rise in the economic dependency ratio by increasing the number of workers generating output.

Chart 2.4: Economic dependency ratio



Source: ONS / HMT

Responding to the challenge of demographic change

2.21 While population growth can be expected to increase the absolute size of the economy, the challenge ahead will be to ensure that increases in productivity and employment rates continue to generate rising income per capita. The growth in the population and changing age profile will increase the proportion of population economically dependent on those in work. This highlights the importance of

⁷ Office for National Statistics, www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=7678; 2008.

⁸ *Social Trends 37*, Office for National Statistics, 2007.

⁹ The analysis underlying these calculations is set out in the *2008 Long-term public finance report*.

maintaining sustainable public finances and macroeconomic stability. A growing population beyond SPA and under the age of 16 will increase and change the demands on public services and infrastructure. Continued flexibility in product, labour and capital markets will therefore be necessary to maintain employment opportunity for all and continue the UK's recent strong productivity performance.

ENVIRONMENT

2.22 The Government's central economic objective is to achieve high and stable rates of sustainable economic growth and employment. To achieve this it is crucial to take care of the natural environment and the resources on which economic activity depends. Pressures on the climate and natural resources are a key challenge facing the UK and the world. The long-term challenge of climate change was set out in the *Stern Review on the Economics of Climate Change*,¹⁰ and the recent analysis by the Strategy Unit described how the UK will need to both play its part in mitigating climate change and exploit opportunities.

2.23 In the past decade there have been important local environmental improvements in the UK, such as to the quality of air and water.¹¹ Other things being equal, however, growth in the UK's population and economy can be expected to increase pressure on the UK's environment in the future, and climate change may exacerbate some issues. Technological developments will be needed to avoid these pressures which would otherwise lead to additional costs or a reduction in the value people get from the environment.

Climate change

2.24 The starkest and most pressing example of the impact that human activity can have on the environment is climate change. Scientific evidence used as the basis for the Stern Review confirmed that carbon dioxide concentrations in the atmosphere have increased by just over one third from 280 parts per million (ppm) in pre-industrial times to around 380ppm today.¹² In total, the atmospheric concentration of all Kyoto greenhouse gases is now equivalent to around 430 ppm of carbon dioxide equivalent¹³ and this is rising by approximately 2.5ppm each year. Research suggests that a doubling of the levels of greenhouse gases compared with pre-industrial levels is very likely to cause a rise of global mean temperatures of between 2 and 4½°C, with a best estimate of 3°C.¹⁴

2.25 Using this scientific evidence as a starting point for its analysis, the Stern Review concluded that the costs of stabilising the climate are significant but manageable, whereas delay will be costly and dangerous. This has been supported by the findings of the Intergovernmental Panel on Climate Change. The Stern Review estimated that temperature increases associated with current business as usual emissions could lead to reductions of global GDP of 5 per cent by 2050. Taking into account the overall costs

¹⁰ *Stern Review on the Economics of Climate Change*, Sir Nicholas Stern, 2006.

¹¹ Information on air and water quality, and other environmental indicators, is available on the Environment Agency website, www.environment-agency.gov.uk.

¹² Stern, N., *The Economics of Climate Change: The Stern Review*, Cambridge University Press, Cambridge, UK, 2007.

¹³ Carbon dioxide equivalent concentration (in parts per million) of carbon dioxide and the other Kyoto greenhouse gases. (methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride).

¹⁴ Technical Summary in *Climate Change 2007: The Physical Science Basis*, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate, 2007.

to, and impacts on, human society of climate change, the cost estimate increases to 20 per cent of global GDP.

A global challenge

2.26 Climate change is global in both its causes and its consequences and needs to be tackled through collective international action. The existing United Nations Framework Convention on Climate Change and the Kyoto Protocol provide the overall framework for international action, but this must be built on to deliver global action proportionate to the scale and urgency of the threat, particularly to the world's most vulnerable countries and communities. Chapter 3 describes how, through the United Nations and EU, significant steps are being taken to tackle climate change and how the UK has set an ambitious new framework of binding targets to take a lead in reducing carbon emissions.

Climate change will affect the UK

2.27 As a result of climate change the UK will experience hotter, drier summers and warmer, wetter winters, which could lead to increased frequency of flooding. Sea levels will continue to rise around the coast and the frequency of storm surges could increase. There is more confidence about impacts driven by temperature than those mediated by rainfall, where predictions still differ between climate models. However, annual costs of flooding to homes, businesses and infrastructure could increase in real terms and consume more resources to prevent and repair damage. According to the Association of British Insurers, the major floods of summer 2007 in England resulted in an estimated £3 billion of insured losses.

Opportunities for business

2.28 The Stern Review found that tackling climate change will provide business opportunities as the markets for low-carbon, high-efficiency goods and services expand. It concluded that markets for low-carbon energy products are likely to be worth at least \$500 billion per year by 2050 and that individual firms and countries should position themselves to take advantage of these opportunities. An example of this was identified by the interim report of the King Review,¹⁵ which discussed a number of opportunities for businesses in the development and manufacture of low-carbon cars, and set out how the UK can play a leading role in low carbon dioxide automotive developments, as a location for high technology companies in the field, and as a leader in key areas of science and engineering.

2.29 The Commission on Environmental Markets and Economic Performance (CEMEP) reported in November 2007, advising the Government on how the UK could make the most of the potential economic benefits of the transition to a low-carbon economy. Details of this work are set out in Box 2.1.

¹⁵ *The King Review of low-carbon cars, Part 1: the potential for CO₂ reduction*, King Review, October 2007.

Box 2.1: The Commission on Environment Markets and Economic Performance (CEMEP)

CEMEP was established in November 2006 following the Stern Review. Its remit was to advise Government on how the UK could make the most of the potential economic benefits of the transition to a low-carbon, sustainable economy.

The Commission set out the goal of making the UK one of the best locations in the world to develop and introduce low-carbon and resource-efficient products, processes, services and business models. They concluded that this will require a policy framework that drives investment and enterprise in environmental markets in the UK and provides more effective support for the development and commercialisation of environmental innovations.

The Commission published its report in November 2007. It highlighted that the overall added value in the low-carbon energy industry could be at least \$3 trillion per year worldwide by 2050 and that it could employ more than 25 million people.

The report said that to benefit from these opportunities the UK needs to become one of the best locations in the world to innovate and do business in environmental markets. To achieve this, it recommended that Government policy should be based on three pillars: environmental policy, market 'pull' and supply 'push'. It suggested that the Government create a clear and credible environmental policy framework and provide increased support for innovation, including greater use of public procurement to create 'lead markets' for emerging environmental innovations. It also concluded that the Government should take into account longer-term costs and benefits in policy making and better harness market dynamics and innovation in meeting environmental goals. The Government will be responding to the report shortly.

Energy demand **2.30** Energy demand worldwide continues to increase, particularly in the US and emerging economies. On the basis of present policies, global energy demand will be more than 50 per cent higher in 2030 than today, with energy related greenhouse gas emissions around 55 per cent higher. Already, more than two thirds of the world's carbon dioxide emissions come from the way energy is produced and used, and so energy policy has to play a major part in overcoming the challenge of climate change.¹⁶

2.31 Even if the potential for increasing low-carbon sources of energy is realised, it is clear that coal, oil and gas will play a significant part in meeting the world's energy needs for the foreseeable future, and ways will need to be found to reduce their emissions. Also, with the UK increasingly reliant on imported energy, it will be important to manage the risks arising from the concentration of fossil fuel reserves in fewer and further away places, some of them in less stable parts of the world.

2.32 Increased competition for resources could see international trade in fossil fuels double by 2030.¹⁷ This trend and factors such as abuse of market power, poor energy market information, infrastructure security risks, and regulatory uncertainty (particularly concerning government actions to tackle climate change) could add to the risks to energy security and prices.

2.33 Energy demand can be expected to grow as the economy expands, despite increased energy efficiency. The investment decisions that will be taken over the next two decades will be critical in determining the world's climate and the security of its

¹⁶ *World Energy Outlook 2006*, International Energy Agency, 2006.

¹⁷ *Ibid.*

energy supplies. Many of the UK's coal and existing nuclear power stations are set to close over the next two decades so it is likely that the UK will need around 30-35GW of new electricity generation capacity and around two thirds of this capacity by 2020.¹⁸

Water pressures

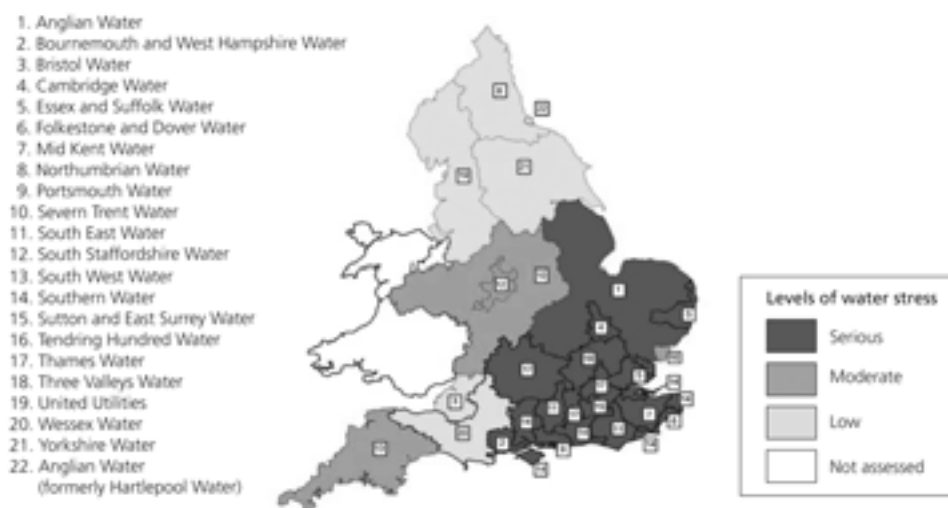
2.34 Climate change will alter patterns of water availability by intensifying the water cycle, with droughts and floods becoming more severe in certain areas. Short droughts could occur more regularly - possibly two or three times a decade by the 2050s, and up to four times a decade by the 2080s compared with once a decade currently.

Increasing household demand for water

2.35 The projected demographic changes described earlier also imply increasing household demand for water. This will be most significant in the South East, given the demographic changes and plans for housebuilding. Policy measures such as metering, price structures and demand management programmes will all have an effect on the level of household water demand. Management of leakage levels will also continue to play a part.

2.36 These changes in climate and household demand, combined with already high levels of water abstraction in some areas, mean that it will become more difficult to provide adequate water supplies, particularly in the South East. The Environment Agency has developed a methodology for identifying and classifying relative levels of water stress in water company areas in England (see Chart 2.5). The Government used this map to designate areas of serious water stress to assess the case for compulsory metering.

Chart 2.5: Relative levels of water stress in water company areas in England



Source: Environment Agency, 2007

¹⁸ *Meeting the Energy Challenge – A White Paper on Energy*, Department for Trade & Industry (now Department for Business, Enterprise and Regulatory Reform), May 2007.

Land pressures

Importance of efficient land use **2.37** Land is a crucial natural resource that will be affected by population and demographic changes. Rising land and property prices may reflect a scarcity in the availability of suitable land for development,¹⁹ but the differential between values of different types of land suggests that the regulatory regime may also lead to an overvaluation of land for certain uses. For the rise in population and household numbers to be accommodated efficiently, the land-use planning regime will need to reflect the genuine costs and benefits of using land for different purposes.

Rising waste levels **2.38** Over the coming decades, the UK is likely to need to manage a continued increase in levels of waste, from both households and businesses, as the economy and population grow. It is important to ensure the right incentives are in place so that households and businesses minimise the waste produced.

2.39 It makes economic and environmental sense for an increasing amount of the waste which is produced to be recycled and used for energy generation. Waste disposal in landfill sites has an impact on the immediate surroundings, and when biodegradable waste decomposes in a landfill site it emits methane, a greenhouse gas 23 times more potent than carbon dioxide. Landfill may also involve materials being lost that could otherwise be recycled, reused or used as a source of energy.

2.40 The availability of potential landfill sites as a result of minerals extraction activity means the UK has traditionally landfilled much more waste than many other European countries. Over the next 10 to 20 years, the UK faces a major challenge to reduce the amount of waste being sent to landfill, in line with European obligations and particularly in the context of a growing population and economy. The amount of biodegradable municipal waste sent to landfill in England will need to decrease from 12.4 million tonnes in 2005-06 to 11.2 million tonnes in 2010 and 5.2 million tonnes by 2020. For this to be achieved, households will have to recycle or compost an estimated 40 per cent of their waste by 2010 and 50 per cent by 2020.²⁰

Responding to the challenge of environmental change

2.41 Climate change is a global challenge, requiring an international response and changes in the generation and use of energy. Concentrations of carbon dioxide and other greenhouse gases have increased markedly as a result of human activities, and are very likely to cause a rise in global temperatures. The UK is not immune to these changes – pressures on land and water will increase and changes in water use and waste disposal will be needed. The transition to a low-carbon and low-waste economy will bring challenges for competitiveness but also opportunities for growth. Chapter 3 outlines the Government's response to these challenges. Firms will need to innovate and utilise new technologies, and consumers will need to overcome the barriers to behavioural change and adapt to some of the inevitable impacts resulting from past emissions.

GLOBALISATION AND TECHNOLOGICAL CHANGE

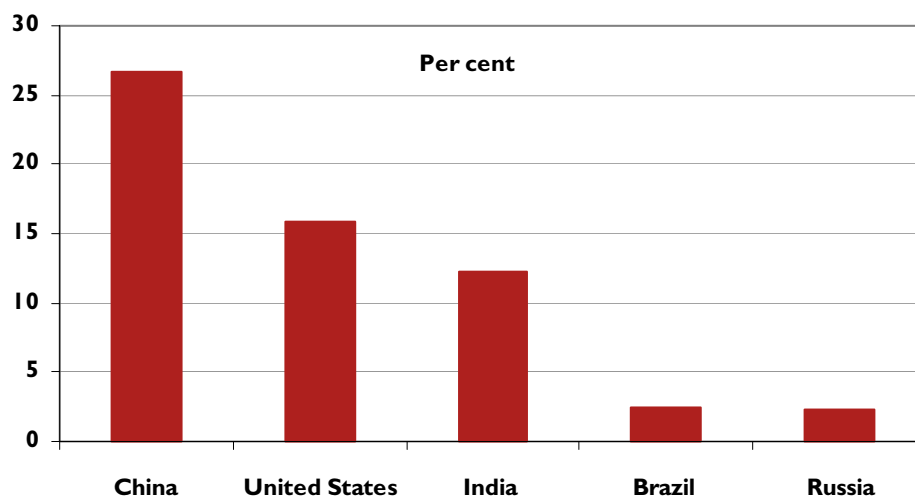
2.42 Chapter 1 outlined the key features of the most recent wave of globalisation: the rapid growth of large emerging economies shifting the balance of global economic

¹⁹ *Review of Land-Use Planning: Interim Report – Analysis*, Kate Barker, July 2006.

²⁰ *Waste Strategy for England 2007*, Department for Environment, Food & Rural Affairs, May 2007.

activity; rising flows of goods, services and capital; and greater competition for investment flows. Advances in technology are also changing the nature of economic relationships. This global change has the potential to increase prosperity in all countries. As Chart 2.6 shows, while China and India are likely to be the key emerging economies driving global growth, other developing countries are also expected to play an increasing role.

Chart 2.6: Expected contribution of BRIC countries to global growth from 2006 to 2020



Source: Economist Intelligence Unit

2.43 The detailed analysis carried out in advance of the 2007 Comprehensive Spending Review, the Strategy Unit's examination of the strategic challenges facing the UK, and recent analysis by the Department for Business, Enterprise and Regulatory Reform²¹ examined in detail the issues around globalisation. This section outlines the challenge for the UK in responding to globalisation – the increasing importance of skills, rewards to innovation and increasing specialisation and the importance of ensuring all regions are prepared for the challenges and can benefit from the opportunities of globalisation.

Technological change, globalisation and specialisation

2.44 Since the industrial revolution, the pace of scientific and technological change, and the rate of uptake and diffusion of new innovations, have been dramatic. In the 18th and 19th centuries, the steam engine and the railway transformed production, transportation and communication, leading to large economic and social upheavals. Internal combustion engines, electricity and the telephone kept up the momentum.

2.45 The 20th century saw the development of the motor vehicle, airplane, mass production factory processes and then computing, the internet, biotechnology and much more. Over the past two decades, there have been innovations in many areas of

²¹ Globalisation and the changing UK economy, BERR, February 2008.

science and technology including energy, manufacturing, and nanotechnology, spectacular leaps in information and communication technologies (ICT) and continued advances in medical knowledge. These developments continue to cause social and economic change.

2.46 Technological change helps to drive, and is shaped by, globalisation. This occurs through three main channels – transaction costs, diffusion and specialisation – each of which have an impact on productivity and the changing structure of the global economy.

Transaction costs 2.47 Developments in ICT have had a significant impact on transaction costs. As Chapter 1 described, increased speed of communication has expanded the range of services which it is feasible to trade, leading to a more integrated global market. Firms are able to specialise, take advantage of economies of scale, and penetrate global markets. The production and consumption of information-intensive services activities, such as research and development (R&D), inventory management, quality control, professional and technical services, and banking and insurance can be separated and traded across borders.²² Future developments in ICT are likely to take this process still further.

Diffusion 2.48 Progress in communications technology has facilitated the diffusion of knowledge and new technologies. This has generated greater spillovers from private investment in knowledge creation. Such spillovers, for example from R&D, used to have a marked local bias. They tended to arise within local clusters due to factors including labour market turnover. However, evidence suggests that the local bias of knowledge spillovers has fallen over time, with the bias in the most ICT-intensive sectors all but disappearing.²³

Specialisation 2.49 Specialisation in the production process reduces complexity, allowing the production system to be further broken into distinct activities and potentially to be outsourced to a more efficient producer in the UK or globally. Chapter 1 described how the unbundling of production processes has given firms greater choice in locating their operations and potentially offshoring. Over the next decade, as emerging markets continue to grow and develop new capabilities in new areas, and technological progress reduces trade and transport costs, international relocation of economic activity is expected to continue and intensify.

2.50 However, the bulk of demand is likely to continue to be met domestically. This is because the delivery of services often requires physical proximity to the customer, some transaction costs remain high, or is due to consumer preferences. Comparative advantage also means that in a large number of developed countries offshoring is matched by the import of other parts of the production process. Studies suggest that there is not, therefore, a significant link between offshoring and aggregate levels of employment.²⁴

2.51 Continued specialisation inevitably implies economic restructuring to enable countries, regions and cities to benefit from their comparative advantage, leading to gains from trade. In advanced economies such as the UK this will provide the

²² *Globalisation and the changing UK economy*, Department for Business, Enterprise & Regulatory Reform, February 2008.

²³ Jaffe, A., Henderson, R., and Trajtenberg, M. *Patent citations and the geography of knowledge spillovers: A re-assessment - Comment*, *American Economic Review* 95(1), pp.461-464, 2005.

²⁴ Recent trends in offshoring are discussed further in *Globalisation and the changing UK economy*, Department for Business, Enterprise & Regulatory Reform, February 2008.

opportunity for firms to concentrate on the high value-added, knowledge-intensive activities in which they have a comparative advantage. Many of these are high value-added services, such as business, legal and financial services. This process can already be seen in some UK cities where, over the long-term, economic restructuring is taking place to develop new specialisms and centres of excellence.

The importance of skills

2.52 Globalisation has increased the importance of skills for developed economies. Skills affect the capacity of economies to respond flexibly to changing sectoral demand caused in part through international specialisation, and skill levels are an important factor in attracting inward foreign investment. To be able to respond quickly to changing business demand, firms need access to a labour force with high-level skills and a strong base of intermediate and basic transferable skills.

2.53 The importance of skills is expected to grow. As global markets become more integrated, the structure of the UK economy will need to adapt to the unbundling processes described above and the skills requirements of business will change. The groups that are expected to show the largest expansion of demand in the next 15 years are at the higher end of the occupational spectrum, such as managers, professional occupations, associate professional and technical occupations. However, there are also increases in demand predicted for occupations that employ less-skilled labour, such as personal service occupations and sales and customer service.

The UK's skill base

2.54 Despite improvements over recent years, the overall skills profile of the UK workforce needs to improve at all levels to contribute to raising productivity growth. The assessment of the OECD is that *“there is now much greater pressure on the education system to equip more pupils with better skills. However, the educational performance of the UK population is below the standard of the best performing OECD countries.”*²⁵ As Chapter 1 described, the UK has specialised in areas that complement emerging economies, but these economies are also investing heavily in skills: in China, the enrolment ratio for tertiary education increased from 2.9 per cent to 9.5 per cent during the 1990s, and in India it rose from 6.2 per cent to 10.5 per cent over the same period. This significant investment in skills, combined with cost advantages, reinforces the message that over the next decade the UK and other advanced economies will need to focus on the skill-intensive, high value-added sectors to continue complementing emerging markets.

Regional skills

2.55 Increasing skills in all regions will be critical to ensure that they are able to compete in the global economy.²⁶ Since 1998, there has been progress towards reducing the skills gap between the Greater South East and the North, Midlands and West regions. For example, the gap in the proportion of the economically active adults qualified to at least Level 2 between the Greater South East and the North Midlands and West has reduced to 0.7 percentage points in 2007 compared to 3.8 percentage points in 1998.²⁷ At higher-level skills, although there are still marked regional disparities, participation by young people in higher education is at record levels across all regions, boosting the supply of advanced level skills available to business.

²⁵ *Economic Survey of the United Kingdom, 2007*, OECD, September 2007.

²⁶ *Prosperity for all in the global economy – world class skills*, Final report of the Leitch review of skills, December 2006.

²⁷ Labour Force Survey, 2007.

Increased rewards to innovation

2.56 The combined effect of increased global competition and the rapid pace of technological change in recent years is increasing rewards to those who innovate. There is now a greater pressure on firms to foster innovative activities, adopt and apply new technologies, and remove barriers to new ideas in order to compete successfully. At a country level, those who foster R&D and innovation will attract businesses in the key high-growth areas of the future. In addition, those countries that are able to apply technological innovations to existing production processes can expand their production possibilities, improve their efficiency, and enhance their attractiveness as centres for high value investment.²⁸ The particular case of the creative industries has recently been examined in *Creative Britain – New Talents for the New Economy*.²⁹

2.57 The UK is well positioned to benefit, having a world-class science base – ranked second in the world to the US in its share of publications and citations³⁰ – complemented by an internationally respected legal and administrative framework for intellectual property. This strength in science is important to attracting inward investment into the UK, in particular in high value-added activities. However, emerging markets are also now increasingly able to challenge advanced economies in innovation, and the rapid expansion of their economies will have implications for long-term trends in innovation. For instance, more than 225 companies in the Fortune 500 have R&D and product design centres in India.³¹ India's enforcement of intellectual property is improving, and this too is making it a more attractive location for international business - in 2005, 2,000 software patent applications were filed in India, 85 percent of which were by multinationals.³²

Information & communications technology

2.58 The investment in and exploitation of ICT gives a clear example of the need to take advantage of technological innovation.³³ As Chart 2.7 shows, over the past 20 years the input from computer hardware into the production process has increased by a factor of more than 30, with the rate of increase accelerating in the late 1990s, while the input from purchased software has increased by a factor of more than 20.

²⁸ See, for instance, *Mapping the Two Faces of R&D: Productivity Growth in a Panel of OECD industries*, Griffith, Redding & Van Reenen, Review of Economics and Statistics 86(4), 2004.

²⁹ *Creative Britain – New Talents for the New Economy*, Department for Culture, Media and Sport, Department for Business, Enterprise and Regulatory Reform, and Department for Innovation, Universities and Skills, February 2008.

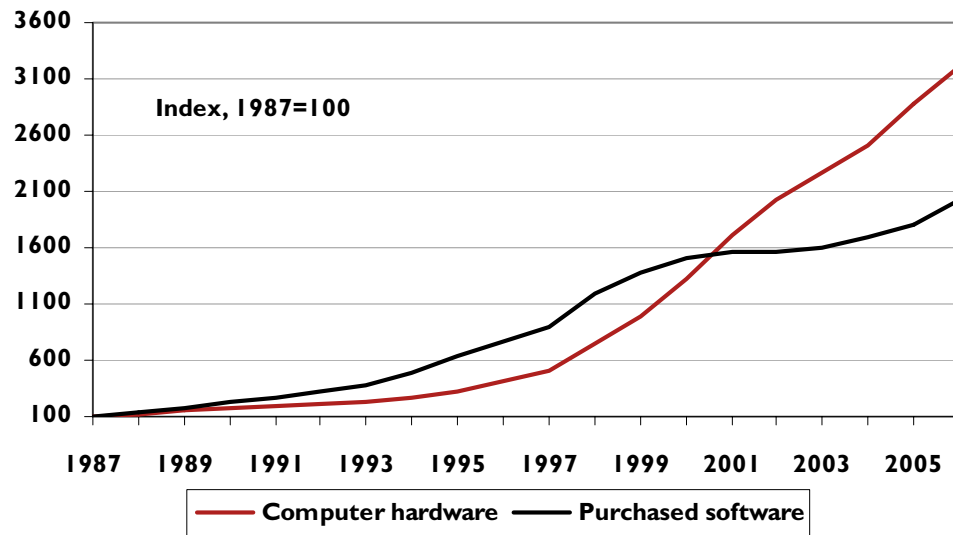
³⁰ *The Race to the Top: A Review of the Government's Science and Innovation Policies*, Lord Sainsbury of Turville, October 2007.

³¹ India Brand Equity Foundation, Davos 2006 Brochure, January 2006

³² *Business Standard*, 4 January 2006

³³ Evidence on the impact of ICT investment on productivity is summarised in *Information Economy Report 2007-2008, Science and technology for development: the new paradigm of ICT*, United Nations Conference on Trade and Development, 2007.

Chart 2.7: Index of capital services from computer hardware and purchased software, UK



Source: ONS

2.59 Analysis has suggested that the productivity gains from ICT investment have not been fully realised in the UK because it has not been sufficiently matched by organisational change. This may be part of the reason for the productivity gap between the UK and US.³⁴ For firms to fully exploit innovations, the skills of the workforce – in particular in management – the flexibility of labour and product markets, and the information and communications infrastructure firms have to utilise are crucial. Box 2.2 examines the importance of information and communications infrastructure.

³⁴ See for example Bloom, N., Sadun, R., and Van Reenen, J., *Americans do I.T. better: US multinationals and the productivity miracle*, NBER Working Paper No. 13085, May 2007.

Box 2.2: Information and communications infrastructure

Paragraphs 2.58 and 2.59 set out the importance of ICT investment and organisational change in increasing firms' productivity. For firms to get the full benefits from this process, they will increasingly rely on the fixed and wireless storage and distribution network for information – the 'information infrastructure'.

For example, fast, reliable and larger capacity broadband is needed as information flows increase and more sophisticated technology is developed. Sadun and Farooqui (2006)^a found that broadband users are more productive than non-users although it is difficult to disentangle the exact causality in this relationship. Firms which were early adopters of broadband were 22 per cent more productive and early adoption strengthened this advantage.

The UK has seen significant success in broadband growth, driven by competition and effective regulation. This has resulted in greater choice of supplier, wider range of service offerings and reduced prices. Over 99 per cent of households are able to access broadband and more than half of UK homes are now connected. Around 120,000 UK businesses also make use of 'next generation' direct fibre connections.

The quality of the UK's information infrastructure is likely to need to continue improving as technology allows for faster and more sophisticated connections. Chapter 3 describes the Government's current review of the barriers to investment in next generation broadband.

^aRaffaella Sadun (CEP/LSE) and Shikeb Farooqui (ONS), Broadband Availability, Use, and Impact on Returns to ICT in UK firms, February 2006.

Responding to the challenge of globalisation and technological change

2.60 As Chapter 1 described, the UK's open and flexible product, labour and capital markets have meant that the UK has been able to benefit from global economic integration and continued technological change. Globalisation and technical change are expected to continue rapidly, driving productivity by reducing transaction costs, and increasing specialisation and diffusion. Markets will become more integrated and incentives to invest in skills or innovate will increase.

2.61 Chapter 3 outlines the Government's response. The UK will need to make further progress on boosting productivity, maintaining an attractive business environment and improving workforce skills. It will also be important to ensure all countries and regions can succeed in the global economy, and that the UK works to deliver prosperity through the EU and other international institutions.

GLOBAL UNCERTAINTY

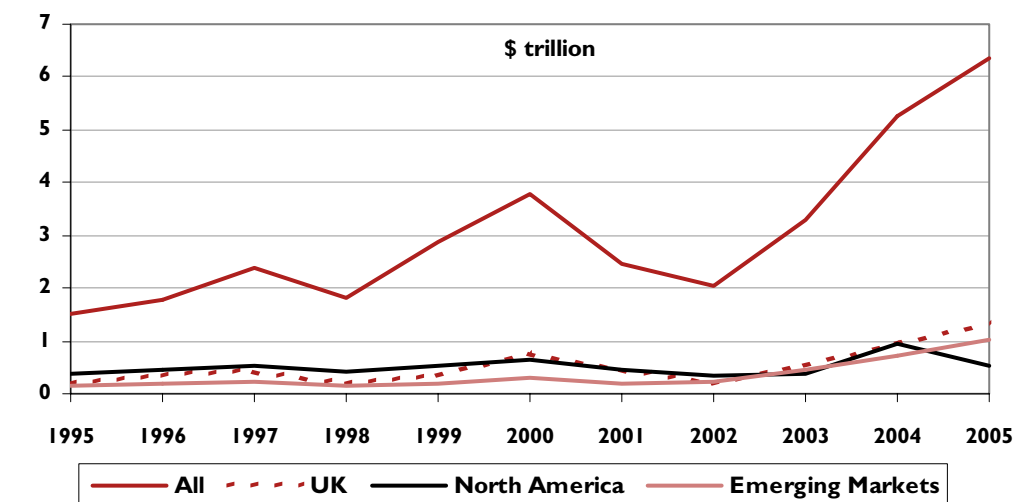
2.62 The detailed analysis carried out in advance of the 2007 Comprehensive Spending Review examined a wide range of sources of global uncertainty affecting international security and development. These included threats from international terrorism and crime, and human and resource pressures. In an increasingly interdependent world these present challenges to stability. The recent analysis by the Strategy Unit also examined the uncertainty around economic, social, constitutional and international developments. The exact nature of the challenges is impossible to

accurately predict so the UK economy needs to be flexible enough to respond to them as they emerge.

2.63 As Chapter 1 set out, the UK's policy of openness to trade and investment has enabled the UK to benefit from growing economic interdependence. The OECD has described how "*openness to trade has promoted competition and encouraged economic resources to shift towards those sectors in which the United Kingdom has a comparative advantage.*"³⁵ Open markets alone are not a sufficient condition for growth, but they can lead to a higher sustainable rate of growth. Since 1950, world exports have risen by twenty seven times and world income by eight times.³⁶ Work by the OECD suggests that a 10 percentage-point increase in trade openness translates into increase of around 4 per cent in per capita income.³⁷ Though such estimates should be treated with some caution, they nevertheless indicate the potential positive effect of openness on the economy.

2.64 Economic interdependence has developed furthest in global capital markets and Chart 2.8 shows how the recent wave of globalisation has been characterised by increased investment flows. This process, which has to date been concentrated in the advanced economies, has brought great benefits to the UK as a whole and to London as a global financial centre. It has also increased the scope for external events and trends to impact on the UK. In responding to such uncertainty it is vital that the openness of markets, which have driven economic prosperity, are not lost.

Chart 2.8: Global capital flows



Source: IMF

³⁵ *Economic Survey of the United Kingdom, 2007*, OECD, September 2007.

³⁶ Calculation from WTO data used in *Globalisation and the changing UK economy*, Department for Business, Enterprise & Regulatory Reform, February 2008.

³⁷ *The benefits of liberalising product markets and reducing barriers to international trade and investment: The case of the United States and the European Union*, OECD Economics Department Working Paper No. 432, May 2005.

Financial market disruption

Global integration has brought significant benefits

2.65 Well developed domestic capital markets play a crucial role in the economy by mobilising savings and channelling investment to where it is most productive. International integration enhances this process, by widening the pool of investors and offering new ways to diversify risk. Financial globalisation thus benefits economic growth and stability, especially where markets and institutions are well developed.

But also poses challenges to stability

2.66 However, the increasing complexity and interconnectedness of markets has meant that developments in one market can be easily and quickly transmitted to other markets. The increased speed of communication also means that instability can spread more quickly than ever, and the increased specialisation and trade across borders can transmit economic shocks. These present new and constantly evolving challenges for authorities in mitigating financial stability risks, protecting consumers, and in ensuring the UK economy is flexible enough to respond.

2.67 The challenges for financial markets and regulatory authorities across the world from the process of financial market integration have been brought to the fore by recent events in global financial markets. Since July 2007, global financial markets have experienced a period of severe disruption which was triggered by concerns in the US sub-prime mortgage market and spread swiftly across countries and markets. Credit markets have suffered from reduced liquidity and this has posed significant domestic and international challenges to policymakers. Investment funds in the US, the UK, France and other countries have faced difficulties. Two banks in Germany have had to be recapitalised or have an emergency takeover arranged. Some of the world's largest banks have announced significant losses, with several choosing to raise new capital as a result. In the UK, the most visible impact has been the funding difficulties faced by Northern Rock and the subsequent decision by the Government to take the bank into temporary public sector ownership.

2.68 These events followed a prolonged period of macroeconomic and financial stability in the UK and globally, during which open and flexible capital markets have contributed to strong growth in productivity and living standards. It is therefore important that the response to recent turbulence is proportionate and does not impede the efficient functioning of the financial system. It will be an ongoing challenge to ensure that the international community responds in a coordinated way to developments in global financial markets. Chapter 3 describes how action is being taken, both in the UK and internationally, to ensure that regulation and risk management continues to respond effectively to rapidly changing events.

Other risks from integrated markets

Integrated commodity markets

2.69 The interdependence of the world's economies also increases the UK's exposure to other global economic risks. Competitive, open markets for energy and other commodities, where prices include external costs, remain the best mechanisms to efficiently allocate resources, lowering prices for consumers and dealing most effectively with shocks through their flexibility and diversification of risk. However, through the interlinked nature of commodity markets, individual countries are exposed to the full range of world events that influence both supply and demand. This means that the impact of events such as bad weather or heightened political tension anywhere in the world is transmitted to the UK, and can affect food and energy prices.

Global trade imbalances

2.70 Also, while there has been some reduction in the US current account deficit, so far this has not been accompanied by a reduction in external trade imbalances in the

large Asian surplus countries. There remains some risk of a sharp, disorderly unwinding in imbalances. To reduce this risk it is important that major world economies allow a continued rebalancing of demand and flexibility in their exchange rates.

Maintaining open markets

2.71 The prevailing view among most commentators is that the process of globalisation of trade and integration of markets will continue. However, history offers several examples where economic integration has gone into reverse, such as the outbreak of war in 1914, and the protectionism of the 1920s and 1930s. While the Government, businesses and individuals should plan on the basis that globalisation will continue, it is important to be aware of the potential risks to continued globalisation, and mitigate them where possible.

The risk of protectionism

2.72 Open economies boost firms' competitiveness and productivity, improve living standards and drive innovation. Any increase in protectionism is more likely to stifle than promote a strong economy. Policies that insulate firms from global competitive forces represent a costly and ineffective means of protecting jobs. Such action may be popular where there is short term uncertainty, but it is likely to inhibit growth and limit prosperity in the longer term. It tends to result in a narrower range of products and ultimately lower quality goods and services, at higher prices for consumers, leading to less customer choice and a reduction in welfare.

2.73 The UK is therefore committed to open global trade and investment. Greater openness in the world economy brings widespread benefits and opportunities. In this context, the EU must lead by example in breaking down barriers to trade in goods and services. Policies or mechanisms aimed at establishing a 'level playing field' for European trade in the world should not form the basis for negotiations. These would be more likely to stifle trade and the EU's effectiveness, limit choice and cause an increase in prices rather than promote greater trade and openness globally. They would also endorse a more protectionist outlook on the part of the EU and would encourage protectionism among the UK's partners.

Responding to the challenge of global uncertainty

2.74 The integration of global capital markets has brought significant benefits to the UK through increased competition, specialisation and opportunities for innovation, all aided by more efficient allocation of capital within and between countries. However, the technology, complexity and the interconnectedness of markets have meant that developments in one market can be easily and quickly be transmitted to others posing risks to financial stability and increased protectionism.

2.75 To mitigate these risks, Chapter 3 outlines how the UK will continue to retain its flexible and open markets and champion this approach internationally to avoid a retreat to protectionism. It describes the Government's proposals for reforming international financial institutions to ensure stronger monitoring of the global economy and better coordination in the face of economic crises. It will also be important to respond proportionately to the recent financial market disruption.

SUMMARY AND CONCLUSION

2.76 This chapter has updated recent work for the 2007 Comprehensive Spending Review and the Strategy Unit on the challenges and opportunities facing the UK economy in the light of new evidence and recent events.

2.77 The UK population is now projected to grow more quickly than previously thought, reaching 70 million thirty years earlier than projected just a few years ago. The Government has set an ambitious new framework of binding targets to reduce carbon emissions. Globalisation and technical change is continuing rapidly, and recent events have demonstrated how growing interconnectedness of financial markets can lead to the transmission of financial market disruption between countries. They have also underlined the importance of mitigating financial risks without losing the openness and flexibility which has contributed to a prolonged period of growth and macroeconomic and financial stability in the UK. These challenges will have different impacts across all regions, cities and localities, and every spatial level must be able to respond flexibly.

2.78 Chapter 3 sets out the Government's approach to raising economic prosperity and responding to the challenges and opportunities.

INTRODUCTION

3.1 The preceding analysis has shown that in most areas the UK economy is well placed to deal with the economic challenges and to benefit from the opportunities presented by demographic, environmental, global and technological change and global uncertainty. The analysis also highlights areas where more needs to be done to improve the UK's economic performance. This chapter sets out the Government's existing programme of action to deal with each of the challenges and opportunities identified in Chapter 2 and specifies a number of areas where the Government will focus its ongoing programme of economic policy development.

3.2 The Government's approach is founded on the central economic objective of achieving high and stable rates of sustainable economic growth and employment. Central to this is the importance of maintaining macroeconomic stability and sustainable public finances. The *2008 Long-term public finances report*¹ shows that the UK is currently well placed to deal with the fiscal challenges over the coming decades. It will be vital that the public finances continue to be managed in a prudent and sustainable way to ensure the UK is able to deal with fiscal impacts arising from long-term trends.

3.3 Productivity growth is the key determinant of long-run growth, and together with employment growth leads to higher prosperity. This objective is delivered through using the Government's policy levers to increase the flexibility of markets and tackle barriers to productivity. As set out in *Productivity in the UK 7: securing long-term prosperity*², the levers Government has to effect change include:

- investing in the workforce and skills;
- investing in infrastructure;
- taxes and regulation;
- strengthening competition and market frameworks; and
- improving public sector efficiency.

3.4 In responding to the strategic challenges, the Government will need to work in partnership with individuals, communities, businesses and all levels of government, including with the devolved administrations. For example, developing environmental policy requires concerted effort across government (through taxes and regulation and market frameworks in particular), by individuals (for example through behavioural change) and firms (for example through seizing opportunities to enter new markets).

3.5 Complementing this approach, the Government has a programme of action on regional policy, and at the EU and international level. The objective of regional policy is to ensure all countries, regions and localities of the UK can adapt and succeed in the global economy. Appropriate action at the EU and international level can help to ensure the benefits of openness to trade and investment are harnessed and global risks are minimised.

¹ *2008 Long-term public finances report*, HM Treasury, March 2008

² HM Treasury, November 2007

RESPONDING TO THE CHALLENGES OF DEMOGRAPHIC CHANGE

3.6 Chapter 1 concluded that the enhanced stability and the strong labour market performance over the past decade provide a solid foundation from which to respond to demographic change. Chapter 2 described how the UK population is projected to grow faster than previously projected. This is driven by increasing life expectancy, higher fertility and increased positive net migration. Together, these will lead to an increase in the economic dependency ratio. This section outlines how the Government is responding, by ensuring the UK has a flexible workforce with the skills needed to contribute to rising productivity growth, by investing in infrastructure to support projected housing demand and labour mobility and ensuring market frameworks promote labour market participation, including among older workers.

Increasing employment and promoting labour market flexibility

3.7 Chapter 1 showed that the UK is experiencing the longest period of sustained employment growth for over 30 years, but that there are ongoing challenges to encourage and support people who are inactive and outside the labour force to return to work. Extending employment opportunity and improving the productivity of individual workers can help to increase the living standards of the whole population. A flexible labour market, as well as helping to absorb additional workers, allows firms and individuals to find the most efficient and productive ways of working.

3.8 The Government will continue to work to increase flexibility and move towards its long-term aspiration of an employment rate equivalent to 80 per cent of the working-age population. *Ready for work: full employment in our generation* published by the Department for Work and Pensions in December 2007 outlined a vision of a welfare system based on working in partnership with employers, training providers, and private and voluntary sector partners to ensure that disadvantaged benefit claimants receive the preparation and support they need to compete effectively in the labour market and to meet employers' needs. Budget 2008 sets out further details of the Government's welfare programme.

Migration 3.9 Migration deepens the pool of talent that firms can recruit from, increasing labour market flexibility and improving job matching. To take advantage of the economic benefits of migration, UK policy must be open and flexible enough to respond to the needs of the labour market.

3.10 In February 2008, a new points-based immigration system was launched to ensure that only those with the right skills will be able to come to the UK from outside the European Economic Area to work and study. This will enable the UK to identify the most talented workers more effectively. The scheme combines more than 80 pre-existing work and study routes in to the UK into five tiers, with points being awarded on workers' skills to reflect aptitude, experience, age and also the demand for those skills in any given sector. This will allow the UK to respond flexibly to changes in the labour market and create a fair, transparent and objective system that will enable potential migrants to assess their likelihood of making a successful application.

Responding to a changing age profile

Promoting participation and flexibility

3.11 The equalisation of the State Pension Age (SPA) of men and women will begin from 2010 and will mean that the SPA for women will increase incrementally from 60 in 2010 to 65 in 2020. Further reforms, introduced as part of a wider pensions reform package, will increase the SPA for all people from 65 to 68 by 2046. This should limit increases in the economic dependency ratio by encouraging people to remain active in the labour market for longer, but will only be effective if accompanied by sufficient labour market flexibility. In 2006, new laws were enacted to protect workers from age discrimination.

Pension reform

3.12 Alongside increases to the SPA, the May 2006 White Paper *Security in retirement: towards a new pension system* announced ambitious proposals for state and private pension reforms, in response to the Pension Commission's final report³. The package of reforms was carefully balanced to be both affordable and sustainable over the long term. Overall the reforms will mean a fairer and more generous state pension foundation in future, and will be accompanied by auto-enrolment to encourage more individuals to save in a private pension for their retirement, supported by an employer contribution and tax relief.

Responding to a growing population

3.13 While there is significant uncertainty associated with population projections, demands on public services are likely to increase, with implications for the nature of public service provision. The Government is committed to addressing the increasing demand for housing, services and supporting infrastructure that will result from continued population growth and the projected decline in average household size. Housing supply grew by 200,000 net additional homes in 2006-07 - the highest level since the 1980s - and investment in social housing has reduced the number of households living in non-decent homes by over one million.

3.14 As set out in *Homes for the future: more affordable, more sustainable*⁴ and the 2007 Comprehensive Spending Review, the Government has set a target to deliver 240,000 homes per year by 2016, and 3 million additional homes by 2020. It is increasing investment in housing from £8.8 billion in 2007-08 to £10 billion in 2010-11, and introducing reforms to bring forward more land for development, improve infrastructure provision and streamline the planning system.

Next steps

3.15 The Government's priority is to create a flexible, open, highly-skilled labour market in which all individuals have an opportunity to participate. The Government's objective will be to ensure that labour market flexibility is maintained, with further analysis and the development of further policies to help more people into work, support changes in working patterns and develop skills and training.

3.16 The Government will continue to analyse the impact of demographic changes on future infrastructure needs. Demographic changes are also likely to continue to put pressure on the planning system and land use. Building on the current set of reforms

³ Implementing an integrated package of pension reforms: The final report of the Pensions Commission, April 2006

⁴ Communities and Local Government, July 2007.

the planning process and land use will be kept under review to ensure they meet the Government's economic, social and environmental objectives.

RESPONDING TO ENVIRONMENTAL CHANGE

3.17 Responding effectively to the challenges presented by climate change and pressures on water supply, land and waste, requires the Government to ensure that market frameworks are set to encourage investment to fund innovative solutions, such as setting binding targets to reduce carbon emissions. It will also require the Government to work with tax and regulatory levers to encourage behavioural change and to invest appropriately in infrastructure to help to adapt to some of the inevitable impacts.

Responding internationally

3.18 Chapter 2 concluded that environmental pressures require an international response. The global community must agree and deliver a plan to reduce emissions. At the United Nations Framework Convention on Climate Change meeting at Bali in December 2007, countries agreed a Roadmap for negotiations on a deal to tackle dangerous climate change. Building on the work of the International Panel on Climate Change, the Roadmap sets out a clear and comprehensive agenda for negotiations and a timetable ending in 2009. In particular, all countries will adopt a shared vision for long-term cooperative action, including a global goal.

3.19 Significant steps have already been taken by the EU on climate change. At the Spring European Council in March 2007, an ambitious climate change and energy package was approved, representing a decision to shift towards a competitive low-carbon economy in Europe. This agreed an independent binding target to reduce Europe's greenhouse gas emissions by at least 20 per cent by 2020, with further commitments as part of an international agreement. There will also be a binding target of a 20 per cent share of renewable energies in overall EU consumption by 2020, and a 10 per cent minimum binding target for the use of biofuels, subject to sustainability criteria and commercialisation of new technologies.⁵ The package published by the European Commission in January 2008⁶ contained proposals to implement these decisions.

Setting the domestic framework

3.20 Climate change strategy needs to be integrated with energy strategy, as energy production and use account for a large proportion of emissions. The 2007 Energy White Paper⁷ set out how the Government's international and domestic climate change and energy strategy would address the long-term challenges the UK faces. The UK must both tackle climate change by reducing carbon dioxide emissions, and ensure that energy supply is secure, clean and affordable as the UK becomes increasingly dependent on imported fuel. A key part of the strategy is make more progress towards fully competitive and transparent international energy markets and to ensure the right conditions for investment.

⁵ January 2007 20 20 by 2020: Europe's Climate Change Opportunity, speech by Jose Barroso, President of the European Commission

⁶ Climate Action: Energy for a changing world, European Commission, January 2008

⁷ Meeting the Energy Challenge. A White Paper on Energy, Department of Trade and Industry., May 2007.

3.21 The Climate Change Bill, currently before Parliament, is an essential element of the response to the environmental challenge of coming decades, setting the framework for other policies. It will strengthen the credibility and predictability of policy by putting into legislation the UK's long-term target of cutting carbon dioxide emissions by at least 60 per cent by 2050 and at least 26 per cent by 2020.⁸ The Bill introduces five-yearly 'carbon budgets' up to 2050, which will limit the total carbon dioxide emissions allowed in each five-year period, beginning in 2008. A new independent body, the Committee on Climate Change, will advise the Government on the level of carbon budgets, and on the optimal pathway to the 2050 target.

3.22 Soon after the Bill is enacted, the Government will set the first three five-year budgets covering 2008 to 2022, after considering the advice of the Committee. The Government also intends to review the 2050 target, which is already stronger than those in most other countries, based on advice from the Committee on whether it should be strengthened further. Having this framework in place will ensure that the Government's long-term ambitions are clear, and influence the actions of individuals and the investment decisions of businesses. It also provides flexibility regarding how the emissions reductions are made, helping to ensure that they can be achieved in the most efficient way.

**Pricing in the
damage
caused by
emissions**

3.23 While the Government will rely on a range of policy tools to meet carbon budgets, a large proportion of the reductions will be delivered through emissions trading. This is the UK's carbon pricing instrument of choice and a key component in a comprehensive UK policy framework to effectively mitigate climate change. Emissions trading with caps works by setting a strict limit on the total permitted carbon emissions, it also ensures that limit is met in the most efficient manner by allowing emitters to buy or sell allowances. The UK's approach has been primarily to price carbon through international trading schemes, such as the EU Emissions Trading Scheme and ensuring that these are linked to the flexible mechanisms created by the Kyoto Protocol.

3.24 For sectors and policies that are not covered by trading schemes, the Government will use the new Shadow Price of Carbon to ensure that the carbon impacts of policies - whether negative or positive - are taken into account systematically and consistently across Government and valued at a level consistent with economic and scientific evidence.

3.25 The Government has also put in place a principled framework for the use of fiscal policy in this area. This was set out in *Tax and the Environment: using economic instruments*,⁹ which builds on the commitment made by the Government in its 1997 Statement of Intent to explore the scope for using tax, alongside regulation and voluntary action, to deliver environmental objectives. The Government aims to reform the tax system to increase incentives to reduce environmental damage, shifting the burden of tax from economic 'goods' to 'bads', while making sure that environmental taxation meets the tests of good taxation.

⁸ From 1990 levels.

⁹ *Tax and the environment: using economic instruments*, HM Treasury, 2002

Seizing the opportunities of transition to a low-carbon economy

Accelerating technological innovation and deployment

3.26 To deliver the scale of reductions in emissions necessary to avoid damaging climate change, new clean technologies will need to be developed and implemented on a commercial scale. The existence of a carbon price provides an incentive to develop such technologies, but technology market failures will also need to be addressed if the necessary technologies are to be brought forward and deployed in the most effective manner.

3.27 The UK can contribute domestically to innovation and technological advances which can be used to reduce emissions around the world. The UK has a mix of innovation policies, and Government support for energy innovation is rising. Examples include the development of cleaner energy generation and transport technologies, and strategies to decarbonise heat. All these sectors present opportunities over the medium to long term for substantial emissions reductions.

3.28 The UK leads the world in developing Carbon Capture and Storage (CCS), a key global technology that can reduce emissions from fossil fuel power plants by 90 per cent. The Prime Minister launched a competition to demonstrate CCS in the UK by 2014, and the Department for Business, Enterprise and Regulatory Reform (BERR) are consulting on regulations for CCS. The UK is also working with key global partners, including India and China, to develop and demonstrate the technology globally.

3.29 The Environmental Transformation Fund (ETF) led by the Department for Environment, Food and Rural Affairs (DEFRA) and BERR, is a dedicated fund to support the demonstration and deployment of new energy and energy-efficiency technologies. From 2008-09 to 2010-11, the total domestic fund is around £400 million. The ETF is a critical part of the Government's response to the technology challenge, along with the Energy Technology Institute and the Technology Strategy Board. New ETF funding initiatives include £47 million for the Carbon Trust to accelerate the development of new technologies such as offshore wind, third-generation photovoltaic power, marine energy and biomass heating.

Behavioural change

Encouraging behavioural change

3.30 Carbon pricing and new technologies can help to deliver large-scale reductions in emissions. There are many opportunities for low-cost emissions reductions, but these are unlikely to be taken up without policies to overcome other barriers that may prevent or deter individuals and businesses from taking action. The main barriers include:

- a lack of information, as individuals may not always be aware of the full costs and benefits of energy conservation;
- problems with access to capital, as energy-efficient processes and products may have higher upfront costs, and so restrictions to the availability of capital could limit investment in these; and
- a focus on the short term rather than the long term, as many people may be unwilling or unable to calculate the long-run savings they would make by using energy efficient products and processes.

3.31 Further measures may therefore be needed to address these problems, including proportionate regulation, tax, the provision of information, incentives or

financial support, by both the private and the public sector. The Government has introduced a range of policies, set out in the Energy White Paper¹⁰ and the 2006 UK Climate Change Programme, to address these challenges.¹¹

Adaptation

Adaptation to inevitable impacts

3.32 Past and future emissions of greenhouse gases mean that some climate change is inevitable. Countries therefore also need to adapt to unavoidable impacts. The Government announced in the 2007 Comprehensive Spending Review that funding for flood and coastal erosion risk management will increase from £600 million in 2007-08 to £800 million in 2010-11. Within this settlement, the Government will also introduce an adaptation toolkit of £10 million per year to assist communities in adapting to change where constructing defences is not the most appropriate means of managing flood and coastal erosion risk.

3.33 The Government attaches great importance to helping developing countries to adapt to the adverse impacts of climate change. The Environmental Transformation Fund has an £800 million international element to finance overseas development projects that will work to deliver poverty reduction and environmental benefits in developing countries, including support for adaptation to climate change.

3.34 The UK has also been taking forward the development of strategic climate funds in recent talks with the US, Japan and the World Bank. This initiative would deliver resources to developing countries to support their national efforts to move to a low-carbon economy.

Water strategy

3.35 Environmental and demographic change will increase pressures on water supply, underlining the importance of managing supplies efficiently. In February 2008, DEFRA published *Future Water: The Government's water strategy for England*. This sets out a vision for the water sector in 2030 and some of the steps needed to get there. It contains measures to reduce water wastage and for assessing and addressing the pressures on rivers, reservoirs and aquifers. Poor surface water management can cause both problems with water quality and serious flooding. The Government is consulting on ways to clarify responsibilities and improve incentives for property owners and developers. River and coastal flooding is also being tackled through investment and a review of the 2007 summer floods.

3.36 The recently announced independent review of competition and innovation in the water sector also has a vital role in ensuring sustainable water supplies into the future. It will explore the opportunities to increase the efficiency of water use and deliver benefits to both business and household customers by introducing greater competition into the sector.

Waste strategy

3.37 A growing population and economy could lead to increased costs and environmental impacts from waste. Significant progress has been made in limiting the amount of waste produced and switching to more sustainable waste management methods such as recycling, composting and energy recovery, but performance still lags

¹⁰ *Meeting the Energy Challenge: An Energy White Paper*, Department for Trade and Industry, May 2007.

¹¹ *Climate Change the UK Programme 2006*, DEFRA, March 2006.

behind many other European countries. The Climate Change Bill introduces powers for pilot incentive schemes for household waste reduction. DEFRA recently published its *Waste Strategy for England 2007*¹², setting out objectives to:

- decouple waste growth from economic growth and put more emphasis on waste prevention and re-use;
- meet and exceed EU Landfill Directive diversion targets for biodegradable municipal waste to 2020;
- increase diversion from landfill of non-municipal waste and secure better integration of treatment for municipal and non-municipal waste; and
- secure the investment in infrastructure needed to divert waste from landfill and for the management of hazardous waste.

Next steps

Opportunities from the transition to a low carbon economy

3.38 Climate change is a priority area for the Government and it will take significant further action this year towards making the transition to a low-carbon global economy. At the international level, the UK will engage closely in EU and international negotiations to secure an international climate change agreement, and effective and flexible EU policies. Domestically, the Committee on Climate Change will advise the Government before the end of the year on the UK's carbon budget for 2008-12 and its 2050 target.

3.39 The Government will also seek to ensure that the UK makes the most of the potential economic benefits of the transition to a low carbon economy. It will undertake further analysis on this issue and will engage further with business to ensure that the UK capitalises on its strengths in the low carbon technology, goods, services and financial markets, through the Carbon Markets Experts Group and the UK Low Carbon Economy Summit - Business Opportunities in a Low Carbon Future. It will also develop a low-carbon energy technology strategy to maximise the cost-effective potential for cutting emissions in the UK and internationally.

3.40 For example, Part II of the King Review of low-carbon cars, published alongside Budget 2008, has identified a number of opportunities for businesses in the development and manufacture of low-carbon cars as a location for high technology companies in the field and as a leader in key areas of science and engineering. Budget 2008 sets out the Government's response to the review.

RESPONDING TO GLOBALISATION AND TECHNOLOGICAL CHANGE

3.41 Chapter 1 highlighted how the acceleration in the integration of the world's economies has led to structural changes in the economy – in particular a shift towards high value-added manufacturing and services. Chapter 2 analysed the implications of continued global change including increased specialisation, the rising importance of skills and increasing rewards to innovation. Responding to this challenge requires action across all of the Government's policy levers. This section outlines how the Government will ensure the UK remains an attractive place to do business, that all

¹² Devolved administrations have separate waste strategies.

countries and regions can succeed in the global economy, and that the EU can play its part in contributing to economy prosperity.

Maintaining an attractive business environment

Maintaining economic and financial stability

3.42 Central to ensuring economic prosperity is the importance of maintaining macroeconomic stability and sustainable public finances. The delivery of macroeconomic stability and improved resilience over the past decade leaves the UK well placed to meet the significant challenges of the coming decade and to continue its reforms to improve the attractiveness of the business environment.

Investing in the workforce and skills

3.43 Given the importance of workforce skills to UK productivity, the Government commissioned the Leitch Review of Skills¹³ to assess the UK's long-term skills needs. In July 2007, the Government published its detailed plans¹⁴ for taking forward the recommendations of the review. This set out the Government's commitment to

- achieve a world-class skills profile by 2020 and in doing so virtually eliminate low skills in the workforce; and
- major reform of the skills system, in particular moving to a “demand-led” approach, which places purchasing power for training into the hands of employers and individuals.

3.44 The Government has already made progress on laying the foundations for these ambitions. The 2007 Comprehensive Spending Review set out additional resources for adult training, rising from £3 billion in 2007-08 to £3.6 billion in 2010-11. This includes funding for reforms to the skills system, enabling employers and individuals to choose the type, delivery method and amount of training they need. This will increase the number of people gaining new skills, with funding for almost 3 million adults to gain new, higher-level qualifications by 2010-11. In the longer term the Government is committed to increasing the stock of high-level skills so that by 2020 40 per cent of all adults will have a higher education qualification. Budget 2008 announces further measures to accelerate skills take up in the UK.

3.45 Different sectors have different skill needs and the Government is taking forward appropriate policies for each, informed by the network of employer led Sector Skills Councils. For example, the skill needs of the UK creative industries are a key aspect of the Government's *Creative Britain - new talents for the new economy* strategy. Policies include 5,000 apprenticeships across the creative sectors, new centres of excellence and ensuring that career routes into the creative industries are accessible for all. In the manufacturing sector, policies include industry specific development programmes provided by the National Skills Academy for Manufacturing to support the learning and skills needs of 40,000 people per annum by 2012, and the national Engineering Apprenticeships programme which has 17,000 people currently enrolled on level 3 courses.

¹³ *Leitch Review of Skills, Prosperity for all in the global economy – world class skills*, HM Treasury, December 2006.

¹⁴ *World Class skills: implementing the Leitch review of skills in England*, DIUS, July 2007.

Promoting innovation across all sectors of the economy

3.46 In October 2006, Lord Sainsbury was asked to carry out an independent review¹⁵ to assess the responsiveness of the science and innovation system to the challenges and opportunities of globalisation. The Government accepted the recommendations of the Sainsbury Review in Autumn 2007, and good progress has been made in implementing these.

3.47 The Department for Innovation, Universities and Skills (DIUS) is shortly publishing a new Science and Innovation Strategy, setting out the vision for innovation as a key driver of economic growth across all sectors, including areas such as the service and creative industries where innovative activity is not captured by traditional indicators. The Department will also publish an update on progress in implementing the Sainsbury Review recommendations. In autumn 2008, the first annual innovation report will further update the Government's progress in implementing the objectives set out in the Sainsbury Review and the Innovation Strategy.

Investing in infrastructure

3.48 Reliable, high quality and widespread transport, communications and energy infrastructure increases the productivity of firms and the labour force. The wider spillover benefits associated with infrastructure mean it will be underprovided by the private sector. In line with the Eddington Study,¹⁶ the Government is enhancing infrastructure in a targeted way with rigorous appraisal techniques, by utilising procurement methods that leverage public and private finance, and by adopting new technology where it offers the best value for money. The 2007 Comprehensive Spending Review announced annual real increases in expenditure for transport infrastructure, extension of the long term funding guideline for transport investment out to 2018-19 to aid long term decision making and legislation creating a new planning regime for major infrastructure projects.

3.49 The Government's goal is to maximise transport's contribution to overall competitiveness and productivity, within its commitment to sustainable development and social welfare, by identifying barriers to growth and by looking for solutions across all modes of transport, giving priority to those with the highest returns. The Government is focused on delivering key infrastructure investment as well as getting the best from existing networks. For example, Crossrail will directly link London's main economic centres, generate economic benefits of more than double its cost and create 30,000 high-value jobs. New technology like Active Traffic Management could unlock around 800km of extra capacity on British motorways by using the hard shoulder as an extra lane. The Government is currently looking at how this new capacity could best be managed, including by use of a lane as a car share or tolled lane.

Reforming the planning regime

3.50 The Barker Review of Land Use Planning and the subsequent Planning White Paper¹⁷ set out how planning is key to meeting the Government's economic objectives. The Government is reforming the planning system to help ensure it contributes effectively to the UK's economic growth and competitiveness through reforms proposed in the Planning Bill on major infrastructure projects and a new planning policy statement on economic development.

3.51 Alongside these reforms the Government is proposing measures to increase the efficiency of the planning process to help reduce the burden on business and individuals. The Planning White Paper proposed to reduce the number of minor

¹⁵ *The Race to the Top*, October 2007.

¹⁶ *Transport's role in sustaining UK's Productivity and Competitiveness: The Case for Action*, Eddington, December 2006.

¹⁷ *Planning for a sustainable future*, Communities and Local Government, May 2007.

applications planning authorities have to deal with, streamline the information requirements for all applications and improve the speed and efficiency of the appeals process.

Communications infrastructure **3.52** As the UK continues to move towards a knowledge-based economy, long-term success increasingly relies on the fixed and wireless information storage and distribution network. This information and communications infrastructure is an important contributor to improving economic performance.

3.53 Given this important role, and with the market for next generation access in its early stages, the Government has decided to establish an independent review to look at a set of focused questions around the potential barriers to deployment of next-generation broadband. The review will examine whether there are potential barriers to investment and the possible solutions. It will also consider how the Government might promote certainty in the investment environment, for instance through clarification of the non-domestic rating (business rates) treatment of new infrastructure options, as well as the case for adjustments to the regulatory framework.

A competitive tax system **3.54** A stable, sustainable and competitive business tax system continues to be critical to ensure businesses can start up, grow and invest. The Government's objectives for the business tax system are that it is internationally competitive, has the fewest distortions and the lowest compliance costs possible, ensures fairness within and across the tax system so that business is contributing a fair share of revenue to fund public services, and encourages growth through targeted support for innovation and investment.

3.55 The Government has made considerable progress towards these objectives. The main rate of corporation tax was cut in 1997 and 1999. Building on this, the Budget 2007 business tax package cut the corporation tax rate to 28 per cent (the lowest in the G7), modernised and simplified the system of capital allowances, rebalanced incentives for small companies (including increasing the small companies rate), and refocused incentives towards entrepreneurial activity. In addition, the 2007 Pre-Budget Report introduced a simplified capital gains tax regime and launched a renewed programme of tax simplification, working with business to drive through reforms that will free up business resource.

3.56 The Government is committed to working closely with the business community to ensure that the business tax system reflects the needs and concerns of business while at the same time ensuring the tax system is as fair, competitive and simple as possible. The next steps in the Government's programme are set out in Budget 2008.

Regulatory reform **3.57** The Government continues to reform the regulatory system, with the aim of delivering real reductions in administrative burdens without harming necessary regulatory outcomes. Over £800 million in net savings have already been delivered. The Government is setting out in its Enterprise Strategy plans to further improve the regulatory environment in the UK. The strategy is also setting out how the Government will further encourage business start up and growth. Focusing on interventions designed to help small and medium sized businesses, the strategy outlines a new framework for Government action.

3.58 The Business Support Simplification Programme aims to improve the effectiveness and accessibility of publicly funded support to business. The Government is reducing the number of support schemes from over 3000 to 100 or fewer by 2010 and, by merging existing publicly funded information, diagnostic and brokerage services into

it, establishing Business Link as the primary channel through which businesses can access support. Ongoing management arrangements are being put in place to ensure that beyond 2010, the support provided remains responsive to changing requirements, and continues to be improved based on rigorous monitoring and evaluation. The new business support offers will all be available by March 2009.

Improving public sector efficiency

3.59 Public sector productivity contributes to whole economy productivity directly and increases public service output for a given level of funding. Furthermore, public procurement can affect both competition and innovation. The Government has made significant progress in delivering the vision of improved public sector efficiency set out in the 2004 Gershon Review of Public Sector Efficiency¹⁸, with departments and local authorities reporting gains in excess of published targets.

3.60 The Government aims to go further by saving a further £30 billion by 2010-11 for reinvestment in priority areas and beginning a process to review effectiveness and value for money across a number of significant spending areas. This review will also scrutinise cross-cutting incentives and systems to ensure they are promoting value for money for the taxpayer.

3.61 *Infrastructure procurement: delivering long term value*, published alongside Budget 2008, sets out the next steps the Government is taking to secure value for money in its procurement of significant assets and long-term service provision. It recognises the evolving needs of the public sector and the changing approaches to complex procurement, many building on experience of the Private Finance Initiative. It outlines a framework for infrastructure procurement designed to drive value for money across the full range of procurement approaches and ensure the effective scrutiny of key projects.

Ensuring all nations, regions and localities succeed in the global economy

3.62 To ensure sustainable economic growth across the UK, the Government's vision is that every country, region, sub-region and locality should perform to its full potential and become more competitive. Although progress has been made in recent years to narrow the gap in regional performance, Chapter 1 showed that there remain historic gaps in employment and skills. The Government has recently announced the establishment of the Spatial Economics Research Centre to strengthen the provision and use of relevant and robust research and evidence on the drivers of disparities in economic performance at all spatial levels.

3.63 As set out in the *Review of sub-national economic development and regeneration*¹⁹, (SNR) promoting growth requires a flexible and devolved framework so that institutions at each spatial level – national, regional, sub regional and local – can address economic challenges and respond where appropriate. Effective devolution will create the right framework to support and incentivise local authorities to promote economic development, to enable sub-regional groupings to tackle issues that cross administrative boundaries, and to enhance the key strategic role Regional Development Agencies (RDAs) play with the private sector in driving growth. This type of devolved

¹⁸ *Releasing resources for the frontline: Independent Review of Public Sector Efficiency*, HM Treasury, July 2004

¹⁹ HM Treasury, Department for Business, Enterprise and Regulatory Reform and Department for Communities and Local Government 2007

framework will help promote cities' economic growth, which is critical to wider competitiveness.

3.64 In light of these conclusions, the Review set out proposals to reform regional, sub-regional and local governance, and to devolve decision-making for economic development and regeneration to the most appropriate spatial level. Key recommendations include:

- a strong emphasis on empowering local authorities and their partners to promote growth, alongside proposals to reform the Local Authority Business Growth Incentive and introduce supplementary business rates;
- an enhanced strategic role for the RDAs, with executive responsibility for developing new integrated regional strategies, supported by increased freedoms and flexibilities and a simplified sponsorship framework; and
- working with interested sub-regions to explore the potential for statutory arrangements for sub-regional collaboration on economic development issues, and negotiating and agreeing the first Multi Area Agreements.

3.65 The Government recognises that cities are engines of economic growth, contributing to competitive regions, and stimulating growth and employment.²⁰ As the Government takes forward its approach to Multi-Area Agreements it will continue to develop a framework to promote cities' continued economic success. However, many cities have lower employment rates than their surrounding regions. To address these issues, under DWP's City Strategy, local partners, including local authorities, private businesses, third sector organisations, Jobcentre Plus, and the Learning and Skills Council, have formed consortia in 15 cities or city regions, pooling funding streams and rationalising and joining up services. City Strategy consortia have now agreed their local strategies and over the next year they will work across traditional boundaries to deliver a range of support to help the most disadvantaged into work.

Delivering economic prosperity through the EU

3.66 Chapter 1 showed that the EU has played a significant role in contributing to economic prosperity in the UK. The EU will continue to provide a central element of a strategy to rise to global changes and developments and opportunities. This requires a more outward-facing Europe, with an agenda for globalisation that emphasises openness, fairness and the importance of cooperation between nations. This is discussed further in Box 3.1.

²⁰ Devolved Decision Making: 3 – Meeting the regional economic challenge: The importance of cities to regional growth, HMT, 2006.

Box 3.1: A more outward facing Global Europe

Global Europe: Meeting the Economic and Security Challenges, published by the Cabinet Office and the Foreign and Commonwealth Office in October 2007, set out the global challenges that are facing the EU and its Member States, and identified the priority areas for action. These include:

- a renewed commitment to high levels of growth and employment through a focus on implementation of the Lisbon Strategy for Growth and Jobs and a flexible approach to Single Market policies that focuses less on legislation and more on promoting competition, reducing the burden of regulation, and encouraging innovation;
- an effective and well-functioning social dimension that pursues modern social policies, which combine labour market flexibility with fairness in line with Europe's long-standing social values and its commitment to economic prosperity;
- a commitment to free trade and openness, with the EU leading in breaking down barriers to create a free and fair multilateral trading system, and developing further its partnerships with the US and major emerging economies to foster economic cooperation and free trade. Europe cannot afford to retreat behind protectionist policies;
- tackling climate change and energy security, where the EU is already playing a truly global leadership role through its commitment to become the world's first competitive, energy-secure, low-carbon economy;
- tackling global poverty and development including through a fresh effort to deliver the Millennium Development Goals (MDGs); and
- reforming the EU budget so that the EU is better equipped to meet the challenges of the 21st century. The priority is to ensure that the forthcoming review of the EU Budget provides the basis for a more effective and efficient Budget.

Through meeting these priorities, the EU can become more outward-looking and globally focused, setting a new agenda for globalisation and delivering prosperity, opportunity and security to citizens of the UK and all other Member States and beyond.

**Achieving
economic
prosperity
through the
EU**

3.67 Europe's key economic challenges going forward are to improve flexibility in labour, product and capital markets to boost innovation and skills. The Lisbon Strategy for Growth and Jobs – the EU's structural reform agenda that was launched in 2000 to raise the rate of growth and employment to underpin social cohesion and environmental sustainability – represents a key framework for action at both national and European levels for how the EU can deliver prosperity and well-being for its citizens.

Next steps

3.68 The Government's priority in this area will be to raise productivity and maintain a business environment that allows firms to respond effectively to the challenges of globalisation, and succeed in the technologies and sectors of the future. The Government will focus on ensuring the UK is equipped with a skilled and flexible workforce and that everyone has the opportunity to realise their full potential and talent. It will also ensure the UK has appropriate tax and regulatory frameworks that contribute to an attractive business environment, and that infrastructure continues to support growth.

3.69 In addition, the Government will continue to focus on ensuring all countries and regions of the UK can succeed in the global economy. The Government will undertake further work to build on the analysis and recommendations in the SNR, to ensure that decisions are taken at the most appropriate spatial level to best meet the economic challenges and needs of different regions, sub-regions, cities and localities. The Department for Communities and Local Government and BERR are leading the implementation of the SNR and will publish shortly a consultation document to seek views on implementing these reforms. In addition, the Government will publish a new framework for regeneration later this year to improve the coordination and prioritisation of regeneration activity.

3.70 On the EU, the Lisbon Strategy is approaching its 2010 deadline, but structural reform is clearly an ongoing process and new challenges are emerging, including competition from emerging economies, ageing populations, the rising importance of human capital, EU enlargement and climate change. The EU must therefore start to prepare a comprehensive economic reform strategy for post-2010, which is robust to these new trends and challenges and continues to ensure strong, sustainable growth and prosperity with fairness and opportunity for all.

RESPONDING TO GLOBAL UNCERTAINTY

3.71 Chapter 1 showed how greater competition brought by global integration has benefited consumers worldwide. Chapter 2 set out how the technology, complexity and interconnectedness of markets have meant that developments in one market can easily and quickly be transmitted to others, posing risks to financial stability and increased protectionism. This section outlines how the Government is responding to these with reform of international financial institutions to support international collaboration and so minimise the risks to global economic stability; proposals to strengthen the current UK framework for financial stability and depositor protection; and by championing competition and openness internationally.

Reform of international financial institutions

IMF reform 3.72 As the process of globalisation continues, it is clear that global institutions must adapt in order to maintain their effectiveness, credibility and legitimacy. Reform of the IMF, which is responsible for monitoring the global economy, providing policy advice and lending to members to help deal with economic crises, is particularly important. Key to this is governance reform, to take into account shifts in countries' weights in the world economy and address the relatively low level of voice and representation of low-income countries.

3.73 In an era of free flowing capital with strengthened inter-linkages and greater spillovers between economies, international cooperation is needed to minimise the risks to global economic stability. The world needs a particular focus on, and better early warning system for dealing with, the risks from developments in the financial system. This means that the international community must be better able to:

- analyse the risks from the financial sector;
- devise and implement policies which mitigate those risks; and
- publicise the risks and appropriate responses in the private and public sectors.

3.74 The Government's view is that since different international institutions have different roles and strengths, the IMF and the Financial Stability Forum (FSF) should build on their respective strengths to form the basis of such an early warning system.

Responding to the recent financial market disruption

3.75 Recent developments in global financial markets have underlined that increasing interdependence can mean that developments in overseas markets can have implications for markets in the UK. The Government is committed to ensuring that the UK continues to be resilient to such shocks.

3.76 The Treasury, the Financial Services Authority (FSA) and the Bank of England are working together, and with their counterparts across the world to understand the causes of the ongoing market disruption. They are also working to ensure that the EU and G7 policy responses to strengthen the stability and resilience of financial markets are and remain consistent. The G7 has asked the FSF to analyse the underlying causes of the ongoing market turbulence and recommend appropriate responses, with a focus on events in the markets for structured products. As a key global marketplace, the EU also has a strong role to play. The Economic and Financial Affairs Council (Ecofin) has endorsed a programme of work on the issues raised by market disruption.

3.77 A joint consultation paper by the Treasury, the FSA and the Bank of England outlining proposals to strengthen the current UK framework for financial stability and depositor protection was published in January 2008.²¹ This draws on best practice from around the world and aims to establish a world-leading regime that builds on the lessons of recent months. The consultation paper also sets out the joint emerging views of the Treasury, the FSA and the Bank of England on the appropriate international response to market disruption.

3.78 The disruption in financial markets since July 2007 has particularly affected mortgage securitisation, limiting mortgage lenders funding sources. Given the importance of mortgages to the financial sector and the wider economy, the Chancellor in July 2007 commissioned the Treasury to undertake a Review of Housing Finance. This has examined how lenders raise their funds in secondary markets, and the challenges that this poses to affordable and flexible long-term fixed-rate mortgages. The review has also examined measures to address the long-term robustness of the mortgage-backed securities market, alongside the covered bond legislation implemented in March 2008. Budget 2008 provides more detail on the review's proposals.

Maintaining openness

3.79 A climate of economic openness is key to enabling trade and maximising the benefits of globalisation. The UK has long benefited from openness to foreign trade and investment and will continue to make a strong case for open markets in the EU and internationally and resist any backslide into protectionism. The Government is committed to working towards a freer and fairer global trading system, while ensuring the capacity of poorer countries to benefit from new trading opportunities, in particular through achieving an ambitious and pro-development outcome to the Doha Development Agenda.

²¹ *Financial stability and depositor protection: strengthening the framework*, FSA, Bank of England and HM Treasury, January 2008.

Sovereign wealth funds **3.80** In order to harness the investment potential in Sovereign Wealth Funds (SWFs), the UK will engage fully with the ongoing work in the IMF and OECD to set out best practice guidelines. SWFs raise important and complex global issues, requiring a global approach. It is in the interest of all parties to improve standards of governance and transparency and promote fair investment frameworks. This needs to be developed with SWF sponsoring countries and recipient countries through dialogue to build confidence.

Ensuring the financial services sector remains competitive **3.81** Chapter 1 highlighted the importance of the financial services sector to the UK economy. In 2006, the Government established a High-Level Group on the City of London's international competitiveness, with senior representatives from across the financial services sector. This Group, which is chaired by the Chancellor, meets around twice per year and is focused on financial regulation, including the response to recent events in financial markets. It is also examining longer term issues including the creation of an International Centre for Financial Regulation, the wider business environment, skills and immigration, infrastructure, market innovation such as Islamic Finance and carbon markets, and overseas promotion of UK-based financial services.

Next steps

3.82 The Government will pursue a range of policies to promote global financial stability and openness. It will continue to work with the financial sector to take forward its proposals to strengthen its framework for financial stability and depositor protection, and will introduce a bill into Parliament in this session. The UK will also continue to work with its European and international partners to analyse the underlying causes of recent market disruption and recommend appropriate responses.

3.83 Over the longer term, the Government will work to ensure that there are effective systems in place at an international level to monitor the international financial system and to address any emerging risks. Working through multilateral fora and bilateral relationships, the UK will also both champion market openness as a fundamental component to economic growth and consider the next stage of the reform of international financial institutions. As discussed above, the Government will work to ensure that a more outward-facing EU sets an agenda for globalisation that emphasises openness and fairness.

CONCLUSION

3.84 The analysis in this report has shown that the UK economy is well placed to deal with the immediate and long-term challenges facing the global economy, but that there is further progress to be made in a number of areas. This chapter has outlined a programme of reform to respond to the longer-term challenges and put the UK in a position to seize the opportunities of demographic, environmental, global and technological change and to minimise the risks of global uncertainty.

3.85 As Chapter 2 noted, there are significant uncertainties associated with each of the challenges. No country can take its place in the world or its prospects for granted. It is inevitable new challenges to economic prosperity will arise and therefore a key part of the response will be to retain the capacity to act flexibly in the face of new developments. The Government, as part of the ongoing process of analysis and policy development, will undertake further work to assess the changing nature of the challenges to ensure the policy framework remains robust in the key areas outlined in this chapter.

3.86 The new and changing context facing the UK has implications for society as a whole. The Government alone cannot ensure that the UK will meet the challenges and seize the opportunities ahead. The Government will work in partnership with individuals, communities, businesses and government at all levels to address these issues. Firms of all types have a major role to play in meeting these challenges: seizing opportunities and making the most of favourable and competitive market conditions; working with the Government to identify and develop the future reform priorities; and helping to ensure the implementation of existing policies and reforms is as effective as possible.

- Baldwin, R. (September 2006): *Globalisation: the Great Unbundling*
- Bank of England, HM Treasury, FSA (January 2008): *Financial stability and depositor protection: strengthening the framework*
- Bassanini, A., Duval, R. (2006): *Employment patterns in OECD countries: Reassessing the role of policies and institutions*
- Barker, K. (March 2004): *Review of Housing Supply, Delivering Stability: Securing our Future Housing Needs*, HM Treasury
- Barker, K. (July 2006): *Barker Review of Land Use Planning Interim Report – Analysis*
- Barroso, J. (January 2007): *20 20 by 2020: Europe's Climate Change Opportunity*, European Commission
- BERR (February 2008): *Globalisation and the changing UK economy*
- BERR, DIUS, DEFRA, (November 2007): *Commission on environmental markets and economic performance report*
- BECTA (January 2007): *Making a difference with technology for learning: evidence for local authorities*
- Bitzer, Görg, (2005): *The impact of FDI on industry performance*
- Bloom, N., Sadun, R., Van Reenen, J. (May 2007): *Americans do I.T. better: US multinationals and the productivity miracle*, NBER Working Paper No. 13085
- Cabinet Office, Foreign and Commonwealth Office (October 2007): *Global Europe: Meeting the Economic and Security Challenges*
- Chellaraj, G., Maskus, K. E., Mattoo, A., (2005): *The Contribution of Skilled Immigration and International Graduate Students to U.S. Innovation*, working paper, Department of Economics, University of Colorado Boulder,
- Communities and Local Government (2007): *The Index of Multiple Deprivation 2007*
- Communities and Local Government (May 2007): *Planning for a sustainable future*
- Communities and Local Government (July 2007): *Homes for the future: more affordable, more sustainable*
- Corrado, C. Hulten, C., Sichel D. (2006): *Intangible capital and economic growth*, NBER Working Paper No. 11948
- Crafts, N. (1997): *Some dimensions of the 'quality of life' during the British Industrial Revolution*, The Economic History Review
- Davos (January 2006): India Brand Equity Foundation, 2006 Brochure
- DCMS, BERR, DIUS (February 2008): *Creative Britain – new talents for the new economy strategy*
- DEFRA (March 2006): *Climate Change the UK Programme 2006*

- DEFRA (May 2007): *Waste Strategy for England 2007*
- DEFRA (February 2008): *Water Strategy: Future Water*
- Dew-Becker, I., Gordon, R. (February 2008): *The role of labour market changes in the slowdown of European productivity growth*, CEPR
- DIUS, (July 2007), *Work Class Skills: implementing the Leitch review of skills in England*
- DTI (May 2003): *UK competitiveness: moving to the next stage*, DTI Economics Paper No. 3, Harvard Business School
- DTI, DEFRA (November 2006): *Bridging the gap between environmental necessity and economic opportunity: First report of the Environment Innovations Advisory Group*
- DTI (May 2007): *Meeting the Energy Challenge, A White Paper on Energy*
- DWP (December 2007): *Ready for Work: full employment in our generation*
- Eddington (December 2006): *Transport's role in sustaining UK's Productivity and Competitiveness: The Case for Action*
- Environment Agency (December 2007): *Review of 2007 Summer Floods*
- European Commission (March 2000): *Lisbon Strategy*
- European Commission (2003): *The macroeconomic effects of the Single Market programme after 10 years.*
- European Commission (January 2007): *Step towards deeper economic integration: The internal market of the 21st century*
- European Commission (January 2008): *Climate Action: Energy for a changing world.*
- Gershon, J. (July 2004): *Gershon Review: Releasing resources for the frontline: Independent Review of Public Sector Efficiency*, HM Treasury,
- Giorgio Marrano, M., Haskel, J., Wallis, G. (October 2007): *Intangible investment and Britain's productivity*, Treasury Economic Working Paper No.1, HM Treasury
- Glover, S., Gott, C., Loizillon, A., Portes, J., Price, R., Spencer, S., Srinivasan, V. and Willis, C., (2001): *Migration: an economic and social analysis*, RDS Occasional Paper No 67, Home Office
- Gott, C., Johnston, K. (2002): *The migrant population in the UK: fiscal effects*, RDS Occasional Paper No 77, Home Office
- Gowers, A. (December 2006): *Gowers Review of Intellectual Property*, HM Treasury
- Griffith, R., Redding S., Van Reenen J. (2004): *Mapping the Two Faces of R&D: Productivity Growth in a Panel of OECD industries*, Review of Economics and Statistics 86
- Grossman, Rossi-Hansberg (August 2006): *Trading Tasks: A Simple Theory of Offshoring*
- Hampton, P. (March 2005): *Reducing administrative burdens: effective inspection and enforcement*, HM Treasury
- HM Treasury (November 2002): *Tax and the Environment: using economic instruments*

- HM Treasury (2003): *EMU and labour market flexibility*
- HM Treasury, DTI, DfES (July 2004): *Science and Innovation Investment Framework 2004-2014*
- HM Treasury (November 2006): *Long-term opportunities and challenges for the UK: analysis for the 2007 Comprehensive Spending Review*
- HM Treasury (2006): *Devolved Decision Making: 3 – Meeting the regional economic challenge: The importance of cities to regional growth*
- HM Treasury (December 2006): *Leitch Review of Skills, Prosperity for all in the global economy – world class skills*
- HM Treasury (March 2007): *Employment opportunity for all: tackling worklessness in London*
- HM Treasury, BERR, Communities and Local Government (July 2007): *Review of sub-national economic development and regeneration*
- HM Treasury (October 2007): *2007 Pre-Budget Report and Comprehensive Spending Review: Meeting the aspirations of the British people*
- HM Treasury, BERR (November 2007): *Productivity in the UK 7: Securing long-term prosperity*
- HM Treasury (March 2008): *Resilience in OECD Economies*, Treasury Economic Working Paper No.2
- HM Treasury (March 2008): *Working Tax Credit and labour supply: an evaluation*, Treasury Economic Working Paper No.3
- HM Treasury, (March 2008): *2008 Long-term public finance report*
- HM Treasury, (March 2008): *Infrastructure procurement: delivering long term value*
- Home Office, DWP, (October 2007): *The economic and fiscal impact of immigration*, Cross-Departmental submission to the House of Lords Select Committee on Economic Affairs
- Home Office, Border and Immigration Agency (February 2008): *The Path to Citizenship: Next Steps in Reforming the Immigration System*
- IMF (December 1996): *1996 Article IV consultation*
- IMF (February 2006): *2005 Article IV consultation*
- IMF (September 2006): *World Economic Outlook: Financial systems and economic cycles*
- IMF (December 2006): *2006 Article IV Consultation*
- IMF (March 2007): *2007 Article IV Consultation*
- IMF (October 2007): *World Economic Outlook Globalization and inequality*
- Independent Review of Public Sector Efficiency (July 2004): *Releasing resources for the frontline, HM Treasury*
- Intergovernmental Panel on Climate Change (2007): *Climate Change 2007: The Physical Science Basis*, Contribution of Working Group I to the Fourth Assessment Report

International Energy Agency (2006): *World Energy Outlook 2006*

Jaffe, A., Henderson, R., Trajtenberg, M. (1993): *Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations*, Quarterly Journal of Economics 108 (3), pp.577-598.

Jaffe, A., Henderson, R., Trajtenberg, M. (2005): *Patent citations and the geography of knowledge spillovers: A re-assessment - Comment*, American Economic Review 95(1), pp.461-464

King, J (October 2007): *The King Review of low-carbon cars, Part 1: the potential for CO2 reduction*

KPMG (June 2007): *Peer review of competition policy*, Report to the DTI

NAO (November 2007): *Sustainable employment: supporting people to stay in work and advance*

Nicoletti, G., Scarpetta, S. (2003): *Regulation, Productivity and Growth: OECD Evidence*, OECD Economics Department Working, Paper 347

OECD (September 2007): *Economic Survey of the United Kingdom 2007*

OECD (May 2005): *The benefits of liberalising product markets and reducing barriers to international trade and investment: The case of the United States and the European Union*, Economics Department Working Paper No. 432

OFT (September 2007): *Approach to calculating direct benefits to consumers*

OFT (December 2007): *Positive impact: An initial evaluation of the effect of the competition enforcement*

OFT (November 2007): *The deterrent effect of competition enforcement by the OFT: A report prepared for the OFT by Deloitte*

ONS (2007): *Social Trends 37*

ONS (2007): *Labour Force Survey*

Pain, N. (December 2000): *Inward investment, technological change and growth: The impact of multinational corporations on the UK economy*

Pensions Commission (2004): *Pensions: Challenges and Choices*

Pensions Commission (2005): *A New Pension Settlement for the Twenty-first Century*

Pensions Commission (April 2006): *Implementing an integrated package of pension reforms: The final report of the Pensions Commission*

Rae, D., Sollie, M. (2006): *Globalisation and the European Union: Which countries are best placed to cope?*, OECD Economics Department Working Paper No. 586

Sainsbury (October 2007): *The race to the top: A review of Government's science and technology policies*, HM Treasury

Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor, H.L. Miller (2007): *Technical Summary in: Climate Change 2007: The Physical Science Basis*

Skrisandarajah, D., Cooley, L. Reed, H. (2005): *Paying their way: the fiscal contribution of immigrants in the UK*, Institute of Public Policy Research

- Statutory Instrument 2006 No. 1031 (made 4 April 2006 coming into force October 2006): *Employment and Training: The Employment Equality (Age) Regulations 2006*
- Statutory Instrument 2006/2931 (came into force on 1 December 2006): *Pension provisions in the Employment Equality (Age)(Amendment No. 2) Regulations 2006*
- Statutory Instrument 2007 No. 825 (came into Force on 6 April 2007): *The Employment Equality (Age)(Consequential Amendments) Regulations 2007*
- Stephan, P., Levin, S. (2001): *Exceptional contributions to US science by the foreign-born and foreign-educated*, Population Research and Policy Review, Vol. 20, No. 1, pp. 59–79
- Stern, N. (2006): *Stern Review on the Economics of Climate Change*, HM Treasury
- Stern, N. (2007): *The Economics of Climate Change: The Stern Review*, Cambridge University Press
- Strategy Unit, Cabinet Office (February 2008): *Realising Britain's Potential: Future Strategic Challenges for Britain – main report*
- Tinsley, D., Monastiriotis, V. (2007) *Developing an Index of Labour Market Adaptability for the UK*, Employment Relations Research Series No.85, Department of Business, Enterprise and Regulatory Reform
- Trajtenberg, M (1993): *Geographic Localization of Knowledge Spillovers as Evidenced by Patent Citations*, Quarterly Journal of Economics 108 (3), pp.577-598
- UNCTAD (2007): *Information Economy Report 2007-2008, Science and technology for development: the new paradigm of ICT*
- World Economic Outlook (October 2007): *Globalization and inequality*, International Monetary Fund
- Zucker L., Darby, M., Brewer, M. (1998): *Intellectual human capital and the birth of the United States biotechnology enterprises*, American Economic Review, Vol. 88, pp. 290–306

ISBN 978-1-84532-431-5



9 781845 324315 >