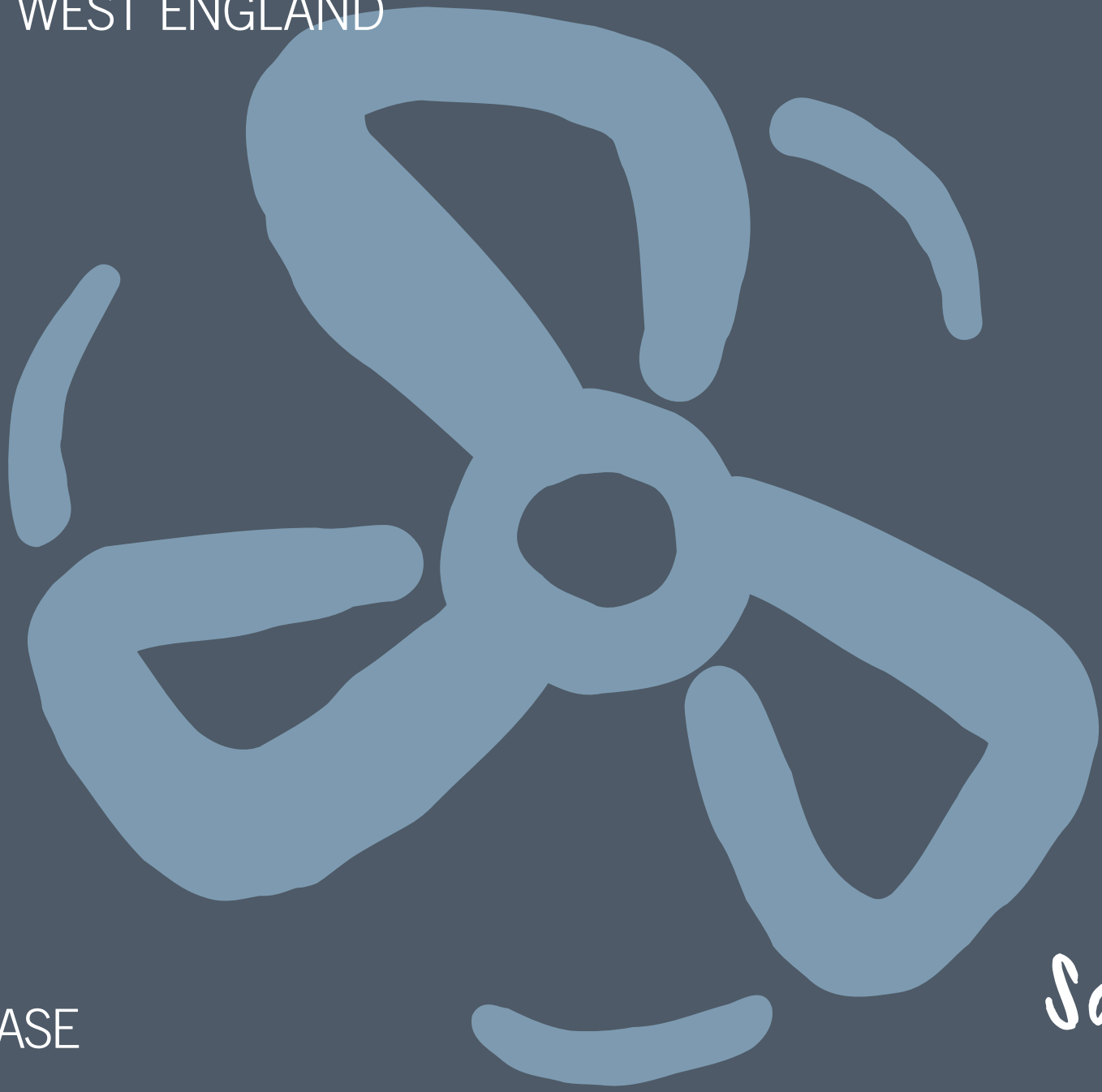
REGIONAL ECONOMIC STRATEGY FOR SOUTH WEST ENGLAND 2006 - 2015



EVIDENCE BASE

MAY 2006

South West England

CONTENTS

The Regional Economic Strategy consists of the STRATEGY document and DELIVERY FRAMEWORK.

These are supported by six documents that provide further detail or background information: EVIDENCE BASE, SPATIAL IMPLICATIONS, STRATEGIC CONTEXT, REVIEW OF RES DELIVERY, CONSULTATION SUMMARY and REFERENCE GUIDE. These are all available from the South West RDA website on www.southwestrda.org.uk/res2006

INTRODUCTION

Government tasks the Regional Development Agencies (RDAs) and their regional partners with helping:

- to boost the absolute economic performance of all regions
- to narrow differentials in productivity growth across the country
- to provide regional economic leadership
- to effect positive and sustainable change

As part of the Review of the SW Regional Economic Strategy (RES) in 2005 (RR05), the Government has asked the South West of England Regional Development Agency (the Agency) and its partners to show a strong evidence base in support of the region's strategic economic goals for the period 2006-2015[1]. A shared evidence base, based on previous research commissioned by the Agency and its partners, will inform the RES Review and the range of other regional strategies.

In any modern economy, resource ownership and trading (labour, land and capital) are the foundation for the development process, largely through market incentives operating at both micro (households, firms and local institutions) and macro (regional and sub-regional interests) levels.

In theory, market dynamics will achieve efficient and effective choices about the allocation of these scarce resources. In practice, there are good reasons for public involvement in the economy – (in 2003/4, identifiable public sector expenditure in the South West was over £27.5 billion[2], representing about a third of regional gross value added). Apart from direct provision of services, market and institutional "failures" (see detail below) make a case for public sector or other intervention to address the time, information and other deficiencies that limit the regional economy from moving towards a desirable path of economic development.

Demographic, technological and regulatory trends influence productivity change through time. These are the ultimate source of economic growth and wealth creation and are intimately linked with broad, sustainable development and prosperity.

The government identifies five drivers of productivity improvement, namely investment, skills, innovation, enterprise and competitiveness. It also recognises employment growth as another key ingredient of development.

The South West faces a changing and challenging economic and policy environment. Major trends in demographics, technology application and competitiveness are underway. The region places great emphasis on sustaining the region's distinctive environmental and cultural heritage. Sustainable advances in relative productivity performance are seen as vital but economic growth without regard to other impacts is not a long-term option.

Recent government pronouncements and publications call for a qualitative economic shift from English regional institutions in the period ahead, in terms of delivery strategies and action plans. In particular, greater emphasis on spatial matters and sustainability is expected.

This is encapsulated in the Integrated Regional Strategy[3], published by the region in 2004.

Against this background, the Agency and its partners aim to boost the SW region's economic development, in absolute and relative terms, by providing strategic leadership, investment and policy action to deliver sustainable growth in productivity and, thereby, prosperity.

The evidence base for policy and action will be crucial for the region to establish the prerequisites for long-term sustainable development, including a skills and enterprise culture based on knowledge transfer and an improved technological and spatial infrastructure.

This report summarises the evidence base of the SW economy for RR05, drawing heavily on the authoritative foundations established by previous research and analysis, for example through the SW Regional Observatory[4] and other regional bodies.

An important "health warning" is required. Regional statistics generally, and within the South West specifically, are plagued with small survey sizes, large revisions, lack of timeliness and scope for mis-interpretation. The government-led Allsopp Review into regional economic statistics promised improvements but these can not be anticipated to deliver significant changes for several years. The evidence base available for decision making is growing all the time and any document will need to evolve continually. We have worked with what we have but we do recognise that errors may persist. In particular, the document relates to sources available by late 2005 and will not cover any subsequent releases before final publication in early 2006. Finally, the evidence base does not remove the need for careful interpretation and judgement.

1 Guidance to RDAs on Regional Strategies 2005 – DTI
2 Public Expenditure Statistical Analysis – HM Treasury, 2005
3 Just Connect: An Integrated Regional Strategy for the South West 2004-2026 – SW Regional Assembly, 2004
4 State of the South West 2004 – SW Regional Observatory for regional partners, 2004

ECONOMICS FOUNDATIONS

This section briefly outlines the principles of economics that relate to regional development

- Short-term cyclical trends are largely driven by private and public consumption. In most modern economies, these account for over 75% of economic activity in a "normal" year. In the United Kingdom, they constituted 86% of gross domestic product (GDP) in 2004.
- Long-term development is driven by demographic, technological and process trends. Investment in human, physical and process capital, which may detract from current growth, adds to productive potential for the future.
  - Investment responds to market, policy and other incentives.
  - Demographic, technological and process changes are the only sustainable sources of productivity growth, building the potential for advances in total resource productivity and, thereby, wealth and welfare through time.
  - Research and development in technological progress, and crucially, their dissemination and use, respond to previous human capital and other investments, and market signals on price and access.
- Current productive potential links inputs to outputs, with inputs reflecting use of raw materials, labour and capital machinery.
  - Raw materials inputs reflect resource productivity through natural resource availability, usage and waste, and international commodity markets.
  - Labour inputs reflect quantitative (population, working age and hours worked) and qualitative (skills, efficiency, management and capital intensity) aspects of employment.
  - Capital inputs reflect previous investment performance, corporate profitability and access to external finance.
  - Specialisation and the capture of economies of scope and scale stimulate better resource productivity and higher output.
- Efficiency and growth respond to the competitive environment for innovation and entrepreneurship.
  - Management and technological systems, given infrastructure and regulation, determine dynamic efficiency.
  - Training, information systems and skills networks determine assimilation, dissemination and effective use of productive technologies and techniques.
  - Relative flexibility and concentrations of expertise and communications, often within urban labour markets that act as economic functional hubs, determine disparities of regional and sub-regional performance.
- Allocation of resources ultimately reflects effective demand – the ability and desire of economic actors to satisfy needs and wants.
  - Personal, household, business and institutional choices are based on market and other signals, such as prices, incomes, tastes and tax incentives.
  - Choices are informed by educational and cultural experience, as well as the full range of promotional information and marketing.
  - Choices respond to relative estimates of benefit and costs, producing efficient results only when all benefits and costs are adequately assessed.

The degree to which total risks and returns are reflected accurately in the market is a key determinant of the need or direction of intervention by public or private sector institutions. Factors that are "outside" the market – "externalities" – can be both positive and negative and can be important elements in assessing the efficiency and effectiveness of market solutions and the need for intervention.

SUSTAINABLE DEVELOPMENT

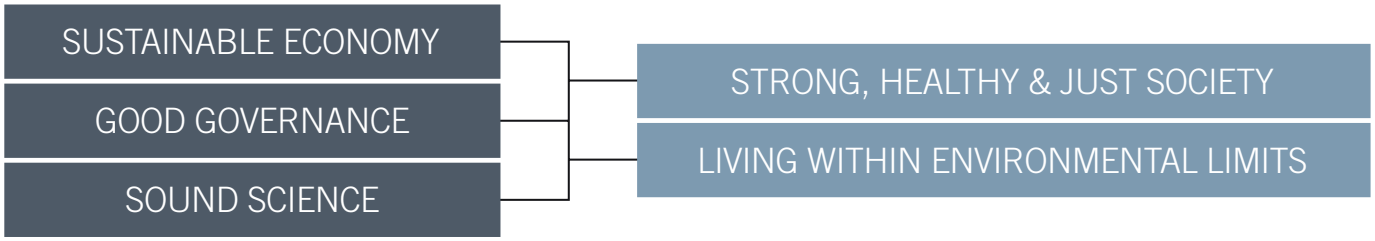
The UK government places increasing emphasis on addressing the economic, social and environmental aspirations of the nation through sustainable development (SD).

The government's latest sustainable development strategy[5] adopts five guiding principles, with the first three building the foundations for the higher two (see Figure 1). By "achieving a sustainable economy", "promoting good governance" and "using sound science sensibly" it aims to "ensure a strong, healthy and just society" whilst "living within environmental limits".

To this end, it charges government departments, agencies and private business with acting on four priorities:

- sustainable consumption and production
- climate change and energy
- natural resource protection
- environmental enhancement and sustainable communities

Figure 1: The Five Guiding Principles of Sustainable Development



The RDAs, the Regional Assemblies and Government Offices in the English regions are tasked with pursuing these aims and RR05 will recognise and support the aim of making economic development more sustainable. In the South West, regardless of this "top down" guidance, a range of consultations about previous strategy development suggests that there is a strong expectation – indeed aspiration (as shown by the IRS process in 2004 – op.cit) – that links between economic development, social inclusion and environmental protection will be at the forefront of both public and private sector activity and investment.

SD recognises these links between social process, environmental protection, resource efficiency, and high and stable growth and employment. It requires consideration of the spectrum of relationships, from international aspects of climate change and "globalisation" to local delivery on resource productivity and waste management, social cohesion and equality of economic and other opportunity.

Government tasks regional bodies to build a "strong, stable and sustainable economy which provides prosperity and opportunities for all, and in which environmental and social costs fall on those who impose them and efficient resource use is incentivised".

Policies to address SD often require strong national measures through taxation and regulation. At a regional level, "Futures" work[6], seeking views as to the kind of region the South West wants to be, always finds strong interest in sustainability issues and a robust desire to moderate development where this creates negative environmental or social impacts.

Indicators of regional SD produced by the government[7] show that the South West has improved across most areas in the last decade, and that the region compares well with most other regions across the spectrum of measures of sustainable consumption and production; natural resource use and local environmental quality; sustainable communities; employment and poverty; and housing and social justice.

Research on the SW ecological footprint[8] – a measure of impact on the environment – suggests that if the average consumption of a SW resident were available to all Earth's people, we would need about three Earths of resources to sustain current consumption: our ecological footprint exceeds environmental (bio)capacity by a factor of 2.9. The SW ecological footprint of 5.56 global hectares per person is split 38% on materials and waste, 29% food (77% animal), 18% energy (of which 71% domestic), transport 10% (79% cars), 5% built land and <1% water. The SW footprint is very slightly above the UK average.

5 Securing The Future: delivering UK sustainable development strategy – Defra, 2005
6 South West Scenarios 2026: Foresight Study – Centre for Future Studies for the South West RDA, 2004
7 Regional Sustainable Development Indicators – Results for the English Regions – Defra, December 2005
8 Stepping Forward – A resource flow and ecological footprint analysis of the South West Region of England – Best Foot Forward for the South West RDA et al., 2005

In terms of resource flow, in 2001 the South West consumed 93,760 gigawatt-hours of energy and 48 million tonnes of materials and products. It generated 20.3 million tonnes of solid waste and emitted 27 million tonnes of gases to the air. "Footprinting" and resource flow analysis informs the SD debate by providing evidence for comparing economic output with resource inputs between activities and over time.

On the social front, the South West does not have the more noticeable extremes of diversity, inequality and deprivation exhibited elsewhere in the United Kingdom. Areas of relative rural and urban ineffectiveness with respect to cohesion and productivity are evident and persistent, however, and advancing the potential of these under-utilised resources is an important goal for policy and action in the region.

Whilst some economic development can be blamed for social and environmental degradation, there is also evidence that economic progress and concern about the other aspects of sustainability can be positively linked together. Building on the region's SD framework[9], this is a goal of the RES and its "partner" publications – the Regional Spatial Strategy (RSS – currently being prepared) and "The Way Ahead"[10].

REASONS FOR INTERVENTION

Government action in pursuit of equitable and efficient provision of services and regulation is profound. Direct intervention in regional economic development, however, may only be justified if there are market and/or other imperfections that make economic "outcomes" sub-optimal or unsustainable. For example, economic players may not have access to information and finance or may not value social or other benefits adequately. Moreover, there should be a clear link between the reasons for intervention and the likelihood of success: interventions need to be both effective and efficient in managing risks and returns.

There are two broad reasons why intervention may be justified:

Market Failure:

- Markets work efficiently when participants can base decisions on fairly equal market power, full access to relevant information and an ability to re-allocate resources quickly when necessary. In practice, markets may not produce desired outcomes when, because of ownership or trading inefficiencies, there are factors or "externalities" not reflected in market prices and outputs.
- Public intervention may be justified, therefore, to address inequalities of market power and accessibility, and information and adjustment lags. It should attempt to capture social benefits and costs not reflected in market decision making: i.e. to internalise the "externalities". Environmental problems, such as pollution, are often cited in this area but there are others, such as access to skills/ training and financial capital, where the market may not provide optimal socio-economic solutions.
- More accurate accounting of, and better policies towards, the effects of market failure is an important element of public and private sector investment appraisal, delivery and evaluation and the pursuit of SD.
- Interventions can, therefore, promote positive benefits for the economy and/or address negative aspects of development. Central and local governments often use the tax system to address the latter. Regional policies attempt more often to pursue the former.

Institutional Failure:

- Markets exist in institutional frameworks that have elements of culture, politics and tradition, as well as economics. Process and regulatory, as well as fiscal, structures can distort decision making and the efficiency of outcomes. Indeed, intervention itself can be a distortion in the market, causing leakage, substitution and displacement effects that diminish the "additionality" of investments[11].
- Intervention may be justified, however, where it can remove or subdue such distortions. Successful economic development usually contains elements of reducing business uncertainty by providing clear direction on process, administration and taxation requirements. Even when this process is incomplete, the direction of change is an important signal to markets. For example, a key element in China's recent economic transformation is the move towards the opening of markets and the reform of ownership and other legal and accounting practices. Importantly, investors are emboldened by the belief that the process of change is gaining momentum and unlikely to be reversed.

9 A Sustainable Future for the South West – Sustainability South West, 2001 (likely to be reviewed in 2005/6)

10 The Way Ahead – Delivering Sustainable Communities in the South West – the South West RDA, SWRA and GOSW, 2005

11 See glossary for definitions of leakage, substitution, displacement and additionality.

An important element of market and institutional failure in the South West reflects its inherent and distinctive spatial characteristics.

- Markets are affected strongly by spatial factors of relative remoteness or distance/access to market, linked to transport, communications and aspiration, and general connectivity. Often, spatial differences act as a special case of market failure because the market-led investment cycle in such areas is long, expensive and uncertain. Private investors may be unwilling to commit to long-term investments because of imprecise price signals that confuse judgements of risk and return.

Arguments about the "peripherality" of the (especially far) South West are a case in point. Proactive measures to reduce the reality and perception of spatial differences, or "peripherality", may be justified where it can be shown that relative economic performance has been skewed from a potentially better position by spatial or temporal distortions. Regional bodies may pioneer new activities in order to demonstrate viability and spread risks and to capture benefits and minimise barriers that current "peripherality" issues hide.

TRENDS & PROSPECTS

THE WORLD ECONOMY

The South West is part of an increasingly integrated global economy. Within the United Kingdom, the region is part of a range of formal and informal economic communities, including the Group of Seven, the Organisation for Economic Co-operation and Development, the European Union, the World Trade Organisation, and the International Monetary Fund. Global economic trends are of great importance to the economic development of the region. It may be argued that, sometimes, regional policies and actions can only act at the margin to influence regional economic development. External pressures on the region's economy will be important determinants of economic progress during the life of the RES.

In 2001-2, the world economy experienced a slowdown caused by the end of the late 1990s "high-tech" boom and the subsequent, short-lived US recession, and exacerbated by particular events, such as the terrorist attacks on the United States and their aftermath. Since then, a moderate recovery has been underway.

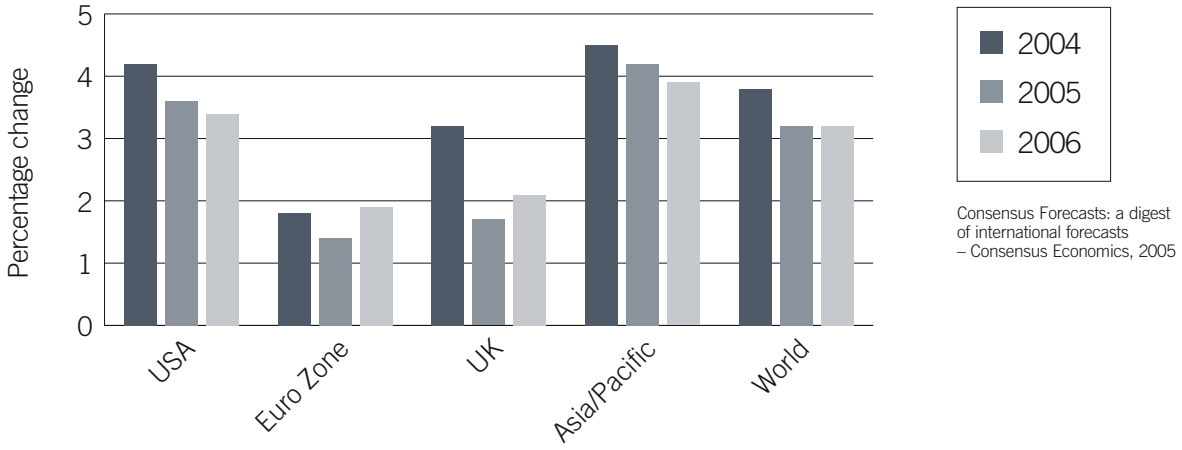
- In 2004, the world economy experienced its fastest rate of real economic expansion for more than a decade. Growth, however, was imbalanced, with North America growing significantly faster than the European Union and activity generally skewed by rapid expansion in China and its "satellites".
- This had significant effect on the commodity and financial markets, adding strain to already imbalanced international payments flows and resulting in a marked decline in the US dollar.
- Despite large price increases for oil and other raw materials, however, global consumer price inflation remained benign. For the last three years, average global inflation has been about 2.5%.

The US and UK monetary authorities are moving base interest rates back to neutral – rates that are neither stimulatory nor restrictive to the economy's forward momentum. In the last two years, UK rates have risen from 3.50% to 4.50%, (with a high of 4.75%), and US rates from 1.00% to 4.25%, with the expectation that they may go higher. Euro-zone rates rose in November 2005 to 2.25%, having been kept at 2% for the previous 30 months. Japanese rates have not moved from 0% since 2000, but the expectation is that they will rise as soon as the authorities are convinced that deflationary pressures have been fully removed.

Most leading economies are running large fiscal deficits. The nature of the steps taken to address these deficits will be important for economic/market development in the years ahead.

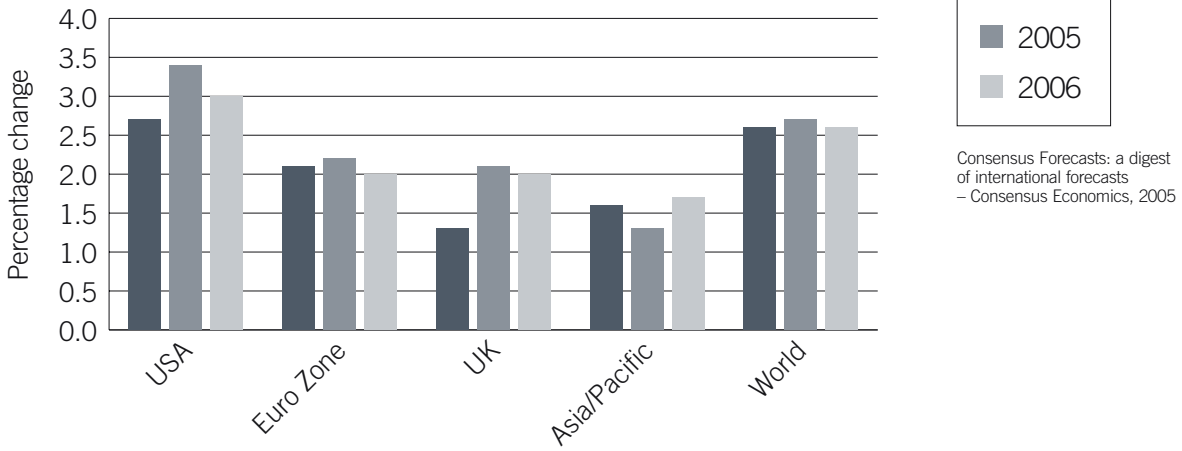
As Figures 2 and 3 show, Consensus Forecasts[12] expect the main economic blocs to keep growing over the next three years, albeit with somewhat slower growth (Figure 2) and a modest upturn in inflation (Figure 3). This benign outlook reflects a belief that risks to activity are balanced and policy makers have scope to react sensitively to any adverse developments.

Figure 2: Consensus Forecasts: Real GDP (% change)



Consensus Forecasts: a digest of international forecasts – Consensus Economics, 2005

Figure 3: Consensus Forecasts: Consumer Prices (% change)



Consensus Forecasts: a digest of international forecasts – Consensus Economics, 2005

12 Consensus Forecasts: a digest of international forecasts – Consensus Economics, 2005

THE UK ECONOMY

The UK economy has performed relatively well for several years. UK GDP figures for 2004 show growth of 3.2% in real terms. Later that year, however, there were signs of slower growth, less business and consumer confidence and more concern about the fiscal position. The current, long (twelve-year plus) expansion of the UK economy started to slow in the winter of 2004/5 and real growth was less than 2% in 2005.

Nevertheless, the broad economic outlook for the UK economy looks reasonably positive through 2006-7, albeit with less momentum (see figures 2 & 3). Given a favourable global outlook, and assuming the Treasury and the Bank of England adopt appropriate stabilisation policies, the UK economy should maintain forward momentum: growth will slow towards trend – i.e. a rate of growth that the economy can sustain over the medium term without generating capacity problems – and inflation will rise only modestly. If consumers at home and abroad continue to be helped by high employment and businesses can build profitability, the private sector should keep growing, even if public sector expansion is scaled back.

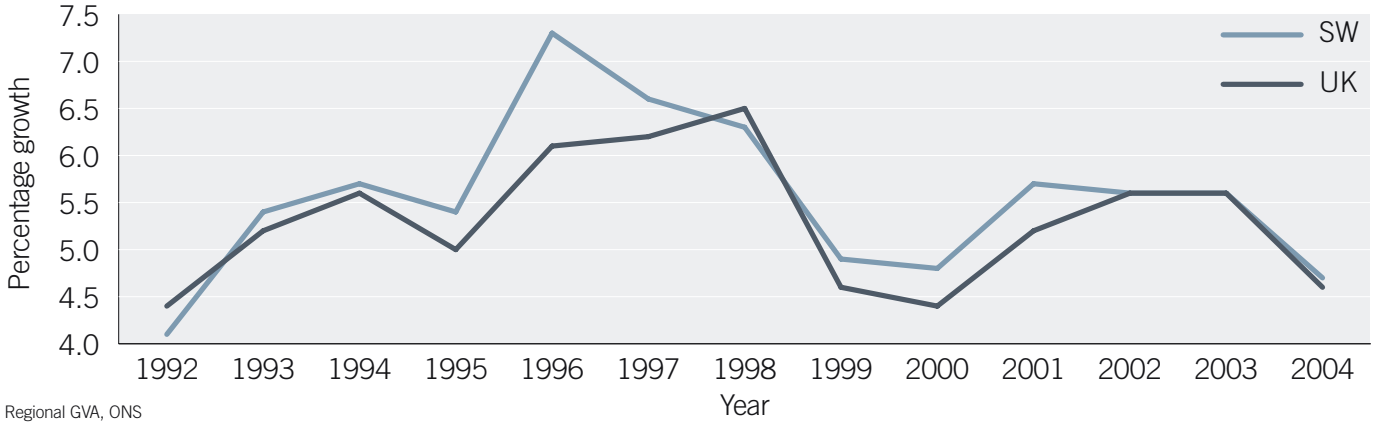
The risk, of course, is that the external environment is less favourable and monetary and fiscal conditions render households (with high debt levels) and firms (facing intense competition) vulnerable to weaker demand for goods, services and labour at a time when other costs are increasing and the public sector is having to retrench.

THE SW ECONOMY

Over the last decade, in terms of nominal Gross Value Added (GVA – a key measure of current output – see glossary for definitions), the SW economy has grown relatively well compared with the UK average (see Figure 4)[13].

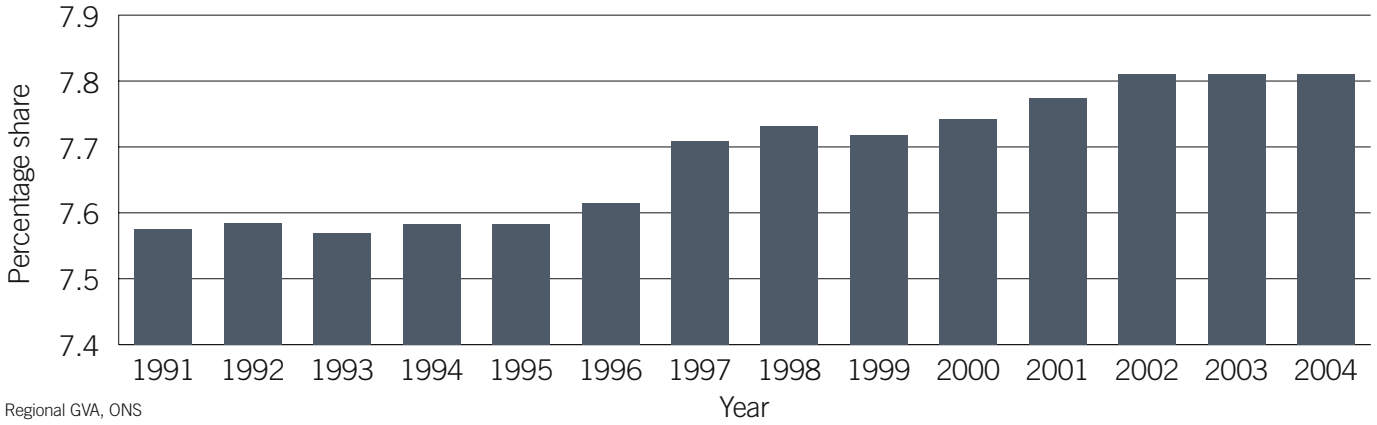
- In the last five years, amongst the twelve UK regions and devolved administrations, SW nominal growth has only been bettered by the East of England.
- As a result, the South West's share of UK GVA has been rising, from 7.6% in the early 1990s to 7.8% in 2004 (see Figure 5), although growth in share has levelled off since 2002.
- In terms of levels, with total GVA of about £79 billion in 2004, the South West ranks seventh largest of the twelve regions/devolved administrations.

Figure 4: Annual Growth of SW and UK GVA



Regional GVA, ONS

Figure 5: South West Share of UK GVA



Regional GVA, ONS

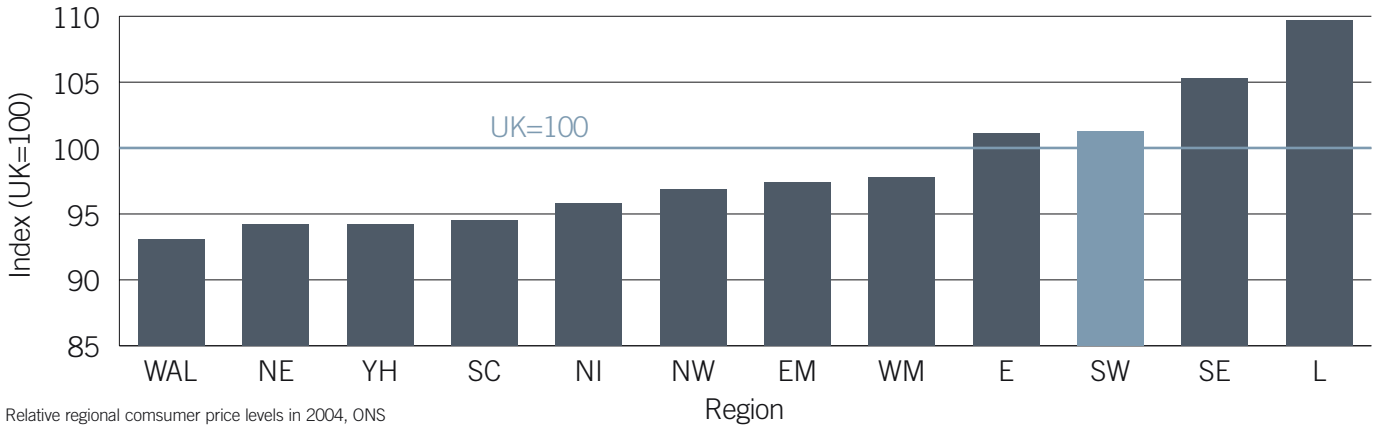
13 Regional Gross Value Added – ONS, 2005

The lack of adequate regional price indices makes it difficult to be certain about the South West's relative growth in real terms. Recent experimental price indices released by the Office of National Statistics (ONS)[14] show average SW prices varying little from the UK average (see Figure 6), although some sector differences are significant. Overall, it seems likely that the South West's real performance has not been significantly different from average.

One of the most commonly used measures of regional productivity is GVA per head. Comparisons of this measure are used by government and regions as one of the key benchmarks of relative regional performance. GVA per head is not without its difficulties – not least in that GVA is measured on a workplace basis whilst "heads" are counted by residence, and that age distribution and migration/commuting trends can affect relativity – but it is a measure of overall annual output emanating from a given location. GVA per worker, usually measured as full time equivalents (FTEs), is a better measure of labour productivity.

The SW region's relatively rapid population growth (see demographics section below) contributes to economic growth but, to the extent that it exceeds GVA growth, has diluted the distribution of the South West's recent relatively strong GVA growth rate. Accordingly, GVA per head has not grown significantly differently from the UK average.

Figure 6: Regional Price Index, 2004



Relative regional comsumer price levels in 2004, ONS

The revised and new data (for 2004) on regional GVA released late in 2005[15], shows the SW position to have moderated recently:

- in 2004, the South West raised its GVA per head to £15,611, 7.1% below the UK average
- the South West maintained (from 1999) its relative ranking of fourth out of the 9 English regions and fifth of the 12 UK regions and devolved administrations
- the regional economy was worth £79 billion in nominal terms and continued to grow faster than the UK average (1999-2004)
- growth slowed in 2004. GVA grew 4.7% on the 2003 level, in nominal terms, compared to 4.6% for the UK average

At a more detailed level, 2003 is the latest data point available. By industry groups, the key changes between 1999 and 2003, largely mirroring national and international trends, were:

- the fall in the share of the primary sectors from 2.8% to 2.3% of total GVA
- the decline in manufacturing from almost 20% to just over 15%
- the increase in services, particularly finance and business services, from about 25% to over 29%

14 Relative regional consumer price levels in 2004 – Economic Trends 615, ONS, 2005
15 Regional Gross Value Added – ONS, 2005

ONS also released 2003 data for GVA and productivity at a sub-regional level. Table 1 shows the NUTS 2 (in bold – an EU geographical classification[16]) breakdown for the South West. At this level, in terms of GVA per head, the Gloucestershire, Wiltshire and N. Somerset sub-region (GWNS), which includes Bristol and Swindon, ranked fifth highest in the United Kingdom, whereas Cornwall and the Isles of Scilly (CIoS) ranked last of all UK sub-regions. On this workplace measure, at least, the region's problems of relative economic performance reflect wide intra-regional disparities.

At the NUTS 3 level (Table 1 – non-bold), Swindon ranked as the fourth highest area for GVA per head in the United Kingdom, only behind Inner London West, Berkshire, and Edinburgh. Bristol ranked seventh. At this level of detail, the importance of urban centres as drivers of workplace-based productivity in each of the sub-regions is apparent. Since 1999, Swindon and Plymouth, however, have declined whereas Gloucestershire and Cornwall have made relative progress. Torbay has suffered a large relative decline and has now become the lowest productivity sub-region in the South West (previously Cornwall). In fact, Torbay and Cornwall rank tenth and ninth lowest in the United Kingdom, respectively.

Table 1: South West and Sub-regional GVA, 2003

2003	GVA (£bn)	GVA PER HEAD (£'000)	INDEX UK = 100	INDEX CHANGE SINCE '99 (%)
Glos, Wilts. & N. Som. (GWNS)	**40.4**	**18,456**	**114**	**+2**
Bristol	9.0	22,946	142	+3
N & NE Somerset, S. Glos.	10.6	17,328	107	+3
Gloucestershire	10.0	17,629	109	+7
Swindon	4.4	24,305	151	-12
Wiltshire	6.5	14,689	91	0
Dorset & Somerset	**15.9**	**13,153**	**81**	**-3**
Bournemouth & Poole	4.6	15,435	96	0
Dorset	4.6	11,627	72	-3
Somerset	6.6	12,997	81	-3
Devon	**13.4**	**12,364**	**77**	**-2**
Plymouth	3.2	13,157	81	-2
Torbay	1.3	10,208	63	-8
Devon	8.9	12,492	77	-2
Cornwall & IoS	**5.3**	**10,364**	**64**	**+3**
South West	***75.1***	***15,019***	***93***	***0***

Regional Gross Value Added, ONS

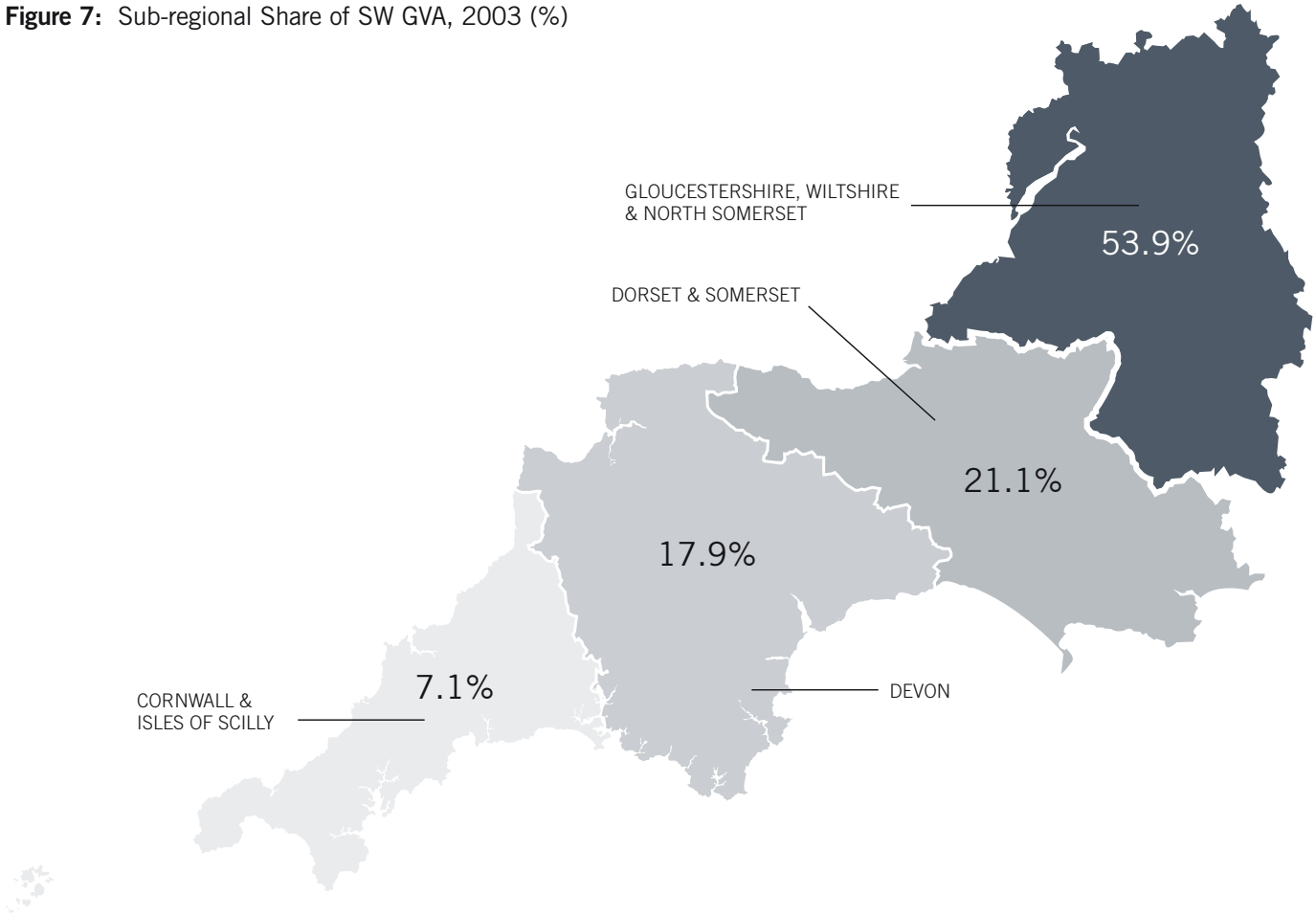
16 NUTS 1 is the SW region. NUTS 2 is the four large sub-regions. NUTS 3 is the counties and principal urban areas

It is important to acknowledge the strong regional disparity in terms of contribution to regional GVA. In 2003, the GWNS sub-region contributed 54% of regional GVA, whereas CIoS contributed around 7% (see Figure 7). Dorset & Somerset contributed 21% and Devon 18%. In 2004/05, the respective employment shares were 45% for GWNS, 10% for Cornwall, 24% for Dorset and Somerset, and 21% for Devon. Comparison of these percentages reflects relative workforce productivity.

Survey and analytical evidence from the CBI, Chambers of Commerce, commercial surveys et al. suggests SW economic growth began to accelerate in late 2003, with the pace of real growth estimated to have more than doubled to about 3% by the end of 2004. Growth was led by public sector demand for a range of products and services, such as construction, parts of manufacturing and business services. The latest survey evidence from these various private sector organisations suggests that confidence remains reasonable but has started to wane, with housing affordability and offshoring having a negative impact.

In broad terms, in 2005, anecdotal and survey evidence indicate that the SW economy slowed down in line with the rest of the UK economy. The balance of risks, for 2006 and beyond, seems skewed to only a small acceleration of the rate of expansion, reflecting the potential for the global economy, tighter policy conditions and stretched household financial balances. Competitive conditions will remain tough for SW businesses, especially those not helped by the weaker dollar and the region's remaining structural disadvantages.

Figure 7: Sub-regional Share of SW GVA, 2003 (%)



LONG-TERM TRENDS & PROJECTIONS

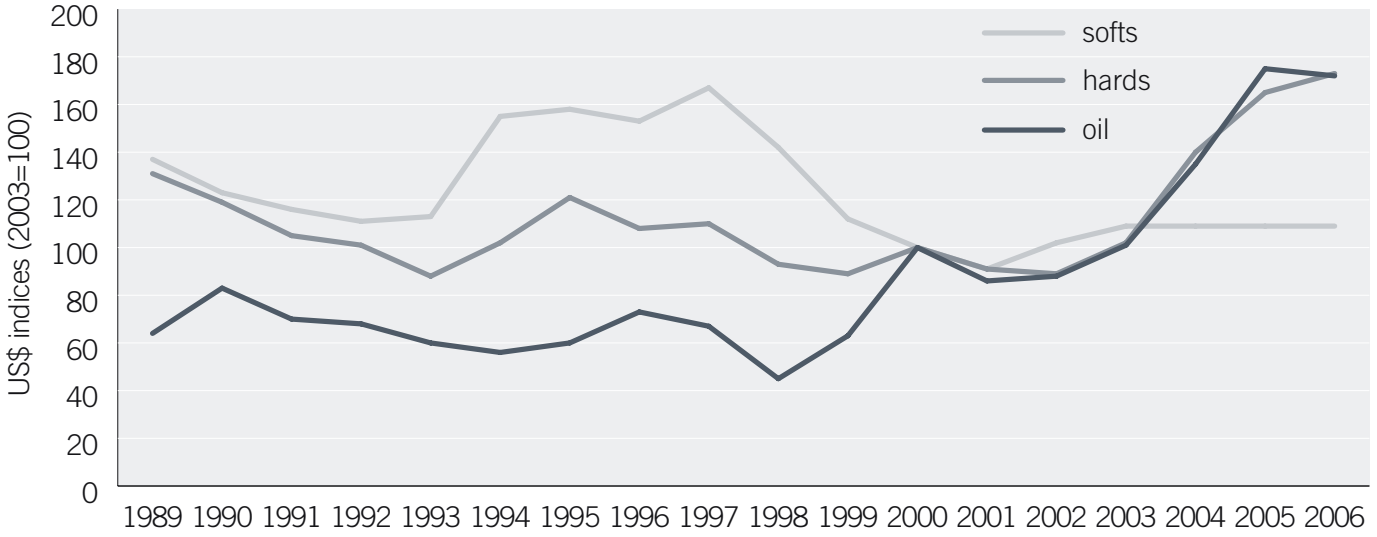
Assumptions about Growth and Inflation

In the long term, economic performance is driven by demographics and technological change: the number and productivity of the human resource available for work, and the quality and quantity of other resources (capital and natural) with which people are able to work.

There are various estimates of the United Kingdom's sustainable real growth rate. Historical data, as shown by the OECD, would suggest real growth at about 2.25%. The Bank of England has recently been assuming 2.5% whilst HM Treasury has talked of 2.75% in recent budget analyses. These differences appear small but, over a decade, can make a significant difference to output, employment and other economic outcomes. In recent years, UK and South West real growth rates have frequently exceeded 3%.

At a regional level, there are no detailed studies of growth/productivity potential but what proxy evidence exists would suggest that the South West's underlying potential is not significantly different from, but higher than, the UK average. For the purposes of RR05 and RSS planning, assuming a central underlying UK real growth in a range of 2.25%-3.00%, the South West would record a slightly higher range. The balance of risk is difficult to judge with, for example, net immigration and technical advances off-setting structural shifts, such as offshoring of high productivity manufacturing. Also, there is a possibility of factoring in some cyclical volatility and some policy aspiration. Given the 2006-2015 time profile and the structural, rather than cyclical, focus of RR05, however, cyclical volatility can be largely ignored.

Figure 8: World Commodity Prices (2000=100)



OECD Economic Outlook, 2005

Aspirations about what the region wants to look like by the end of the period will be taken up more actively in the policy aspects of RR05 that will build on this evidence base document. Around the central forecast, we would consider three other sensitivity scenarios: first, the Treasury view is correct and the underlying real growth rate of the SW economy has improved to 2.8%; second, the trend rate reverts to historical "norms" of about 2.4%; and, third, the recent higher trend growth can be maintained, averaging about 3.2%.

World inflation has been relatively subdued in recent years. According to the OECD and the IMF[17], "core" country GDP deflators have risen by less than 2% every year since 1996 and inflation is forecast to remain at about 1.5%-2.0% per annum through 2006/2007. High growth in the Chinese economies and other geo-political pressures has put upward pressure on commodity prices recently (see Figure 8). Oil prices in particular have risen sharply in nominal dollar terms, although in real terms the recent spikes have remained below the highs seen in the late 1970s and early 1980s. "Hard" commodity prices (minerals and metals, etc.) have also risen in response to global demand pressures for industrial raw materials but are not high in historical terms, and "softs" (foods and beverages) prices remain relatively subdued. The impact of higher raw materials prices is being felt, particularly in globally competitive manufacturing sectors, but the feed through to output and consumer prices has been, to date, relatively modest. The South West, within the UK sterling area, has been relatively sheltered by the weakening of the dollar in the last few years.

17 World Economic Outlook: IMF – April & September 2005

Persistently high or rising commodity prices could dampen global activity in the years ahead but the current trend seems to be a normal reflection of increased demand to which supply should react in due course, dampening inflationary trends. Shocks are always possible and there are risks that the outlook is less favourable, but the broad central assumption of a fairly benign inflation outlook remains justified. There may be competitive pressures in particular sectors linked with key commodity-based markets as the world economy adjusts to the structural shifts inherent in China's relatively rapid pace of development. Moreover, some energy analysts estimate that a turning point in the relationship between demand and supply for carbon-based energy is approaching, such that the trend to higher fuel costs will remain a feature of the world economy over the medium term.

Projections based on the SW Regional Accounts

Using the SW Regional Accounts and an associated forecasting model of the SW economy, we have produced the following projections (see Table 2). It is important to note that these figures reflect the Treasury's forecasts for the UK economy and assume that historical patterns between national and regional growth persist. Therefore, they should be construed as benchmarks from which alternative scenarios and policy impact implications may be approached.

Table 2: Economic Projections for the South West

AV. ANN. CHANGE	1989-1997	1997-2003	2006-2015
SW GVA nominal	+5.9	+5.5	+5.5
SW GVA real (2001 prices)	+2.3	+2.9	+2.8
UK GVA nominal	+5.7	+5.2	+5.2
UK GVA real (2001 prices)	+2.0	+2.6	+2.6
SW GVA per head (nominal)	+5.5	+4.9	+4.8
UK GVA per head (nominal)	+5.4	+4.8	+4.8

SW Regional Accounts Modelling, ESRC-BEM SWRO 2005

The central view is that the region's economy grows in real terms at a rate above the UK average (fourth highest behind London, Northern Ireland and South East), i.e. about 2.8%. Demographic growth is projected slightly faster. The resulting relative improvement in GVA per head is modest. In nominal terms, the region's GVA exceeds £100 billion before 2010, from about £79 billion in 2004.

At a sector level, fastest real growth (those over 4.5% per annum) is seen in business services, other services, education, and hotels and catering. The sectors thought to face real declines are in the production sectors of mining and quarrying, agriculture, fishing and forestry, and manufacturing (see Table 3). One important message from these projections is, on sensible assumptions about growth differentials, how slowly significant structural change occurs. These trends are not significantly different from national equivalents.

Table 3: Real Growth Projections by Broad SW Sector

AV. ANN. REAL GROWTH	% GROWTH 2006-2015	SHARE (%) 2006	SHARE (%) 2015
Agriculture etc	-2.7	1.4	0.8
Mining & quarrying – energy	-5.7	0.0	0.0
Mining & quarrying – other	-0.2	0.4	0.3
Manufacturing	-0.3	14.4	10.7
Utilities	+0.1	1.9	1.5
Construction	+2.7	6.2	6.2
Wholesale & retail	+3.5	13.2	14.1
Hotels & catering	+4.5	4.4	5.1
Transport etc	+2.8	6.7	6.7
Financial services	+2.9	5.2	5.3
Business services	+5.5	24.6	31.9
Public admin & defence	+0.2	6.5	5.1
Education	+4.9	7.1	8.6
Health etc	+3.7	7.0	7.7
Other services	+5.4	5.3	6.7

SW Regional Accounts Modelling, ESRC-BEM SWRO 2005

Table 4 shows equivalent regional projections for employment. It indicates that the region improves its absolute employment growth but its relative advantage moderates, whilst remaining positive. The underlying regional employment growth rate of +2.1% for 2006-2015 compares well with a UK equivalent. There is a risk that structural adjustments in the land-based and manufacturing sectors mean that the looked-for slowdown in the pace of job losses in these areas is less.

The final table (Table 5) in this section shows tentative sub-regional GVA projections at a NUTS 2 level. They suggest a relative improvement in the position of GWNS and CIoS compared with Dorset, Somerset and Devon. These projections largely assume that current differences in sub-regional economic performance persist, because agglomeration effects favour GWNS and the negative aspects of structural change are more dominant beyond the major urban areas. Cornwall's figures indicate the "catch up" effects of relatively significant intervention policies.

Table 4: Employment Projections by Broad SW Sector

Av. Ann. Jobs Growth	% GROWTH 1997-2003	% GROWTH 2006-2015
Agriculture etc	-9.0	-3.6
Mining & quarrying – energy	+2.4	-5.1
Mining & quarrying – other	-1.3	-1.2
Manufacturing	-2.6	-1.0
Utilities	-5.5	-5.3
Construction	+2.9	+3.7
Wholesale & retail	+2.8	+2.6
Hotels & catering	+3.4	+2.3
Transport etc	+1.4	+1.5
Financial services	+0.9	-0.2
Business services	+3.3	+4.0
Public admin & defence	-0.1	-0.1
Education	+3.8	+3.5
Health etc	+2.2	+2.0
Other services	+2.3	+2.9
SW total	+1.5	+2.1

SW Regional Accounts Modelling, ESRC-BEM SWRO 2005

Table 5: Economic Projections for the SW Sub-Regions

Av. Ann. GVA Growth	% Growth 1997-2003	% Growth 2006-2015
SW	**+2.9**	**+2.8**
GWNS	+3.2	+3.0
Dorset & Somerset	+3.0	+2.5
CIoS	+3.6	+3.4
Devon	+2.0	+2.4

SW Regional Accounts Modelling, ESRC-BEM SWRO 2005

Most commentators judge the period 2006-2015, covered by RR05, as likely to be one of accelerated market and structural change. The SW economy will be buffeted by these global, European and national trends. Strategy must be framed in relation to the need to accommodate strong structural adjustments in population, employment, and trade and industry mix, with ramifications for all aspects – economic, social and environmental – of SD.

Policy pointer:
The short-term, cyclical, economic outlook is fairly benign, though there is potential vulnerability to market or policy shocks. The long-term prospects are for further significant structural change, affecting demographics and employment, technology, trade flows and industry mix. Nevertheless, the SW economy is expected to continue to perform amongst the upper echelons of the UK regions.

PRODUCTIVITY TRENDS AND DRIVERS

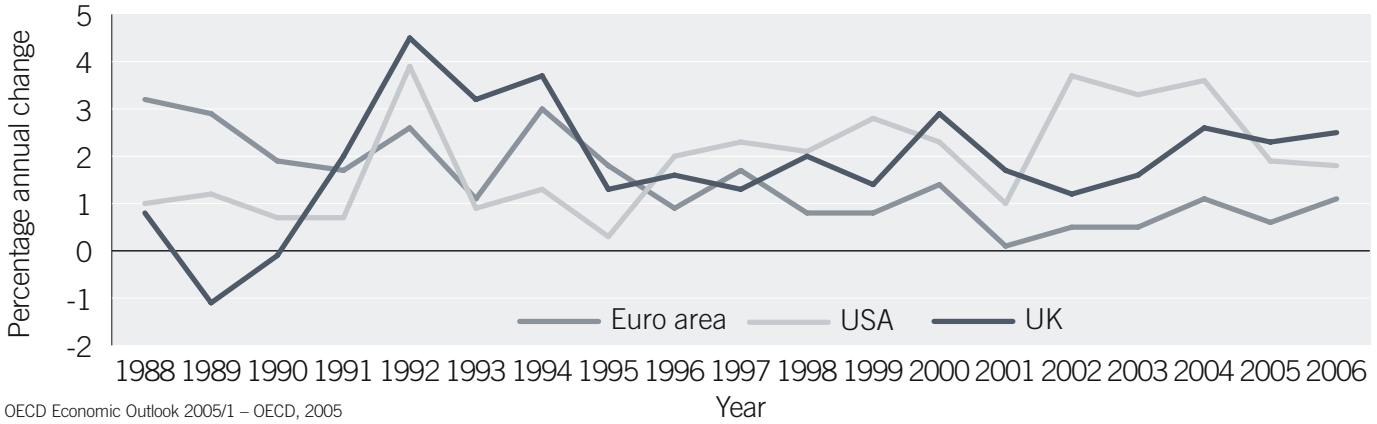
NATIONAL PRODUCTIVITY

Figure 9 shows the recent relative decline of Euro Area labour productivity growth compared with the United States (OECD data and forecast[18]). The key message for the United Kingdom is that its performance has been more consistent since the late 1990s, following more closely the average OECD trend and lying between the US/Euro extremes.

Figure 10 suggests these patterns reflect relative investment trends amongst the major developed countries. In recent years, the UK economy did not experience the investment declines observed elsewhere amongst the major economies and is expected to continue to perform fairly well in the years ahead.

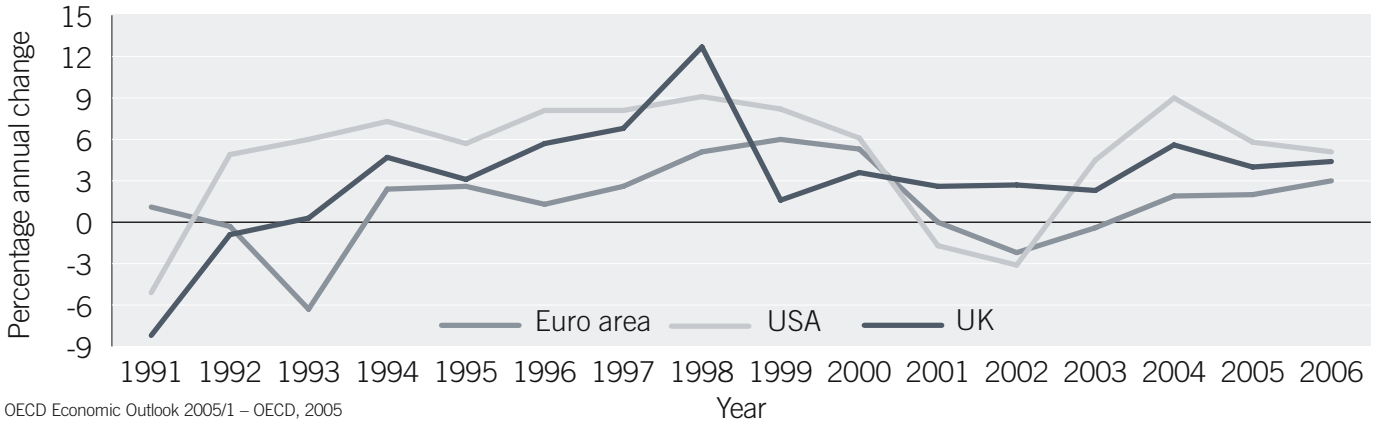
In absolute terms, as various DTI reports on relative productivity continue to highlight[19] and latest ONS figures confirm[20], UK labour productivity continues to lag behind key rivals (GDP per worker 25% below US levels and 10% below French levels in 2003), although on some measures, it has overtaken Germany.

Figure 9: International Productivity – % Annual Change



OECD Economic Outlook 2005/1 – OECD, 2005

Figure 10: International Real Investment – % Annual Change



OECD Economic Outlook 2005/1 – OECD, 2005

18 OECD Economic Outlook 2005/1 – OECD, 2005
19 For example, Raising UK Productivity – Developing the Evidence Base for Policy – DTI, 2004
20 International Comparisons of Productivity – ONS, 2005

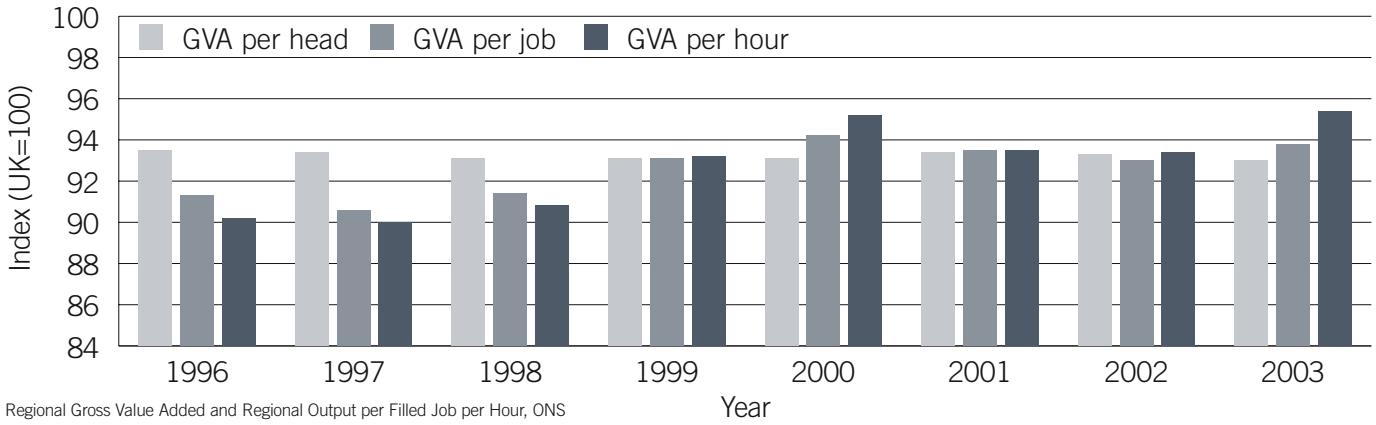
REGIONAL PRODUCTIVITY

The South West's relative productivity performance within the United Kingdom has improved over the last decade (see Figure 11) but remains below average (see Table 6). Only London, and the South East are consistently above average. The South West tends to be fairly well placed in the following group. Note that the GVA per head measure is more dispersed than the other more direct measures of relative productivity.

The GVA per head measure suffers inadequacies, principally because it is a ratio of workplace outputs and residence inputs and, at a sub-regional level, commuter flows into urban centres and across regional borders are significant. In contrast, the relative progress in GVA per job and per hour since 1997 is encouraging. Heads are growing faster than jobs and jobs faster than hours. This reflects age distribution effects and the relative preponderance of part-time employment. (It is important to realise that these are relative to UK averages measures based on the different denominators of the three productivity ratios. Bar heights are not comparable directly across measures.)

The SW Economy Centre's (University of Plymouth) 2003 report[21] for the Agency into productivity highlighted the importance of "peripherality" and the lack of integrated and flexible labour markets, based on large urban centres, in explaining the region's relatively disparate and low performance.

Figure 11: SW Relative Productivity (UK=100)



Regional Gross Value Added and Regional Output per Filled Job per Hour, ONS

Table 6: Regional Productivity, 2003

UK = 100	GVA per head	GVA per job	GVA per hour
London	133.7	121.2	115.4
South East	116.4	105.0	106.5
East of England	108.7	96.4	97.1
South West	**93.0**	**93.8**	**95.4**
West Midlands	90.6	94.0	94.6
East Midlands	90.9	96.7	96.9
Yorks & Humber	88.5	93.3	93.7
North West	88.4	92.8	94.4
North East	79.3	92.5	95.1
Scotland	96.2	97.5	98.1
Wales	78.8	90.9	91.9
Northern Ireland	79.9	89.6	84.3

Regional Gross Value Added and Regional output per filled job/per hour – ONS

21 Productivity in the South West – Eric McVittie, South West Economy Centre for the South West RDA, 2003

Work completed by the Universities of the West of England and Bath[22] takes this analysis further. This major piece of work covers all aspects of productivity in the South West, linking the academic rationale behind current government policy, a top-down analysis of the South West's absolute and relative position compared with other UK and EU regions, and a bottom-up analysis of firm-level evidence and some policy implications.

The report shows that, apart from relatively minor competitiveness issues relating to industry mix and openness to international trade, the South West's relatively low productivity measures are largely explained by a combination of:

- relatively low capital/labour ratios
- weaknesses in both basic and high skills development and use
- time-distance from key economic hubs (large and flexible consumer markets, knowledge transfer networks and flexible local labour networks)

These factors are enough to explain the SW productivity "gap". Some of our best companies and best sectors are highly competitive in the national and global market place. If more of the region's businesses could invest more in plant and equipment, skills and connectivity, it could significantly raise average performance and, perhaps, address the significant intra-regional disparities (see next section).

Sub-Regional Productivity:

As we saw in Table 1, intra-regional disparities on productivity performance are marked. According to EU data, the SW region includes one of the "richest" (Swindon) and one of the "poorest" (Cornwall and Isles of Scilly) sub-regions in the EU15, in terms of GDP per head (see Table 7)[23].

The wide sub-regional disparity in terms of GDP per capita, however, shrinks considerably in relation to disposable incomes ratios. Transfer payments – pensions, social benefits and other flows of funds not directly related to employment – make a significant difference to relative welfare measures, as do statistical differences between workplace measurement of output and residential measurement of incomes.

More sub-regional commentary is contained later in the report. Although a general convergence in growth rates has occurred, the three relatively low productivity sub-regions need to achieve rates of productivity growth well in excess of the UK average in order to close the productivity gap. They have not been able to do so consistently in the past.

Policy pointer:
The South West's productivity performance is gradually improving. Intra-regional disparities are a significant element of the remaining weaknesses in the region's relative position. Investment in human and physical capital and market connectivity offer scope for addressing some of these relative competitive deficiencies.

Table 7: SW Sub-regional GDP per head, 2002

GDP PER CAPITA	2002 (€)	2002 (EU=100)	2000-2002
South West	23,052	108.9	106.9
GWNS	28,353	133.9	130.0
Dorset & Somerset	20,024	95.4	96.4
Cornwall & IoS	15,366	72.6	70.2
Devon	19,146	90.4	89.0
UK	24,945	117.8	115.67

Source: Eurostat 2005

GWNS: Gloucestershire, Wiltshire and North Somerset (including Bristol and Swindon)

22 Meeting the Productivity Challenge – Martin Boddy, John Hudson et al., Universities of the West of England and Bath, for the South West RDA, April 2005

23 GDP and GVA are roughly equivalent measures of economic output. Technically, GDP = GVA (- taxes + subsidies on products).

PRODUCTIVITY DRIVERS

The government has issued a range of reports[24] detailing the United Kingdom's and its regions' productivity performance and drivers. Productivity investment as a broad tool of development should be based on a range of capital assets:

- human (skills, entrepreneurship and innovation)
- physical (plant and machinery, and infrastructure)
- environmental (natural resource and waste capacity, amenity and quality of life)
- social & process (culture and leadership, diversity, connectivity and specialisation)
- brand (perception, aspiration and motivation)

Evidence about the five "drivers" of productivity, as currently espoused by the UK government (see above), is detailed in this part of the report for the South West. Consideration of these drivers, however, needs to be framed in relation to the broader range of investment "assets" in the previous paragraph. Other key "drivers" of the South West economy are considered in the themed areas later in the report. In particular, the environment driver for the South West is highlighted in its own later section.

LABOUR & SKILLS

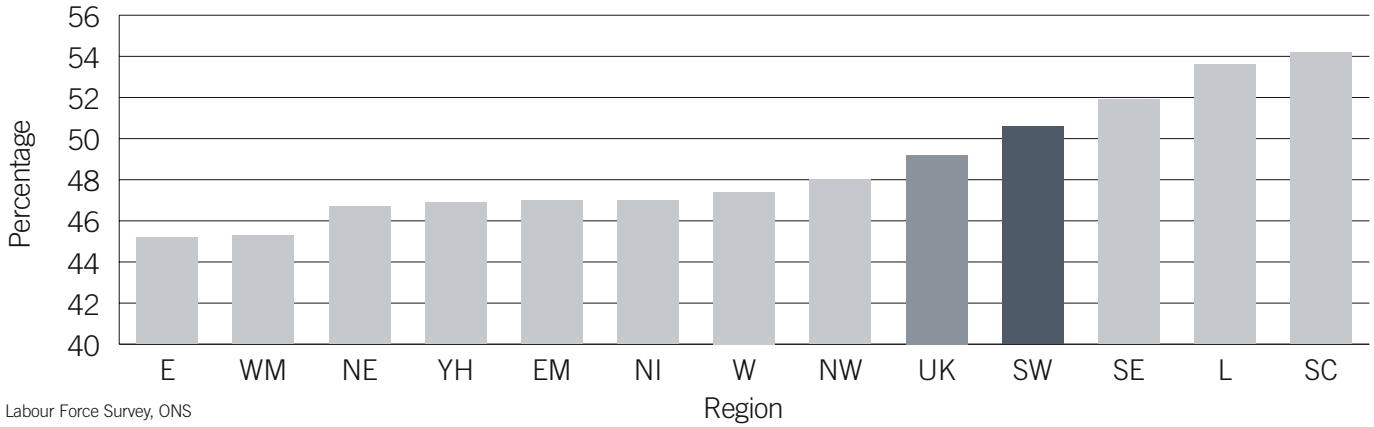
SW employment and unemployment ratios are amongst the "best" (78.9% and 3.2%, respectively, in the second quarter of 2005, compared with national averages of 74.7% and 4.8%)[25]. The juxtaposition of relatively high employment and low productivity appears to confirm the picture painted by recent research into labour and skills – that the South West exhibits high labour utilisation in quantitative terms but is not utilising its skills base to best effect[26,27]. There are important shortages in intermediate skills but addressing inadequate basic skills and boosting the highest skills are, perhaps, the main priorities for policy intervention.

The region's relatively good qualifications ratios (over 50% of economically active aged 18 to 59/64 and fourth highest in the United Kingdom – see Figure 12) are not reflected in overall economic performance. The geographically dispersed nature of the labour market, with important seasonal characteristics in some sectors and a large part-time element (27% of workforce versus UK average of 24%)[28], with a comparatively high small and medium-sized enterprise (SME) segment, makes relative measures based on national surveys difficult to interpret.

Recent SW productivity research (Meeting the Productivity Challenge, op. cit.) identifies two key aspects of the skills "problem". Although the South West has a low proportion of its population with only basic skills, raising basic skills would have a positive impact on productivity in the workforce for a range of firms and sectors. Raising the quantity, quality and use of existing high skill levels would have an even stronger impact whilst the supply of certain intermediate skills would also be beneficial.

Skills are important for both social and economic reasons and are at the core of improving regional economic performance. High education and skills provide a platform for continuing improvements in economic productivity and competitiveness.

Figure 12: Economically Active (Aged 18-59/65) with NVQ 3+ Qualifications, 2003/04



Labour Force Survey, ONS

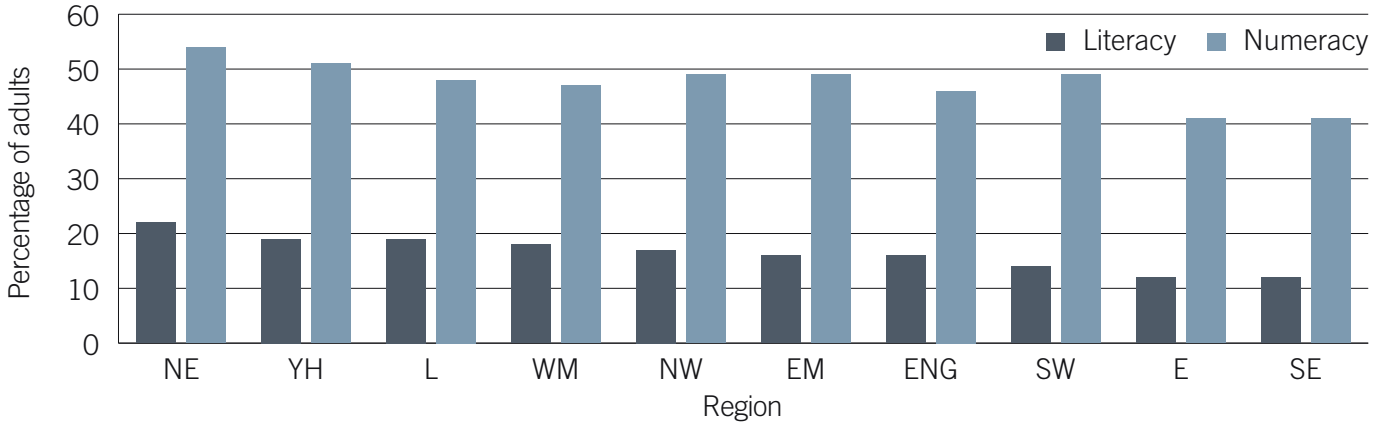
24 Productivity in the UK 5: Benchmarking UK Productivity Performance – HM Government (DTI – March 2004) and related series of DTI publications on productivity
25 Labour Force Survey – ONS
26 South West Skills Market: a Review of Supply and Demand – SLIM for SW Regional Observatory, 2004
27 South West Healthy Labour Market Review – SWESA, 2005
28 Annual Population Survey – ONS

In terms of the supply of skilled labour, the South West performs relatively well with regards to those with formal qualifications. It exceeds the national average for NVQ level 1-3 qualifications, having the second highest proportion of its population qualified to at least NVQ 2 level of any region. It has the lowest proportion of people who hold no qualifications[29].

However, the South West presents a relatively mixed picture on basic skills (see Figure 13). It performs better than the English average, with a lower percentage of adults with entry level literacy or below (i.e. below a low level GCSE (D to G)). On this measure, the region is only "bettered" by the East & South East. It has a higher than national average figure, however, for the proportion of adults with only entry level numeracy or below. It also performs relatively poorly for entry level Information and Communication Technology (ICT) skills, with approximately 59% of those surveyed with ICT skills at entry level or below against a national average of 53%[30].

In surveys of activity and constraints on growth, SW businesses often mention difficulties in not being able to satisfy the demand for a suitably qualified workforce. In terms of recruitment, at the time of the last comprehensive survey, it was estimated that 10% of all establishments in the region were facing "hard-to-fill" vacancies and 5% of establishments were facing "skill shortage" vacancies[31]. As self-defined by businesses, hard-to-fill vacancies represented 1.7% of all employment vacancies in the South West. This broadly matched national averages and is, perhaps, lower than would be expected in a tight labour market. Other survey results show, however, that hard-to-fill vacancies are less likely to exist because of skill shortages in the South West than in other regions – 37% compared with a 50% national average.

Figure 13: Adults with Basic Skills at Entry Level or Below



Within the existing workforce, skills "gaps" occur when employers regard some of their staff as not being fully proficient to meet the requirements of their job role. On this basis, it is estimated that 23% of establishments in the region suffered from internal skills gaps, slightly higher than the 22% reported in England as a whole. Of those employers that reported skills gaps, 39% stated that they caused increased operating costs and 35% difficulties in introducing new working practices. The South West, however, has the second highest level of job-related training, according to the proportion of the working age population that has received training in the previous 13 weeks – 24% of adults have undertaken some form of training, compared to a UK average of 22%[32]. The range covering all regions is narrow but the high ranking of the SW's position has been persistent in recent years.

In terms of forecasting demand for skills, the pattern of consolidating employment share into managerial, professional and associate occupations – which has increased to 40% of all regional employment in the past decade – is set to continue. A further 18% increase in these occupations is predicted to 2012, as well as personal service occupations increasing by a further 35%. In contrast, the number of elementary occupations is forecast to decline by 20%, skilled trades by 16% and process and machine operatives by 10%. This will be an issue for all sub-regions. For example, employment projections for Bristol forecast that professional services employment will increase by 25% between 2002 and 2012. In comparison, mechanical engineering employment is forecast to decline by 9% in the same period[33].

29 Labour Force Survey – ONS
30 Read Write Plus Skills for Life Survey – DfES, 2004
31 Employment, Learning and Skills in South West England – Spilsbury Research for SLIM, 2004
32 Labour Force Survey – ONS
33 Cambridge Econometrics – Regional Forecasts – August 2004

Reflecting existing sector mix, the continuing change in the composition of occupational structure on a national and regional basis will be composed of larger variations at a more localised level. Nevertheless, the age structure and absolute numbers in these skilled sectors suggest a continuing strong replacement demand for manufacturing skills and a motivation to support skills training if important sectors and supply chains are to remain competitive.

The links between skills and the development of a sustainable, knowledge-based economy are profound. There are important shifts in demand for workforce skills underway. The "knowledge-based" value added economy of the future needs both a solid foundation of people with basic skills, able to make the most of technological and process change, and an increasing supply of people with high skills, able to innovate flexibly in response to, and anticipation of, demand. To this end, greater integration along the skills chain is desirable.

Policy pointer:
The South West has a reasonably good skills base and areas of strength. There are also areas of need, particularly in those parts of the economy where low wage, low skills market equilibria and 'gaps' are persistent. Efforts to improve basic skills and to develop and utilise high skills more effectively should yield reward in terms of productivity improvements by sector and in the overall regional economy.

ENTERPRISE & INNOVATION

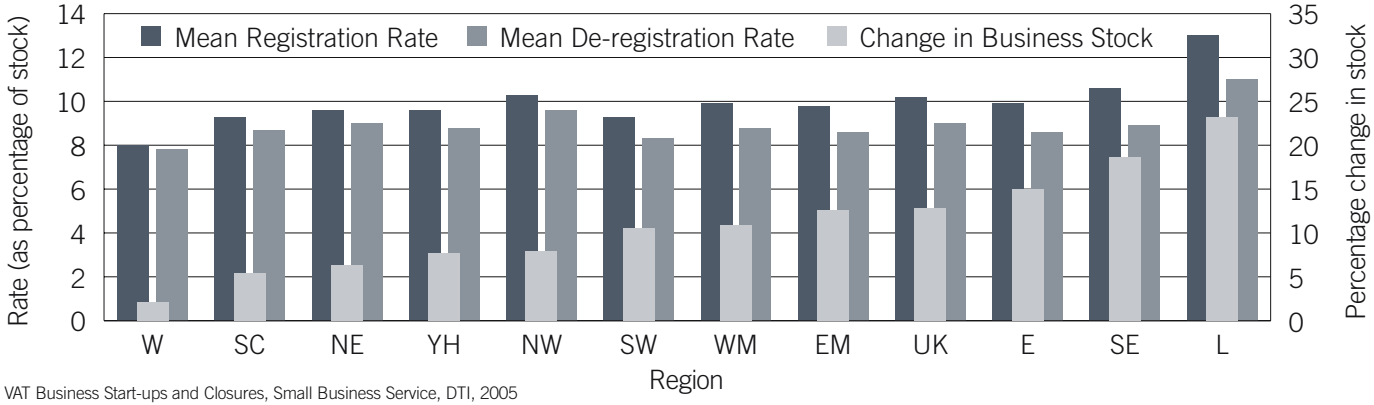
Enterprise

Enterprise – efforts to make new combinations of inputs ("factors of production") that stimulate productivity and growth – is a concept that is often difficult to measure; indeed, a significant proportion of enterprise activity probably goes unmeasured. Most available measures tend to compare rates of net new business formation, business density and overall entrepreneurial activity. Enterprise, in the form of new small businesses or offshoots of existing activity, enhances productivity by increasing competitive pressures and more efficiently meeting existing, changing or emerging "needs" within the economy.

Business stock measures suggest entrepreneurial activity is about average (37 start-ups per 10,000 of population in 2004, down from around 40 in 2003), though the South West's relatively high SME stock is not captured in most benchmark data. High survival rates (68% after three years compared with UK 66.5%), however, may suggest some relative risk averseness as well as success.

The South West's stock of VAT-registered businesses grew by 16,375 between 1995 and 2005, equivalent to an overall increase of 10.6% compared with 12.8% for the United Kingdom (see Figure 14). (N.B. by definition, VAT registered businesses tend to be on the larger scale – see later for alternative analysis of smaller businesses.)

Figure 14: VAT Registered Businesses (1995-2004)



VAT Business Start-ups and Closures, Small Business Service, DTI, 2005

The business density of 416 VAT-registered businesses per 10,000 adult residents compares favourably to a national average of 378[34]. In part, this reflects the industrial structure of the region and the relative importance of the agriculture and tourism sectors where businesses will often be smaller but more prevalent. For instance, the region has 14.8% of all UK VAT-registered agricultural businesses, which will often have a small- or medium-sized turnover. It should be noted that VAT registrations are only an indicator of business density and do not include those enterprises operating below the VAT threshold. Again, the South West has a relatively high proportion of these, particularly in agriculture and tourism related activities, as well as large numbers in construction, retailing and other business and financial services[35].

In terms of entrepreneurial activity – defined as an attempt at new business or new venture creation – the South West was above the national average at 6.8% of those surveyed[36] (up from 5.1% in 2002). Although this is lower than the level of entrepreneurial activity in London and the South East, all other regions had lower levels of entrepreneurial activity than the South West and in 2004 London and SE levels both dropped to around 7%, while the South West maintained its position – consequently the gap between the South West and these regions is now very small. There has also been an increase of 1.7% in entrepreneurial activity throughout the region between 2002 and 2004 – a relatively buoyant picture.

34 Business Start-ups and Closures: VAT Registrations and De-Registrations 1994 – 2004 – Small Business Service, DTI, 2005
35 Barriers to Survival and Growth in UK Small Firms – 2004 Survey, FSB
36 Global Entrepreneurship Monitor United Kingdom – London Business School, 2004

Barclays' analysis[37] of UK business start-ups, which is measured by bank account openings and tends to focus more on small, non-registered businesses, shows strong growth in 2004 (+453,000) led by growth in construction (+34%) and transport and communication (+27%). The South West saw a small decline in the number of start-ups (-4% to 49,000) but remained a relative "hotspot". Excluding London, measured in relation to the working population, Somerset was highest in the country (23 per thousand), and Bournemouth and CloS were joint third (19 per thousand). Torbay and Wiltshire were joint sixth, with three others (18 per thousand) – see Table 8. Plymouth had one of the lowest national rates of start-up.

Table 8: Business Start-ups in the SW Sub-regions, 2004

	NO. ('000)	RATE PER '000 POPN
BNES	1.7	16
Bournemouth	1.9	19
Bristol	3.9	15
Cornwall & IoS	5.6	19
Devon	6.9	17
Dorset	3.3	15
Gloucestershire	5.3	15
Somerset	1.7	16
Plymouth	1.4	9
Poole	0.9	11
Somerset	6.7	23
S. Glos.	1.7	11
Swindon	1.8	11
Torbay	1.3	18
Wiltshire	4.8	18
South West	**49.0**	**17**

Barclays SME Research Team, News Release, March 2005

The difficulty is in knowing what proportion of this measure of entrepreneurship is positive – a result of productive risk taking or life-style choice; or negative – a result of distress due to redundancy or unemployment. The locational differences between the Barclays figures and the official VAT figures suggest qualitative differences and, perhaps, a higher degree of distress in the former.

Countries or economies with high rates of enterprise activity generally have widespread involvement of women in entrepreneurial activities. Women in the United Kingdom, however, are significantly less likely to start and own a business than their male counterparts[38]. While the percentage of self-employed males in the South West outstrips the percentage of self-employed females – 18.3% and 8.2% of working age, employed men and women, respectively – the proportion of SW self-employed women ranks second highest (after London) and considerably higher than the UK average of 6.9%[39].

These figures are supported by Barclays' analysis, which shows that entrepreneurial activity amongst women in the South West is higher than anywhere else in the United Kingdom, with 20,600 female mainstream starts in 2004. This is equivalent to 15 new firms per 1,000 females of working age, with the East and North West next highest, although somewhat lower, at 11 new firms per 1,000 females[40]. Without a detailed analysis of the nature/sector of these businesses, however, it is difficult to be sure of the productivity impact of these relative positions.

The South West has a broadly average level of job-related start-up activity compared to the United Kingdom as a whole – 3% against 2%. Owner-manager businesses account for some 15% of the adult population in the South West compared with a national average of 13%. The slight above-average ratio reflects the importance both of the inward migration into the region in terms of generating entrepreneurially-based employment and of the region's small business sector acting generally as a driver of employment and wealth creation. It is a moot point however, as to where the region sits on the spectrum between "productivity enhancing" and "distress" led start-ups that reflect the loss of high productivity jobs in shrinking manufacturing sectors.

Specifically, in 2004, the region had the highest level of start-ups that used new technology than any other region (29.9% of all start-up activity), almost doubling since 2003 (17%) and overtaking London[41]. This is an indication that South West firms have been relatively active in adopting new technology, which is good news for future development prospects. Particular strengths lie in Cornwall where the figure stood at 37% in 2003 and, perhaps, this highlights the impact of such interventions that have encouraged business uptake of broadband and other ICT. In 2003, the South West also had a good proportion of entrepreneurial businesses using or producing technology that was not available the previous year – 24% compared with a national figure of 23%[42]. Therefore, it can be claimed that the level of technology adoption is reasonably high in the South West.

37 Barclays SME Research Team – News Release, March 2005
38 A government action plan for small business: the evidence base – Small Business Service, DTI, 2003
39 Annual Population Survey – ONS, 2004/05
40 Women in Business 2004 – Barclays Small Business Survey, Barclays, 2004
41 Global Entrepreneurship Monitor UK – London Business School, 2004
42 South West Regional Entrepreneurship Monitor – London Business School, 2003

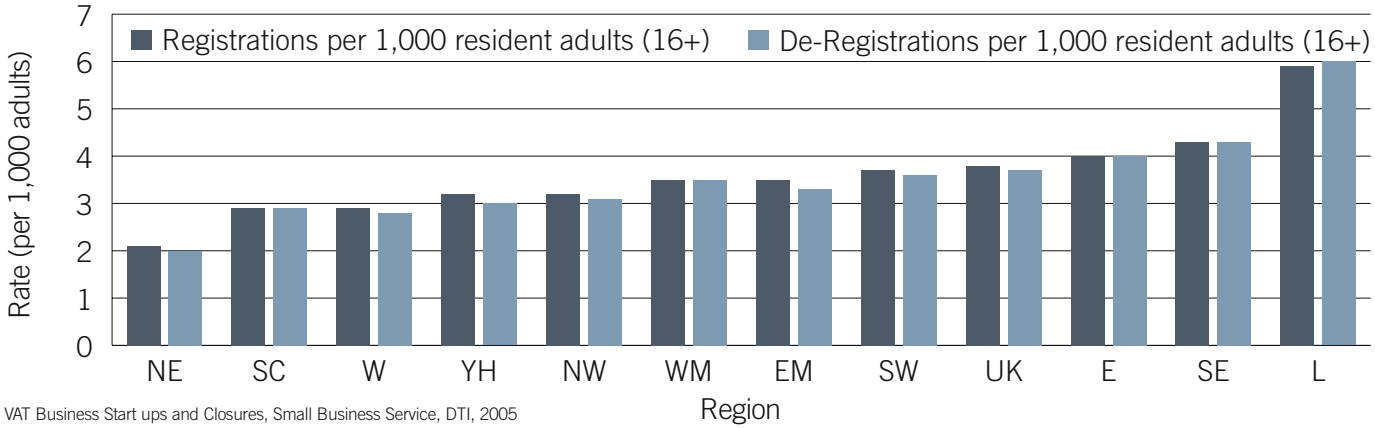
The competitive argument of enterprise relies specifically on the workings of "productive churn" within an economy – where it is assumed that efficient new entrants to the market replace less efficient existing businesses. In 2004, using registration and de-registration per thousand residents as an indicator of change in the business stock (see Figure 15), the South West had a productive churn of 7.4% compared with a UK average of 7.5%.

Despite this relatively average churn rate (the South West ranks fourth), the South West has high survival rates for its businesses. For both the one-year and three-year survival measure, the region fares better than the national average. For the most widely used measure – three-year survival rate – 68% of the region's businesses survived after registering in 1999, i.e. were still trading in 2002. This compares with a 66.5% UK rate[43]. Survival rates may be a pro-cyclical measure – when broad economic conditions are favourable business survival rates rise.

The rising survival rates through the 1990s act as an indicator of the generally favourable business environment. Such figures need careful interpretation, however. In areas with significant large-employer redundancies where start-ups reflect "distressed" business creation, survival need not reflect productive growth potential.

Policy pointer:
South West England is an entrepreneurial region but effort tends to be concentrated, by area and sector, and there is an element of distress in the figures. Intervention needs to be focused carefully on the process of business creation and growth, minimising market failures and encouraging the risk/reward balance for entrepreneurship.

Figure 15: Registration and De-registration Rates, 2004



VAT Business Start ups and Closures, Small Business Service, DTI, 2005

Innovation

Innovation is a key enabling force for improved economic performance. Innovation relates to the ability to find and introduce new products and processes and, therefore, to enhance the growth potential of modern economies.

Two primary indicators tend to be used to measure innovation: activity in research & development (R&D) and the number of new patents being registered.

If disseminated effectively, R&D has a positive impact on the competitiveness of regional firms and is a key driver of underlying growth in productivity. In 2004, total R&D expenditure by businesses in the South West amounted to £1.361 billion[44], or 1.7% of SW GVA, which is above the figure for UK of 1.3%[45]. The region accounted for 10.1% of all R&D business expenditure in 2004, which is significantly larger than its GVA and population shares and indicates a strong presence in R&D. The region has also experienced strong recent growth in business R&D expenditure with an approximate 57% increase during the period 2000 to 2004. This compares favourably with 16% growth experienced in England during the same period.

Overall, expenditure on R&D across business, government and higher education accounted for 2.4% of SW GVA in 2003, comparing favourably with the UK average 2.1%. As with all other regions, R&D within the South West occurs primarily within businesses, accounting for around 76% of all R&D spend (see Figure 16). In 2003, the proportion of R&D spend within businesses in the South West was the fourth highest at 76.3% and well above the UK average (67.9%).

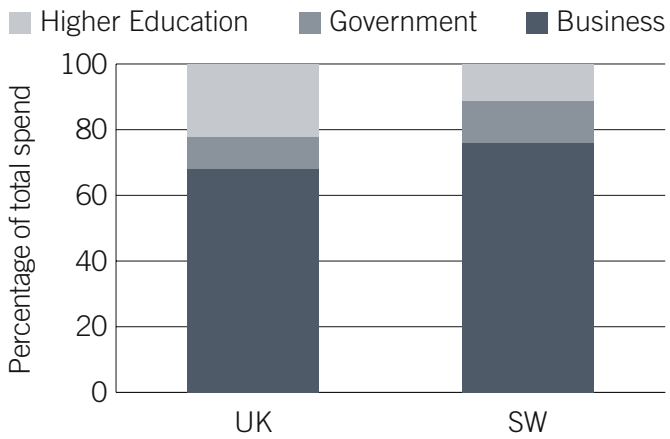
43 Business Survival Rates – Small Business Service, DTI, 2004
44 UK Business Enterprise Research and Development 2005 – ONS, 2005
45 Based on provisional GVA figures – ONS

The South West receives a relatively large share of government funding for research: the third (equal) largest in 2003 at 0.3% of GVA. This has fallen in recent years from 0.6% in 1998. Conversely, the South West is one of the poorest regions at winning funding for research within higher education institutions and was lowest (equal with West Midlands) in 2003 at 0.3% of GVA, compared with the UK average of 0.5%. The region's HE sector has a relatively low share of the region's R&D effort (11% vs. 22% for the UK).

The UK Innovation Survey 2001, which attempted to quantify innovation activity and performance across the regions, found that the South West was around average in terms of innovation activity – defined as introduction of a new or significantly improved good, service or process; engagement in innovation projects and/or longer-term innovation activity (i.e. basic R&D or technology watch); innovation-directed expenditure; or formal co-operation on innovation activities with other enterprises or institutions. In the South West, 46% of enterprises were classed as "innovation active", compared to a UK average of 47%. This was broken down as 45% of SMEs (vs. 46% UK and ranking 6th equal) and 68% of larger enterprises (vs. 67% UK and ranking 8th)[46].

Overall, the South West performs particularly well in terms of high-technology patent applications. It has the third highest level of high-tech patent applications per million inhabitants in the United Kingdom (see Figure 17) and has shown higher than average growth in the period 1997 to 2002. Again, the GWNS area performs strongly – in 2002, it had the seventh highest NUTS 2 level of high-tech patenting in the European Union, expressed as applications per million inhabitants.

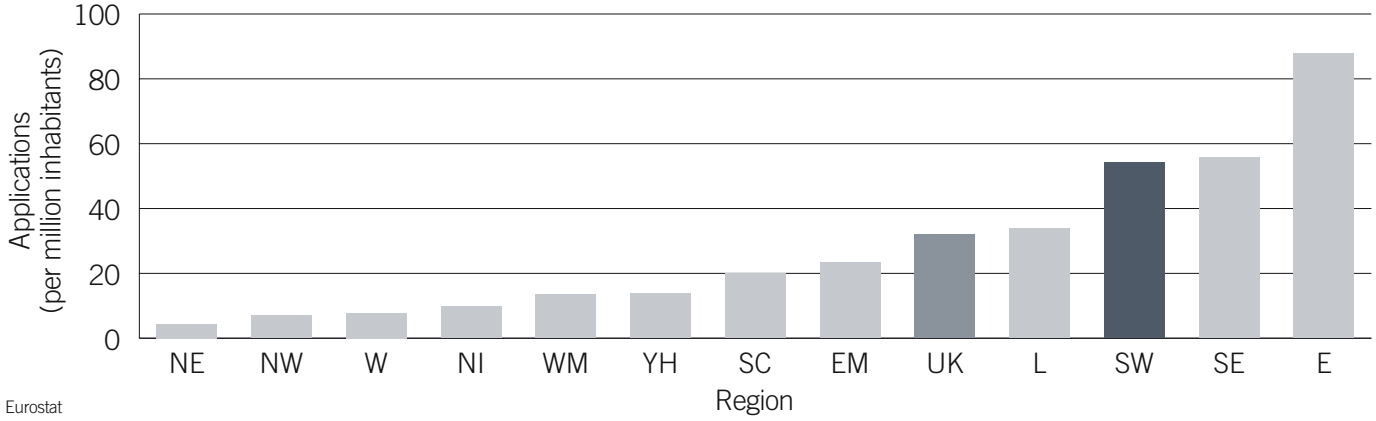
Figure 16: Distribution of R&D Spending, 2003



Regional Economic Indicators, In Economic Trends, ONS

The area shows a propensity for high-tech patenting as part of its overall patenting activity – 44.1% of all patent applications were classified as high-tech against an EU average of 19.5%. The sector mix of sub-regions, with aerospace and communication technologies particularly important in the GWNS area, is the key driver of intra-regional differences. Nevertheless, assuming these patent applications transform into real productive activity, it helps the region to build a lead role in key, high value added, knowledge-related sectors.

Figure 17: High Technology Patent Applications, 2002



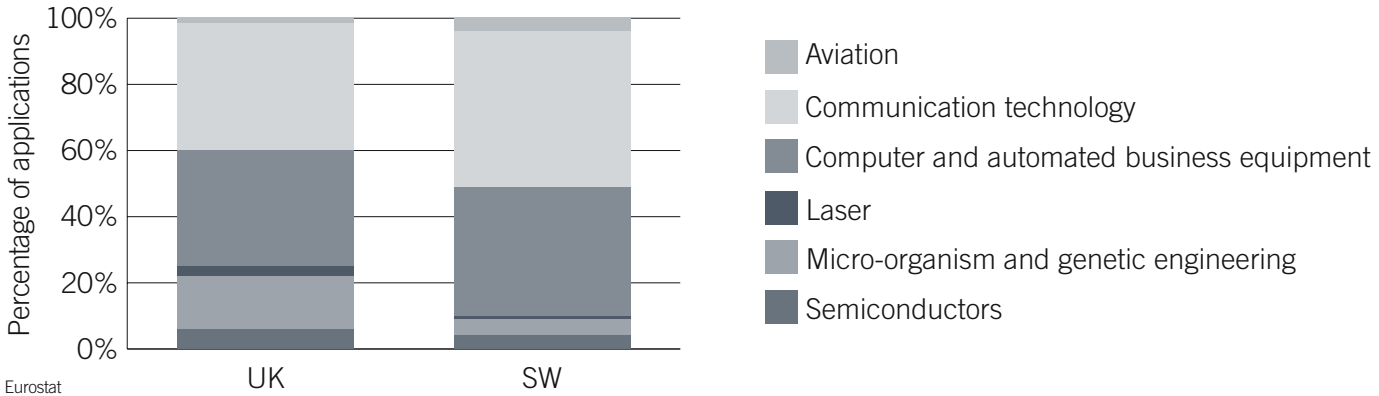
Eurostat

46 Regional Innovation Performance in the UK – DTI, 2001

Within the high-tech applications sector, the region has relatively larger presence in "communication technology" and "computer and automated business equipment" (see Figure 18). It has larger than average shares in both of these sectors whilst a lower than average performance in "micro-organism and genetic engineering". All of these are expected to be high growth sectors in the decade ahead.

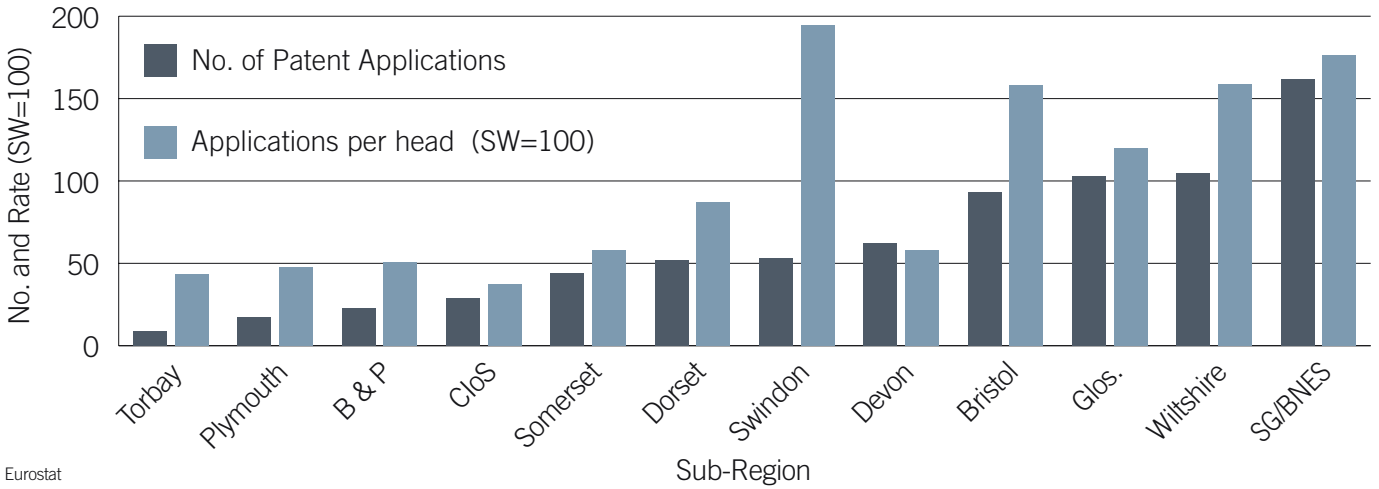
The number of patents registered, as an indication of innovative activity, tends to be spread unevenly within the region. For example, the GWNS area is the third best performing sub-region on patent applications in the United Kingdom (though it should be recognised that not all applications will end up as registered patents). In the period 1997 to 2002, it was the seventh-fastest growing region in Europe with regards to number of patent applications registered at the European Patent Office. GWNS accounted for 68.5% of the total number of patents registered in the SW region. It has particular strengths in patent activity for computer and automated business equipment and communication technology with approximately 90% of all registered patents taking place in these sectors[47]. As Figure 19 highlights, patent activity is highly geographically concentrated in the north/east of the region, which probably reflects knowledge-sector clustering, particularly in aerospace.

Figure 18: High-Tech Patent Applications by Sector, 2002



Eurostat

Figure 19: SW Sub-Regional Patent Applications, 2002



Eurostat

47 Eurostat

A notable figure is that just 9 patents were filed in the Torbay area in 2002, the lowest in the region. Although Torbay is the smallest SW sub-region (NUTS 3), it also shows the lowest rate of applications, in terms of both population (see Figure 19) and workforce. This may be explained partly by the reduction of Torbay's manufacturing sector, including the closure of high profile ICT facilities. In contrast, although Swindon – the most productive SW sub-region – ranks sixth highest in absolute numbers of applications, it has the highest rate of patent applications per head of population, almost double the SW average.

The South West's R&D effort tends to be concentrated in private business and the (defence-related) public sector. The relative importance of the education sector is modest (see Figure 16). Knowledge transfer and related supply chain linkages are a key element of modern economic performance and development. In the South West, performance in this area is relatively narrowly focused in sector and area terms. International studies suggest knowledge transfer is a driver of relative productivity in the long term and a policy area worthy of attention.

Policy pointer:
South West England is innovative but performance is patchy and uneven, with key sectors in key sub-regions tending to dominate. Efforts to spread the "best practice" use of processes and techniques, products and services and productive knowledge generally may prove rewarding, particularly the encouragement of education, research and business links.

INVESTMENT & COMPETITIVENESS

Investment

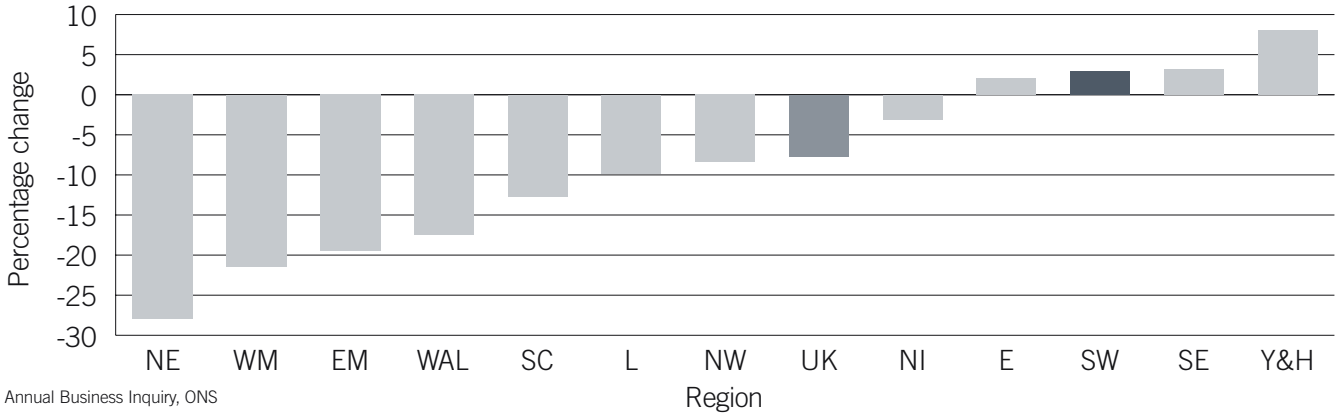
Investment refers to the acquisition of new productive assets and is a vital source of sustained economic growth. By enhancing the capital stock, investment contributes to underlying improvements in productivity. The productivity impact of infrastructure investment is disputed[48] but particularly relevant to the South West.

Ideally, we would like to analyse capital stock figures in some detail but these are not available at a regional level. The recent productivity research[49], however, gained access to restricted data which showed the levels of capital to labour and investment per job are relatively low in the South West. Business level data indicates that the region has the lowest capital to labour ratio of any UK region other than Wales. Within the region, the north east of the region is close to national averages whereas the farther south west is around 60% of the average.

Investment (see Figure 20) grew strongly between 1998 and 2002, but dropped off in 2003. The South West experienced the highest proportional change of capital expenditure in the period 1998 to 2002 of approximately 24%, and is third highest over the period 1998 to 2003. This is a particularly good performance when taken in the context of an environment where a high proportion of regions experienced a decline in regional capital expenditure levels. As a consequence, the South West's share of national capital expenditure increased by 2% in the period 1998 to 2002, though it fell back to a 0.7% difference between 1998 and 2003. The share in 2003 stood at 6.8% of national investment (see Figure 21)[50]. This is important because the productivity research (op.cit) shows that one of the primary explanations for the South West's productivity gap is its low labour/capital ratio.

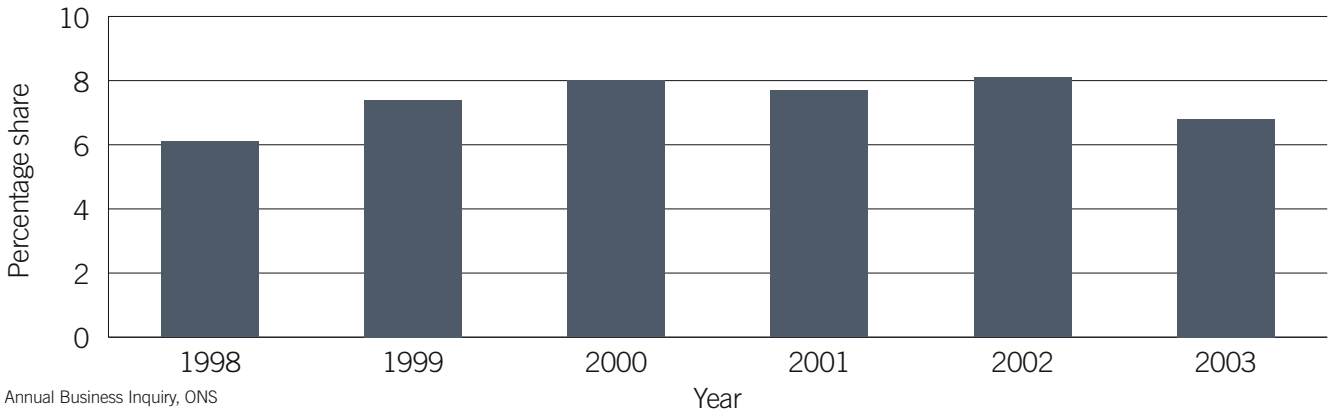
48 Transport and the economy: summary report (SACTRA) – DfT
49 Meeting the Productivity Challenge – Universities of the West of England and Bath, for the South West RDA, 2005

Figure 20: Capital Expenditure % change 1998-2003



Annual Business Inquiry, ONS

Figure 21: SW Share of UK Capital Expenditure



Annual Business Inquiry, ONS

Policy pointer:
The recent relative investment performance of the region has been strong, but this has taken place in the context of a general weakening of investment levels throughout the United Kingdom. There is concern that the current gross figures fail to take account of the net loss of capital stock associated, in particular, with offshoring closures in manufacturing. There is also concern that savings ratios, nationally and regionally, are insufficient to support adequate investment rates.

50 Annual Business Inquiry, ONS

Competitiveness

International trade is important in creating competitive advantage and stimulating regional growth. Exposure to export markets, and the competitive pressures thus generated, contribute to improved productivity among exporting firms.

The South West generates the lowest value of exports per employee in the United Kingdom (£4,636 in 2004 against an average of £7,246)[51]. Total international exports from the region amounted to only 12.4% of regional GVA during 2004, the lowest proportion of all the English regions and substantially below the UK average of 19.0%[52]. There are significant doubts about regional trade data: not least because the measurement of services is missing or inadequate, and the way regional goods activity is attributed regionally is open to dispute. For example, the value added by aerospace design may be generated in the South West but the product in which it is embodied may be counted as a North West export. Also, the exports of the region's high SME population may not be recorded fully. Nevertheless, one of the inherent weaknesses of the SW economy is its relatively low trade and direct investment rates.

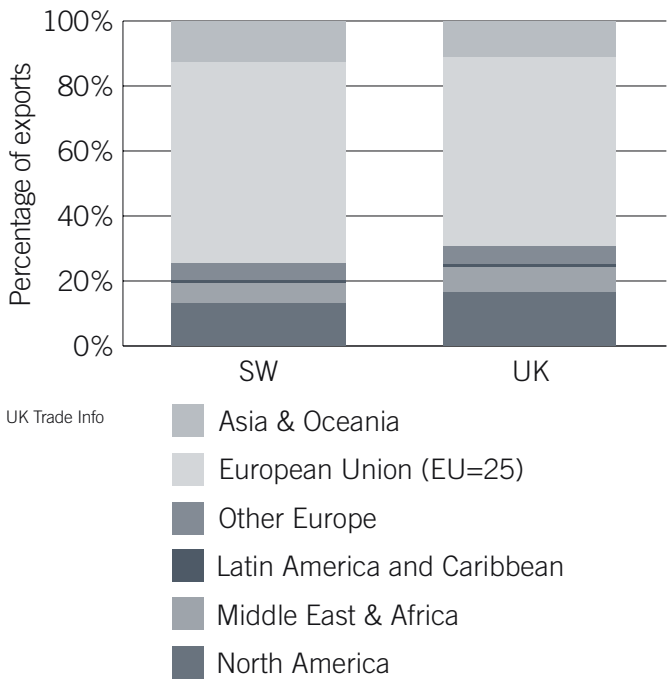
Recently, however, performance appears to have improved. The South West had 5.1% of UK total exports in 2004 which was a significant rise from 4.0% in 2002. In the period 1999 to 2004, the region has seen the third largest increase in its value of exports within England; an overall nominal increase of 34%.

The region has also seen about 18% growth, between 2001 and 2004, in the number of firms engaged in exporting activities – by far the fastest growth rate of numbers of exporters among the English regions (next highest East at 12.5%). Nevertheless, the overall number still only equates to 2.6% of VAT registered businesses which is the lowest proportion among the English regions[53].

The predominant share of exports is still destined for the European Union market – over 60% of all SW exports, above the UK average (see Figure 22). In recent years, this somewhat "mature" market has shown relatively low growth rates. The South West has performed well, however, in capturing export growth to two major markets. The value of exports to Asia and Oceania has increased by 116% between 1999 and 2004 whilst Other Europe has increased by 83%[54]. This is significantly higher than the national growth figures and highlights that the region's businesses have been relatively successful in capturing some benefits from both the expansion of the market economies in Asia and the accession of new countries into the EU.

There is some concern, however, that this is a temporary phase linked to industrial restructuring and the export of second-hand manufacturing equipment to the new growth markets rather than any lasting improvement in trade competitiveness.

Figure 22: Destination of Exports by Value, 2004



UK Trade Info

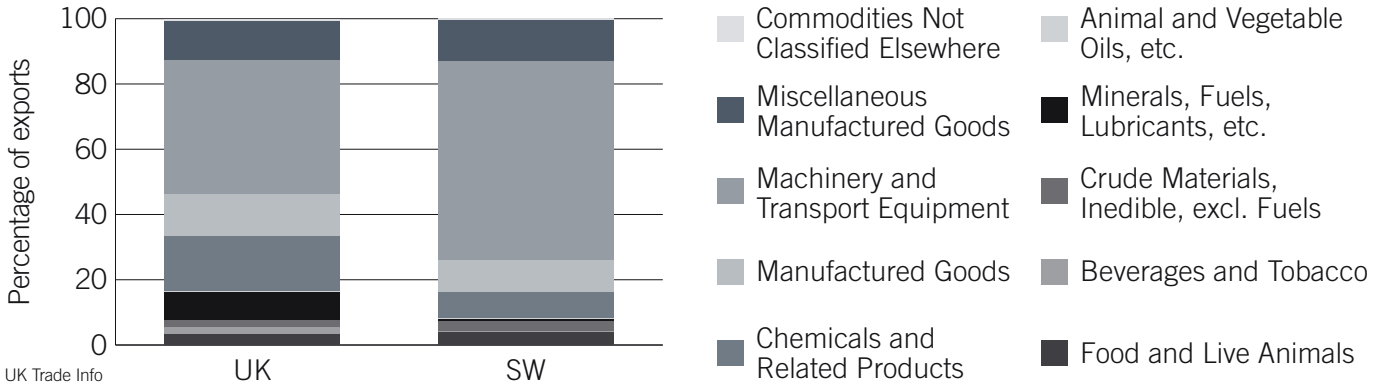
51 South West of England International Trade Strategy – July, 2004
52 UK Trade Info – HM Customs & Excise - 2005
53 State of the South West 2004 – South West Observatory - 2004
54 UK Trade Info – HM Customs & Excise - 2005

The region's main export products are in the Machinery and Transport Equipment sectors (a highly significant 61% of the total in 2004 – see Figure 23). "Other transport" is the largest sub-sector of this group, accounting for 24% of total regional exports. The two priority sectors – aerospace and advanced engineering, and marine technologies, are important contributors to this total. Other significant goods exporters are electrical machinery and appliances – 14%, and industrial machinery – 6%. Over 40% of all exports are concentrated in these three broad industrial groups and, in turn, these are highly dominated by a small number of large suppliers. Such a degree of export specialisation, whilst important in exploiting comparative advantage, does expose the regional economy to risks associated with adverse conditions in key markets and strategic decisions of major firms[55].

Turning to internal competitiveness – in terms of retail prices levels, the South West is marginally above the national average. In 2004, the average price level equated to 101.3 of the national average although the average is heavily influenced by London price levels[56]. Overall, the South West was the fourth most expensive region and has experienced a relative increase of prices by 2% since 2000.

We do not have figures on producer prices to be able to compare overall cost competitiveness. SW labour costs, however, are at or below the national average. The gross average hourly full-time earnings of £11.90 in the manufacturing sector in 2004 equates to the UK average £12.04 whereas the same figure for the service industry of £11.68 is considerably lower than the national average of £13.02[57].

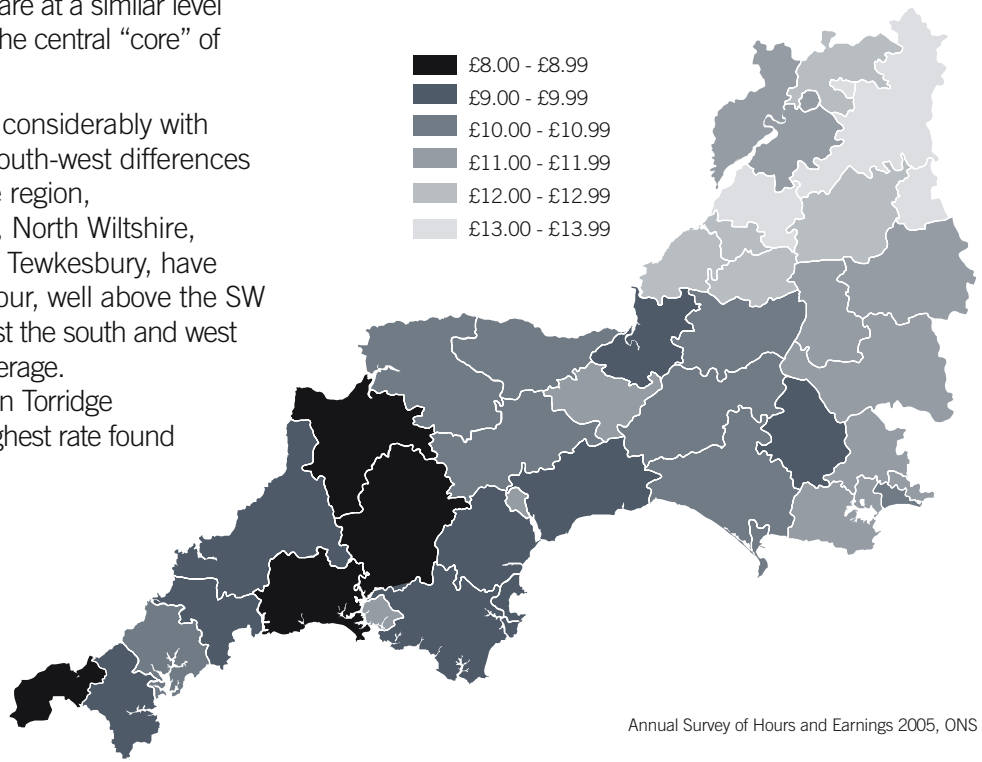
Figure 23: Exports (value) by Broad Sector, 2004



Generally, labour costs in the region, as represented by gross hourly full-time rates of pay, are at a similar level to most other regions, apart from the central "core" of London, East and South East.

Within the region, pay rates vary considerably with an emphasis on the north-east/south-west differences (see Figure 24). The north of the region, in particular Bristol, Cheltenham, North Wiltshire, S. Gloucestershire, Swindon and Tewkesbury, have pay rates in excess of £12 per hour, well above the SW average of £11.40 per hour, whilst the south and west of the region tends to be below average. The lowest sub-regional pay rate, in Torridge (£8.06 per hour) is 59% of the highest rate found in Swindon (£13.58 per hour).

Figure 24: Gross Full-time Hourly Pay Rates, 2005



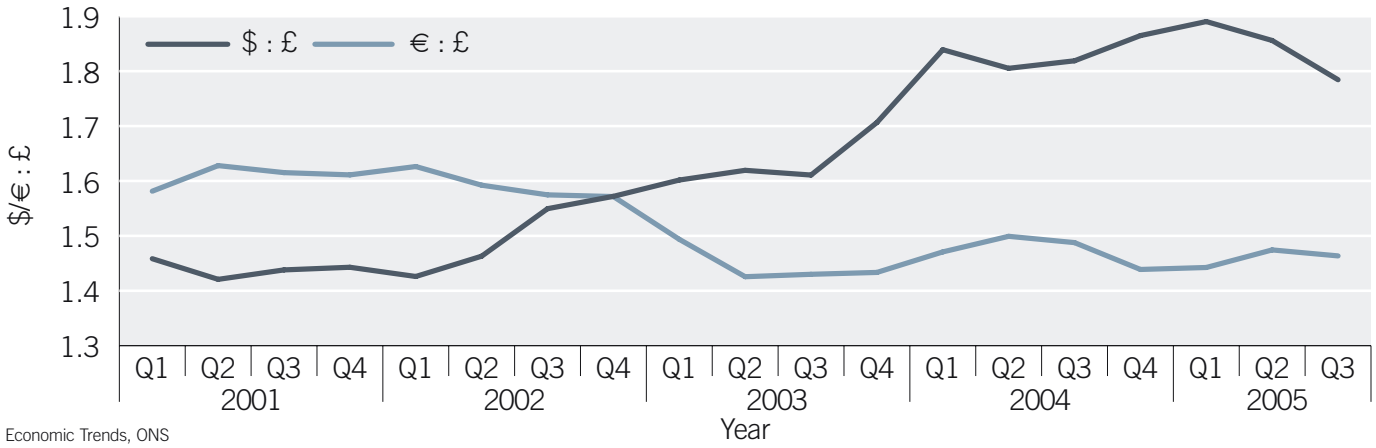
Annual Survey of Hours and Earnings 2005, ONS

55 Business Guide 2005 – Western Daily Press, 2004 – lists the region's major firms.
56 Economic Trends – ONS – February, 2005
57 Annual Survey of Hours and Earnings, ONS

Recent exchange rate movements (see Figure 25), with Sterling strengthening against the dollar and weakening against the euro have favoured the South West's overall trading position (exports to EU and imports from US). With the EU economies being weak, however, this has not helped as much as it might. Moreover, competitiveness in dollar-based markets or commodities/products has been eroded.

Policy pointer:
South West England has a low international trade and investment rating. According to 'UK Trade and Investment' experience from its contacts with SW businesses, this may reflect lack of motivation as well as difficult competitive conditions. Raising the region's trade profile might boost economic performance sharply, albeit against tests of sustainability.

Figure 25: Sterling Exchange Rates



Economic Trends, ONS

SECTORS & AREAS

SECTORS

Sector Mix

Table 9 shows the South West's industry mix relative to the GB average. Apart from agriculture businesses, the differences are largely insignificant, both by enterprise numbers and by employment.

Table 9: Enterprise and Employment by Broad Industrial Group

ENTERPRISE STOCK 2005 (%)	GB	SW
Agriculture	8.4	13.1
Production	8.5	7.9
Distribution	33.3	32.3
Public Sector	9.3	8.5
Other	40.5	38.2
EMPLOYMENT STOCK 2004/05 (%)	**GB**	**SW**
Agriculture	1.3	1.9
Production	14.5	14.3
Distribution	26.5	27.3
Public Sector	28.3	28.8
Other	29.4	27.7

UK Business: Activity, Size and Location -2005; Annual Population Survey (Apr04-Mar05), ONS

According to the input-output data within the SW Regional Accounts[58], Table 10 shows broader sector performance in terms of contribution to output (GVA) and employment (FTEs). It highlights the key contribution of four areas; business services, manufacturing, distribution and retail, and the public sector (public admin and defence, health and education) account for 69% of GVA and 67% of employment. Other sectors with more than 5% of output and employment are construction, and transport and communication.

58 SW Regional Accounts – BEM – South West Regional Observatory for the South West RDA Spring 2005

Table 10: Output and Employment in the South West by Industry, 2002

SW INDUSTRIES (2002 BASE YEAR)	GVA (£m)	GVA (%)	FTEs	FTEs (%)
All industries	70,481	100	2,146,341	100
Primary industries	**1,609**	**2.3**	**81,507**	**3.8**
Agriculture	1,170	1.7	71,860	3.3
Forestry	25	0.0	1,901	0.1
Fishing	38	0.1	1,541	0.1
Coal extraction	2	0.0	118	0.0
Oil and gas extraction	145	0.2	354	0.0
Other mining & quarrying	229	0.3	5,733	0.3
Energy & water	**1,240**	**1.8**	**12,555**	**0.6**
Electricity production & distribution	735	1.0	7,778	0.4
Gas distribution	194	0.3	1,338	0.1
Water supply	310	0.4	3,439	0.2
Construction	**5,036**	**7.1**	**174,307**	**8.1**
Manufacturing	**10,879**	**15.4**	**306,171**	**14.3**
Food & Drink	1,286	1.8	39,596	1.8
Tobacco products	148	0.2	480	0.0
Textiles	132	0.2	4,527	0.2
Clothing	88	0.1	3,234	0.2
Leather & footwear	122	0.2	1,480	0.1
Wood & wood products	220	0.3	7,263	0.3
Paper & printing	1,255	1.8	37,048	1.7
Coke ovens, refined petroleum & nuclear fuel	50	0.1	803	0.0
Chemicals	557	0.8	13,171	0.6
Non metal products	894	1.3	28,804	1.3
Metals	64	0.1	2,422	0.1
Metal products	856	1.2	29,994	1.4
Engineering	1,036	1.5	28,453	1.3
Electronics	1,487	2.1	40,732	1.9
Transport equipment	2,190	3.1	46,622	2.2
Other manufacture	495	0.7	21,542	1.0
Services	**51,717**	**73.4**	**1,571,802**	**73.2**
Distribution & retail	9,872	14.0	352,267	16.4
Hotels & catering	2,877	4.1	118,342	5.5
Transport & communication	4,575	6.5	125,994	5.9
Finance	3,276	4.6	78,521	3.7
Business services	14,175	20.1	276,408	12.9
Public administration & defence	4,558	6.5	148,163	6.9
Education	4,627	6.6	135,382	6.3
Health & social services	4,753	6.7	227,368	10.6
Other services	3,005	4.3	109,357	5.1

South West Regional Accounts, BEM – South West Regional Observatory, 2005

Relative to averages for Britain as a whole, measured in terms of sectors in which the SW share is about 2% or more different than the GB share, the South West is relatively "heavy" in manufacturing (GB 13.4% GVA and 15.4% employment), in particular transport equipment (GB 1.4% GVA and 1.4% employment), and "light" in services overall, particularly business services (GB 24.8% GVA and 16.3% employment). Measured in terms of ratios of share, however, the region is again relatively "heavy" in transport equipment manufacture (3.1% of SW GVA versus 1.4% of GB GVA), mining (0.3% vs. 0.1%) and agriculture (1.7% vs. 0.8%), and light in chemicals manufacture (0.8% of SW GVA versus 1.4% of GB GVA).

There are wide differences in sector productivity (see Table 11), ranging from oil and gas extraction to forestry. Performance relative to GB and other averages suffers from the peripherality of geography and leadership in the region. Most of SW industry is diversified with relatively few clear clusters of industrial innovation providing key business decision making (to or in the region). There is always a debate about how the region should balance its interventions between the "best" performing sectors and the "worst" performing sectors. Some of these debates may be informed by the data on relative sector productivity but, ultimately, this is a case of judgement rather than evidence alone.

The final column of Table 11 compares the South West with national averages. It suggests that the region performs relatively strongly in some of the traditional primary, manufacturing and services sectors, such as forestry and fishing, textiles and associated industries, and defence, and relatively weakly in some of the higher growth areas, such as financial and business services.

Table 11: Productivity of SW Industry by Sector, 2002

	GVA/FTE		
SW INDUSTRIES (2002 BASE YEAR)	£	% (SW=100)	SW VS. GB (GB=100)
All industries	32,838	100.0	90.3
Primary industries	**19,741**	**60.1**	**56.2**
Agriculture	16,282	49.6	104.7
Forestry	13,151	40.0	81.6
Fishing	24,659	75.1	108.8
Coal extraction	16,949	51.6	136.3
Oil and gas extraction	409,605	1247.4	100.7
Other mining & quarrying	39,944	121.6	132.0
Energy & water	**98,765**	**300.8**	**86.1**
Electricity production & distribution	94,497	287.8	69.9
Gas distribution	144,993	441.5	129.3
Water supply	90,142	274.5	116.2
Construction	**28,892**	**88.0**	**96.9**
Manufacturing	**35,532**	**108.2**	**103.9**
Food & Drink	32,478	98.9	95.3
Tobacco products	308,333	939.0	99.5
Textiles	29,158	88.8	122.5
Clothing	27,211	82.9	109.2
Leather & footwear	82,432	251.0	256.6
Wood & wood products	30,291	92.2	104.6
Paper & printing	33,875	103.2	83.2
Coke ovens, refined petroleum & nuclear fuel	62,267	189.6	83.3
Chemicals	42,290	128.8	78.2
Non metal products	31,037	94.5	100.8
Metals	26,424	80.5	109.4
Metal products	28,539	86.9	101.1
Engineering	36,411	110.9	118.7
Electronics	36,507	111.2	105.6
Transport equipment	46,974	143.0	138.2
Other manufacture	22,978	70.0	87.3
Services	**32,903**	**100.2**	**89.1**
Distribution & retail	28,024	85.3	89.1
Hotels & catering	24,311	74.0	102.7
Transport & communication	36,311	110.6	93.7
Finance	41,721	127.1	81.9
Business services	51,283	156.2	92.4
Public administration & defence	30,763	93.7	108.4
Education	34,177	104.1	101.8
Health & social services	20,904	63.7	90.2
Other services	27,479	83.7	81.2

South West Regional Accounts, BEM of SWRO, 2005

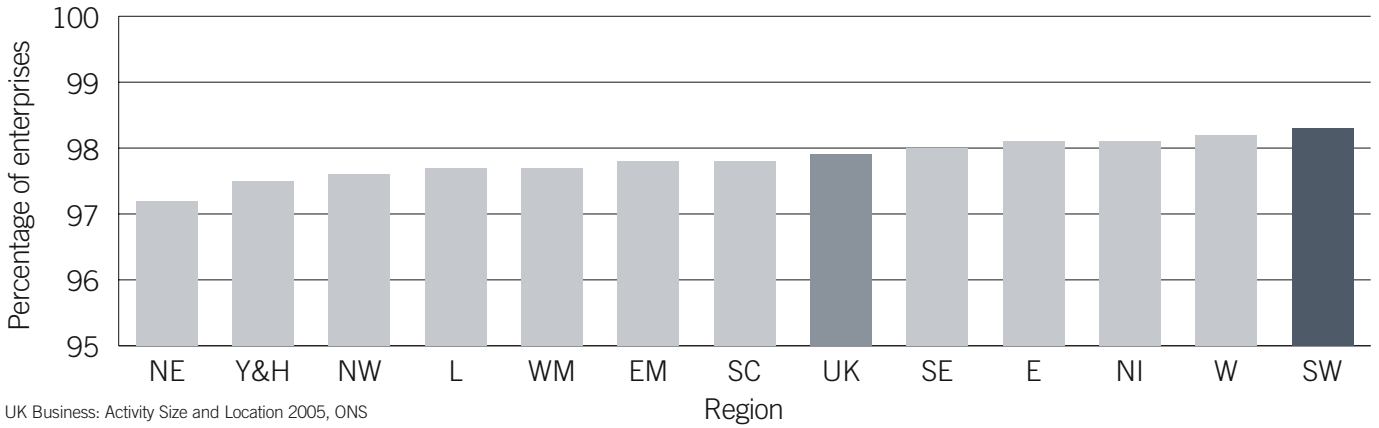
During RR05, the region may wish to consider how it wants to spread or focus its resources in terms of sector support: the distribution of deployment between helping to improve the relatively weak performers and to enhance the relatively strong performers. Issues, such as the ability to influence real outcomes (often through remote "head office" decision making) with the resources available and the inter-linkages between a target sector and the rest of the economy and wider regional aspirations of SD, will be paramount (see next section).

Business Size

The SW industrial structure typically involves marginally smaller-than-average business operations: 76.7% of the region's enterprises employ 0-4 people in comparison with a national average of 75.3%. The region has the highest proportion of small enterprises – classified as employing fewer than 50 employees – of any region in the United Kingdom (see Figure 26)[59]. In contrast, it has the lowest proportion of firms classified as medium-sized enterprises (50-249 employees).

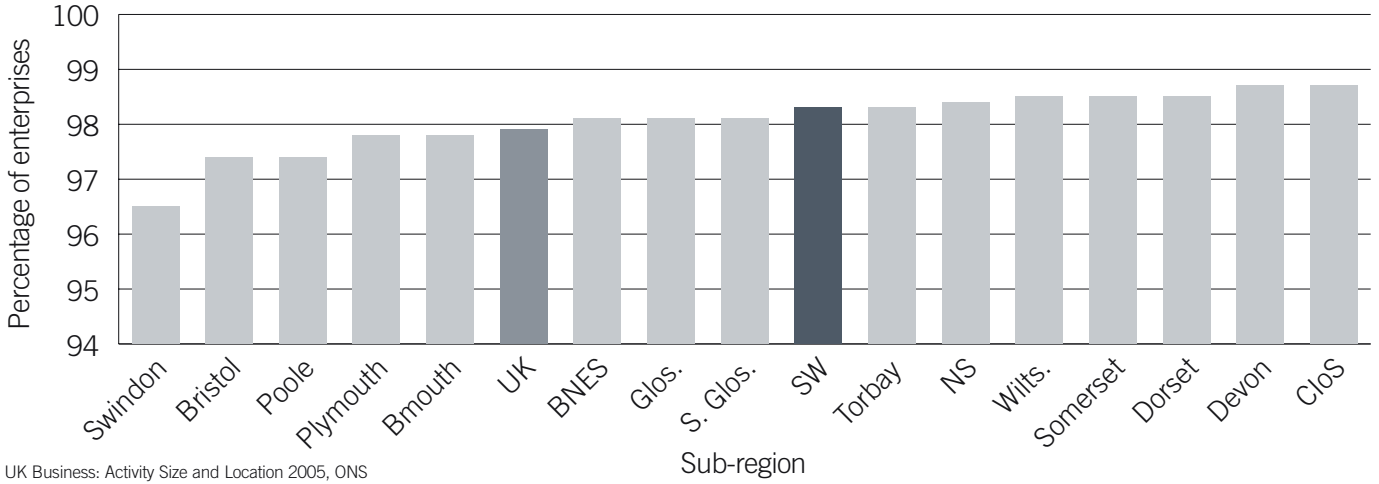
As noted earlier in this report, this is probably a reflection of the industrial mix in the region, with, for example, agriculture and tourism businesses typically being smaller individually than those in other sectors. This is shown at a sub-regional level (Figure 27). Rural/tourism areas such as Devon, Cornwall, Dorset and Somerset all have a higher proportion of small enterprises in comparison to the predominantly urban areas, although the differentials are small (98.7% in Cornwall and Devon compared to 96.5% in Swindon).

Figure 26: Regional Small Enterprises (0-49 employees), 2005



UK Business: Activity Size and Location 2005, ONS

Figure 27: SW Sub-Regional Small Enterprises, 2005



UK Business: Activity Size and Location 2005, ONS

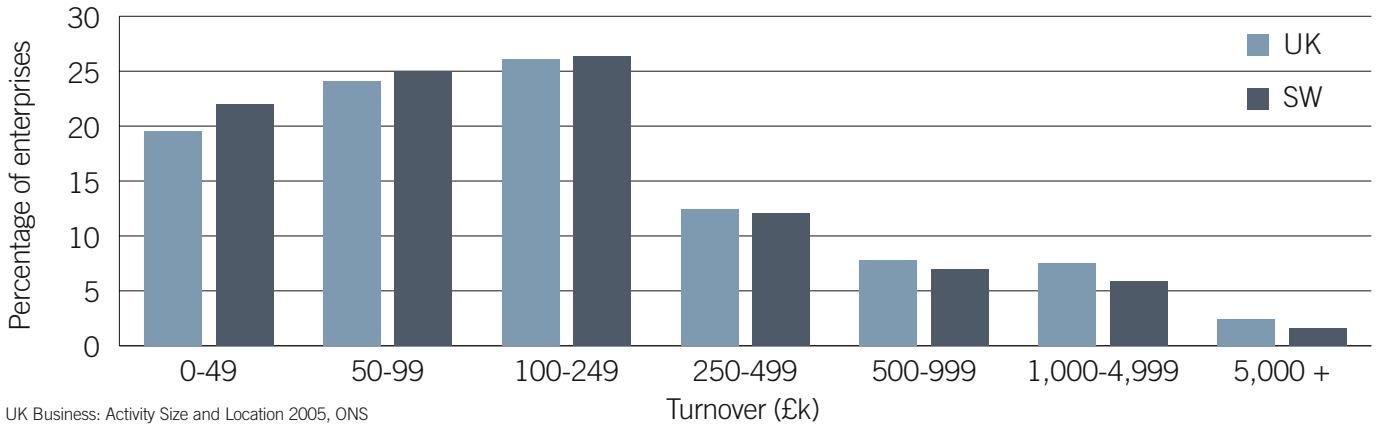
59 UK Business: Activity, Size and Location 2005 – ONS, 2005

Looking at business turnover, the distribution shows the highest proportion of businesses belonging in the mid-range turnover band of £100,000 to £249,000 per annum (see Figure 28). Whilst 98.3% of businesses in the region are classified as small enterprises, turnover is broadly, and fairly evenly, distributed across several turnover bands – £0-49,000 (22.0%), £50-99,000 (25.0%) and £100-249,000 (26.4%).

At the other extreme, the region has the lowest proportion of businesses with turnover in excess of £250,000 in England. Again, this partially reflects the relatively small size of a typical SW firm, both in terms of employment and turnover, and the proportional absence of many large enterprises, particularly those with "headquarters" in the region. The importance of agriculture, hotels and catering and other sectors dominated by small businesses is an important element of the business mix in the region.

Related characteristics of businesses in the region suggest that they are typically older, with a higher proportion of enterprises aged over 10 years and a relatively low proportion aged less than 2 years. Having a high proportion of relatively mature firms is potentially an indicator of higher market entrenchment and, therefore, higher turnover. It may also be seen as an indicator of relative dynamism. The figures do not seem to differentiate businesses bought as a going concern from those owned by current management. Moreover, the FSB's "Barriers" surveys (op. cit. under enterprise section above) suggests that the age distribution of SW businesses is falling (2000-2004).

Figure 28: SW Enterprises by Turnover, 2005



UK Business: Activity Size and Location 2005, ONS

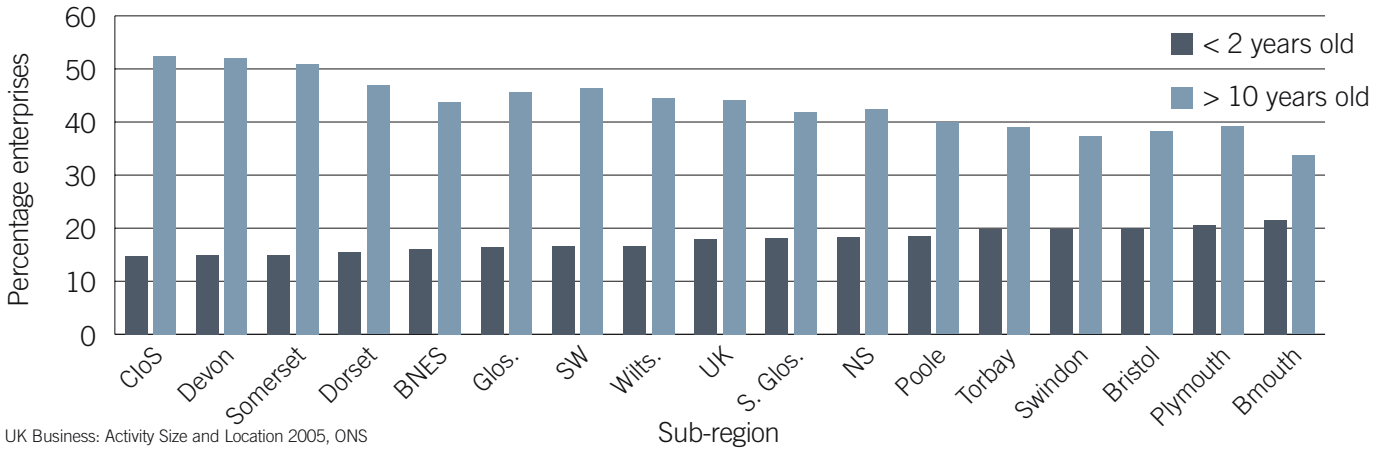
The turnover figures above, however, point to business maturity not necessarily resulting in typically higher levels of turnover. As noted elsewhere, business "churn" – the movement of firms into and out of the market – may be seen as an indication of the market working effectively. A relatively high number of companies de-registering and leaving the market is an indication of competitive pressures working well and forcing less competitive companies out of business. The low churn rate may be directly correlated to the relative maturity of companies in the region.

Another characteristic is the difference between the predominantly rural areas and the urban areas (see Figure 29). Typically, businesses are older – as measured by proportion of businesses operating for over 10 years – in rural areas and less mature in urban areas. Economic theory suggests that markets function more efficiently in urban areas in terms of competitive pressures, flexibility of labour markets and agglomeration effects.

This changes how long firms stay competitive in the market. The figures could also indicate that business formation and entrepreneurship is greater in urban areas – highlighted by the higher proportion of businesses aged under 2 years. Again, these numbers reflect the region's particular sectoral mix in terms of the business stock as distinct from value added.

There are variations in typical business sizes within different industries. For example, 92% of VAT-registered agricultural businesses employ less than 5 employees in comparison to 44% of businesses in the health industry. (Of the 20,220 VAT-registered agricultural enterprises in the region, 98% of businesses employ less than 10 employees[60].)

Figure 29: Proportion of Young and Old SW Enterprises, 2005



UK Business: Activity Size and Location 2005, ONS

One possible disadvantage to the region, the sector and the individual businesses of having a high proportion of small businesses is that an industry could suffer from a lack of 'scale' in terms of potential investment and training. On the other hand, small businesses may exhibit greater flexibility in response to changes in market conditions. For example, construction has a significant level of employees in micro businesses, reflecting the market's switch to more efficient sub-contracting to smaller firms and individuals. Also, small firms in new, developing or knowledge-driven sectors may have great, but difficult-to-identify, growth prospects.

Manufacturing shows a marginally more 'balanced' business size structure. Whilst 76% of businesses employ fewer than 10 people, 10% employ between 10 and 19 people and 8% between 20 and 49. This may indicate scale development and, perhaps, robust supply chain linkages – an important element in a well-functioning economy.

The hotels & catering sector also follows a similar distribution – possibly reflecting that, while there are a large number of small enterprises as noted elsewhere in this document, the industry also involves medium and large enterprises, such as hotels, that still employ significant workforces.

According to the figures released by the Small Business Service (DTI) there were 380,000 private sector businesses in the region in 2003[61]. This is equivalent to 942 businesses per 10,000 resident adults, the fourth highest in the United Kingdom. Those businesses with no employees (those comprising only self-employed owner managers and employee directors) constituted 71.1% of SW businesses, accounting for 9.9% of turnover (second highest after Wales).

60 UK Business: Activity, Size and Location 2005 – ONS - 2005
61 SME Statistics – UK and Regions 2003, Small Business Service, DTI

Priority Sectors

The current RES[62] identifies eight priority sectors for the South West. Theoretically and practically, it is difficult to accurately define sectors, particularly in a modern economy, where services businesses dominate and can be supplying a wide range of traditional sectors, and where statistical practices or coverage may be, at best, variable[63].

- Is a textile company supplying a luxury yacht builder part of marine technologies or part of textile manufacturing?
- Is a fish and chip shop part of the food and drink sector or part of tourism? – The answer may be different according to whether it is in an inner city housing area or on the promenade of a seaside resort.

The current priority sectors are[64]:

- advanced engineering (including aerospace)
- bio-technologies
- creative industries (media and non-media)
- environmental technologies
- food and drink (from farm to market)
- information and communication technologies (ICT)
- marine (including manufacturing and leisure)
- tourism

By its nature, economic activity is not easily defined on sector lines. Moreover, major elements of economic development (such as knowledge transfer – technologies and skills) cross sector boundaries. The priority sectors, therefore, are not intended to be exclusive. For example, if there is a skills deficit in the SW construction sector amenable to public intervention, not being a priority sector does not exclude possible investment. Nevertheless, limited resources mean that objective priority choices do have to be made.

Against the background of global structural change and the previously explained rationale of market and institutional failure (see Introduction), the framework for setting these priorities contains four theoretical and two practical criteria.

The four theoretical aspects are:

- **Comparative advantage:** is the sector in an area of economic activity in which the South West is (nationally and internationally) competitive and productive and in which there is a rationale for helping that sector maintain and develop its comparative advantage?
- **Economic scale:** does the sector employ large numbers of people and contribute a significant share of the region's output? Is it likely to continue to be an "important" sector for the region and is there a need to raise its "game" in terms of market share and productivity?
- **Economic potential:** is the sector in an area of economic activity with significant growth potential for the medium term – based on knowledge, technology and location factors and/or products or services in which the South West can develop a comparative advantage and significant economic scale?
- **Sustainability & aspiration:** is the region supportive of investment to help particular sectors for other reasons, such as a vision of regional "futures" and SD goals?

More than eight sectors of economic activity may be classified under one of these four theoretical criteria (see Table 12). The following practical criteria suggest a need to prioritise:

- **Ability to intervene:** there are limits to the financial, human and other resources available to support sector development. Selection of a manageable number of priorities based on objective analysis, rather than attempting to spread effort across as many sectors as possible, is likely to optimise resource allocation and maximise net returns to the regional economy.
- **Rationale to intervene:** it only makes sense to intervene if there is an element of market or institutional failure to address (see Introduction) and where the intervention is likely to be sufficient to "make a difference". Investment should be related to the "opportunity cost" of alternative interventions and, therefore, should reflect ability to have an impact. For example, on the three theoretical grounds, there may be a case for intervention in financial services but, given the market-driven, non-SW owned, internationally-focused, and enormous scale of this sector, it is difficult to see how SW regional intervention could have a tangible effect, even when market failures can be identified.

62 Regional Economic Strategy for South West England 2003-2012
63 State of the Key Sectors – AD Little for the South West RDA July 2004
64 See appendix on sectors for further analysis of priority sectors

For each priority, therefore, these two intervention elements are prerequisites. Table 12 shows indicative theoretical and practical support for the current priority choices.

It is beyond the scope of this document to make recommendations on whether these sectors should be increased, reduced or changed. The wider RR05 process will examine this issue. There may be an evidence issue, however, as to whether policy could be more finely tuned to certain parts of the priority sectors or certain sub-regional issues within sector development.

Table 13, derived from the SW Regional Accounts,[65] shows the productivity performance of the priority sectors in the available years, 1998-2002. Not too much should be read into changes from year-to-year. *Unfortunately, the numbers can be distorted sharply by changes in the survey and statistical details made by the ONS. Significant plant openings and closures can also shift the picture.* Nevertheless, there are important differences between them in terms of trend increase or decrease (see Table 13).

Moreover, in snapshot, we can make some overall statements about the relative performance of the key sectors on output per worker in relation to each other and the rest of Great Britain.

- ICT, Creative Industries, Advanced Engineering, Environmental Technologies and Biotechnology broadly perform better than average in the region.
- Food & Drink and Tourism perform below average.
- Marine performance fluctuates over time, in part due to its small overall size and partially concentrated distribution. This makes it more susceptible to step changes in data arising from the "lumpiness" of markets for some major sector players.

65 SW Regional Accounts – BEM – South West Regional Observatory, the South West RDA 2003-5

Table 12: The South West RDA's Priority Sectors

PRIORITY SECTOR	FAILURE	THEORY	ECONOMIC DRIVERS
Advanced Engineering	Information & temporal rigidities, policy & price uncertainty	Advantage	Supply chain/ knowledge transfer – skills/innovation
Biotechnology	Information & process rigidities	Potential	Innovation & competitiveness
Creative Industries	Information, temporal and price uncertainties	Advantage, potential & aspiration	Innovation & competitiveness
Environmental Technologies	Externality benefits, price uncertainties, temporal rigidities	Potential & aspiration	Skills/innovation, environment driver
Food & Drink	Spatial access / competitiveness, social externalities	Scale & aspiration	Supply chain/skills development, environment driver
ICT	Information, connectivity, social externalities	Potential	Innovation/skills transfer
Marine	Information, skills externalities, access	Advantage & potential	Supply chain/skills development, environment driver
Tourism	Access, skills externalities, structures	Scale & aspiration	Raising quality & productivity, environment driver

Table 13: Productivity of the South West's Priority Sectors

	GVA/FTE (£'000, INCL. FSIM)									
	1998		1999		2000		2001		2002	
	SW	GB	SW	GB	SW	GB	SW	GB	SW	GB
Advanced Engineering	36.3	32.4	38.4	34.7	33.6	34.3	34.4	35.7	45.9	35.1
Biotechnology	35.0	48.2	38.2	51.4	38.5	45.3	39.6	48.7	45.0	46.6
Creative Industries	30.3	39.7	28.8	39.6	32.4	40.1	34.2	44.2	35.1	45.6
Environmental Technologies	54.9	40.3	59.2	42.8	46.5	41.8	51.1	40.0	58.9	45.6
Food & Drink	23.2	24.4	23.4	26.0	22.6	25.6	22.6	25.6	22.080	24.5
ICT	53.3	53.4	52.9	54.9	54.2	50.6	43.7	52.2	50.118	57.4
Marine	45.2	30.8	43.0	31.9	28.6	29.3	40.1	29.0	29.0	28.3
Tourism	22.4	25.4	23.8	27.8	25.4	29.5	25.898	29.725	23.334	30.078
All Industries	**29.8**	**31.2**	**30.3**	**33.1**	**31.4**	**33.5**	**32.2**	**36.4**	**32.838**	**36.4**

South West Regional Accounts – BEM – SWRO for the South West RDA

- Advanced Engineering, Environmental Technologies and Marine perform better than average in the country, although the gap in SW and GB Marine productivity narrowed considerably in both 2000 and 2002
- Food & Drink, Tourism, Biotech, Creative and ICT perform below average, with the gap in SW and GB Biotech productivity narrowing over time

The following questions are raised by these figures:

Advanced Engineering:

Can the region maintain its strong position, particularly in aerospace and motors, in the face of globalisation pressures? Recent announcements about investments and orders suggest the region has a strong position in some of these sectors, particularly aerospace. What is needed to build a workforce and supply chain capable of continuing to compete successfully?

Biotechnology:

Shows rapid growth from a low base but is the South West ever really going to be a major player in this sector? Are there specific or related areas of work, such as medical technologies, where investment could make a difference to the creation of a competitive growth sector?

Creative Industries:

The average and/or aggregate figures hide a wide range of different activities. Does the region have a comparative advantage, which can be gainfully supported, in sub-sectors with global aspirations, such as some of the media elements?

Environmental Technologies:

A relative winner and a regional aspiration: what schemes would assist this sector to maintain its lead and select activities that can achieve growth into a major industry?

Food & Drink:

The region's Food & Drink (FD) sector is average in a generally below average area of productivity but this sector will always be important to this region. Should we try to focus effort more on parts of the sector where performance can be improved relative to its competitors? Can we identify these areas? Are there SD and international trade reasons for supporting FD?

ICT:

Does the decline in ICT mean intervention in this sector is ineffective against wider location trends? Might ICT intervention be suited to generic investment for all businesses rather than being sector specific? Are there specific sub-sectors where intervention could be focused more successfully?

Marine:

The South West potentially has a selective advantage in this area, particularly in certain luxury niches of the market. Overall, however, this sector has shown large fluctuations in performance. What interventions will maximise its potential?

Tourism:

National productivity generally, but specifically in tourism, is biased upwards by London. Excluding London, the SW performance is probably relatively good. Nevertheless, given its importance as an employer, customer of other sectors and environmental agent, how can we best improve quality rather than quantity to boost skills, productivity and sustainability and extend the season?

Work undertaken to forecast priority sector development[66] shows a wide range of expected experience over the next twenty years, with, for example, biotechnology growing strongly in both GVA and employment terms, advanced engineering growing in GVA terms but contracting in employment terms and tourism relatively flat on both measures. Such forecasts are indicative only, assuming no policy impact and a lack of exogenous shocks or endogenous proactive or reactive strategies. Nevertheless, they imply a growing contribution to regional productivity with important spatial ramifications for the South West.

The sector approach is evolving continually because the economy is exhibiting an acceleration of competitive change. Against this background, the region may wish to focus on those parts of manufacturing and services where comparative advantage can be reinforced and international viability increased. Also, activity might centre on "new" technologies that have potential for competitive growth and that are likely to be generic across many sectors. The aim might be to evolve into a more specific sector approach integrated with spatial and other thematic actions in skills, business support, and innovation and enterprise generally.

Policy pointer:
The region is not in the business of "picking winners". Sector policy is not exclusive but resources are limited and some focus is necessary. Given the time needed to effect competitive change, it might be perverse to change direction radically before the results of previous/current sector interventions are apparent. Nonetheless, sector policy may seek to evolve towards generic technological/knowledge dissemination in the years ahead.

66 The Spatial Dynamics of Change in the Region's Key Sectors – AD Little/DTZ Pieda – January 2005

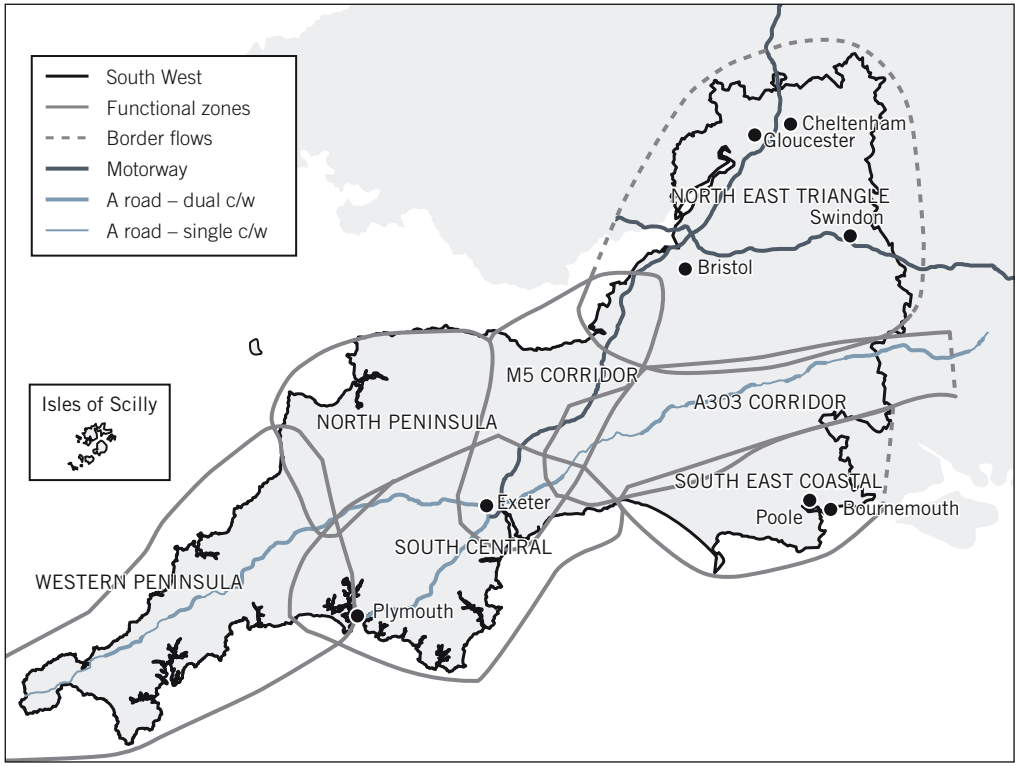
AREAS

Spatial Economic Characteristics

The RSS[67] focuses on the broad areas of the region: North and Central, South East and West Peninsula. Analysis of spatial dynamics undertaken for RR05 reveals seven functional economic zones (Figure 30) overlaid with four characteristic zones (Figure 31) based on non-economic factors[68]. Together, these zones emphasise clear divides, particularly between the three points of the regional "triangle" reflecting economic and geographic connectivity. The South West is a relatively peripheral region. Population density ranged from 43 people per square kilometre (West Devon) to 3,581 (Bristol) in 2004.

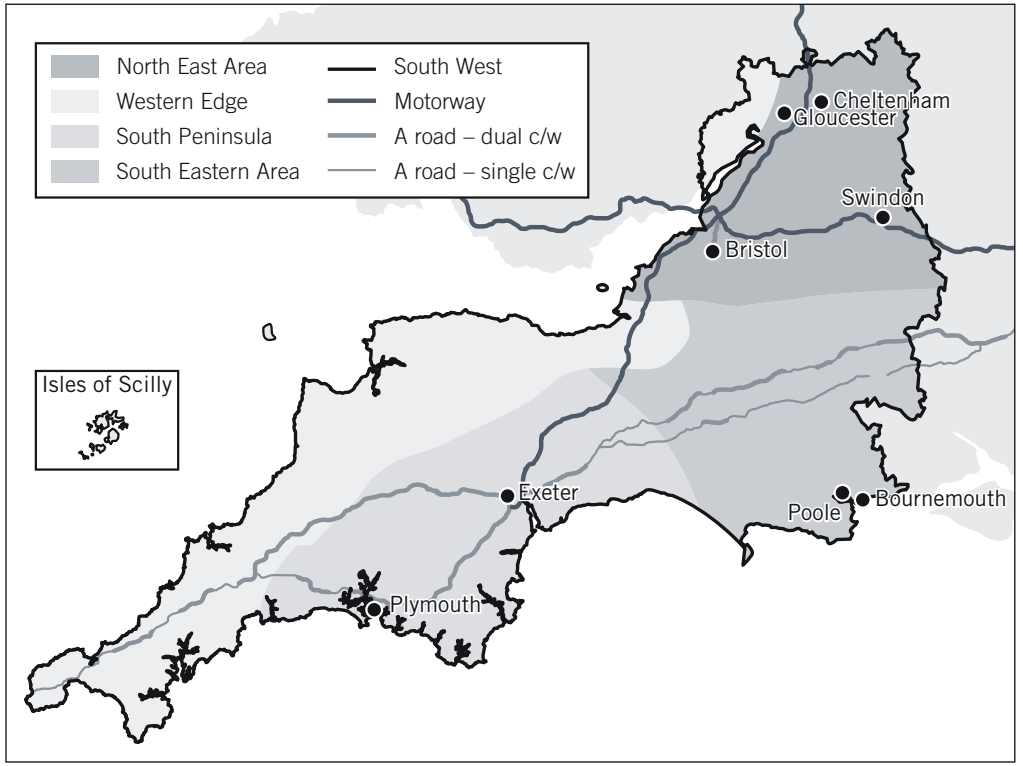
In recent years, it has had one of the highest population growth rates and the highest proportion of the population over retirement age. Growth pressures are centred on housing, transport and other services in major urban areas, where there can be sharp contrasts between areas losing employment because of offshoring and other sector/structural change, and areas where excess demand is evident and skills gaps/ shortages are observed. There are similar contrasts between some, often rural, communities where service provision becomes non-viable and other, often coastal, communities where the age distribution is relatively "top heavy" and services are struggling to match need as inward migration increases.

Figure 30: SW Functional Zones



Copyright Mapinfo/Bartholomew – Adapted from Spatial Dynamics Final Report, DTZ

Figure 31: SW Characteristic Zones



Copyright Mapinfo/Bartholomew – Adapted from Spatial Dynamics Final Report, DTZ

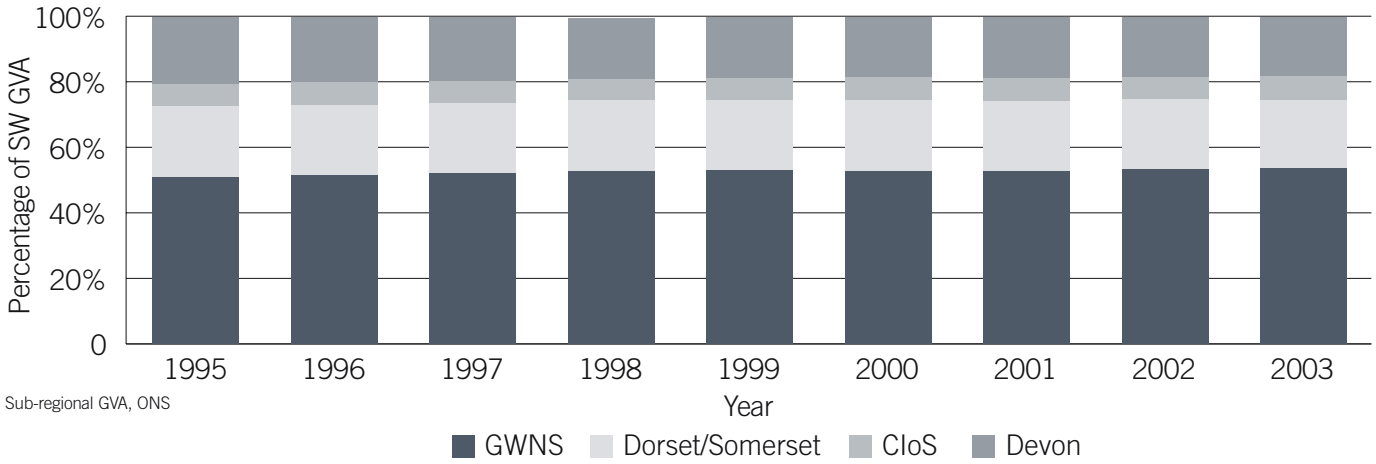
67 The Regional Spatial Strategy for the South West of England (publication pending)
68 Spatial Dynamics – DTZ Pieda for the South West RDA (March 2004)

Recent house price surveys show the South West to be one of the most "stretched" regions in terms of house price/incomes ratios (see housing section), raising significant issues about affordability in the key worker, low income and the first time buyer segments of the market. SW industrial property indicators of price trends and ratios are fairly average, implying a better balance of supply and demand pressures in this market.

Opportunities & Disparities

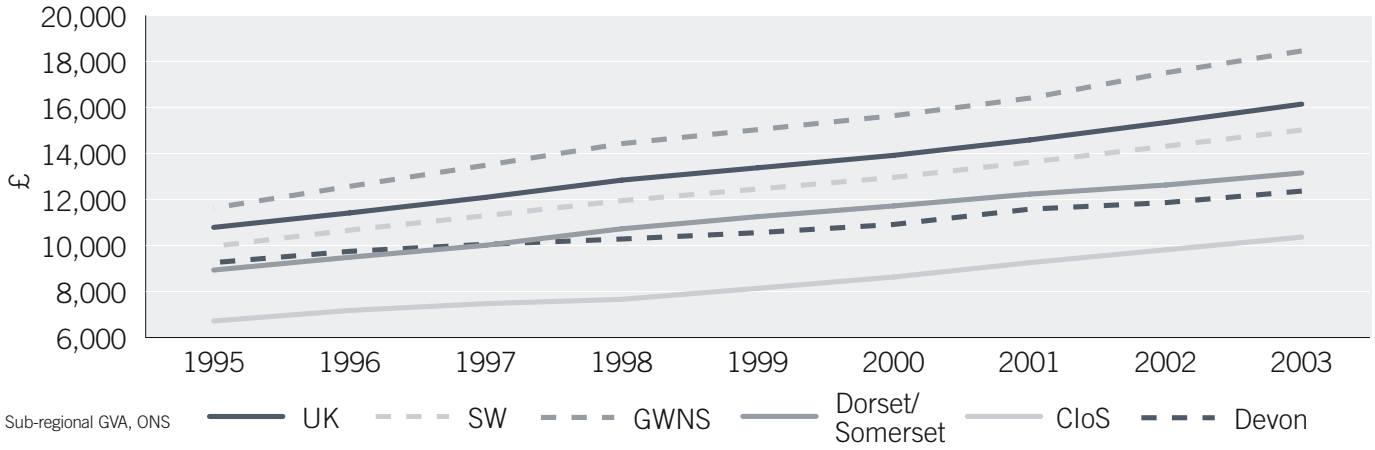
As Figure 32 shows, the sub-regional share of regional economic output has not changed significantly in recent years, with the northern parts of the region (GWNS) contributing over 50% of the region's output to CIoS contributing around 7%. As Figure 33 shows, intra-regional growth trends have been maintained over time and only the GWNS area is above the UK average in terms of GVA per head, albeit that the UK average is lifted by the strong influence of London.

Figure 32: Sub-regional (NUTS 2) Share of SW GVA



Sub-regional GVA, ONS

Figure 33: Sub-regional (NUTS 2) Share of SW GVA per head

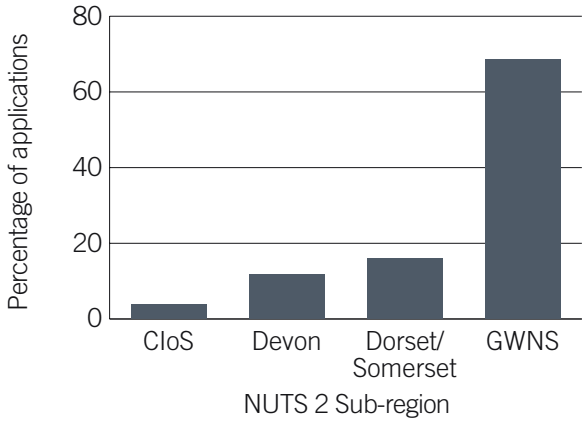


Sub-regional GVA, ONS

The economic importance of the GWNS area of the region is further exposed by considering business patent evidence: an indicator of innovation. GWNS is the third highest area in the country in terms of the absolute number of patent applications. It is seventh in Europe and second in the United Kingdom (after East Anglia) in terms of the growth of new patents, 1997-2002, and eleventh in Europe and second in the United Kingdom, in terms of the numbers of high-tech' patent applications (2002). Figure 34 shows that GWNS accounted for 70% of the region's patent applications in 2002. This may suggest that intra-regional growth differentials will persist, perhaps even expand.

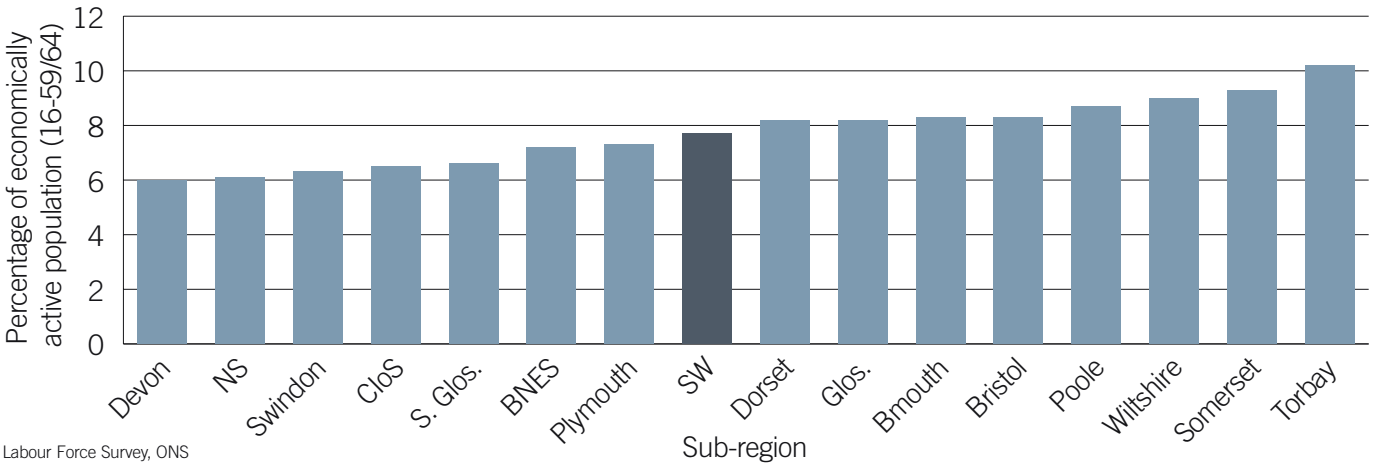
Further evidence of intra-regional disparities is shown by the sub-regional skills data. In terms of lack of formal qualifications, the geographic spread is less obvious across the region than for many other measures – from 6% in Devon to 10% in Torbay (see Figure 35). At higher levels, however, the NE-SW split starts to re-assert itself (see Figure 36).

Figure 34: Sub-regional Share of SW Patent applications, 2002



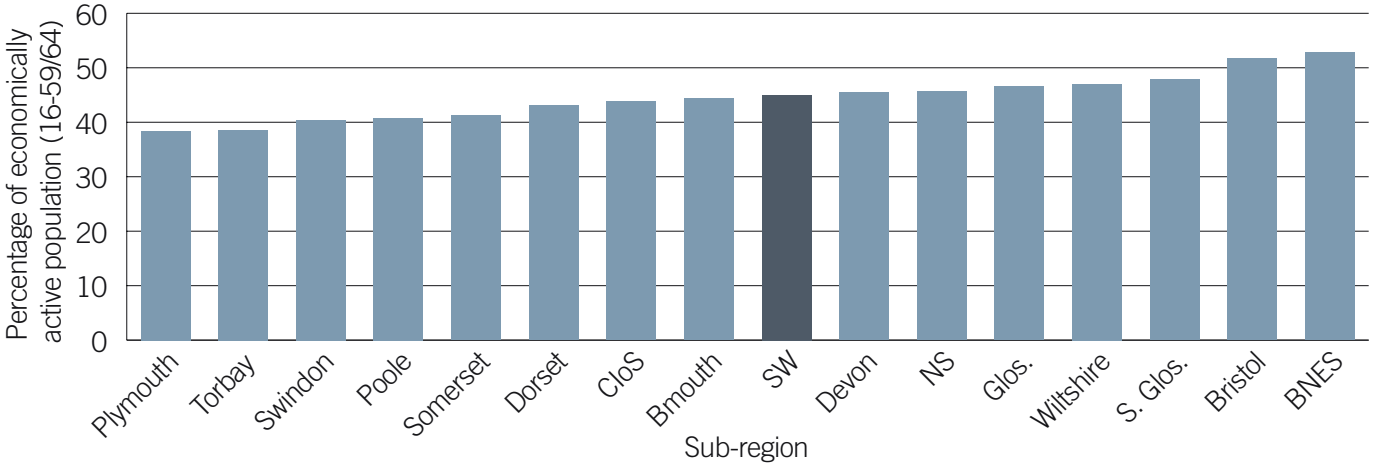
Patent applications to the EPO from the EU regions 1997 to 2002 – Eurostat, 2004

Figure 35: Proportion of Population with No Qualifications, 2003/04



Labour Force Survey, ONS

Figure 36: Proportion of Population with NVQ 3 Qualifications or above, 2003/04



Labour Force Survey, ONS

The challenge and opportunity presented by the evidence, that disparities within the region are probably more important than those between the region and its neighbours, is to tailor interventions that meet the market and institutional failure needs of the sub-regions, within the broad scope of strategic SD.

- One danger is that interventions are spread thinly across the region and impact is dissipated; indeed undetectable.
- Another is that investments are concentrated on "he who shouts loudest" rather than on objective sustainable (economic, social and environment) investment criteria.

Within this spectrum, objective analysis of sub-regional disparities and deficiencies and the potential outcomes of, and options for, investment is essential if strategy and policy are to benefit the whole region rather than special interest groups. There is a need to spread "best practice" across the region whilst incorporating elements of local characteristics and issues as appropriate.

Policy pointer:
Given its various functional, characteristic and administrative geographies, South West England exhibits strong intra-regional differences of business, household and broad economic or SD performance. Policy needs to be tailored carefully to these realities, justifying intervention against objective evidence of need and sensible discounting of relative short and long-term net benefit.

THEMES

"GLOBALISATION" – TRADE & INVESTMENT

There is widespread agreement amongst academic researchers that:

- international trade and investment is a vital component of productive competitiveness
- the world economy is evolving rapidly

As indicated in the competitiveness section above:

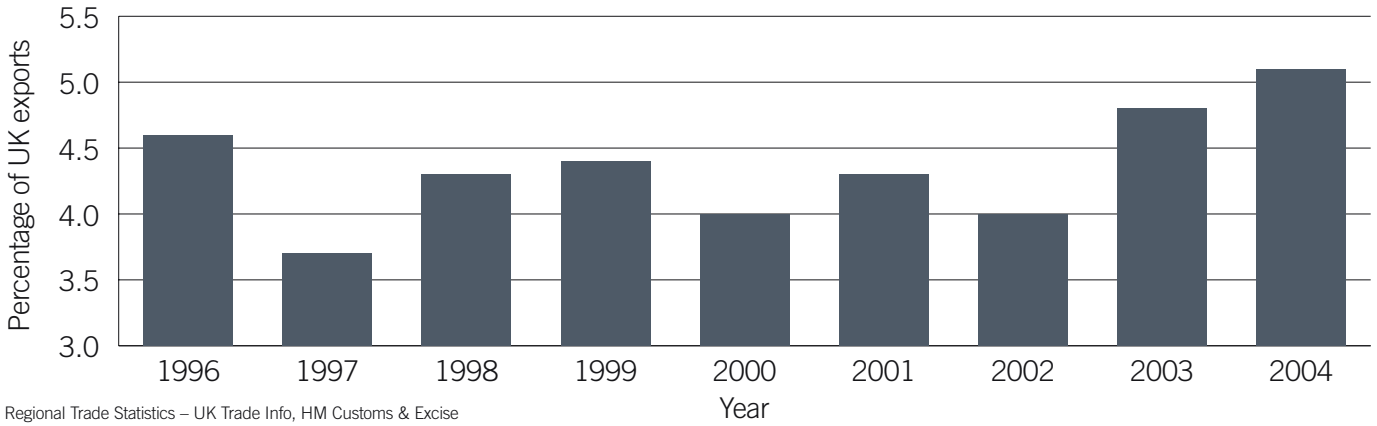
- the South West is relatively poorly engaged in this area

There are important questions about data collection and allocation by sector and by region. First, most trade data is for goods only and the SW region may be relatively successful in some key service sectors, notably tourism and professional services. The SW Regional Accounts for 2001 suggest that SW overseas services exports (about £3.5 billion) were equivalent to 53% of goods exports and about half of those were related to financial and business services, and hotels and catering. Second, problems with under-reporting – the region's contribution to exports counted in other UK regions or not counted at all (SMEs) – and with the way imports are allocated regionally may bias the goods figures.

Nevertheless, SW export values per employee job ratios are the lowest of all UK regions (60% of UK average). The region is heavily dependent on (sluggish) EU markets and on a few major sectors, especially aerospace and other advanced engineering.

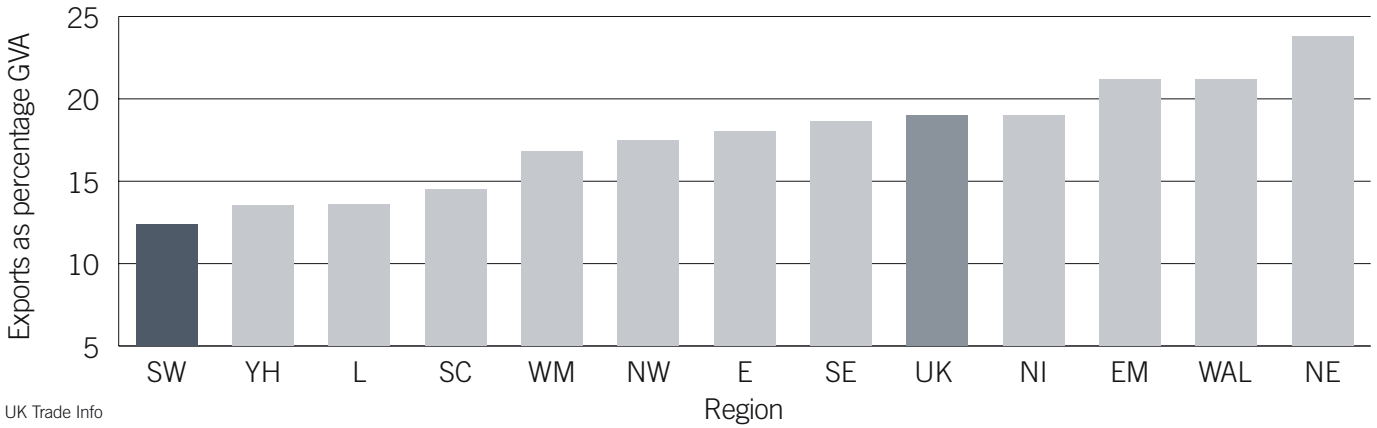
Inward investment to the South West constituted just 5.5% by value of the UK total in 2002/3. Non-UK firms in the region tend to be significantly more productive than UK firms, suggesting a deficit in aspiration as well as capital and human investment.

Figure 37: SW Share of UK Goods Exports (by value)



Regional Trade Statistics – UK Trade Info, HM Customs & Excise

Figure 38: Value of Regional Goods Exports as % of GVA, 2004



UK Trade Info

Figure 37 shows that the South West's share of UK exports has increased recently. It exceeded 5% of UK trade in 2004. Since the region represents just less than 8% of GVA and about 8.4% of the population, however, this still suggests a relatively low appetite for international economic activity.

This is confirmed by comparing regions on the basis of exports as a percentage of regional GVA (Figure 38). On this basis, the South West ranks twelfth of twelve.

Studies of the economic impact of international trade and investment show the benefits to productivity, growth, employment and standards of living from open, fair and vigorous international activity. Businesses engaged in international competition tend to lead in the dissemination of best practice and product and productive innovation. Workers in trade-orientated businesses tend to be better trained, more productive and better paid than in other sectors. Recent research (Meeting the Productivity Challenge, op.cit.) into productivity gaps confirms this.

It may be argued that the South West is shielded from negative cyclical shocks to the global economy by being less internationally orientated but it also benefits less from positive international events. There is a range of anecdotal evidence from enquiries to consultants and recent plant closures that the pace of offshoring, out-sourcing and repatriation is increasing and having strong effects on many manufacturing activities and some services in the region at present. The danger is that this elimination of capacity will undermine supply chain viability. It is too early to judge whether such changes are a necessary process of short-term adjustment, leading to positive future investment and development, or whether they augur for a lengthy period of adjustment to relative decline. Over the period of the next RES, with the pace of "globalisation" unlikely to slacken, the need to strengthen international supply links and to adjust to a significant shift in the direction of trade, within the EU and towards the Far East, will be important.

The value of imports into the SW economy exceeds the value of exports. In 2004, the value of goods exports was £9.7 billion whereas the value of goods imports in the same period was £11.0 billion[69] – a slight improvement on 2003 and marked improvement from 2002 but still a negative net trade balance. It is important to remember that this is trade in goods – official data on trade in services is unavailable, yet is thought to be a rapidly growing segment of trade.

As might be expected, the import/export ratio for primary goods is high, reflecting their importance in the production process. For example, the South West only exported 25.1% of the value of minerals, fuels, lubricants etc. that it imported. In the agriculture sector, the region exported only 52.0% of food and live animals than it imported in 2004, although this compares favourably with a figure of 36.3% on a national basis. In 2004, goods exports were £9.7 billion and imports £10.9 billion. The region is far from self-sufficient but its relative agricultural presence may offer a potential advantage for boosting market share through trade, especially if "market" rather than "bureaucratic" signals start to dominate incentives after reform of the CAP support system.

Another important point is that, from the net trade figures, the region was actually a marginal net exporter of manufactured goods (excluding machinery and transport equipment) in 2003 but in 2004 became a net importer. In terms of value, the region exported 1% more manufactured goods than it imported in 2003, falling to 11% less in 2004. This compares with the United Kingdom being a net importer by more than 25% over the same period. The manufacturing sector is relatively important to the South West in terms of trade – both in the sense of volume and net contribution. Within that, moreover, SW trade is dominated by transport equipment and electronics, which is a net exporter with export values increasing from 3% of import values in 2003 to 11% in 2004. This sector accounts for almost two-thirds of goods overseas exports according to the SW Regional Accounts. Those SW sectors heavily involved in international trade are relatively successful. The concern is that the region's absolute level of trade remains low and the fear is that "globalisation" may be affecting those areas of trade where there have been recent relative "success".

SD issues relative to the adverse environmental and social impacts of the movement of goods and people across regions and countries are also relevant in calculating net returns to boosting international competitiveness.

Policy pointer:
Efforts to stimulate trade competitiveness and spread "best practice" down and across supply chains will remain important policy goals, whilst recognising a need to consider environmental and social impacts as part of any SD calculations.

69 UK Trade Info – HM Customs & Excise - 2005

PERIPHERALITY

The South West is the largest region in England, accounting for 15% of the total land area. Overall, the region's most distinguishing feature is its peninsular character and, in places, its relative peripherality. To put this into context, to travel from Bristol (in the north east of the region) to Penzance (in the west) takes a third as long again as to travel from Bristol to London by road, and over four times longer by rail. Therefore, the region has important concerns about intra-regional connectivity.

Relative peripherality impacts on access to the markets for goods and services and for factors of production, such as labour and capital. For example, the train journey time to London Paddington differs from between five to six hours from Penzance to less than one hour from Swindon. For much of the region, proximity to the Greater South East is of prime importance in determining relative economic performance.

The region's access to international markets via air travel is improving. During 2004, in terms of passenger volumes, Bristol International Airport moved into the top ten of largest airports in the country. During the past year, it has experienced an 18% increase in passenger volume and now has direct access to cities such as Brussels, Paris, Madrid, Rome and New York. These are all important international centres for business commerce. Similarly, Exeter airport experienced the largest increase in passenger volume of the top 25 UK airports with a 62% rise during 2004[70]. International links are increasing but scheduled routes remain primarily domestic.

SW airports fare less well with regards to freight movements. In 2003, Bristol carried only the 36th largest volume of freight out of all UK airports. Notably, it carried only 0.01% of the volume transported out of Heathrow during 2003 and only 0.4% of volume transported out of Belfast International – a similar sized airport.

As detailed in the Transport section below, Bristol could be classified as a medium sized seaport which has a primary focus on imported goods. Other SW ports are relatively insignificant in national or international terms. The nearest port that has a major proportion of the freight export market could claim to be Southampton. Approximately one third of freight traffic at Southampton port is classified as outgoing – representing a substantial 12.9 million tonnes.

Reflecting the United Kingdom's trade imbalance, all of the United Kingdom's major ports, such as Grimsby & Immingham, London and Felixstowe, are heavily weighted towards imports.

Relative physical peripherality may be overcome by improvements in communication technology. The South West has marginally higher than average internet connectivity. In 2004, 50% of households in the region had home access to the internet compared to a UK average of 48%[71].

According to British Telecom, broadband coverage as of March 2005 was 93% in the South West. Therefore, from a supply side perspective, the provision of broadband facilities is fairly comprehensive and now largely market driven. It is perceived that higher broadband functionality will become increasingly important if the South West is to attract and retain the high value design and R&D sector that is reliant on data transfer.

A recent report looking at business uptake of ICT and broadband in the South West noted, however, that, despite the relatively high broadband coverage across the region, there is concern that both business and residential consumers are failing to adopt broadband. In some towns, take up rates were as low as 2% to 3%[72]. There is still a need to develop the demand side of the market in certain areas, particularly in smaller communities. Moreover, this technology does not stand still: there is an ongoing need to develop access to greater band width/speed.

The demand for broadband is developing on a national basis – there has been a strong recent trend towards permanent or broadband connections as opposed to dial up. In the period March 2003 to March 2004, the UK market share of broadband connections has increased from 13.9% to 25.7%[73].

The report looked at business adoption of broadband for those companies using the internet. It found that the patterns of narrowband/broadband adoption do not change markedly as one moves from Wiltshire to Cornwall in the far South West. The two variations to this are the old County of Avon, which has the highest adoption of broadband, with 30% of internet connections being in that form. This figure drops to approximately 18% in Cornwall[74]. Nevertheless, sub-regional experience with ACTNow is positive and has helped to attract and generate new ICT businesses in the far South West.

Indicating that business demand is expanding, approximately 15% to 20% of all companies surveyed stated that they had changed their internet connection in the period March 2003 to March 2004, and this was broadly consistent across the region.

70 Civil Aviation Authority
71 Family Expenditure and Food Survey – Office of National Statistics
72 Research Project into Business Uptake, Understanding and Awareness of ICT and Broadband in the South West – the South West RDA/Broadband Access Strategies LLP
73 ONS
74 Research Project into Business Uptake, Understanding and Awareness of ICT and Broadband in the South West – South West RDA/Broadband Access Strategies LLP

The issue of peripherality has other aspects than transport and communications. To an extent, it is a state of mind as well as a physical characteristic. There are regions, some more remote than South West England, that have experienced better development trends.

The rapid productivity growth of the Irish Republic since it joined the euro-zone is a case in point. Through a mixture of luck and policy, Eire has attracted foreign investment, particularly from the United States, benefited from significant transfer payments from other EU regions, particularly for the development of transport infrastructure, adopted progressive skills and technology strategies, and been fashionable, especially amongst the Irish diaspora.

Moreover, peripherality is an asset as well as a hindrance. Location characteristics are important to the region in attracting visitors and new residents and needs to be married with entrepreneurial spirit to generate SD.

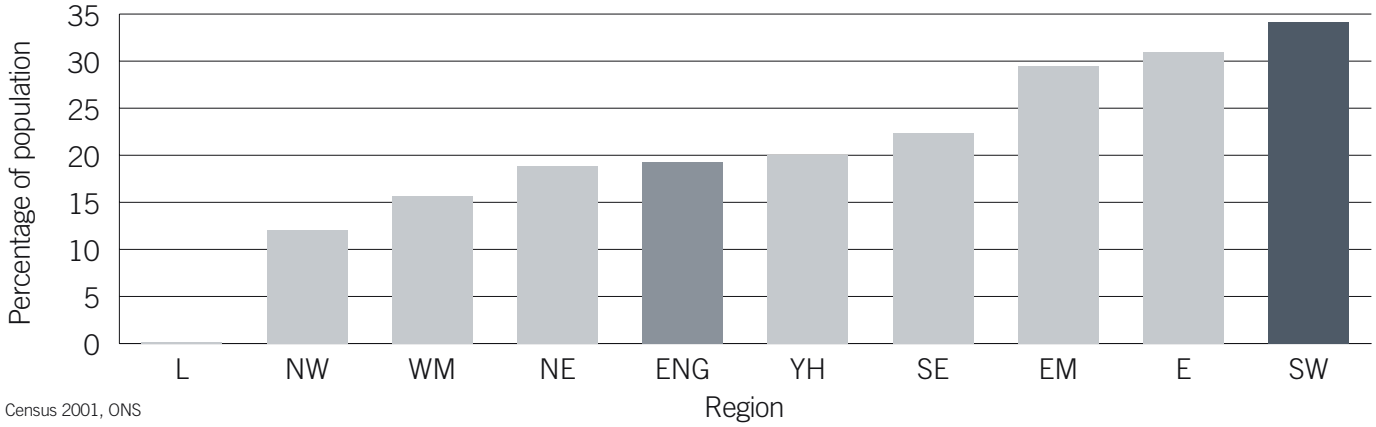
Policy pointer:
Peripherality is an opportunity as well as a hindrance. Its negative aspects can be overcome but, usually, this requires significant, long-term and broad investment. It is debatable whether adequate resource is available to significantly alter physical peripherality directly. Effort may be better focused on making peripherality irrelevant through enabling, lobbying and leadership, and knowledge transfer, rather than direct intervention.

RURAL ISSUES

The South West is a relatively rural region, with 64% of land classified as "undeveloped uses" in the region in comparison to an average of 48% throughout England. More specifically, 50% of land in the region is classified as agriculture against 35% in England[75].

"Rurality" is also reflected in the geographical location of the population: 34.1% of people were classified as living in rural areas within the region – the highest proportion of any region in England and significantly higher than the national average of 19.3%[76] (see Figure 39). Recent changes to Defra definitions[77] talk of differences between "town and fringe", "village" and "hamlet and isolated dwelling". On these measures, 13.9%, 13.8% and 6.4% respectively of the SW population live in these areas compared with 9.4%, 7.5% and 3.3% for the United Kingdom as a whole. There is a wide range within the region. Cornwall is the highest, at 25.4%, 23.7% and 13.0% respectively.

Figure 39: Regional Populations Living in Rural Areas, 2001



Census 2001, ONS

The rural population is typically older. Rural areas have a lower proportion of their population in all age ranges until the 45-54 age group. The age structure figures also confirm the widely held perception that younger people leave rural areas, primarily for education and employment purposes. This has an impact on the shape of the labour force – for example, rural areas have a significantly lower proportion of their population in the 25-34 age group, which might suggest differences in terms of new skills acquisition and entrepreneurship.

The geographical spread of businesses broadly reflects the population spread. In 2003, the South West had the highest proportion of its businesses in rural areas in comparison to English regions, although the figure was exceeded by Wales: 36.2% of businesses in the region were located in rural areas in 2004[78].

75 ODPM
76 Census 2001 – ONS
77 Rural and Urban Classification 2004 & Key Statistics for the Rural and Urban Classification 2004 – ONS, 2004
78 Annual Business Inquiry – Office of National Statistics

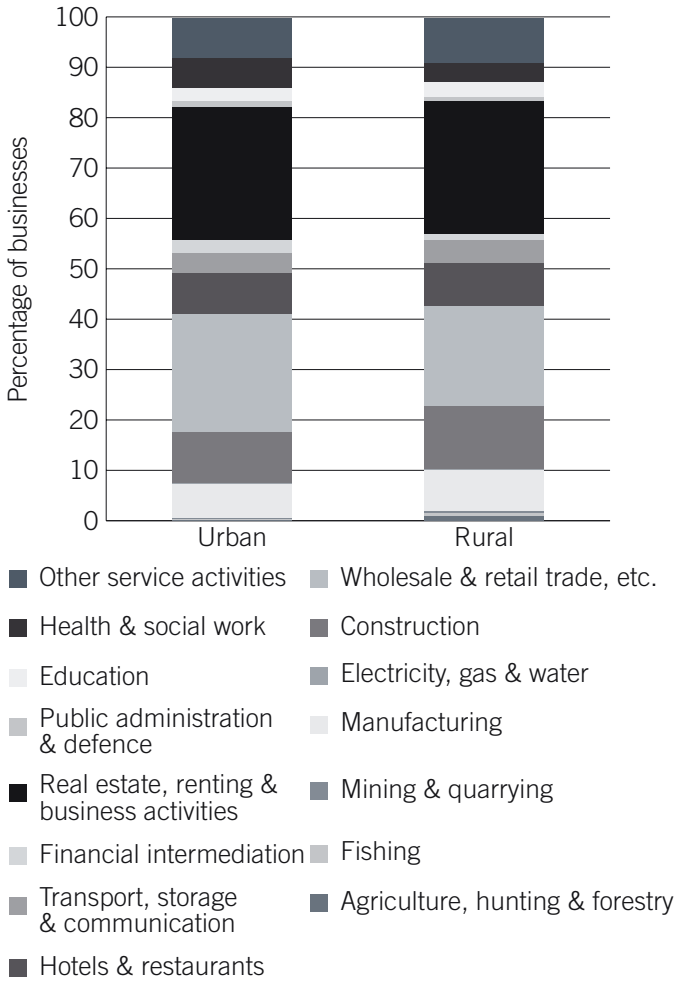
A Defra report on rural productivity recognises that rural and urban issues about productivity are matters of degree rather than substantial difference and shows a strong relationship in the region between productivity and peripherality[79]. It also highlights the region's rural migration characteristics – "old in, young out". Poor productivity in rural areas is attributed generally to low educational attainment. The South West, however, does not show this: relatively high education levels are matched with low rural productivity. This may well reflect workplace and residence differences and resulting commuter flows.

Typically, businesses in rural areas are smaller than in urban areas – in 2004, 75.8% of businesses in rural areas employed fewer than four employees in comparison to 64.9% in urban areas. The explanation for this might be the higher proportion of businesses in the agricultural and tourism sectors, which typically have a smaller business size profile. The proportion of businesses involved in tourism – as measured by hotels and restaurants – is broadly similar for urban and rural areas – at 8.0% and 8.5% respectively. The difference in typical business size may be due more to the businesses themselves than to differences in industrial structure.

As Figure 40 highlights, the industrial structure for rural and urban areas (excluding agriculture) is broadly similar, although it is interesting to note that rural areas have a slightly higher representation in both the manufacturing and construction industries. There are over 47,000 agriculture businesses in the region, of which about 80% are classified as rural (sic). Going forward, it will be important to distinguish the development prospects, patterns and requirements of new land-based activities/ relationships from other new activities with dynamic, networking characteristics for which urban/rural location is more of a "free" choice.

79 Productivity in Rural England – Defra, 2005
80 Annual Population Survey, ONS

Figure 40: Rural & Urban Businesses by Sector, 2003



Annual Business Inquiry, ONS

Further structural changes are expected in the rural areas as a consequence of the reforms to the EU's Common Agricultural Policy. The de-coupling of subsidy payments from production is expected to decrease the amount of land used purely for agricultural production purposes and this is expected, although not with absolute certainty, to potentially decrease the number of businesses (though not necessarily the scale of total activity) involved in agriculture and its support sectors. Ownership and use of land may become less connected. The total area farmed may only decline slightly whilst total output and effort gets more concentrated.

This could have a significant effect in some of the more peripheral and rural areas where agricultural has a significant, yet marginally profitable, presence – for example, in Torridge in 2004/05, 9.7% of workers were directly employed in the agricultural sector and areas such as Caradon, West Dorset and West Somerset all still had a significant agricultural sector[80]. Expected structural changes will not necessarily have a uniform impact across the region but do have the potential to affect specific rural areas to a greater degree.

Policy pointer:
Given the decline of traditional land-based industries (agriculture, minerals extraction, some tourism etc), the problems of rural areas are not dissimilar to those of the economy generally. There are, however, some specific emphases of distribution, peripherality and SD in the most rural parts of South West England.

URBAN ISSUES

Some analysis suggests that new technologies will encourage the geographical spread of economic activity. Evidence on agglomeration effects disputes this, suggesting urban concentrations and "city-region" flexible networks of business clusters and labour markets remain the engine of economic growth and development. These "proximity" factors will drive innovation and the knowledge economy, the creation of productive businesses and will build confidence for crucial infrastructure and other spatial decisions.

Research supporting RR05 and the RSS[81] support the argument that the South West's major urban centres will remain the focus of economic development and growth over the next twenty years. It also shows that our urban areas have each performed very differently: the challenges and opportunities for the Bristol conurbation vary widely from those in and around Bournemouth-Poole and Plymouth. (Bristol, for example, has a particular issue with poor school performance encouraging outward movement by families with school age children.)

The same is true when future economic potential of those areas is assessed. The West of England has significant potential for growth in new jobs and output, without strategic intervention. Bournemouth and Poole may face specific issues about environmental constraints on land use whilst Plymouth may need more direct intervention to generate potential. Aspiration to grow and develop is another important issue that differentiates urban economic centres, with the Mackay Vision perhaps indicating Plymouth's appetite for change[82].

Other recent research has shown that productivity is affected by proximity to economic mass/urban areas. These findings suggest that doubling mass raises productivity in a given area by 3.5%. Research finds that just over a third (34%) of the predicted spatial variation in UK productivity is attributable to variance in economic mass[83].

In addition, cultural aspects of urban life have been found to contribute to urban dynamism and productivity[84]. This work suggests that economically successful international cities have vibrant music scenes, diverse ethnic and orientation communities and other cultural factors that encourage networking, entrepreneurship and innovation. This is likely to reflect age distribution factors, links with educational centres of excellence and other factors that encourage multiplier effects to be strong and positive.

In some parts of the country, urban development and land use patterns are almost self-reliant: availability of land for re-development within existing urban areas is significant. Apart from some areas of Bristol and Plymouth, this is less prevalent in the South West. There have been cases of firms looking to expand being constrained by land designations in Poole, Yeovil and other manufacturing-orientated areas. There is an ongoing need for the region to be sensitive in the way it handles issues of a lack of brown-field sites, the preservation of green-belt and environmentally distinct areas whilst accommodating the business and sector aspiration for growth and development.

Looking forward, the key question in the South West may be how much control our city-regions can or wish to exercise over trend growth – how much market forces are allowed to dictate the pace of development; and how much intervention seeks to encourage or dissuade underlying trends. These issues are more fully covered in the RSS process.

Another key element is that the urban landscape of the region is broader than the main "city-regions." There are important connections – physical, cultural, economic, knowledge – between our cities, towns and rural areas. Businesses unable to find space, looking to re-locate or making lifestyle choices about venue may "leapfrog" across the wider region. A relatively small number of towns in the South West – within and outside defined city-regions – perform valuable regional and sub-regional functions in the economy. They have some potential to increase that contribution and strengthen links between cities and rural areas. This role, function and potential of the region's towns should be recognised, but physical and economic growth may well be limited to a scale commensurate with that role, function and potential.

Policy pointer:
Most people live and work in South West England's main "city-regions". These centres provide the drive of economic development and entrepreneurship. They are a key focus for social and environmental issues of sustainability. Policy will remain strongly rooted in developing flexible and efficient goods, services and labour markets in our urban centres but will need to respect the differing past performance and future potential and aspiration of each "city-region".

81 RSS forthcoming, being developed in parallel with the RES Review. Spatial dynamics – DTZ Pieda for the South West RDA March 2004. The Spatial Dynamics of Change in the Region's Key Sectors – AD Little for the South West RDA, January 2005.

82 A Vision for Plymouth, Final report of MBM Arquitectes with AZ Urban Studio – October 2003

83 Spatial determinants of productivity analysis for the regions of Great Britain – Rice & Venables, LSE - 2004

84 The Rise of the Creative Class – Richard Florida, 2002

TRANSPORT AND ENERGY

Transport

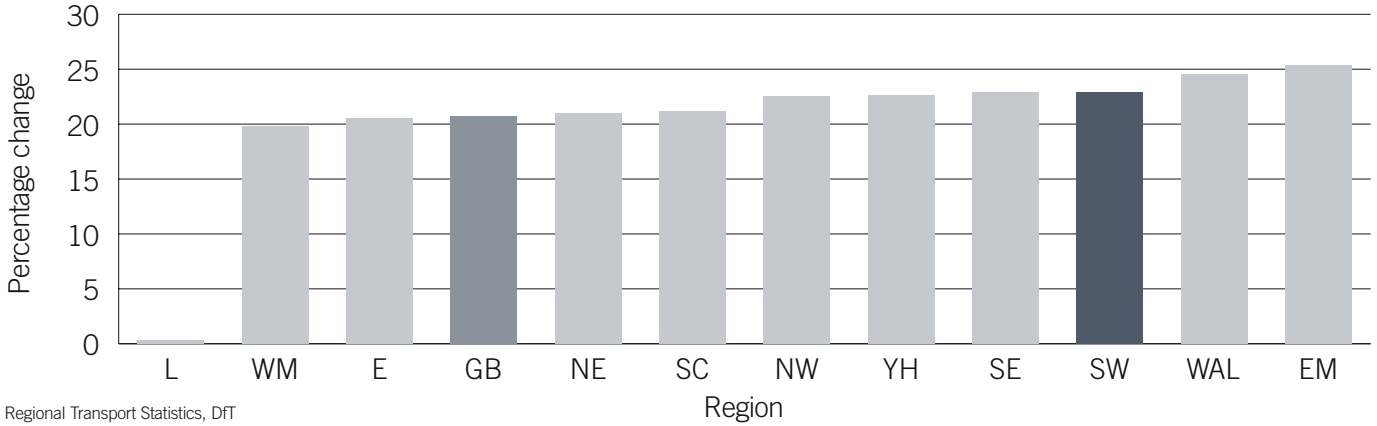
Generally, **road transport** in the South West is marked by lower car ownership, lower than average vehicle flows and lower average travel to work times:

- in 2003, 66% of all households in the South West owned a car compared to a national average of 70%[85]. However, 34% of households own two or more cars, compared to a GB average of 30%
- a regional average of 2,600 vehicles per day on all roads in 2004 compared favourably with 3,900 for England as a whole
- the difference is particularly marked on motorway traffic flows – in 2004, this was 67,500 vehicles per day in the South West compared to 79,500 in England

Therefore, even though there are undoubtedly congestion points in the region, there are generally lower overall traffic flows in the area compared to the national average. The region has seen typically high traffic growth over the previous decade, however, with 22.9% growth in traffic flows (1994 to 2004) – the third highest (equal) level of growth of any region – see Figure 41. It is a moot point as to what extent lack of alternatives is a key force behind car ownership and commuting trends.

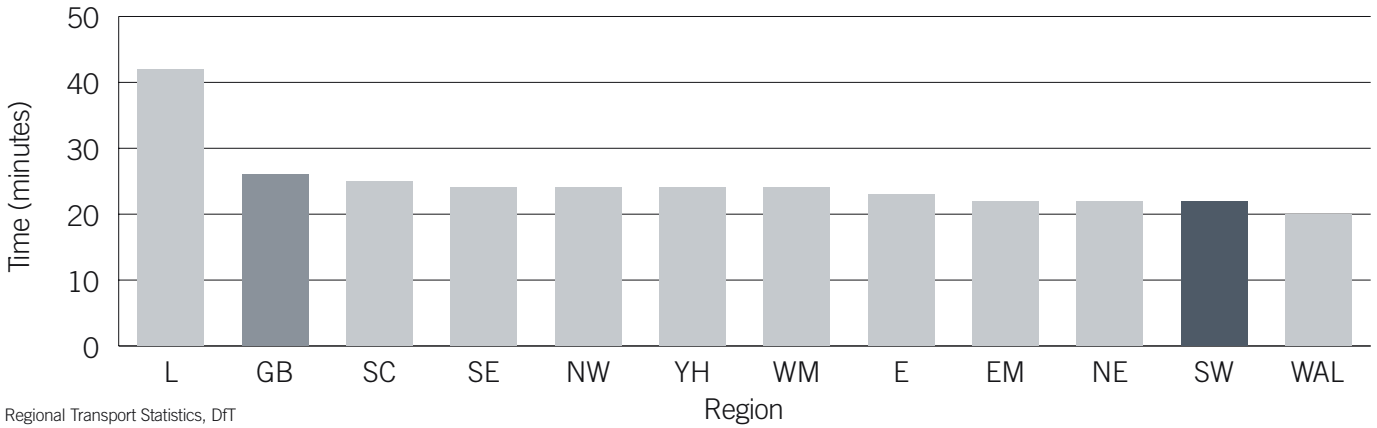
The South West also tends to have lower journey times to work (see Figure 42). For instance, in 2004 only 15% of employees and the self employed journeyed for more than 40 minutes to work compared with a GB average of 22%. Approximately 52% took less than 20 minutes to journey to work.

Figure 41: Traffic Increase on Major Roads, 1994-2004



Regional Transport Statistics, DfT

Figure 42: Mean Journey Time to Work by Workplace



Regional Transport Statistics, DfT

85 Regional Transport Statistics 2005 – DfT, 2005

Typically, the average journey to work time is amongst the lowest in Great Britain. This has economic implications in terms of influence on, and size of, potential labour force – for example, one reason why the travelling times to London are high is that it draws on a very large labour market catchment.

The most significant commuter in-flows in absolute terms are for the Bristol/Bath area (55,000 people), Bournemouth/Poole area (26,000) and Cheltenham/ Gloucester area (25,000). The most significant flows as a proportion of the population who work in each area are for the Cheltenham/Gloucester area and Bristol/ Bath area (24% and 22% respectively)[86].

Workers in Exeter took an average 21 minutes to travel to work in 2001, while in Bristol the average was 29 minutes[87]. Within this study, of the larger cities selected, Bristol commuters got to work quicker than their counterparts in Edinburgh, Birmingham, Glasgow or Manchester.

Generally, increasing transport costs – usually related to increases in travelling times – will have a detrimental impact on economic growth. In a recent report that looks at connectivity in the region[88], however, it was noted that a previous Government report on the links between transport and the economy[89] concluded that while, in theory, transport cost reductions might be expected to lead to increased economic activity, the empirical evidence relating to such impacts was "weak and disputed". In contrast, the econometric work, cited earlier in this report, in the recent SW productivity research (op.cit.) found "time distance" to be an important explanatory variable of relative productivity at individual business level.

Other evidence collated during the connectivity research points to the fact that, notwithstanding the time-distance argument on productivity gaps, inter-regional connectivity is important to economic growth in the South West. It is argued that from a regional development perspective, it is the inflow and outflow of business activity and wealth into and out of the region that provides the basis for economic growth rather than the movement of wealth within the region.

In terms of **seaport** activity, Bristol transported 2.1% of all UK domestic and foreign freight traffic in 2003, making it the 14th busiest port in the United Kingdom. It experienced a 12% increase in freight traffic between 2002 and 2003, which was a healthy rise – many of the major ports experienced a decline in freight traffic. It transported 11.4 million tonnes of goods which were primarily constituted of bulk fuels (6.7 million tonnes), coal (4.5 million tonnes) and oil products (2.2 million tonnes). Bristol remains a port primarily for the importing of goods. Of total shipments, approximately 89% was imported freight traffic. The next largest port in the region was Plymouth with freight traffic of 2.1 million tonnes[90]. Other ports in the region are constrained by physical characteristics and proximity to other larger facilities.

With regards to **rail travel**, there remains a heavy reliance on connections to the Greater London area. In 2002-03, 75 million journeys were made within, to and from the Great Western Main Line (GWML) area – around 8% of national rail journeys. However, only 25.8 million related to areas within the SW region[91]. 7.6 million journeys (29.5%) are to or from central London, with almost 67% of these in the "to London" direction[92].

This traffic is more heavily weighted towards the East of the region – 43% of journeys originating from Wiltshire were completed in Central London and this, in part, highlights the extensive draw of London's labour market. Meanwhile, 46% of journeys in the GWML area are less than 20 miles in length, reflecting the volume of commuting and local flows.

In similar vein, the Greater Bristol area, excluding rail traffic with Central London, is a net attractor from the rest of the region – receiving 4.3 million journeys in the year 2002 to 2003. Bristol Temple Meads Station attracts the largest number of journeys in the region – 5.2 million journeys. The influence of Bristol on the regional labour market can be inferred by a review of load factors on routes at peak times. Between the hours of 8 am and 9 am, the load factors on trains arriving into Bristol Temple Meads are Taunton/Exeter (approximately 89%), Cardiff (87%) and Westbury/Bath (92%). In comparison, the principal urban areas in the far South West have typically lower load factors at peak time – for example, at Plymouth load factors are generally around 60%.

Overall, passenger demand on GWML routes grew faster than the national average over the five years between 1998 and 2003, possibly reflecting the relatively buoyant regional economy. National average passenger growth was 2.8% per annum against which the GWML area grew by 4.7% per annum. The far South West saw some significant growth in demand in the years 2001 to 2003. For example, Exeter St Davids Station saw originating passenger numbers increase from just over 600,000 per annum in 1998 to approximately 710,000 journeys in 2003.

86 2001 Census – ONS
87 ONS Urban Audit – ONS
88 Intra-regional Connectivity in the South West – the South West RDA, DTZ Pieda, 2005
89 'Transport and the Economy' – Standing Advisory Committee for Trunk Road Assessment, 1999
90 DfT
91 As classified as Bristol Area, South West, Cotswolds, Wiltshire
92 Consultation Great Western Main Line – Route Utilisation Strategy – Strategic Rail Authority

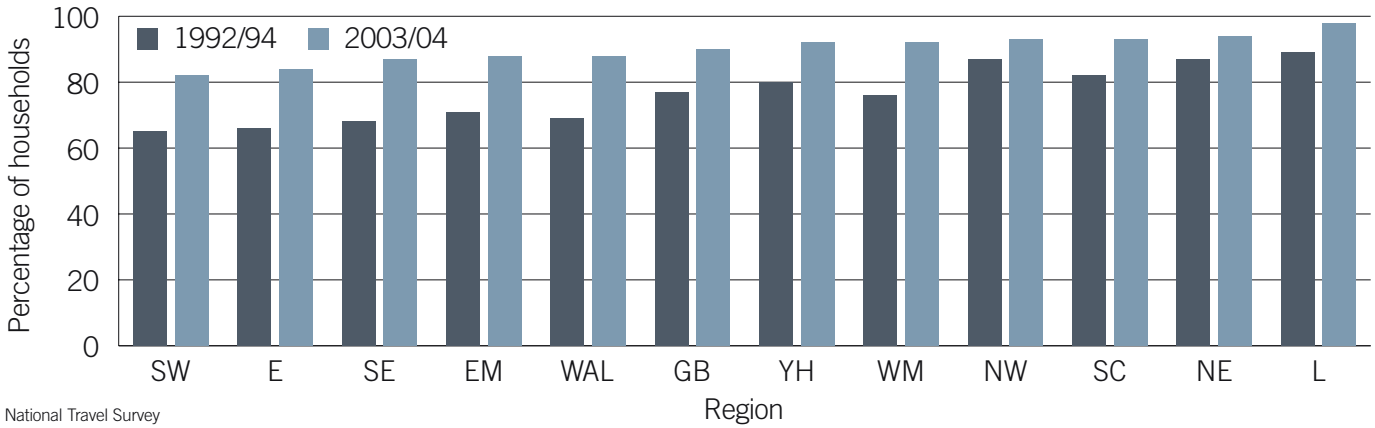
Aspects of **air travel** are covered in the Peripherality section of this report. Generally, this is still a relatively less important mode of transport for the region. It is growing fast, however, and has the potential to develop strongly in the years ahead. It may be a significant element in addressing time-distance constraints on productivity growth in the peripheral South West but has its own problems in terms of negative externalities for sustainable development.

The statistics suggest that moving around the South West and from it to other regions is less problematic than in other regions. Nevertheless, transport issues are often raised by SW businesses as a significant constraint on economic development. The real constraint is with the peripherality issue and "time-distance" disadvantages in links with and between major urban centres (op. cit on "Meeting the Productivity Challenge").

In terms of **public transport** availability, the South West lags behind all other regions and has the lowest use of public transport to travel to work, both for those working and for those living in the South West. In 2004, 5% of people used public transport to travel to work, compared to a GB average of 14%[93].

Bus availability in the South West, measured as a proportion of households within a 13 minute walk of a bus stop with a service at least once an hour, is the lowest in Great Britain (see Figure 43)[94]. In 2003/04, SW bus availability was 82%, compared to 90% for Great Britain. Over the last 20 years, the region has seen considerable improvement in availability of bus services (a 17% rise since 1992/94).

Figure 43: Bus Availability*



National Travel Survey

*Households within 13 minutes walk of a bus stop with a service at least once an hour

However, other regions with historically poor bus availability, such as the East of England, Wales and South East, have shown greater improvement over this period.

While the population of the South West has increased by around 5% over the last decade, the number of bus journeys has fallen from 189 million to 174 million 1994/95 to 2004/05. This represents an 8% decline in journeys in the face of a 5% overall increase in bus journeys across Great Britain. Despite increasing rail prices, however, rail journeys have increased by 42% since 1995/6, compared to 37% for Britain.

93 Regional Transport Statistics, DfT
94 National Travel Survey, DfT

The importance of transport to economic development is recognised by a raft of academic literature, empirical analysis and anecdotal evidence from many regions around the world. SW businesses frequently mention private transport bottlenecks and inadequate public services when they are asked to list important constraints on business operations and development.

For example, the CBI[95] and the BCC[96] both find that:

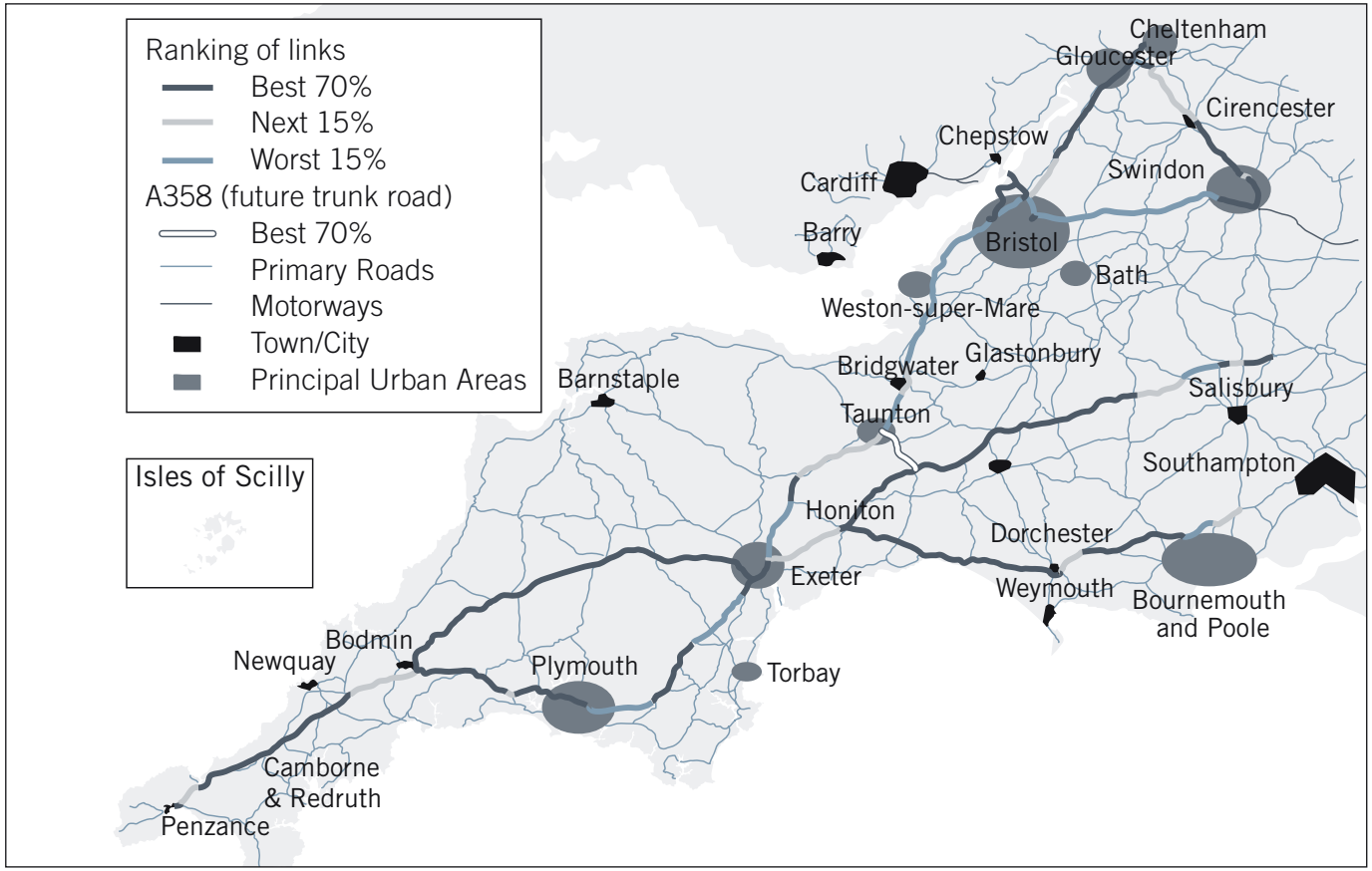
- The quality of transport infrastructure is a strong influence on decisions about where to invest
- Businessmen believe that UK transport infrastructure is less reliable than in many other countries with UK roads suffering much longer periods of significant congestion
- The UK's transport system is reducing its relative attraction as a place to do business and adversely affecting the efficiency of business operations

The BCC estimates that transport failure costs the UK economy £15 billion per year and these costs are increasing strongly year-by-year. Another source says that, with traffic growth exceeding capacity, UK congestion costs of about £20 billion per annum will rise to £30 billion during this decade[97].

The "Meeting the Productivity Challenge" research (op cit) provides empirical evidence, based on strong academic foundations, on the importance of time-distance in explaining the South West's low relative productivity. It explains that access to competitive markets is vital for developing productive and competitive businesses and sustained, high value employment. Accordingly, SW transport priorities need to address access to markets (by whatever means of transport and communications, including rail and air transport as well as road).

95 Is Transport Holding the UK Back? – CBI 2003
96 British Chamber of Commerce "Getting Business Moving", 2004
97 The economic costs of road traffic congestion – P Goodwin, 2004 for The Rail Freight Group

Figure 44: Predicted Severest Congestion Points



Policy pointer:
South West England has lower congestion problems but the rate of traffic growth is higher. Moreover, the region has less public transport capacity than most other regions. Transport policy is tied up with peripherality constraints on productivity and growth and sustainability constraints on infrastructure development and use. Policy should aim to retain a balance between closer integration with national and international hubs and the desire to retain social and environmental distinctions.

As well as improved rail/air links with key economic centres in the United Kingdom, Europe and elsewhere, vital for this are a second strategic road route for the region and alleviating congestion around key economic centres, especially Bristol, which directly impacts communications and "peripherality" further down the peninsula.

Between 1994 and 2004, SW traffic increased 22.9% compared with a GB average of 20.7%. In particular, the Bristol conurbation demonstrates strong traffic growth and falling average vehicle speeds, with some estimates suggesting journey times between Birmingham and Bristol have risen almost 14% in the last four years[98]. Congestion in Bristol city alone is said to cost businesses £50 million per annum. Unreliability of journey times, by road and rail, is a major concern for both short and long distance journeys within, and without, South West England.

Data on vehicle hour delays[99] show that, of 260 congestion points in the South West, nine of the highest ranking 25 relate to Bristol City and South Gloucestershire and a further eight of the 25 are related to the A303/A30. This evidence supports the priority given by public agencies and private businesses to the problems of Bristol congestion and strategic routing within the region. As Figure 44 shows, current predictions of where the severest congestion points in the region will be in 2025 reinforce this focus.

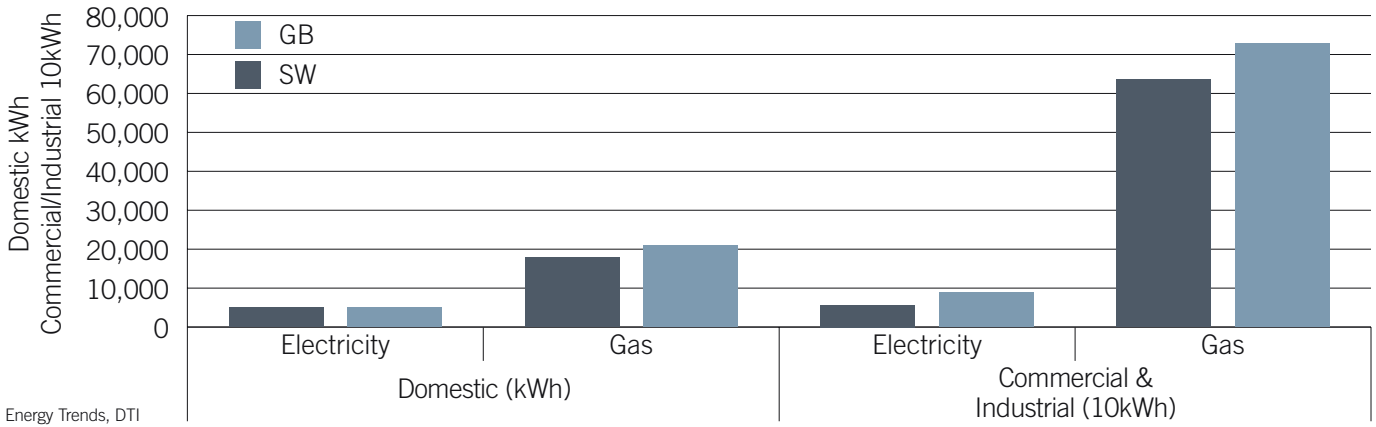
98 Transport Brief – CBI, March 2005
99 provided by Parsons Brinckerhoff for the Highways Agency

Energy

The balance of demand and supply for carbon-based fuels (led by oil) has been favourable to low prices for energy for most of the last twenty years. Currently, however, the "excess capacity" balance is lower than it has been throughout that period[100]. Furthermore, many energy analysts expect this market "tightness" to persist as global demand rises and non-renewable stocks diminish. Such forecasts have been wrong before but, given increased policy aspiration for a lower carbon economy, it would be prudent to plan for higher real energy prices over the next decade.

Total energy consumption (gas and electricity) in the South West region in 2003 was 70,344 gigawatt hours, with 55% of this as domestic consumption, compared with 52% for the GB average. The South West has the lowest domestic gas consumption rates in Great Britain and the third lowest commercial/ industrial gas consumption rates (see Figure 45). While the region has the second lowest commercial/ industrial electricity consumption, the SW domestic market has comparatively high electricity consumption (3rd highest). This is reflected in the South West accounting for an 8.8% share of GB domestic electricity consumption versus a 6.7% share of domestic all energy consumption. Domestic average gas consumption in the South West has decreased by 3.3% since 2001, compared to a 0.8% GB increase. However, while average commercial gas consumption across Great Britain has declined by 6.1% over the same period, only a 1.2% decrease has been seen in the South West.

Figure 45: Energy Consumption, 2003 (kWh per consumer)



Energy Trends, DTI

Most of SW energy use relies on imports from outside the region. Government targets look for reduced use of carbon-based energy sources under its climate change efforts. The region has aspirations to adopt more renewable sources of energy but all new sources of supply carry some local or wider controversy. The political debate about the "right" mix of wind, wave, tide and nuclear energy sources is likely to intensify during the next RES period, 2006-2015, at national, regional and sub-regional level. Given its peninsular geography, the region probably has a potentially significant comparative advantage in non-carbon based fuels. Development of these sectors could provide valuable benefits in terms of output value added, job creation, skills and innovation, export potential and import substitution and sustainability. There may be, however, externality "dis-benefits" in terms of amenity loss, waste disposal and political or social opposition to specific sitings.

Policy pointer:
The SW economy has the potential to benefit from development of non-carbon energy sources. Debate about capturing economic and environmental benefits and mitigating social and other costs in a sustainable fashion is likely to intensify in the years ahead.

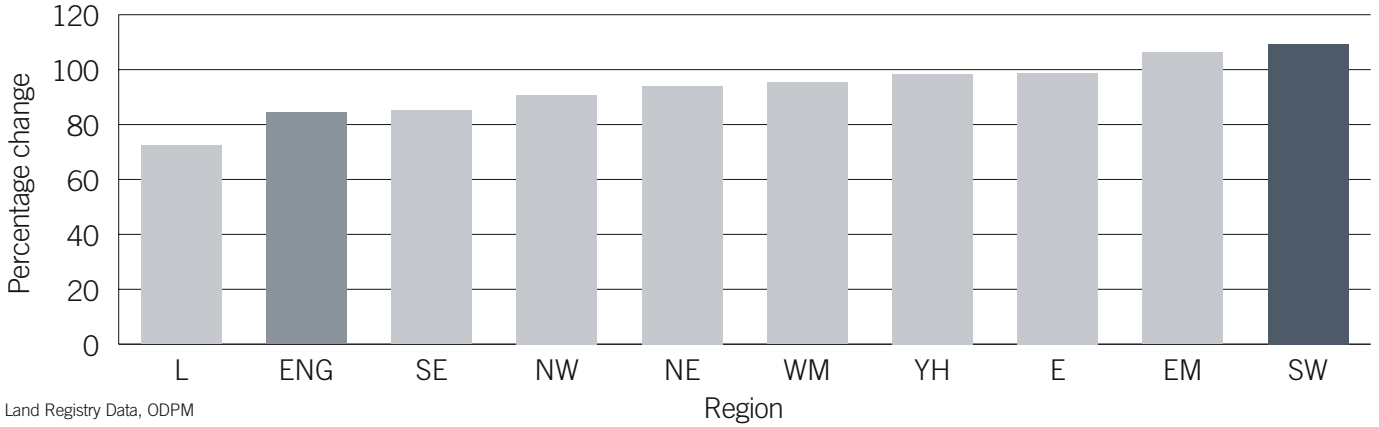
100 World Economic Outlook – IMF, April 2005

HOUSING

In terms of average prices, the South West has the fourth highest average house prices in the United Kingdom. In the period July to December 2005 the average house price in the region was £202,396[101]. This was a marginal increase from the previous quarter after a slight decline in the early part of 2005 but, as with most regions of the United Kingdom, represents a significant rise over the long run. The region has experienced the largest proportional change between 1999 and 2004 in England– over 100% growth with annual growth peaking at 10% in Q3 2002 (see Figure 46).

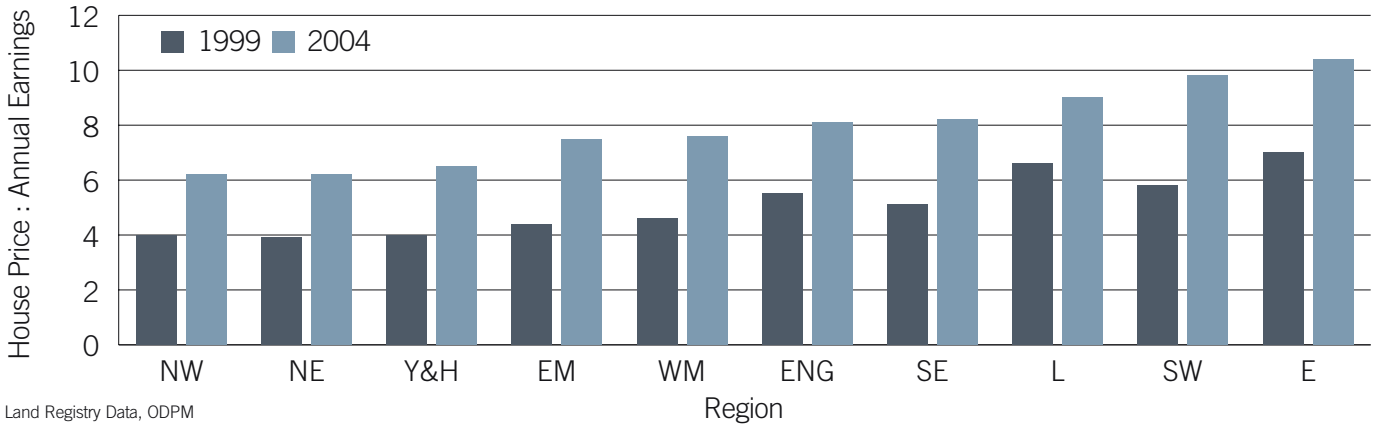
Affordability of housing, particularly in the "key worker" part of the market and particularly in some of the more dynamic sub-regional markets, is an important issue in the South West region. Indeed, SW affordability ratios are amongst the highest in the country (see Figure 47). In recent years, increases in average earnings have not matched house price growth. As a consequence, the house price/earnings ratio for the region as a whole has increased significantly from 5.8 in 1999 to 9.8 in 2004[102]; higher than London and the South East.

Figure 46: House Price Growth, 1999-2004



Land Registry Data, ODPM

Figure 47: Decline in SW Housing Affordability



Land Registry Data, ODPM

101 HM Land Registry
102 Annual Survey of Hours and Earnings – ONS, HM Land Registry

The NUTS 3 areas with the highest prices in the region (2005 Q3) are Poole (£254,959), BNES (£250,077) and Dorset (£230,261), although at a local authority level they reach as high as £299,582 in the Cotswolds. The lowest prices are primarily within the urban areas of Gloucester (£144,350), Plymouth (£145,423) and Swindon (£156,557). To a large extent, these figures reflect relationships between market turnover and stock, and averages are biased by the skewed nature of the local stock. Nevertheless, they also reflect relative economic vigour, planning restraints and other factors and may indicate pressure points. There are also issues about the way impact of high non-earned income and wealth levels in the region, and funds flows from London and the South East into the region, affect strongly the regional housing market and relative affordability.

Policy pointer:
The RSS will seek to address important regional concerns over the balance of supply and demand in the regional housing market, its impact on affordability and, thereby, on the overall labour market and output flexibility of the South West.

SOCIAL INCLUSION AND DEPRIVATION

Social Inclusion

Household and personal incomes in the South West are around 10% lower than the England average (see Table 14), even when adjusted for household size and composition.

Table 14: Household and personal income: £ per week

	SOUTH WEST	ENGLAND
Mean gross weekly household income[1], 2002/03-03/04	£543	£589
Equivalized mean gross weekly household income before housing costs[2], 2003/04	£507	£561
Mean gross total weekly income of taxpayers[3], 2003/04	£391	£430

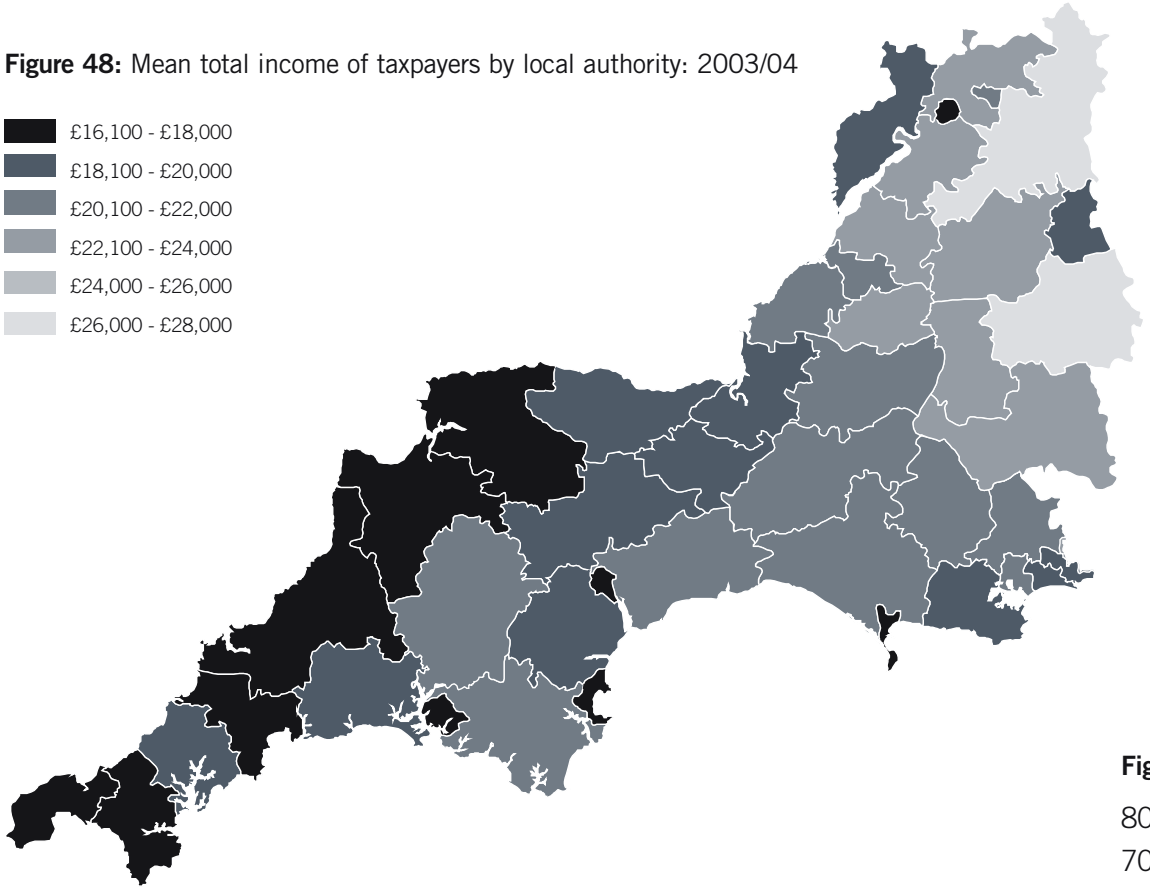
1 Family Spending, 2005, ONS; 2 Family Resources Survey, DWP, 3 HM Revenue & Customs

Personal incomes vary from 75% to 123% of the England average across the local authority areas of the South West (see Figure 48)[103]. Seven areas – Bath and NE Somerset, Cotswold, Kennet, Salisbury, Stroud, Tewkesbury and North Wiltshire have incomes above the national average; three have incomes that are 75% or less of the national benchmark: Kerrier, North Devon, and Weymouth and Portland. These figures are based on relatively small sample sizes, but do reflect the north-east to south-west trends in prosperity evident in other data series.

Generally, the extremes of low and high income are somewhat less pronounced in the South West than elsewhere[104]. The South West has a slightly lower proportion of households in the lowest (18% compared to 20%) and highest (20% and compared to 25%) income bands (less than £200 and more than £700 per week, respectively) than England as a whole and correspondingly higher proportions in the middle income bands (57% compared to 55%). London and the South East have the highest proportions of households in the highest income bands at 31% and 34%, respectively.

103 HM Revenue & Customs
104 Family Resources Survey, 2003/04, DWP

Figure 48: Mean total income of taxpayers by local authority: 2003/04

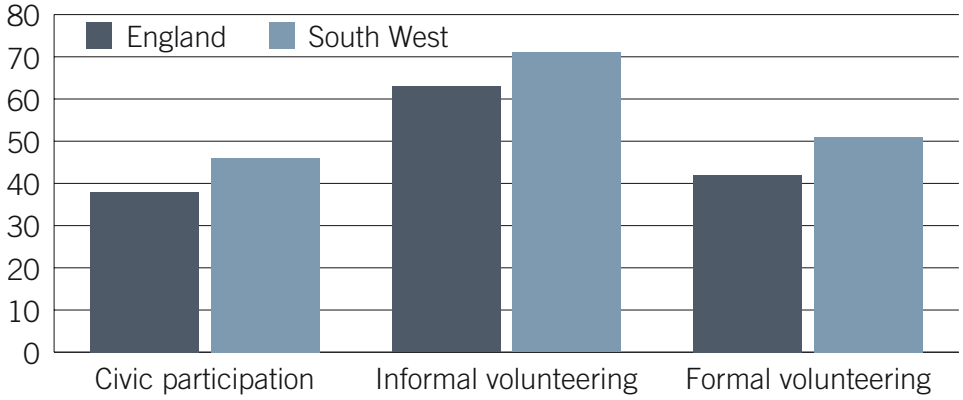


HM Revenue & Customs

The Labour Force Survey suggests that there are around 173,000 "workless" households in the South West (spring 2005). The region has a lower percentage of workless households (12%) than the England average. This is a corollary of the region's relatively high employment rate.

Participation in voluntary and community activities is a measure of social capital. The 2003 Home Office Citizenship Survey suggests that the South West had higher participation rates than the England average for most forms of voluntary and community activity (see Figure 49). In all categories – civic participation and formal and informal volunteering – the South West recorded the highest rates of all the English regions. This aspect of life in the region contributes to the perception of a high quality of life and, along with the physical environment, encourages people and businesses to relocate to the South West.

Figure 49: Participation in Voluntary and Community Activities, 2003*



Home Office Citizenship Survey 2003 – Home Office

*at least once in last 12 months

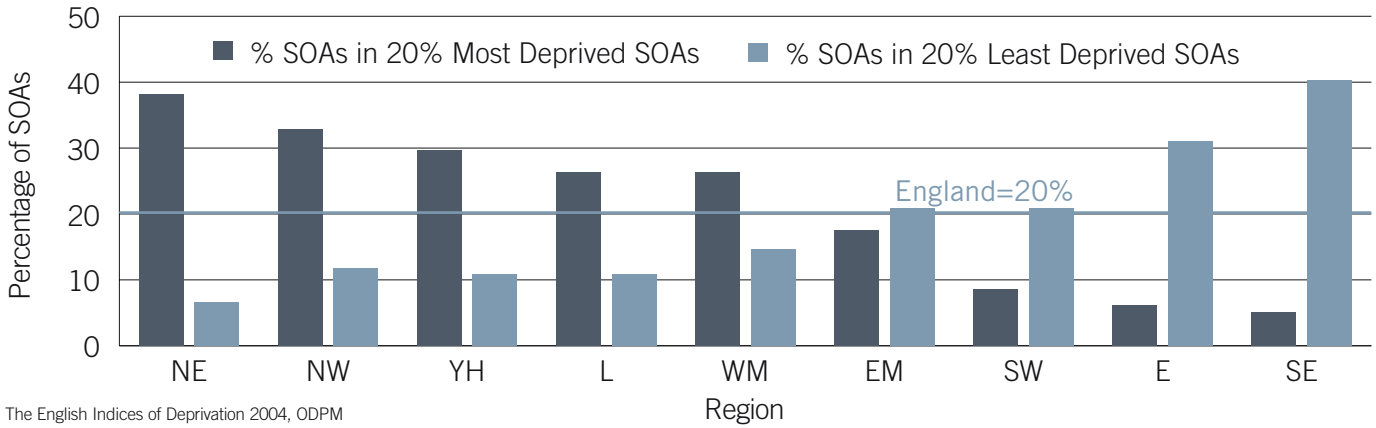
An alternative measure[105] shows that 6.6% of the UK population are engaged in starting, owning or managing ventures with community or social goals at their heart. The region's ratio is 7.2%, exceeded only by London (8.5%) and followed by "above average" readings in Scotland and East Midlands (7% each) and Yorkshire and Humberside (6.9%). In terms of income generation, SW social enterprises got 32.6% from sales and 18.6% from the public sector. UK equivalent averages are 29.6% and 23.3% respectively.

Deprivation

Deprivation across the SW region can be assessed using the Indices of Deprivation for England, which were updated in 2004. These indices comprise the Index of Multiple Deprivation (IMD) and seven domain indices, which cover deprivation in terms of income; employment; health and disability; education and skills; barriers to housing and services; and environment[106].

IMD data show that the South West is relatively well off compared to most other regions (see Figure 50) with only 8.6% of Super Output Areas (SOAs)[107] in the South West belonging to the 20% most deprived SOAs in England. The proportion of least and most deprived SOAs tend to be inversely related. The South West has a disproportionately low level of very deprived areas, but an average share of areas at the opposite end of the spectrum.

Figure 50: Location of Most and Least Deprived English Super Output Areas



The English Indices of Deprivation 2004, ODPM

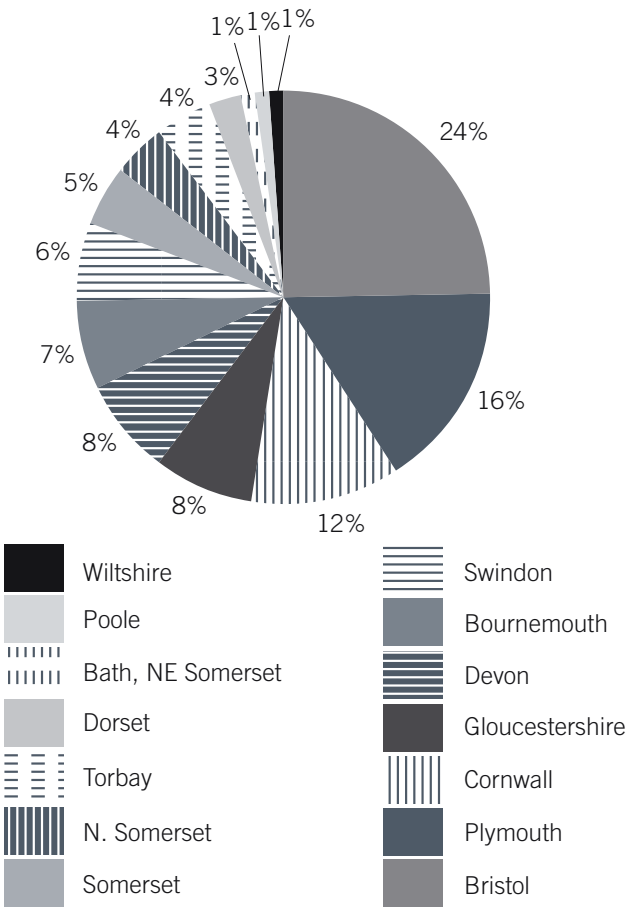
On average scoring, the most deprived local authority in the region is Penwith in Cornwall, which ranks 56th (out of 354 local and unitary authorities in England) in terms of average IMD score. Bristol, which is ranked 67th on this measure, however, shows the highest concentration of deprivation in the South West (ranked 34th) and is also 14th highest in terms of numbers of people who are both income or employment deprived.

105 GEM Social Enterprise Monitor UK – 2004
106 The English Indices of Deprivation 2004 – ODPM, 2004

107 Super Output Areas – SOAs are the new local geography for ONS collection and publication of small area statistics. SOAs are aggregations of the census-based output areas. They are intended to have consistent boundaries.

Figure 51 shows the distribution of the SW SOAs that fall in the 20% most deprived SOAs in England. The majority are located within the principal urban areas of the South West, with over one third in Bristol and Plymouth, where 27.4% and 28.1%, respectively, of SOAs within those sub-regions fall within the top 20% most deprived SOAs nationally. While a further quarter are located in the most rural counties of the region (Cornwall, Somerset and Devon), almost all (98%) deprived SW SOAs are found in urban (i.e. >10,000 population) settlements.

Figure 51: SW Distribution of Top 20% Deprived English SOAs



The English Indices of Deprivation 2004, ODPM

Bristol and Plymouth have higher than average deprivation (i.e. rank in the top 20% of super output areas nationally) across all but the barriers to housing and services index. Swindon, the most productive sub-region, is not particularly deprived but shows slightly higher than average skills deprivation (22.1% of SOAs within the top 20% nationally).

In contrast, Bath and NE Somerset, N. Somerset, S. Gloucestershire, Gloucestershire and Poole have no SOAs in the top 20% most deprived areas for either the IMD or any of the domain indices.

Unsurprisingly, rural areas score generally highly in the housing and services domain, probably through a combination of issues around both access to affordable housing and road distance to local services. Bournemouth and Swindon also have relatively high scores for this index (44.9% and 23.5%, of SOAs in top 20%, respectively), which for these areas is more likely to be related to housing issues (overcrowding, difficulty of access to owner-occupation and homelessness) than geographical barriers to services.

There are relatively low levels of deprivation in the South West on most standard measures. Deprivation tends to be evident in two types of geographical area. First, the inner cities – especially of the largest urban centres – show poor health, poor incomes, housing and employment. Many rural and related small urban areas show deprivation in distance from services. Rural associated deprivation is most pronounced in the west of the region, where incomes and employment are also lower.

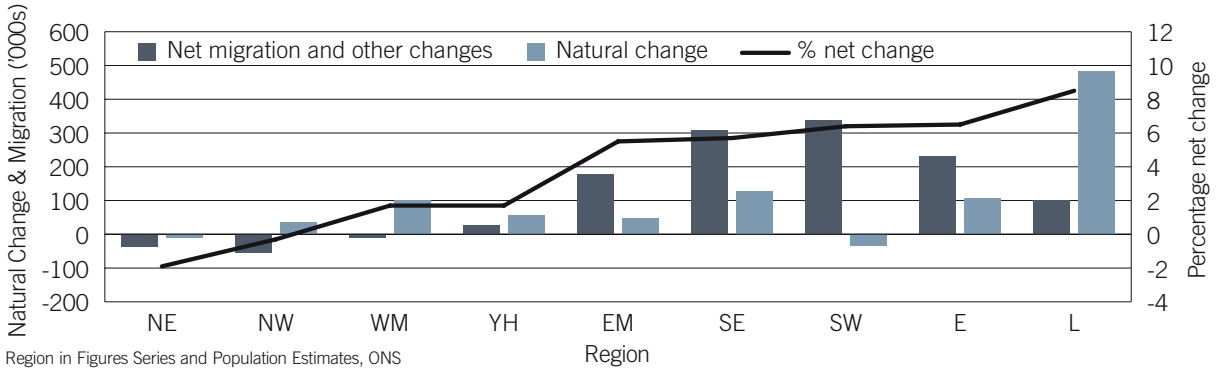
Policy pointer:
Deprivation is not as important an issue for South West England as it is for some other UK regions. In both absolute and relative terms, the region's dispersion on these measures is relatively low. There remain, however, persistent pockets where remedial action is appropriate.

DEMOGRAPHICS

Over the last decade, the SW population (now over 5 million) has grown faster than the UK average – indeed, faster than all regions except London and the East of England (see Figure 52)[108] and fastest of all regions between 2003 and 2004. The region is unique in having the lowest negative natural rate of increase but the highest rate of net immigration[109].

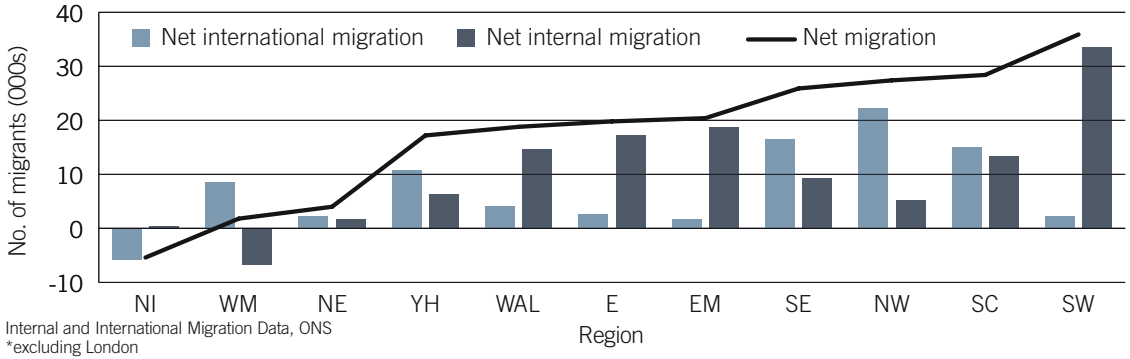
Although the international migration data is of poor quality, inward migration seems to be strongly biased towards being internal to the United Kingdom (see Figure 53), and London and the South East provide most of the migration flow in both directions (see Figure 54)[110]. The age distribution of migration shows some bias towards the older age groups. In recent years, the percentage of inward migrants of working age has been about 75% whereas the percentage for outward migrants has been closer to 80%. In 2002/3, 23.8% of inward and 18.8% of outward migrants were over 45. There may be early signs of change, however. For example, the NHS figures on patient registrations show a sharp swing in Cornwall from net emigration of 16-29 year olds of over 1,000 per annum between 1997/98 and 2000/01, to net immigration in that age range in 2002/3 and an increase towards 1,000 in 2003/4.

Figure 52: Components of Population Change, 1993-2004



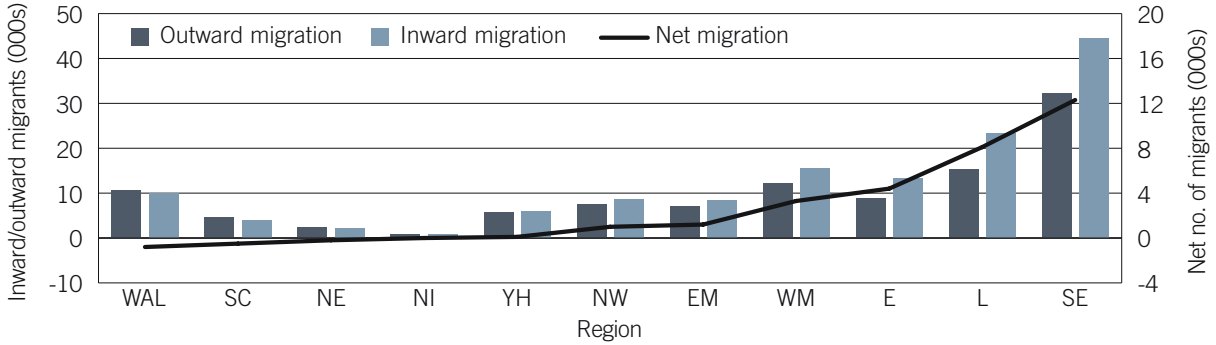
Region in Figures Series and Population Estimates, ONS

Figure 53: Regional Migration 2003*



Internal and International Migration Data, ONS
*excluding London

Figure 54: Inter-regional Migration, Year Ending March 2005



NHSCR Inter-regional migration movements within the UK, ONS

108 From Region in Figures Series 2004/05 – ONS, 2005
109 Population Estimates, ONS

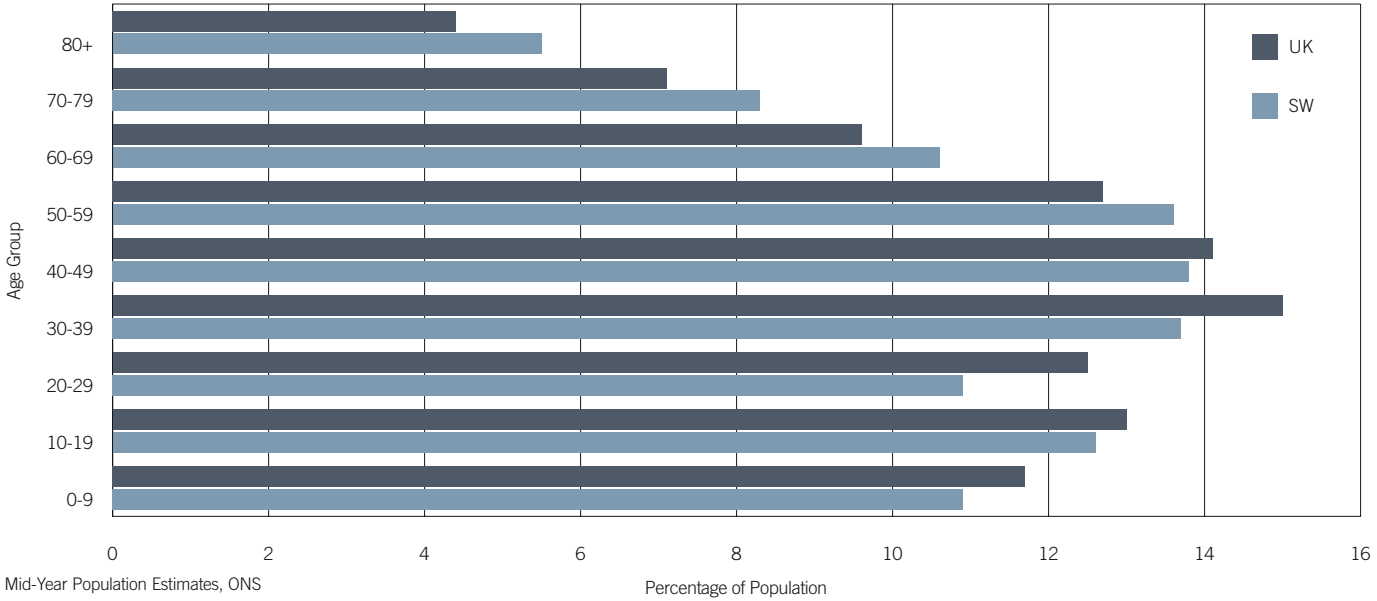
110 NHSCR Inter-regional migration movements within the UK in the year ending March 2005 – ONS, 2005

The age distribution of the South West is relatively biased towards the older age groups with 24.4% of the population over 60 in 2004 compared with a UK average of 21.1% (see Figure 55)[111]. In line with most developed economies, between 1994 and 2004, the population has tended to age. The South West, however, has aged at a faster rate than the UK as a whole. In 1994, 34.9% people in the South West were over 50, compared with a UK figure of 31.5%. By 2004, these proportions had risen to 38.0% and 33.7%, respectively.

These population trends are expected to continue over the RES period, 2006-2015. There is some uncertainty, however, over whether SW immigration will shift somewhat more towards younger, international, work-related migration from new EU and other countries.

Policy pointer:
The developing trends and structure of the South West population will have important economic consequences. On the demand side, it may affect the housing market, in terms of both location and prices. Second home and affordability issues are already important, particularly in parts of the region where older cash-rich immigrants have a disproportionate impact. On the supply side, it will affect business creation and employment. Older lifestyle migrants may have different attitudes to entrepreneurship, innovation, skills utilisation and employment than younger people.

Figure 55: Population Distribution by Age, 2004



Mid-Year Population Estimates, ONS

111 Mid-year population estimates – ONS

HOUSEHOLDS & EMPLOYMENT

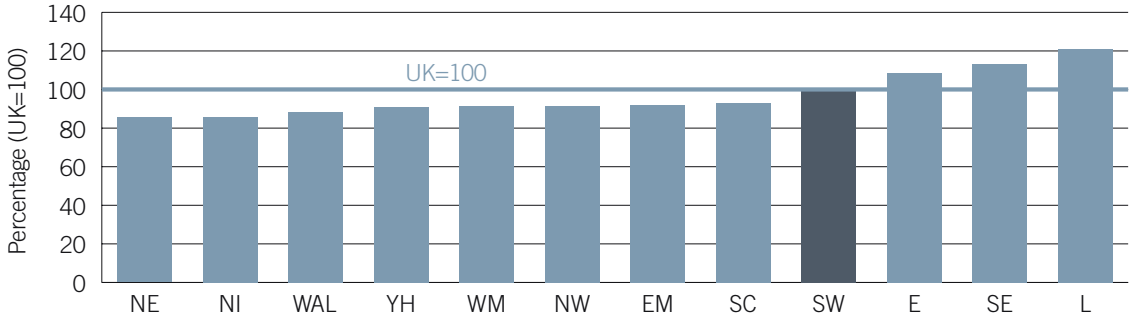
SW households are slightly above UK average and rank fourth of twelve in terms of gross disposable household income, behind the expected three "south and east" regions (see Figure 56)[112].

Within the region, measurement of relative economic status by disposable incomes rather than GVA, creates a much narrower range of disparities. For example, rather than Swindon, Torbay and Cornwall being about 90 points different on the relative GVA/head measure, they are less than 10 points different on a disposable income/head measure. This is the expected redistributive and retirement impact of income transfers such as pensions, taxes and benefits, foreign earnings and official flows (EU and UK), together with statistical differences related to workplace and residence measurement. The region is not relatively poor but it is relatively unproductive and the disparities within the region are more to do with output than income.

In terms of average gross weekly earnings, however, the South West ranks tenth (see Figure 57)[113], down from eighth in 2004.

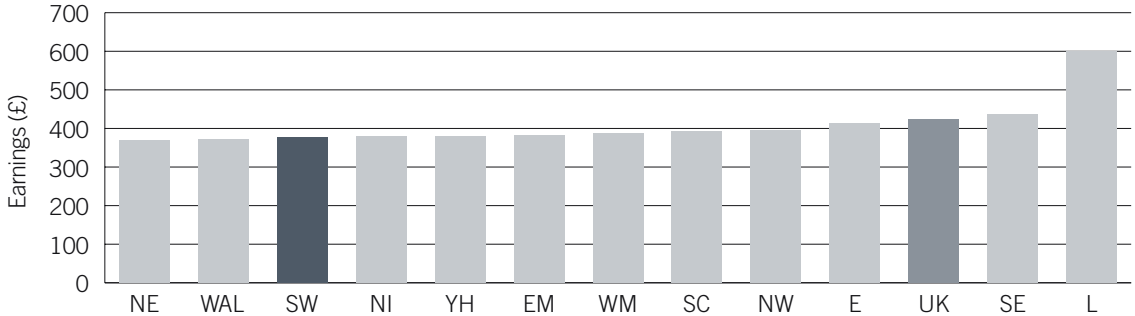
As economics would predict, relatively low productivity is reflected in earnings – the region displays some of the characteristics of a low wage economy. In recent years, SW earnings growth has generally exceeded the UK average, especially for part-time and female workers (see Figure 58). This reflects the "catch up" mechanism implicit in the narrowing of employment differentials over the last ten years. It has yet to be seen whether this is a temporary or semi-permanent development.

Figure 56: Gross Disposable Income per Head, 2003



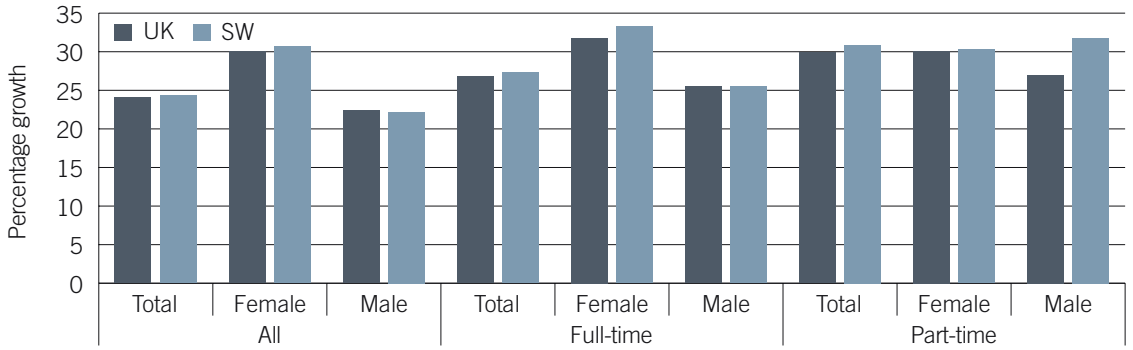
Gross Disposable Household Income, ONS

Figure 57: Average Gross Weekly Earnings, 2005



Annual Survey of Hours and Earnings 2005, ONS

Figure 58: Earnings Growth, 1999-2005



Annual Survey of Hours and Earnings 2005, ONS

112 Gross Disposable Household Income – ONS
113 Annual Survey of Hours and Earnings – ONS, 2005

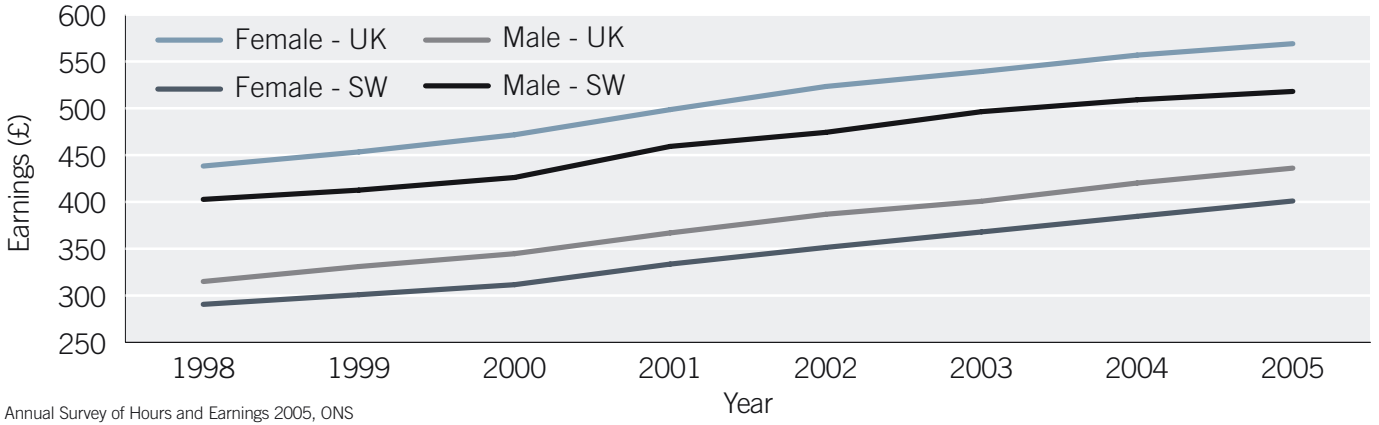
Earnings differentials between full-time employees by gender have shifted little in recent years, in relation to each other and in relation to equivalent UK averages (see Figure 59). The part-time situation is more volatile but the differentials are narrower (see Figure 60).

In the last few years, the South West has experienced one of the lowest unemployment rates in the country. In the year ending March 2005, the LFS based unemployment rate was 3.6% compared to a UK average of 4.7%. Employment rates (78.6%) are third highest and inactivity rates (19.2%) third lowest.

The region has the largest part-time element in its labour force (27.2% of all in employment, compared to 23.9% for the UK) and third highest proportion of self-employed (13.6% of employees vs. 12.3% for the UK). The gender split of full-time employees is 66:34 (male: female) but the part-time split is very different (21:79): 10.8% of men in the South West work part-time (UK 9.2%) compared with 46.5% of women (UK 41.5%).

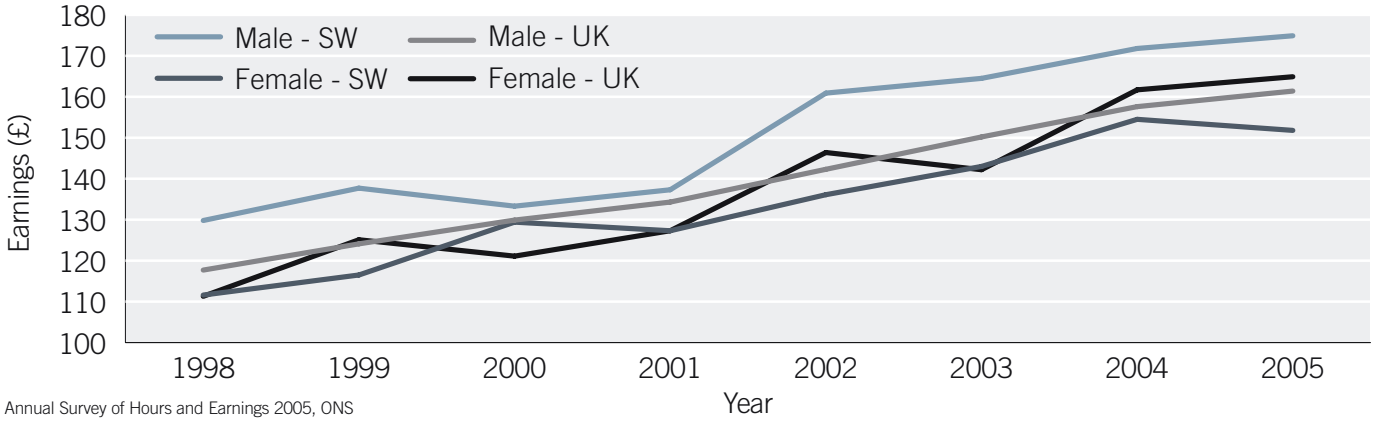
In the year ending March 2005, 40.8% of the region's employees were employed in services (largely private), 34.7% in other services (mainly public sector) and 13.3% in manufacturing. Construction accounts for 8.2% and agriculture, forestry and fishing 1.9%. In recent years, the public sector has been a significant source of jobs growth in the region and the country as a whole.

Figure 59: Full-time Gross Weekly Earnings



Annual Survey of Hours and Earnings 2005, ONS

Figure 60: Part-time Gross Weekly Earnings



Annual Survey of Hours and Earnings 2005, ONS

Below the regional level, the latest Annual Population Survey labour data (for NUTS 3) for March 2004 to April 2005 is shown in Table 15. These rates compare with UK employment and unemployment rates of 74.3% and 4.8%, respectively (77.9% and 3.6% for the South West).

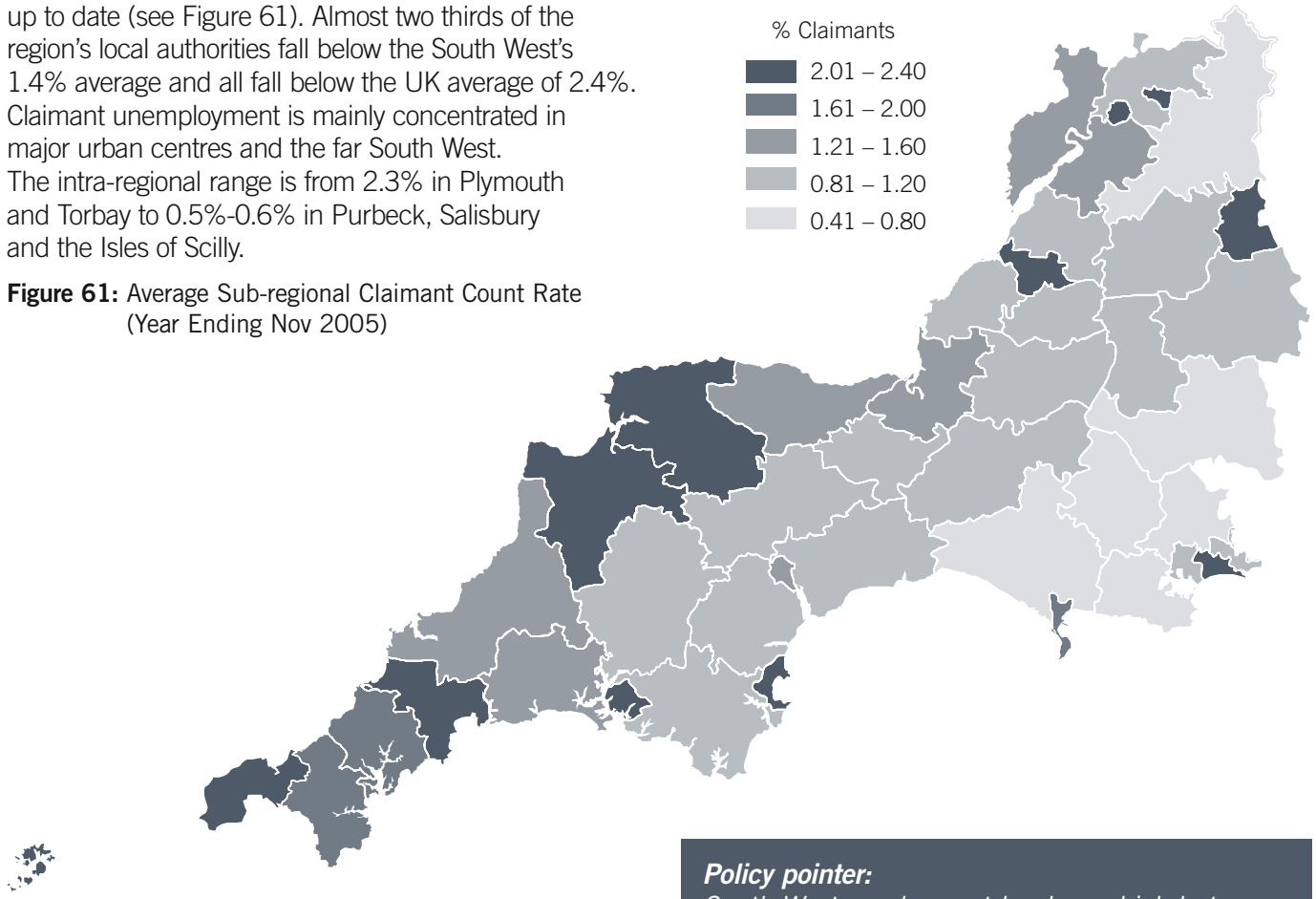
Table 15: Sub-regional Employment and Unemployment, 2004/05

NUTS 3 AREA (2003)	EMPLOYMENT (%)*	UNEMPLOYMENT (%)*
Bristol	74.1	5.2
N & NE Somerset, S. Glos.	80.9	3.1
Gloucestershire	79.0	3.7
Swindon	80.1	4.2
Wiltshire CC	80.5	2.8
Bournemouth & Poole	76.0	3.1
Dorset CC	80.2	2.4
Somerset	79.2	2.9
Plymouth	74.9	4.8
Torbay	73.6	4.2
Devon CC	73.3	4.7
Cornwall & IoS	77.6	3.2

*as % of working age population
Annual Population Survey, ONS

The more limited claimant count measure of unemployment has the advantage of being more up to date (see Figure 61). Almost two thirds of the region's local authorities fall below the South West's 1.4% average and all fall below the UK average of 2.4%. Claimant unemployment is mainly concentrated in major urban centres and the far South West. The intra-regional range is from 2.3% in Plymouth and Torbay to 0.5%-0.6% in Purbeck, Salisbury and the Isles of Scilly.

Figure 61: Average Sub-regional Claimant Count Rate (Year Ending Nov 2005)



Source – Nomisweb

Policy pointer:
South West employment levels are high but some incomes are not. A key issue remains the relatively low-wage, low-skill equilibrium in parts of the South West regional economy.

ENVIRONMENT & SOCIETY

Climate Change and Economic Development
The scientific debate about the source and extent of "climate change" continues but the evidence is that there is an upward drift of annual temperatures. This may be an important pressure on the South West's economy over the next decade, both positive and negative, affecting a wide range of business sectors and markets, including goods and services, labour and housing. Some sectors, such as elements of leisure and tourism or food and drink may benefit from changing lifestyles linked to weather change. Others, such as utilities, transport or clothing may have to adapt to changing demand and cost structures. The market will provide signals through the price mechanism to promote behavioural change but there remain key areas of potential intervention, particularly with respect to non-market social and environmental externalities and dysfunctions with respect to timing response:

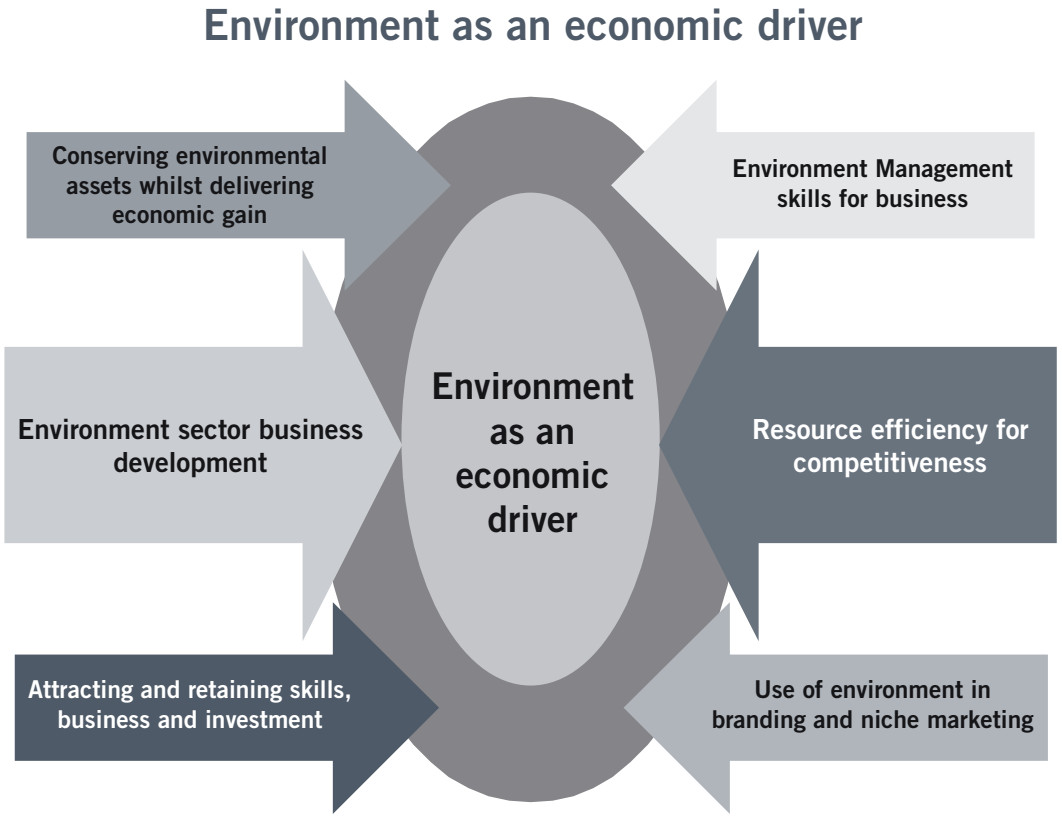
- measures to reduce carbon emissions and substitute more sustainable consumption and production
- measures to mitigate the negative impacts of climate change
- measures to accommodate the effects of climate change in an efficient manner
- measures to promote the potential wealth creating aspects of change through the environment driver

Energy generation, resource use, pollution and waste are vital parts of the economic chain and areas where market and institutional failure are often significant and ripe for intervention. The South West's focus on the "environment driver" as a potential source of business development, and social and environmental sustainability is a key, positive element of the current RES and an important aspiration for the region.
It will be important that positive social and environmental benefits are harnessed with economic growth in the current RES Review and throughout the next RES period.

The Environment Driver
Six broad themes (outlined in Figure 62) make up the broad range of activities covered by the SW environment driver.

Figure 62: The SW Environment Driver

Environment Agency, 2005



Environmental sector business development
The environment or environmental technology business sector covers a broad range of activity, the common thread being providing solutions to environmental problems or providing environmentally based products or services. Environmental technologies and services, such as renewable energy or waste disposal and recycling, is one of the region's priority sectors with a potentially large global market in which SW firms could develop leadership. It is predicted that significant numbers of new jobs could be created in this sector in the years ahead with suitable investment in boosting capacity and expertise and stimulating demand for specific and generic technologies and skills.

Resource efficiency
To meet the UK's commitment to cut greenhouse gases by 12.5% below 1990 levels by 2012, there needs to be a significant contribution through resource efficiency savings in relation, for example, to energy, waste and transport. Businesses that undertake efficiency measures, or occupy efficient buildings, stand to benefit financially and competitively. Recent research[114] shows that environmental issues are the most important issues for which companies will seek outside assistance/business advice over the next five years.

Environmental management skills for business
With the regulatory framework becoming more robust, there is an increasing need for provision of primarily business-focused environmental management training in order for businesses to undertake environmentally related activity, to ensure compliance, obtain accreditation, gain supply chain advantage, or to ensure efficiency. This is likely to require some intervention to promote skills acquisition and other investment.

Branding and niche marketing
The region's high quality environment has a significant role in the marketing of a wide range of products (many with no actual link to the environment). Moreover, niche products that draw on the environment (such as "green tourism" or geographically specific food products) utilise environmental quality as a key aspect of their product, or draw on their environmental credentials in marketing.

Attracting and retaining business and investment
The perception of the region as one with a high quality of life, linked to a high quality environment, makes a significant contribution to both inward investment and the retention of business in the region. Quality of life influences the decision of entrepreneurs and economic migrants on location. The growth of e-business and the ability for many businesses to operate effectively without close physical links makes the region better placed to attract new businesses while retaining growing businesses.

Conserving environmental assets
Underpinning the environment driver agenda is the need to ensure that the quality of the region's environmental assets is maintained. These assets are the amenity value of both the natural (landscape, biodiversity) and the built and historic environment. All these assets have intrinsic value and many demonstrate positive economic linkages.

114 Review of Business Support in the South West – DTZ Pieda for the South West RDA 2003

Environmental & Social Aspects of Sustainable Development

Sustainable development is difficult to measure accurately. Commonly, measurement is based on a series of indicators that look at a range of social, environmental and economic factors. In 1999, the UK Government established a set of 15 headline indicators and a wider set of core indicators to underpin a strategy for sustainable development in the United Kingdom.

The latest regional SD indicators measure progress to date and it could be argued that, for South West England, it draws several conflicting pictures on progress to date.

- In broad health measurements, the region at least matches the general growth in life expectancy seen elsewhere in the developed world.
  - The South West has a higher than average life expectancy at birth for both males and females. Specifically, it has the highest life expectancy for females of any region in England (82.0 years) and recently became also the highest for males (77.8 years).
  - Overall, life expectancy for males and females has increased between 1991 and 2002 by 2.9 and 1.7 years respectively[115]. Life expectancy generally reflects relative wealth although there are major diseases, such as heart disease and obesity, which are seen to be positively linked to increases in wealth and economic activity. Therefore, there is some current debate that the consumption levels associated with increasing levels of wealth will eventually lead to a slowdown in the improvement or, perhaps, decline of life expectancy.
- In terms of housing and other socioeconomic indicators, the increases in wealth have not necessarily resulted in comprehensive improvements in the housing stock. Overall 33.9% of dwellings in the region did not meet the "Decent Homes" standard (all tenures, private and social housing dwellings) in 2001.
- 8.3% of working age people were in workless households (against an English average of 11.6%) in spring 2005, whilst 17% of children lived in households with relatively low income before housing costs and 27% after housing costs in the period 2003-04 (England averages were 20% and 29%, respectively).
- The region built the second lowest proportion of new homes on previously developed land (brownfield development) between 1999 and 2004. Only 48% of homes was brownfield development in comparison to an English average of 60%, although this situation has improved considerably in recent years. The current Regional Planning Guidance Target is 50% by 2016, which was exceeded in 2003 and 2004 (58 and 57%, respectively). The South West does not have the brownfield capacity of other regions. Demographic changes noted elsewhere in the document have been and will be largely met through greenfield development, which, without adherence to SD principles, could lead to degradation of the SW environment.
- The environmental indicators used give a mixed picture: river water quality has improved whilst wildlife, as measured by bird population, has decreased.
  - In terms of river water quality, the South West fares well. It had the second highest proportion of its total river lengths of good chemical quality (78% in 2004). It also had the highest proportion of rivers with good biological quality (88%) although it showed the least change of any of the regions between 1990 and 2004. There have also been longer term improvements in air quality levels.
  - Between 1994 and 2004, however, farmland bird species numbers fell by 6% in the region. Woodland species fell by 10% although much of this decrease occurred in the early part of that period and there has been some recovery thereafter. This was a relatively poor performance – many regions have experienced increases or only marginal falls in woodland species. The fall in bird species could be linked to the relatively high level of development that has taken place on greenfield sites and other changes to business (particularly agriculture) sector practices. Bird populations are also potentially affected by factors such as air quality and traffic emissions and, in this sense, are a good indicator between the links between economic growth and environmental quality.

Some behaviour is changing to address the problems of sustainable consumption and production. For example, household recycling has increased significantly: 517 kg per person of household waste was produced in 2003-04 (English average of 510 kg per person), an increase of 5% compared with 1998-9 (England overall increase 6%), but a decrease from 2002-3.

115 Regional SD Indicators 2005 – ONS/DEFRA

The South West had the third highest recycling rate of the regions in 2003-04, with almost 21% of household waste recycled (England average 18%).

Different messages can be drawn from the SD indicators used. Life expectancy is increasing although housing conditions and income are spread relatively unevenly. There have been some improvements in environmental conditions although other indicators are showing signs of degradation. Inevitably, measurement of SD involves trade-offs of experience which are difficult to judge in objective net terms.

Environmental Impact Assessment

The South West has the aspiration to achieve economic growth within sustainable environmental limits. Using the projections for economic and population growth detailed elsewhere in this Evidence Base (see relevant appendix), we have used the REEIO model of environmental impact to assess possible effects on energy and water use and waste and greenhouse emissions (see Table 16). The REEIO model allows us to ask what would be the effects on key environmental variables if different rates of growth are achieved.

At this stage, it is difficult to assess accurate environmental impact capacity ("limits") for the region. We do not know what levels of resource use/abuse can be mitigated by current environmental processes – natural and man-made. Given the "footprint" work cited earlier, however, it is clear from Table 16 that a "business as usual" approach to successful economic development (growth of population and output) will mean more resource use and waste disposal and, therefore, potentially higher environmental impact.

In response, price, technological and business practice changes will probably be required to mitigate this impact if we are to develop without damaging environmental assets and conditions in the South West. An important point to make is that the model's results already take some account of potential resource productivity gains by industry sectors over the forecast period. These reasonable assumptions, ex ante, indicate that the link from economic growth to environment can be indirect. In essence, most of the increase in resource use and disposal relates to the household sector and is a direct function of population change and only indirectly economic change.

Table 16: Environmental Impacts of Growth*

		2001	2015
Waste arisings	1)	58.6	72.8
(mn tonnes)	2)		75.4
Energy	1)	13.4	15.3
(mn tonnes oil equiv)	2)		15.8
Greenhouse gases	1)	41.2	55.2
(mn tonnes)	2)		57.1
Water	1)	1386	1624
(bn litres per day)	2)		1653

Average growth assumptions: 1) +2.8% real GDP growth and 0.65% population growth per annum; 2) +3.2% real GDP growth and 0.7% population growth.

The region is already approaching some identifiable environmental "limits". For example, landfill capacity in the region is expected to be used up within the new RES period, with area capacity limits ranging from four years in Somerset to eighteen years in Gloucestershire (from 2001). Such "limits" are to an extent exchangable in relation to technical intervention, cross-border "trade" and/or political will. However, it demonstrates that policy for the RES will need to encourage changes that boost household resource efficiency. It also needs to encourage better business resource productivity if the goal of sustainable development for the economy and the environment is to be achieved.

Policy pointer:
Environmental concerns about resource use and pollution, especially emissions and waste, need to be factored into policies and actions for economic development. Social aspirations provide direction to, and regeneration contributes important outcomes from, the process of strategic economic development. Focus on the environment driver should enable the region to develop a strong and positive relationship between economic development and broader issues of sustainability. Inherent policy conflicts/ trade-offs between the various aspects of SD, such as might occur between the desire to reduce peripherality and the desire to protect the environmental stock, need to be faced openly, assessed objectively and resolved carefully.

CONCLUSION

REGIONAL ECONOMIC CHARACTERISTICS

Economic and other development characteristics are seldom "black and white". There are shades of grey in South West England and any assertion about its economy can usually be countered with exceptions. Nevertheless, this section attempts to bring together the key threads of this report, identifying broad trends and influences that the region can agree will be central to the development process in the years of the next RES (2006-2015).

- The South West is a productive and wealthy region, with a dynamic population, an attractive environment and relatively few pockets of social deprivation.
- On some measures, SW performance compares very favourably with other UK and European regions, particularly if London is excluded. The region is relatively strong in terms of output and employment growth, productivity improvement and wealth distribution, high level skills and innovation, particularly in certain sectors and some geographical areas.
- On other measures, the region fares less well – with notable exceptions, elements of its international trade performance are poor, some of its businesses exhibit low aspirations, there are productivity gaps in like-for-like activities and the region's relative ranking is disappointing, it has problems in areas of basic and high skills, intra-regional disparities are wide, and its industry mix is unusual.
- Other characteristics display positives and negatives. Peripherality – mental, time and physical distance from markets and networks – limits some aspects of progress, especially links with other dynamic markets, but provides the environmental benefits that residents and visitors enjoy. The rural nature of the region brings its own benefits and problems and the dispersed nature of its urban centres creates potential poles of development but problems of inter-reaction.
- The South West is particularly characterised by intra-regional differentials with respect to output, productivity, most productivity drivers and many other indicators of relative economic performance and progress.
- In common with all UK regions, the South West faces some intense pressures from competitive change in sectors and technologies, from business restructuring and industry mix, from net immigration, social and spatial inequalities, and from concentrations of innovation and entrepreneurship and issues of environmental resource use and climate change.

POLICY POINTERS

The policy debate remains strong about how or whether to balance support for the "best" or the "worst". Difficult choices, based on evidence and judgement, have to focus intervention where SD returns will be maximised. Policies need to be tailored to reflect urban/rural and other spatial, sector and market characteristics.

The policy pointers derived in previous parts of this report are brought together here.

Economics:
The short-term economic outlook is fairly benign, though there is a potential for SW vulnerability to shocks from commodity, debt and asset imbalances. The long-term prospects are for further significant structural change. Nevertheless, the SW economy is expected to continue to perform amongst the upper echelons of the UK regions.

Productivity:
The South West's productivity performance is gradually improving. Intra-regional disparities are a significant element of the remaining weaknesses in the region's relative position. Investment in human and physical capital and market connectivity offer scope for addressing some of these relative competitive deficiencies.

Skills:
The South West has a reasonably good skills base and areas of strength. There are also areas of need, particularly in those parts of the economy where low wage, low skill market equilibria and gaps are persistent. Efforts to improve basic skills and to develop and utilise high skills more effectively should yield reward in terms of productivity improvements by sector and in the overall regional economy.

Entrepreneurship:
South West England is an entrepreneurial region but effort tends to be concentrated, by area and sector, and there is an element of distress in the figures. Intervention needs to be focused carefully on the process of business creation and growth, encouraging the risk/reward balance for entrepreneurship.

Innovation:
The South West is innovative but performance is patchy and uneven, with key sectors in key sub-regions tending to dominate. Efforts to spread the "best practice" use of processes and techniques, products and services and productive knowledge generally may prove rewarding, particularly the encouragement of education, research and business links.

Investment:
The recent relative investment performance of the SW region has been strong but the overall context is weak and gross figures fail to take account of the net loss of capital stock associated, in particular, with offshoring closures in manufacturing.

Competitiveness:
The South West has a low international trade and investment rating. This may reflect a lack of motivation as well as difficult competitive conditions. Raising the region's trade profile might boost economic performance sharply, albeit against tests of sustainability.

Sectors:
The region is not in the business of "picking winners". Sector policy is not exclusive but resources are limited and focus is necessary. Given the time needed to effect competitive change, it might be perverse to radically change direction before the results of previous sector intervention are apparent. Nonetheless, sector policy may seek to evolve towards generic technological/ knowledge dissemination in the years ahead.

Areas:
Given its various functional, characteristic and administrative geographies, the South West exhibits strong intra-regional differences of business, household and broad economic or SD performance and structure. Policy needs to be tailored carefully to these realities, justifying intervention against objective criteria of need and sensible discounting of relative short- and long-term net benefit.

Globalisation:
Efforts to stimulate trade competitiveness and spread "best practice" down and across supply chains will remain important policy goals, whilst recognising a need to consider environmental and social impact as part of any SD calculations.

Peripherality:
Peripherality is an opportunity as well as a hindrance. Its negative aspects can be overcome but, usually, this requires significant, long-term and broad investment. It is debatable whether adequate resource is available to significantly alter peripherality directly. Effort may be focused on making peripherality irrelevant through enabling, lobbying and leadership, and knowledge transfer, rather than direct physical intervention.

Rural:
Given the decline of traditional land-based industries, the problems of rural areas are not dissimilar to those of the economy generally. There are, however, some specific emphases of distribution, peripherality and SD in rural parts of the South West.

Urban:
Most people live and work in the South West's main "city-regions". These centres provide the drive of economic development and entrepreneurship. They are a key focus for social and environmental issues of sustainability. Policy will remain strongly focused on developing flexible and efficient goods, services and labour markets in our urban centres but will need to respect the differing past performance and future potential and aspiration of each "city-region".

Transport:
The South West has lower congestion problems but the rate of traffic growth is higher than other regions. Moreover, the region has less public transport capacity than most other regions. Transport policy is tied up with peripherality constraints on productivity and growth and sustainability constraints on infrastructure development and use. Policy should aim to retain a balance between closer integration with national and international hubs and the desire to retain social and environmental distinctions.

Energy:
The SW economy has the potential to benefit from development of non-carbon energy sources. Debate about capturing economic and environmental benefits and mitigating social and other costs in a sustainable fashion is likely to intensify in the years ahead.

Housing:
The RSS will seek to address important regional concerns over the balance of supply and demand in the regional housing market, its impact on affordability and, thereby, on the overall labour market and output flexibility of the South West.

Deprivation:
Deprivation is not as important an issue for the South West as it is for many other UK regions. In both absolute and relative terms, the region's dispersion on these measures is relatively low. There remain, however, persistent pockets where remedial action is appropriate.

Demographics:
The developing trends and structure of the SW population will have important economic consequences, affecting the housing market, business creation and employment.

Households & Employment:
SW employment levels are high but some incomes are not. A key issue remains the relatively low wage, low skill equilibrium in parts of the SW regional economy.

Environment & Society:
Environmental concerns about resource use and pollution, especially emissions and waste, need to be factored into policies and actions for economic development. Social aspirations provide direction to, and regeneration contributes important outcomes from, the process of strategic economic development. Focus on the environment driver should enable the region to develop a strong and positive relationship between economic development and broader issues of sustainability.

POTENTIAL AREAS OF INTERVENTION

There remains tension between the desire for an internationally competitive economy and the desire to preserve the special place that is the South West. These aspirations need not be mutually exclusive but striking the right balance and adopting the optimal strategy to achieve both goals remains difficult.

SW residents do not want to re-create another Greater South East yet they do want to match aspects of its productivity and wealth. There is a desire to preserve distinctions between the various parts of the region yet there is a need to spread "best practice" around the region.

To these ends, the objectives of the current RES remain valid:

- to raise business productivity
- to increase economic inclusion and
- to improve regional communications and partnership

Moreover, the drivers towards those goals are unlikely to change:

- to improve innovation and enterprise
- to enhance skills and learning and
- to protect environmental and cultural assets and use them to economic advantage

Against this background of aspiration and evidence, potential areas for intervention in the next RES must keep the following principles to the fore:

Interventions should:

- build on the themes of SD, investing where identifiable "failures" need to be addressed and returns for the region can be optimised
- improve regional productivity in absolute and relative terms, by integrating and spreading "best practice" and by building supply in tandem with demand for skills and innovation
- foster entrepreneurship and competitiveness by bolstering our city-region hubs and their links to our other towns and rural communities

Assuming fairly favourable global trends, a strong growth performance can be envisaged for South West England in the years ahead. In relative terms, however, the leading position, in terms of nominal growth, attained in recent years will gradually be lost. Unemployment rates will remain low and sub-regional variations will persist.

Against this cyclical background, the need to focus policies towards addressing the structural weaknesses and strengths identified above remains central to the mission to be identified in the RES.

Sustainable economic development will be furthered most effectively by promoting the incentives to invest in complementary and competitive technologies and skills. These incentives will be market, process and people driven and are likely to be most easily exploited through urban and economic networks that expose rural inter-linkages.

To this end, the evidence base suggests that the RES Review might focus on:

- Investment in best practice:
  - Innovation and knowledge, and skills
  - Broad strategic leadership
  - Sectors in competitive change
- Investment in market failure:
  - Transport and communications, and sustainable communities
  - Environment driver, and rural economy

South West RDA: Economics Team: February 2006

REFERENCES

Key Sources for this Document

Most of the statistical data in this document are from official UK sources, principally Office of National Statistics (ONS). The main media through which these can be accessed are detailed in the Research and Intelligence Evidence Base (RIEB – see next section). The SW Observatory website can be used to access this and many other key data sources. Sources directly relevant to this document are footnoted in the body of the text.

The Research & Intelligence Evidence Base (RIEB)

In preparation for the RES Review and the largely concurrent RSS, we have compiled a Research and Intelligence Evidence Base (RIEB) – based on sources to which the Agency and its partners hold or have access. We welcome the views of partners and colleagues on evidence "gaps" that have yet to be identified.

The RIEB offers a list of research known to have been conducted since the start of 2002 by national or regional bodies. The RIEB is believed to be comprehensive but is unlikely to be complete. The full RIEB may be accessed through the SW Regional Observatory website. The RIEB also lists known statistical, largely official, sources of regional economic data.

Summary of Key Research

1. **The State of the South West** – analyses the full range of official regional statistics. It includes chapters on population and migration, economy, labour market, skills and learning, transport & communication, housing, environment & natural resources, public health, crime, social & welfare, culture, government and politics, climate change, productivity and ageing population. The document provides a comprehensive overview of the SW region.

2. **Spatial & Sectoral issues**

   a. **Spatial Dynamics** – identifies spatial zones which reflect the economic, social and environmental "operation" of the region in terms of its underlying characteristics and functional relationships. It is informing development of the RSS and RES priorities and actions.

   b. **Key Sectors** – builds on the "Review of the Priority Sectors" completed in 2000. It aims to improve how the Agency and its partners use sector development as a tool to raise business productivity.

   c. **Sectors & Spatial Dynamics** – complements the spatial dynamics study (as above) to analyse the likely development of priority sectors (identified by the current RES) over a time frame to 2026. It aims to understand the spatial characteristics and dynamics of these trends and how future sector development can be supported and facilitated through the provision of strategic employment sites, transport infrastructure improvements and housing.

   d. **Spatial Prioritisation** – provides further evidence and synergy for the RSS and the RES. It will identify options for the division of the South West into "spatial zones" based on functional urban areas, which could lead future regional development.

3. **Knowledge Economy**

   Knowledge and information are at the heart of economic activity and wealth creation in modern advanced economies. Fundamental shifts are occurring in the nature of economic activity and competitive advantage on a global scale.

   a. **Spatial Aspects of Knowledge Economy** – considers the spatial dimensions and implications of the "new knowledge economy": what geographical networks or clusters are important and how will they drive knowledge exchange and innovation? What concentrations of knowledge workers and knowledge-based activities will drive innovation and growth? What locations are attractive to those activities and workers? How can economic development and regeneration requirements be linked with, for example, higher education institutions? The research provides recommendations as to how the RSS and RES should facilitate the growth of the knowledge driven economy over the period to 2026.

   b. **Exploiting the Knowledge Base of the South West** – offers an assessment of the potential knowledge base of the region, including an analysis of market factors (demand and supply) that will influence the development of incubation/science park facilities.

4. Broad Economic Trends and Relationships

a. Meeting the Productivity Challenge – explores the reasons for, and potential policies to address, the region's relatively low levels of productivity. Building on existing research, such as the 2003 McVittie Report (BEM – South West Regional Observatory) on the regional productivity gap, the study uses econometric techniques and other data sources to provide evidence and steer future policy and activity, particularly in relation to HM Treasury's "5 drivers of productivity".

b. Ageing and Demographics – The Core Unit of the Regional Observatory is analysing demographic trends likely to impact on demand and supply trends in the region over the next decade.

c. Prospects for Growth – The Business Economy Module of the Regional Observatory will use the Regional Accounts and related CGE modelling to highlight the potential impact of technological and structural changes likely to affect the region's economy over the next decade.

5. Skills

a. South West Healthy Labour Market Review – identifies SW labour market characteristics with a view to establishing skills deficiencies and potential policy levers.

b. The South West Skills Market: A Review of Demand and Supply – provides a strategic overview of the skills market in the SW region by examining the demand and supply components of the market and their interaction.

Summary of Key Intelligence

The majority of key statistics on the SW region and sub-regions are conveniently compiled into two publications from the Office for National Statistics (ONS):

a. Region in Figures for the South West

b. Regional Trends

Region in Figures provides data on the South West at a sub-regional level (down to local authority level). Regional Trends compares the South West with the other English Regions and the Devolved Administrations in the other countries of the United Kingdom.

These compendia are produced biannually and annually, respectively, and are, therefore, reasonably up-to-date. In addition, many of the statistics presented are available over several years. Both volumes cover a wide range of subjects, including Economy, Population, Labour Market, Education and training, Transport and Environment.

Most regional statistics can be accessed directly via the worldwide web.

The main source of statistics is the Office for National Statistics website (**www.statistics.gov.uk**), which provides access to a wide range of economic, demographic and social statistics, including data from the 2001 Census.

A further invaluable source of sub-regional statistics, covering industry structure, local labour force (including skills and training), VAT-registered businesses, job vacancies and earnings, is the Nomis website (**www.nomisweb.co.uk**). This website, funded by the ONS, is the key source for small area statistics and the official source for small area labour market statistics.

KEY OFFICIAL PUBLICATIONS PROVIDING COMPENDIA OF REGIONAL STATISTICS:

Regional Competitiveness & State of the Regions

Region in Figures

Regional Trends

Regional Transport Statistics

Regional Economic Indicators in Economic Trends

State of the Countryside Report & data hub

Official databases providing a wide range of regional statistics:

Nomis	Includes LFS, Claimants, ABI
Neighbourhood Statistics	Includes 2001 Census, IMD
NewCronos	European data – some down to NUTS 3
NewCronos – Urban Audit Data	Range of data on urban centres – Exeter and Bristol in South West
Floor Targets Interactive	Data supporting deprivation targets – i.e. employment by deprived groups, skills, etc.
Countryside Agency Data Hub	Broad range of data with rural/urban cut – old classification

APPENDICES

SECTORS

Advanced Engineering, including Aerospace
This sector accounted for a GVA of £2.599 billion in 2002[116]. In terms of the employment breakdown of this sector, over one third of all employment takes place within the aerospace industry (37.0%). Other advanced manufacturing (39.3%) and automotive (23.8%) make up the rest of the sector[117].

When looking at specific sectors, the aerospace industry stands out as particularly significant. Overall, the UK aerospace industry accounts for a global market share of 13%[118].

The aerospace industry had a regional GVA of £1.181 billion in 2002. This represented 1.7% of total regional GVA. This is heavily focused in the specific sub-regions of South Gloucestershire, Bristol and Somerset where GVA of over £850 million was generated in 2002. According to the Society of British Aerospace (SBAC), 27% of all aerospace employment in the United Kingdom is located in the region. The South West has a comparative advantage in this sector[119].

Expenditure associated with the SW aerospace industry constitutes a significant proportion of all industrial expenditure in the region. Spending by aerospace companies (£3.35 billion) constituted 3.2% of total spending by firms located in the region in 2001. The aerospace industry was responsible for 8.2% of spending by SW firms in the manufacturing sector. Therefore, there is potentially a high level of dependency within the overall manufacturing supply chain.

The key role that aerospace holds, in terms of its contribution to regional net trade, is exhibited in the export figures. In 2001, aerospace generated 19.4% of all overseas exports from the SW economy. This is a significant figure considering that aerospace GVA represented 1.4% of GVA in the same period, and clearly indicates an export oriented industry. £2.02 billion worth of goods and services were exported by aerospace companies in the region during the year. Other industries in the advanced engineering sector that also play a significant export role are electronic components (£543 million), medical and precision instruments (£405 million) and motor vehicles (£310 million).

Aerospace also holds a key role in R&D spending. On a national basis, in real terms, R&D investment increased by almost 18% to £2.1 billion, and employment in R&D increased to over 17,700, an increase of over 15% between 2002 and 2003. Turnover invested in R&D is now 12.3% and 15% of all employees are engaged in R&D. Since 2001, when aerospace R&D was £1.6 billion, the aerospace industry has experienced a real 14.3% per annum average increase in R&D investment.

Interestingly, the Arthur D Little report notes that aerospace prime contractors such as BAE Systems and Rolls-Royce are reducing their own "value added" from 70% plus down to around 30% or less. As a result, first tier suppliers are often becoming prime contractors in their own right and a substantial part of aerospace employment has been transferred to the supply chain.

The Advanced Engineering sector is characterised by a relatively high level of craft and related occupations, which constituted 28% of FTE jobs in 2001 in contrast to 15% for all SW industries. The level of craft and related occupations is often viewed as an indicator of jobs that have a firm skill base.

GVA per business site of £1.27 million in 2002 is much higher than the regional average for all industries of £134,000 and marginally higher than the average for advanced engineering in other regions of Great Britain (£884,000). This indicates the relative size of the business sites in the sector and could imply that there is a higher level of potential "business dependency" on a number of larger business sites in the region.

Biotechnology
Biotechnology has experienced relatively rapid employment growth in the region with 77.3% growth between 2000 and 2004[120]. It employed 11,500 jobs in 2004 which represented 0.5% of all jobs in the region. It remains the smallest of the priority sectors in terms of both employment and GVA (£483 million in 2002) although this has increased by 110% compared to 1998.

The sector in the region is characterised by a small number of sites – 319 in total in 2004. The number of FTE workers per site is the third highest among the key sectors in the region (approximately an average of 18 FTE workers per site in 2004 compared to an average for all industries in the region of just over 4), suggesting dominance of relatively sizeable companies. As a consequence, GVA per business site of £850,122 is much higher than the regional average for all industries (South West = £134,433), yet one third lower than the average for Biotechnology in other regions (excl. London).

The sector is further characterised by the relatively high overseas export levels and import levels and will have a potentially important role in any future regional trade growth. Expressed as a percentage of output, overseas exports and imports reach 39% and 29% respectively, second highest among the priority sectors.

116 South West Regional Accounts – BEM – South West Regional Observatory
117 Annual Business Inquiry – ONS
118 The State of the Key Sectors – Arthur D Little/South West RDA – July, 2004
119 Society of British Aerospace Companies (SBAC) – UK Aerospace Facts and Figures 2003
120 Annual Business Inquiry – ONS

In terms of sub-regional specialisation, the sector is highly concentrated in Wiltshire and Swindon although this reflects the concentration of a small number of large sites.

The sector performs well in terms of the proportion of its workforce that holds higher qualifications: 75% of the workforce has A Levels, which represents the highest figure among the priority sectors[121].

The relative 'immaturity' of the sector is reflected in the relatively low levels of GVA, employment & business sites. Recently, however, it is showing signs of faster growth.

Creative Industries

The output of the SW creative industries generated revenues of £5.54 billion and GVA of £1.847 billion in 2001 (£2.024 billion in 2002)[122].

Employment in the industry within the region grew by 8.2% between 2000 and 2004, compared to a 1% decline across Great Britain[123]. In 2004, the sector supported 53,300 jobs of which a high proportion were concentrated in the West of England sub-region (18,300), although Devon exhibited a high growth rate of 75% from 1998 to 2004[124].

More specifically, Bristol has the second highest concentration of Creative Industry employment among the English "Core Cities" as measured by Employment Location Quotient.

The sector is characterised by a high proportion of self-employed persons, second only to Food & Drink. The data revealed high fragmentation of the sector. This is illustrated by the fact that about 70% of employees are employed in enterprises of fewer than 50 employees and that there is only a handful of companies with over 200 employees, based primarily in Bristol and Plymouth.

The data suggest that there has been some growth of business size. Whilst micro-enterprises (fewer than 10 employees) accounted for 36.9% of employment in 1998, this had fallen to 32.5% in 2001. However, small enterprises (10-49 employees) increased their share of employment over the period from 24.2% to 26.6%.

26% of businesses in this sector have been established in the period 1999 to 2004. The pattern of new business formation is more pronounced in some sub-regions than in others – for instance, 31% of enterprises in Devon & Cornwall have been established over the last five years compared with 23% in West of England, Gloucestershire and Wiltshire. This is reflected in financial scale. For example, in the Visual Arts & Design sub-sector 58% of businesses have turnover below £100,000.

Therefore, the two main characteristics of the sector are the typically small-size enterprises that exist and the relative immaturity of the sector. These characteristics suggest a potential for high growth in the sector. Increases in turnover, enterprise size and exposure to export markets are important indicators of overall sector growth.

The sector is further characterised by the low overseas export and import levels relative to other priority sectors[125]. It is an industry oriented towards the domestic market – exports account for only around 4.5% of sales, and UK markets outside the South West account for about a quarter.

The level of investment, in the form of net capital expenditure, differs significantly between the sub-sectors. Net capital expenditure varied from £28,200 per business in the audio-visual sector to £7,900 in the performance sector. This also reflects the relative capital intensity of each component industry. Generally, the sector exhibits varying productivity performance between the sub-sectors.

It is an industry that is marked by the relatively high level of qualifications that its employees hold: 30.4% of employees hold degree or equivalent qualifications, second only to the Biotechnology sector. The creative sector is predominantly a graduate labour market.

Environmental Technologies

The Environmental Technology sector is extremely diverse, consisting of a number of sub-sectors with some overlap into other sectors including Agriculture, Biotechnology and Advanced Engineering. Much of the development is being driven by the increasing importance of EU and UK environmental legislation.

The sector is notable for having the highest average annual earnings of any of the key sectors: £37,400 (2001)[126]. It is also notable for experiencing relatively high employment losses in the recent period – between 2000 and 2004 the sector lost 12.5% of its total employment[127]. In part, this reflects the continued restructuring of the ex-nationalised utility companies such as water and waste. Employment is dominated by the Utilities sub-sector: water supply and treatment, wastewater treatment and waste disposal; and generation and electricity distribution apparatus – 53.5% of employment. In 2004, it employed 19,000 people, making it the third smallest priority sector.

The employment trends are partially reflected in a reduction of GVA contribution by the sector between 1999 and 2002. A GVA of £1.416 billion in 1999 had fallen by approximately 10.9% by 2002 to give a sectoral figure of £1.261 billion.

121 South West Regional Accounts – South West Economy Centre - 2000
122 Regional Mapping and Economic Impact Study of the Creative Industries – Culture South West, South West RDA – May 2004
123 Annual Business Inquiry – ONS
124 Regional Mapping and Economic Impact Study of the Creative Industries – Culture South West, South West RDA – May 2004
125 The State of the Key Sectors – Arthur D Little/South West RDA - July, 2004
126 South West Regional Accounts – South West Economy Centre - 2000
127 Annual Business Inquiry – ONS

Again, it is a sector that has strengths in the north and east of the region although Devon also has a significant sector presence. Wiltshire and Swindon is the only sub-region that has an employment location quotient of greater than the national average. The employment quotient is influenced by the location of the headquarters for the ex-nationalised utility companies.

The sector has a relatively high business site/FTE ratio – therefore resulting in a low number of average employees per site.

In terms of employment location quotients, the region has a relative employment specialisation in manufacture, electrical distribution and apparatus, and a significant under-representation in technical testing and analysis.

It is important to note that the natural environment has played and continues to play a pivotal role in the economy of the South West. The protection and improvement of the region's environmental capital is a major driver of the regional economy. Environmental technologies and services, such as renewable energy, represent a significant and growing economy. This is partly as a response to the Government aim to reduce carbon dioxide emissions by 60% by 2050 and an aim for renewable energy to supply 20% of UK electricity by 2020[128]. The market share currently stands at 2.9% of electricity generated.

Food & Drink

Much of the Food and Drink sector is facing cost pressure from imports from low production-cost countries. At the same time, the buying power of the major supermarket chains allows great pressure to be put on their food and drink suppliers, not just to reduce cost but also to increase quality and rate of new product introduction. As a consequence, the absolute GVA for the sector has fallen since 1998. The absolute GVA figure of £2.495 billion in 2002 represents 83% of the 1998 level and in this period it has been surpassed by ICT and Advanced Engineering as the largest of the priority sectors[129]. The decline in the recent period has extended long-term structural decline, specifically in the Fishing and Agricultural sector, although this is being addressed, in part, by diversification.

It is the least productive sector in terms of productivity, as expressed by GVA per FTE. In 2002, this figure equated to £22,080 against a regional average of £32,838.

The sector is marked by the second highest number of business sites, reflecting the agricultural content in terms of farm holdings. In total, there were 28,597 business sites in 2002, although this represents a significant fall from a figure of 33,726 in 1998. This could possibly reflect the process of farm consolidations that is also expected to continue as a response to the reform of the Common Agricultural Policy. Employment numbers, although marginally lower for the same period, are still very substantial – the Food and Drink sector employed 112,996 FTEs in 2002[130]. The decline of employment has been much more pronounced in land-based activities than in the Food Processing sub-sector and there has been a rising number of part-time farmers (up by 4% between 2000 and 2003)[131].

The distribution of GVA in the region represents its rural inclination – it has higher absolute concentrations in the rural counties such as Devon, Cornwall and Somerset. Food processing and preparation tends to be located near points of production. This is reflected in an employment location quotient of 1.44. In terms of broad employment split, 52% of employment is classified as land-based activities whilst the remaining 48% are involved in production/processing activities.

The sector still contributes significantly in terms of exports and trade. Overseas exports represented 12.3% of the regional value although the region is an overall net importer of food and drink. For example, the region imported food and live animals to the value of £735 million in comparison to an overseas export value of £365 million[132].

The AD Little report notes that signals from the labour market, in conjunction with the evidence on falling competitiveness of the sector, suggest that emphasis should substantially shift away from simple job creation to promotion of high value added production, even if it means further drops in employment in the sector. Increasing productivity, rather than employment should become the major objective[133].

The reform of the Common Agricultural Policy (CAP) into the Single Payment System, EU Enlargement and the EU Common Fisheries Policy (CFP) will potentially have a large supply-side impact on the sector. The reform of CAP will remove production subsidies and expose the sector to more market forces; EU enlargement will potentially allow access to the European market of low-cost production units in Central and Eastern Europe. The latest round of the CFP will further restrict supply – for example, the quota for cod catch has been reduced by 45%.

128 Energy White Paper – HM Government
129 South West Regional Accounts - 2001
130 Annual Business Inquiry – ONS
131 State of the South West 2004 – South West Observatory - 2004
132 UK Trade Info – HM Customs & Excise - 2005
133 The State of the Key Sectors – Arthur D Little, South West RDA - 2004

Information & Communications Technology

In terms of overall contribution to the regional economy, ICT is the largest of the priority sectors. It surpassed the Food and Drink sector as the largest sector between 1999 and 2000. ICT now has the highest number of businesses of the priority sectors. In 2002, its GVA of £2.983 billion represented 4.2% of total regional GVA[134]. It employed 59,519 FTEs in 2002.

The relative importance of the sector is most marked in South Gloucestershire, where it accounts for 14.0%.

Factor productivity expressed as GVA per FTE worker was £50,100 in 2002, well above the average for all other regional industries (£38,500) but significantly below the average for other regions of GB (£56,400). In 2000, however, productivity was higher than the national average.

2002 figures represent a significant improvement in relative performance from the previous year, although it should be noted that 2001 marked a difficult year for the global technology sector with a significant decrease in stock values.

The sector is marked by relatively high investment levels. Gross Fixed Capital Formation of £723.6 million was comfortably the highest among the key sectors in absolute terms and substantially above average for all sectors in terms of investment per FTE. This reflects its relatively high capital intensity and the potential role of investment as a productivity driver.

It has strong export performance, 9% of all SW exports. Industries within the sector that have a significant export role include office machinery & computers (£276 million) and transmitters for TV radio and phone (£380 million).

The sector has a relatively young workforce – 63.2% of all employed in the sector were aged 25-45 years. This workforce is also well qualified – 29.6% hold a degree or equivalent. This is an important factor in terms of labour market "pull" – certain sectors can play a key role by attracting a young and qualified workforce into the region and ICT has the profile to suggest it could play this role.

The AD Little report notes that unlike in 1999/2000 when shortages threatened to hinder further expansion in many areas of ICT, the supply and demand in ICT-related disciplines is now close to equilibrium. On the supply side, the Universities in the region have been producing sufficient numbers of graduates. The report also notes that the sector in the South West has a competitive advantage due to lower costs of labour and premises[135].

The provision of ICT support is lower in the SW peninsula than in the Bristol and Swindon area. Only 1 in 170 companies in Cornwall specialise in providing ICT support services; around Bristol and Swindon the ratio improves to 1 in 70 companies[136].

ICT plays an important "secondary role" in support of all other modern industries and a well developed ICT sector is required to develop and support the growth and adoption of technological change. Research has shown that differentials in productivity between the United Kingdom and the United States are determined less by shortfalls in investment in physical and human capital and more by different ways of working (around half of the gap) – how firms are organised and use technology. Since the 1990s, US companies have reaped greater benefits from technological change. The level of technology is not necessarily the most important factor. It is how technology is used and fits within the wider organisational processes[137]. The SW economy has further to develop on this front.

Marine Technologies

The Marine Technologies sector consists of industries that are involved in the design, manufacture and repair of all types of vessels. It is a sector that has become highly exposed to global competitive pressures, specifically with regards to shipbuilding – for example, 80% of all ships are now built in Korea, Japan and China[138].

In terms of GVA (£347 million in 2002), it is now the smallest of the priority sectors, having being overtaken by Biotechnology between 2001 and 2002. It is the second smallest in terms of employment (11,967 jobs). However, it has shown healthy employment growth in the period 2000 to 2004 with a 22.2% growth (16.6% 2003 to 2004)[139].

The GVA figures indicate significant variation over the recent period. GVA has fluctuated from £468 million in 1999, £330 million in 2000, £485 million in 2001 and £347 million in 2002, although employment growth has steadily and consistently risen over the same period.

The sector is heavily concentrated in Devon (including Plymouth and Torbay), which had 62.2% of total Marine sector employment in 2004. Devon has an employment location quotient of approximately 9.0. This is the highest level of specialisation of any of the key sectors in a specific geographic sub-region. More specifically, the sector is dominated by Plymouth, which accounts for well over half of all regional GVA. Within Plymouth it accounts for a substantial 6.4% of local GVA. To a lesser extent, in Poole, it accounts for 1.8% of local GVA[140].

134 South West Regional Accounts – BEM – South West Regional Observatory
135 The State of the Key Sectors – Arthur D Little, South West RDA - 2004
136 Research Project into Business Uptake, Understanding and Awareness of ICT and Broadband in the South West – South West RDA/Broadband Access Strategies LLP
137 'The UK's Productivity Gap – What research tells us and what we need to find out' – ESRC - 2004
138 China Ocean Shipping (Group) Company
139 Annual Business Inquiry – ONS
140 The State of the Key Sectors – Arthur D Little, South West RDA - 2004

The sector has an overall employment location quotient of 2.4 within the region. However, there are higher areas of "specialism" within the sector. The employment location quotient for "building repairing of pleasure boats" is 4.0 and for "building and repairing of ships" the quotient is 3.0. Therefore, it could be argued that this sector has a higher degree of concentration – both in terms of geography and activity – than many of the other key sectors.

The Marine sector's exports comprise 1.7% of all SW exports and it has a positive role in net trade creation in the South West with a positive net trade overseas trade balance of £55 million.

Importantly, a high proportion (48.2%) of its employees are employed in craft and related occupations. The sector with the next highest proportion of employees classified as craft and related occupations is Advanced Engineering at 28%[141]. The assumption is that this occupation type is an indicator of employees with specific trade-related skills that have a higher added value. This is reflected, in part, by the higher-than-average productivity per FTE that the sector has in some years. GVA per FTE of £40,100 in 2001 is the third highest for any priority sector, although this fell off dramatically in 2002 (£29,000 GVA/FTE).

Tourism

Leisure & Tourism GVA for the sector has shown healthy growth rates for the region – between 1998 and 2002 there was 25% growth, compared to the regional average of 21%[142]. However, GB growth in the tourism sector was somewhat greater over the same period (43%). Productivity in 2002 of £23,334 per FTE was below the regional average and the GB average for this sector (£30,078). Employment in the sector is significant – 78,168 FTEs in 2002 – and the trend has been strong in the recent period – 14.4% growth in jobs between 2000 and 2004[143].

Part-time employment is higher than in any other key sectors at 52% and self-employment is similarly relatively high at 16%[144].

The South West remains an important region for the tourism industry. For example, there were 20.5 million trips to the South West in 2004, surpassing all other English regions (and Scotland and Wales) by some margin and representing approximately one fifth of all tourism visits[145]. However, this represented a fall from 22.8 million in 2003, although due to changes in survey methodology comparison with previous years should be made with caution. There was a corresponding fall in expenditure. This could suggest that the South West is capturing a decreasing share of a growing global market although it does reflect, in part, a declining market share for the United Kingdom as a whole.

The classification of VAT-registered businesses as in hotels and catering indicate the sub-regional concentration of tourism-related activity around the region. For example, in 2004 15.7% of businesses in Torbay fell into this business classification against a regional average of 8.0% in the South West[146]. Leisure & Tourism employs disproportionately high levels in certain sub-regions – for example, 7.6% of all jobs in Cornwall are involved directly in the sector (compared to 4.6% for the South West)[147].

At a sub-regional level the sector generates the largest absolute contribution to GVA in the counties of Devon, Cornwall and Gloucestershire. In terms of relative contribution to local GVA the sector is of most importance in Torbay and Bournemouth.

141 South West Regional Accounts – BEM – South West Regional Observatory
142 Annual Business Inquiry – ONS
143 Annual Business Inquiry – ONS
144 The State of the Key Sectors – Arthur D Little, South West RDA - 2004
145 'Key Facts of Tourism in the South West 2000 – 2003 – South West Tourism
146 Inter-Departmental Business Register – ONS
147 VAT Registration Data – Small Business Service, DTI

AREAS

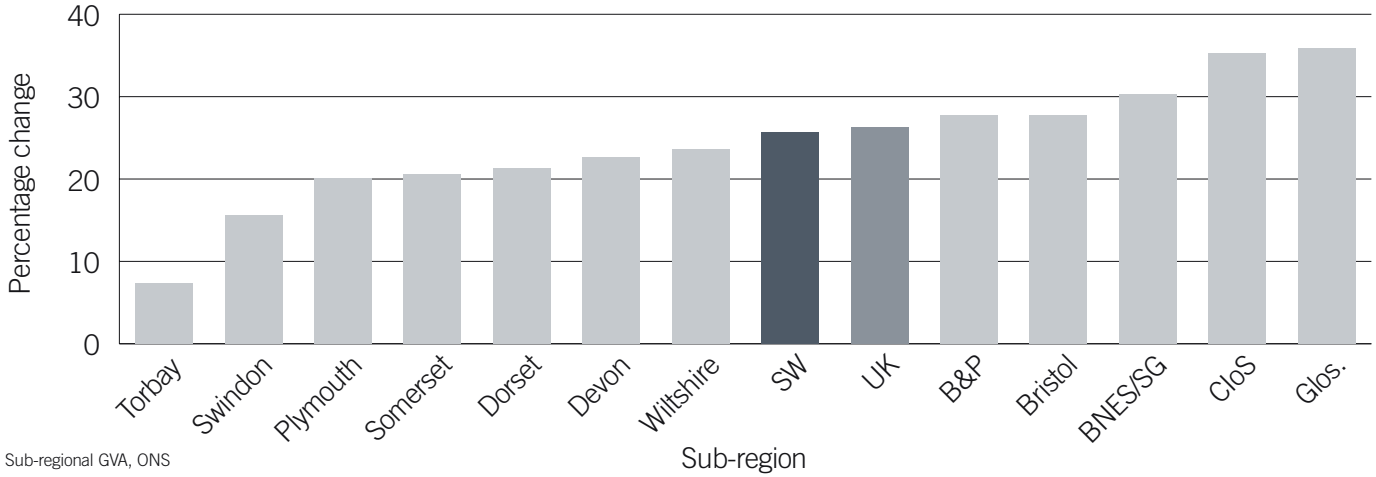
Cornwall and Isles of Scilly

Cornwall's relative economic performance remains weaker than all other parts of the region except Torbay. In terms of GVA per head, Cornwall and the Isles of Scilly (CIoS) had an absolute value of £10,364 according to the latest 2003 figures, which equated to 64% of the UK average. Total GVA of £5,322 million represented only 7.1% of total regional GVA, significantly lower than the population share of 10.3% (mid-2004). CIoS has exhibited, however, enhanced growth in GVA in recent periods. Over a 5 year period from 1998 to 2003, Cornwall experienced an average annual growth of GVA per head of 7.3% in comparison to a regional average of 5.3%[148] (see Figure 63 for the sub-regional range).

Over half of all VAT-registered businesses in CIoS are involved in two primary industries: agriculture (21.9% compared to regional share of 13.1%) and distribution, hotels and catering (32.8% in comparison to 28.4% for the South West – 2005). CIoS has a lower-than-average representation in finance, property & business services (15.4% compared to 25.4%)[149]. Therefore, CIoS has a different industrial profile than the region as a whole with continuing over-reliance on less productive and lower-growth sectors.

CIoS has a higher employment share for self-employed workers but this proportion experienced a decline of over 1% between 2003 and 2005[150]. During 2004/05, 17.1% of those who were working were self-employed, compared to a regional share of 14.2%. This is, in part, related to the continuing high share of agricultural related employment. Despite 21.9% of enterprises being classified as agriculture, the employment share is just 2.4%.

Figure 63: Change in Sub-regional GVA per head, 1998-2003



Sub-regional GVA, ONS

CIoS has above average unemployment (3.7% ILO unemployment in period June 04-May 05, compared to the regional average of 3.4%). There are intra-regional differences in unemployment rates. The alternative claimant count measure of 1.8% for Cornwall (Nov 2005) contains significant differentials that range from 2.2% in Penwith to 1.4% in Caradon.

CIoS remains a predominantly low-paid economy. Average gross weekly (full-time) earnings of £402.6 in 2005 were only 85.1% of the regional average with about a fifth of all full-time males and a third of all full-time females earning less than £250 per week[151]. Nevertheless, the area contains strong elements of wealth and is not a relatively "poor" area in terms of average disposable incomes.

148 ONS
149 Inter-Departmental Business Register – ONS
150 Labour Force Survey – ONS
151 Annual Survey of Hours and Earnings – ONS

Devon

The Devon economy is often split into three areas – Plymouth, Torbay and rural Devon, including Exeter, although it can be argued that the City of Exeter and its hinterland represents a relatively dynamic enclave within the wider NUTS3 Devon area. There has been significant variation in economic performance over the recent period in these areas. GVA per head growth has varied from an annual average of 4.2% in Devon county to 1.4% in Torbay in the period 1998 to 2003.

Devon County has an economy heavily slanted towards small and micro businesses. It has the highest proportion of businesses in the region employing fewer than 10 people – approximately 91% of all businesses. In relation to this, Devon County also has the highest rate of self employed workers in the region at 17.6%. Almost a quarter of all businesses are classified as agriculture, which reflects the predominantly rural environment.

The unemployment rate and claimant count are below the regional average whilst GVA per head is 77.6% of the national average. This position has remained relatively static in the previous four-year period. Again, there are significant differences in the area in terms of economic activity rate from a high of 82.4% in Teignbridge to 69.8% in West Devon. In contrast, the proportion of the population who are claiming income support ranges from 4.9% in Exeter to 3.1% in West Devon.

Certain districts within Devon County exhibit problems in terms of those claiming support for over 12 months as a percentage of the total claimant count. Torridge and North Devon, at 14.8%, have the second highest level of long-term claimants, in the region. Therefore, parts of Devon County exhibit an inflexible and "sticky" labour market.

Overall, the size of the employed workforce is the largest in the region at 337,000 (June 04 to May 05) of which a significant amount – 60,000 – are employed within Exeter.

Devon County performs relatively poorly in terms of wage levels. The average gross weekly full-time earnings of £424.20 per week in 2005[152] were the fourth lowest in the region whereas the area has some of the highest average house prices in the region – therefore, making house affordability an economic and social issue. For example, in South Hams the average house price in Q2 of 2005 was £249,318[153] whilst the average gross annual wage was £20,810 – one of the highest house price/earnings ratio in the region (12.0 – compared with 7.9 for the region and 6.8 for England).

Torbay:

The manufacturing sector in Torbay has gone through a particular period of difficulty. Manufacturing GVA per employee in Torbay stood at £10,648 in 2002 in comparison to the regional average of £37,387[154]. More markedly, in 2002, net capital expenditure per employee in manufacturing was just £348 per person in Torbay in comparison to an average of £3,860 in the South West. This shows a marked under-investment in the manufacturing sector – inferring past performance issues as well as indicating possible future and continuing problems. In fact, the size of the manufacturing industry in Torbay is now negligible – £39 million GVA out of a sub-regional total of £11 billion (<1%).

The relative position of GVA per head in Torbay has declined markedly in recent years – from 74% of the national average in 1998 to 63% in 2003. Torbay now has the lowest productivity in the region (previously Cornwall). Torbay has experienced the lowest increase in GVA per head of all sub-regions in the South West and, indeed, the second lowest in the UK after West Lothian (1998 to 2003).

The economy in Torbay remains dominated by the distribution, hotels and catering sector – 42.9% of all businesses are active in that area. In relation to this, Torbay has seen some fluctuations in the proportion of self employed from 16.9% to 19.0% between 2003 and 2005. There may be an element of "distress" in response to unemployment in this increase.

Plymouth Urban Area:

Plymouth is the most productive part of Devon in terms of GVA per head. A figure of £13,157 per head represents 81% of the UK average and this ratio has declined in recent years from 90% in 1997.

The shape of the Plymouth economy differs from that of other urban areas within the region. For example, Plymouth has a high proportion of businesses (38.1%) in the distribution, hotels and catering sector compared with Bristol (29.2%) whereas it has a relatively low representation in finance, property & business services (23.3%) compared to Bristol (38.0%).

The manufacturing sector within Plymouth remains important. The GVA per employee for those employed in manufacturing equated to £39,700 in 2002, compared to £28,278 for the rest of Devon excluding Torbay.

Plymouth has a significant labour force of 110,000 in 2005 although it has the lowest proportion of its population qualified to NVQ4+ in the region. The unemployment figure for Plymouth rose to 5.2% in the period June 04 to May 05, the second highest unemployment rate in the region and well above the South West average (3.4%). It has low employment rates of 73.2% which is 5.6% below the regional average.

152 Annual Survey of Hours and Earnings – ONS
153 ODPM
154 Annual Business Inquiry – ONS

Dorset & Somerset
The Dorset and Somerset economy largely constitutes the rural economies of both counties as well as the Bournemouth and Poole conurbation. This results in a wide variation in terms of productivity per head – from £15,435 in Bournemouth and Poole to £11,627 in Dorset County.

The overall area also has wide-ranging employment rates. This ranges from 68.1% in Bournemouth compared with 81.8% in Somerset (June 04 – May 05). Similarly, there are differentials in the average gross full-time weekly earnings – Bournemouth, at a figure of £422.00 in 2005 is near the bottom of the regional scale. In contrast, average earnings in neighbouring Poole are £505.70, well above the regional average (£473,10).

Somerset has experienced relatively poor recent productivity growth, generally below the South Wet average. Between 1998 and 2003, Somerset productivity grew by 20.6% compared to 25.7% for the region. Overall, its relative position has declined since 2001 – from 84% of the UK average to 81%. It does, however, maintain a healthy labour market situation – an unemployment rate of 3.4% (June 04 –May 05) and claimant count of 1.2% in November 2005.

The Somerset economy is marked by the continued and relatively high manufacturing presence. In terms of the proportion of workforce employed in manufacturing, 16.2% were employed in the sector in 2004 in comparison to a regional average of 11.6% and substantially higher than rural counterparts such as Devon (9.8%). This could be considered a position of strength – manufacturing tends to generate higher productivity – or potentially higher 'exposure' to future job losses if the trends for offshoring continue. There have been several important cases of the latter in recent months.

In terms of basic skills, Somerset performs relatively poorly. 67% of adults do not hold Entry Level ICT Skills which is above the English average of 50%. Nevertheless, its performance in the labour market remains relatively strong – it has a low LFS unemployment rate of 3.4%, although this represents a substantial increase from 1.9% in Sep 03 – Aug 04.

Bournemouth & Poole Conurbation:
The recent economic performance of the urban area has been relatively strong with a 28% increase in GVA per head between 1998 and 2003. The urban area has a markedly different industrial profile from the rest of the sub-region. Two thirds of the economy comprises the finance and business services, and distribution, hotels and catering sectors, and there is also a strong manufacturing presence, particularly in Poole.

Commuting flows both in and out of the SW region imply some significant differences between residence and workplace measures of income in the SE corner of Dorset. Ratios of workplace/residence earnings are 94.6% for Bournemouth, 102.8% for Poole and 92.1% for Dorset, which implies people leave Dorset and Bournemouth to go elsewhere (Poole). The South West average is 97.7%.

Gloucestershire, Wiltshire and N. Somerset

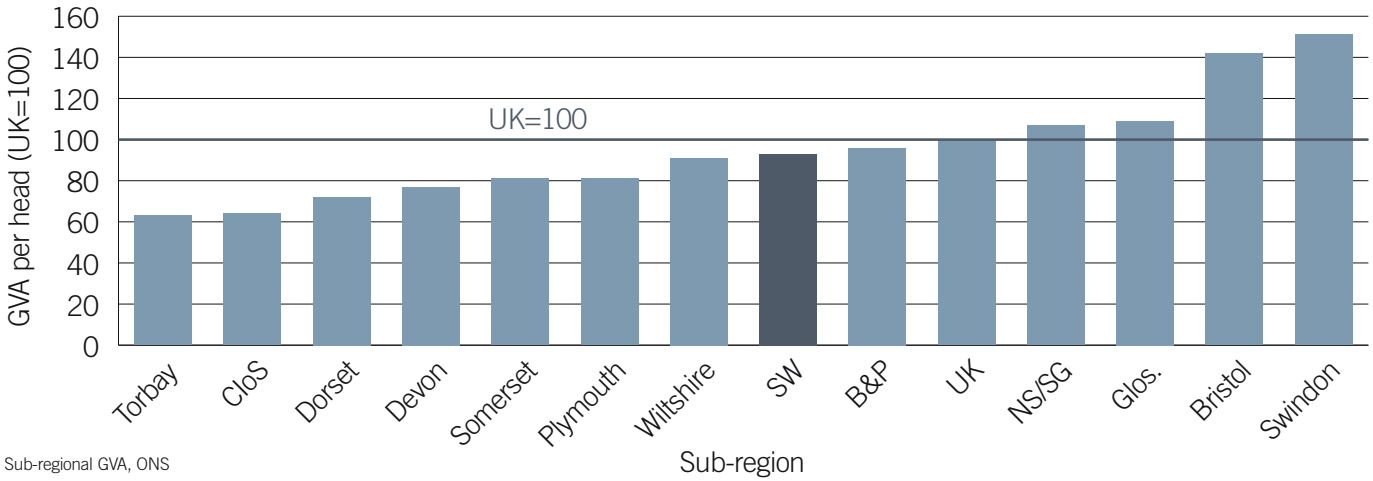
Wiltshire & Swindon:

The urban area of Swindon remains the strongest performing area in economic terms, but its relative productivity has been declining since a peak of 164% of UK GVA per head in 1998. The GVA per head figure in 2003 was 51% higher than the UK average, making it the fourth most productive area in the United Kingdom (see Figure 64).

The Swindon area is a high wage economy, particularly for male employees. The average gross weekly full-time earnings for males in Swindon in 2005 were £629.40 which is approximately 22% above the regional average and 47% above the lowest in the region – Cornwall. Earnings for all employees (full- and part-time) in Swindon are 15% higher than the rest of the Wiltshire economy. Earnings data show that Swindon workers earn 10% more than Swindon residents and that a Wiltshire worker's average wage is 90% of a Wiltshire resident's average wage. This infers that a large proportion of the "benefit" of Swindon's economy "commutes" elsewhere within Wiltshire and into the South East.

Over half of the sub-regional workforce is employed in the finance and business services, and distribution, hotels and catering sectors. Swindon has a relatively strong manufacturing sector. GVA per employee in this sector equated to £52,136 which is significantly higher than the regional average of £37,387 although the overall size of the sector is relatively low at £953 million GVA.

Figure 64: Sub-regional GVA per head, 2003 (UK=100)



Sub-regional GVA, ONS

The rural Wiltshire economy has underperformed compared with the average for the SW economy in terms of GVA growth. Average growth of 5.1% per annum (1997-2002) has been significantly lower than the regional annual average of 6.1%, but there was a relative improvement later in the period. In terms of per head growth, Wiltshire performs more poorly – showing the second lowest growth figures in the same period. As with similar rural areas in the region, it has a relatively high proportion of self-employed workers at 15.3%.

Reflecting the commuting-related issues highlighted above, Wiltshire – excluding Swindon – has lower wage levels than the regional average. The average gross weekly earnings of £476.8 – which is a workplace-based measurement – is substantially below the figure for Swindon of £544.80. Local incomes are higher, reflecting the commuting influence of the Greater SE region.

City of Bristol:
The Bristol urban economy is a significant proportion of the regional economy. It makes up approximately 12% of regional GVA with 7.8% of the resident population – admittedly, this also reflects the large level of inward commuting that it draws in. As a consequence, GVA per head levels for Bristol are one third higher than the regional average – £22,946 compared to £15,019 – and 42% above the national average. The economy continues to outperform the overall region in terms of growth in GVA per head.

The economy has a high proportion of businesses involved in the finance, property & business services – 38.0% of all firms. It has the second lowest proportion of workers in the region classified as self-employed at 10.6%.

Importantly, 29.4% of its workforce are employed in the finance and business service industry, which is a significant concentration when taken in the context of a regional average of 17.0%. Just over half of its workforce is employed in two main industries: as mentioned, finance and business services, and distribution, hotels and catering.

Bristol has the third highest level of unemployment at 4.5%. It has a relatively high claimant count standing at 2.2% of the workforce. It also has a significant proportion of its claimant count classified as long-term – 11.2% of the total claimant count has been claiming support for over 12 months.

Bath, N & NE Somerset, and S. Gloucestershire:
The area that immediately surrounds Bristol performs relatively well economically. This is particularly the case for Bath, North and NE Somerset and South Gloucestershire which had an annual average GVA per head growth of 5.4% between 1998 and 2003, compared to an average of 4.7% for the South West.

In relation to this, both labour costs and GVA in South Gloucestershire are the highest in region for the manufacturing sector. Labour costs per employee of £31,208 in 2002 represented typical wage levels 37% above the regional average. Similarly a GVA-per-manufacturing-employee figure of £66,277 was 77% above the regional average.

South Gloucestershire has the highest (equal with Swindon) full-time wage levels (£545) compared to the regional average of (£473). Wage levels are also above average in Bath & NE Somerset (£502), N. Somerset (£515) and Gloucestershire (£493).

In terms of broad industrial structure, Gloucestershire County has a significantly lower proportion of agricultural enterprises than its more rural counterparts, such as Devon & Dorset: 9.9% of all businesses in Gloucestershire are classified as agriculture, below the regional average (13.1%, including many urban areas). For a rural area, it has a significant presence in the finance, property and business services – reflecting the role of the urban areas Cheltenham & Gloucester.

Gloucestershire County experienced the highest GVA per head growth in the region between 1998 and 2003 – 36% compared with 26% for the South West – and had the highest annual growth in the region in 2001, 2002 and 2003. Gloucestershire's relative position has improved from the UK average in 1997 to 109% of the UK figure in 2003. It is a significant economy – the labour force of 279,000 in Q4 2004 was the second largest of all the County & Unitary authority areas.

Bath and NE Somerset has a very high proportion of its enterprises involved in finance, property & business services – 35.0% compared to regional average of 25.4%.

SCENARIOS

A suite of four regional "socio-economic-political scenarios" depicting how the South West might look in the medium-to-long-term future (c. 2026) were developed in 2004, in order to stimulate, guide and inform strategic thinking about the future of the region[155]. The scenarios portray distinct pictures of the social, political and economic background against which the strategies for the South West can be reviewed and developed.

The future of social, economic and political systems is uncertain, often the focus of dispute and always subject to intervention and modification. There is little that can be said with certainty about the ways in which societies will develop over the longer term. Futures scenarios are not a set of prescriptions of how the future will evolve. They are tools for imagining the future. It is more likely that the future in twenty years will comprise features of each of a suite of scenarios rather than one of them in particular. As such, scenarios are a way of structuring thinking about the possible outcomes in a coherent and manageable form.

The starting point for the development of the SW scenarios was a comprehensive futures research programme across five major themes – Society, Technology, Economy, Environment and Politics. The results of the futures research provided an authoritative base of knowledge on which to develop the SW Scenarios for 2026[156].

Review of the literature identified five main dimensions of change:

- demography and settlement patterns
- the nature of economic growth
- the rate and direction of technological change
- the nature of governance
- social and political values

Some of the major future trends identified by this work include:

Ageing population: There is an overall trend in population ageing due to declining birth rate and increasing life expectancy. This follows from the demographic transition that is occurring in all countries in Europe. The rate of change, the magnitude of change, and the timespan of this overall trend can be influenced by migration, technological breakthroughs and specific demographic policies.

Technology/innovation: There is a trend of economic transition from a traditional manufacturing-based economy to a knowledge-intensive and ICT-based economy. The rate of both ICT penetration and the decline of traditional industries, the magnitude of transformation, and the length of the transition period can be influenced by specific research & development policies, investment in technology, and changing consumption patterns.

Globalisation/liberalisation: Globalisation is the process of dissolving physical and geographical boundaries. The trend is towards a single unified global system involving a reduction of barriers to allow cross-border flows. Economic liberalisation leads to a process of deregulation that increases mobility of people, capital and information. These trends can provoke the counter response of localisation.

Natural resource use: Supply and demand trends determine the mix of energy carriers in terms of both fossil fuels and renewables. The overall future trend is towards an increase in energy demand. Due to the inertia of the energy system, a transformation towards a low-emission society will take at least two generations, which implies that renewables can only play a substantial role after the 2020s. Nevertheless the rate of penetration of renewables in society can be accelerated by specific incentives.

Role of the European Union: The overall trend is towards enlargement and eventual integration and centralisation. The number of members and the pace of integration can be influenced by, for example, conditions set for accession, the (economic) development of the assenting countries, and market forces.

Global climate change: There is general agreement that some climate change will occur in the future. However, there is scientific uncertainty about the rate of climate change, the magnitude and the regional distribution. It is not so much the average trend in temperature and precipitation change that is important as the extremes of temperature. The predictions vary from a manageable policy issue to a potential disaster. Specific lessening or adaptation strategies can relieve the impact of climate change, but not prevent it.

155 South West Scenarios 2026: Foresight Study – Centre for Future Studies, for the South West RDA, 2004

156 South West Scenarios 2026: Phase 1 Report – Centre for Future Studies, for the South West RDA, 2004

Dimensions of uncertainty identified included:

Cohesive, networked society **Individualistic, atomised society**

Will increased prosperity and individual freedom allow us to build social cohesion and find new ways of living together, or will society become increasingly fragmented and conflict-driven as people pursue their own interests at the expense of others?

Environmental improvement **Environmental degradation**

Will we find effective ways of managing the environmental pressures that could emerge from uncontrolled economic consumption, or will the world become increasingly polluted and difficult to live in?

Inclusive world development **Global inequality**

Will the global economy benefit all parts of the world or will some countries remain poor and unstable?

Networked monopolies **Vigorous competition**

Will the new economy be characterised by vigorous competition and low profits – to consumers' benefit – or will strong competition policy and government regulation be needed to prevent the ingrained monopoly of power?

Public acceptance of globalisation **Widespread public opposition**

Will people understand and accept an increasingly internationalised economy or will opposition to these developments grow, to the advantage of anti-capitalist or nationalistic political parties?

Effective global institutions **Ineffective global institutions**

Will institutions develop which are able to cope with the economic and technological complexities of the coming world or will policy-makers be unable to rise to the challenge?

Information overload **Information society**

Will we be able to harness the potential of ICT to benefit us both individually and collectively, or will we find that the sheer bulk of information overwhelms and frightens us, leading to some form of reaction or backlash?

While population and technological changes are more easily quantified and amenable to modelling, societal values and governance cannot be quantified in any useful way. Based on the "futures" literature, these more qualitative dimensions, along with the economy, were the basis for the scenario construction.
The dimensions relate to:

- governance and the capacity of institutions at different levels to manage change
- the focus of social and political values
- the position of economic power

A brief description of the four SW Scenarios for 2026 are given below.

Media World: This is a consumer-driven form of society where we are guided into action and beliefs by universal messages derived from the media and a celebrity culture. The power of the media drives political and economic stability, and its populist message can have a large impact on social behaviour and the environment. In this world, the desire to be fashionable has driven society to a highly consumerist position, in which it has become increasingly superficial in terms of its values and beliefs. In turn, this leads to a short-term view on the use of environmental resources resulting in the degrading of the environment itself.

Community Life: In this scenario, values are shaped by concern for the common good. The individual is seen as part of a collective, with rights and responsibilities determined by social goals. Civil society is strong and highly valued, and resources are allocated through more deeply managed markets. Economic and political power is devolved to the regional levels. Sovereignty is retained over key areas of policy, and the process of economic globalisation is weakened. Regional governments have greater independence in decision-making, and economic, political and cultural boundaries are maintained or strengthened. National and regional development is based on local capabilities and resources. This scenario, however, has modest economic growth.

Risk Society: Here, the power to govern is centralised with the permission of the electorate. International, economic, political and cultural relationships strengthen, and regional and national boundaries become more enforced. There may be a role for regional decision-making and for regional particularities, but this will be in the context of globalised and national economic and political systems. The main themes in this scenario are the prevailing terrorist threats and the security regime that results, concerns over environmental crises and the rapid increase in technology. The recognition of the threats has led to a 'united' society in which consent has been given to a strong central authority to organise and protect the society in a rational and non-ideological manner.

Populist State: Economic and political power resides in Westminster, but continues to be influenced by European and global developments. Government is populist and in seeking to please all of the people all of the time fails on many fronts and achieves 'half measure' compromises. Here we have a society which has become fragmented, and unable to make structural change. This leads to greater inequality and tension, which in turn makes the society more difficult to govern. A number of powerful forces combined over the period to 2026, including public disaffection with the political process, a political concern to be 'popular' and pursuit of economic growth in the name of prosperity.

The full report and associated range of materials provide a more detailed description of the full scenarios and how this scenarios approach can be used in undertaking futures analysis.

PROJECTIONS

This note summarises the analysis behind the economic projections made for the review of the Regional Economic Strategy (RES) and to support the development of the Regional Spatial Strategy (RSS).

Given the long-term emphasis of the RES and the RSS, no attempt has been made to build in cyclical patterns of development. In particular, it would be dangerous to infer any long-term trend from the short run slowdown in economic growth currently underway (2005/6). Nonetheless, the further out one extends the projections the more likely the outcomes will deviate from them.

It is founded on official data sources and the analysis of:

- Cambridge Econometrics, forecasting commissioned for the RSS
- CGE modelling based on the Regional Accounts (Eric McVittie, Principal Lecturer in Economics at the University of Plymouth)
- South West of England Regional Development Agency Chief Economist (Nigel Jump)
- SW Regional Assembly Regional Policy Manager (Keith Woodhead) and other Assembly and Agency staff involved in RES and RSS development.

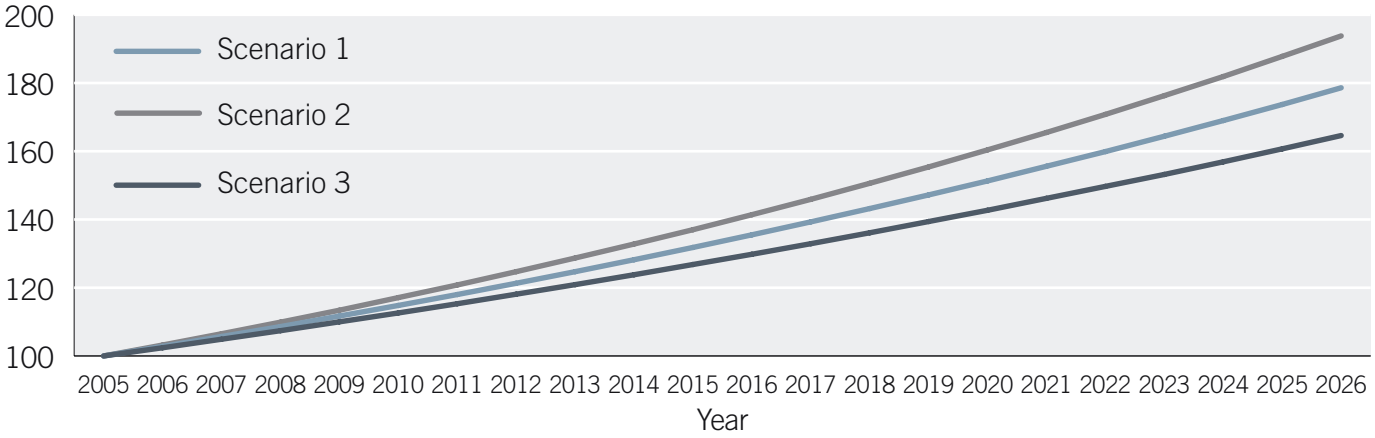
Growth Projections:
The analysis considered a range of different growth assumptions, which have been used to derive three main scenarios.

1. The **"First Scenario"** assumption is that real GVA growth in South West England averages +2.8% per annum over the period 2006-2026.

This is derived from study of the underlying growth trend of the UK economy, based on OECD, HM Treasury and private sector calculations with regard to output "gaps", productivity trends and employment expectations. These tend to put the UK's "underlying real growth rate" in a range +2.25% and +2.75% per year, with recent evidence and the Treasury view towards the upper end of the range.

Because recent experience has shown South West England growing slightly better than the UK average, given population and productivity trends, the reasonable and realistic assumption is that SW real growth will be at the top end of this range: +2.8%.

Figure 65: SW real GVA growth projections (2005=100)



2. The **"Second Scenario"** assumption is that real GVA growth in the South West averages +3.2% over the period 2006-2026.

Rates of growth of this magnitude have been achieved in recent years and this scenario assumes such performance can be maintained if current strategies and policies are delivered effectively and business and household confidence can be bolstered. Positive assumptions about changes in sector mix, infrastructure development, migration and employment patterns and technological change and dissemination, as well as a positive policy impact contribute to this outlook. Sustained growth rates higher than this would be unrealistic, given the UK/global background and the advanced state of SW economic development.

The important point is that policy needs to be orientated towards this "second" scenario if sustainable development of SW economic potential is not to be restrained by a lack of preparation in planning and structural development.

3. The **"Third Scenario"** assumes that real GVA growth averages +2.4% over the period 2006-2026. This would require a return to the sluggish average UK performance extant before the mid-1990s and implies errors of UK stabilisation policy and/or global economic disruption. Planning on the basis of this outlook would seem relatively restrictive, risking significant under-preparation for a wide range of potential outcomes.

Given current commitment to sound stabilisation policies from all mainstream UK political parties and the positive stimulus to the global economy from rapid East Asian development, this scenario seems the least likely of the three. More importantly, in policy terms, preparing for the other two scenarios allows lower growth to be accommodated if necessary.

The three growth projections are highlighted in Figure 65.

Population Projections:

1. The **"First Scenario"** adopts ONS projections of SW demographic trends for 2006-2026 – growth of about 0.75% per annum. In rounded terms, about 780,000 new residents are added to the population over 20 years. Given our negative natural population rate, this growth reflects net inward migration figures. Recently, about 77% of inward migrants have been of working age. The net effect of increases in the retirement age and increased longevity may tend to raise this ratio over the planning period.

2. The **"Second Scenario"** assumes higher economic growth affects inward migration of working age people positively – raising population growth to above 0.8% per annum. This adds about 835,000 new residents over two decades.

3. The **"Third Scenario"** renders population growth of about 0.7% per annum. Approximately 630,000 new residents are added to the population.

Figure 66 depicts the three scenarios over the two decades.

Employment Projections:

1. Under the **"First Scenario**", employment growth slows from recent high levels to reflect ageing population trends, offset to some degree by changing work and retirement patterns. About 280,000 new full-time equivalent (FTE) employment opportunities, equivalent to about 360,000 jobs in total based on current ratios, are added (see Figure 67). This leaves the employment/population ratio unchanged at about 41%. For comparison, between 1995 and 2005, this ratio increased from 39% to 41%. The projection is, therefore, based on relatively conservative assumptions.

Figure 66: SW population projections (change in thousands)

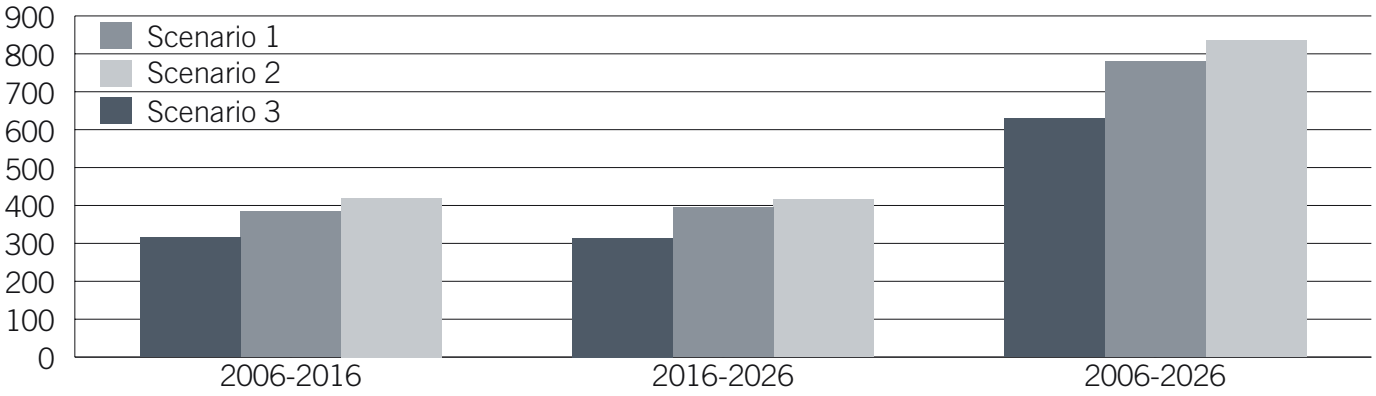
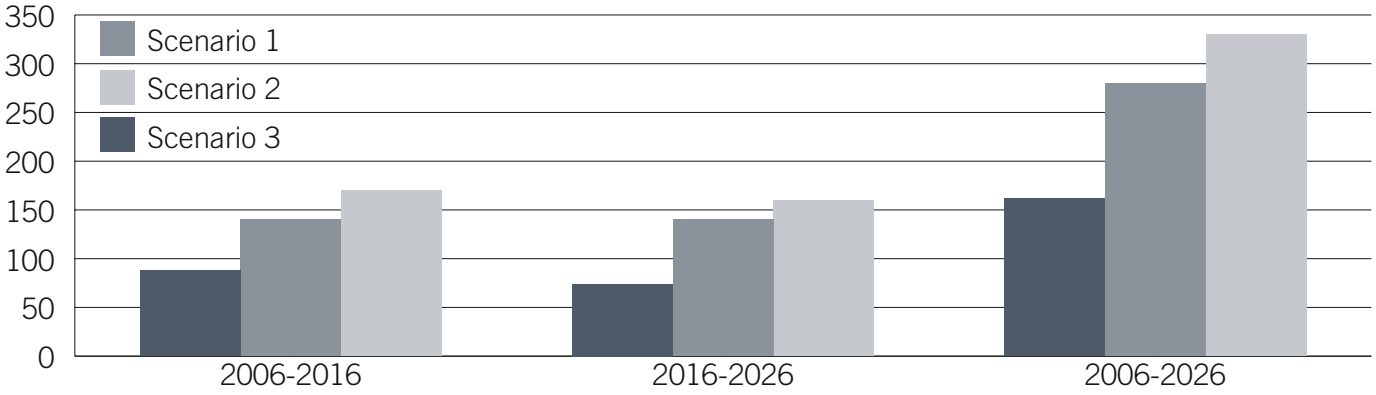


Figure 67: SW employment (FTE) projections (change in thousands)



2. Under the **"Second Scenario"**, employment growth still slows from recent rates of growth but adds almost 330,000 new FTEs (about 430,000 jobs in total). The ratio to population increases to a still rather modest 42%.

3. Under the **"Third Scenario"**, employment grows by about 162,000 FTEs (210,000 total jobs) and the ratio slips back to 40%.

Housing Projections:

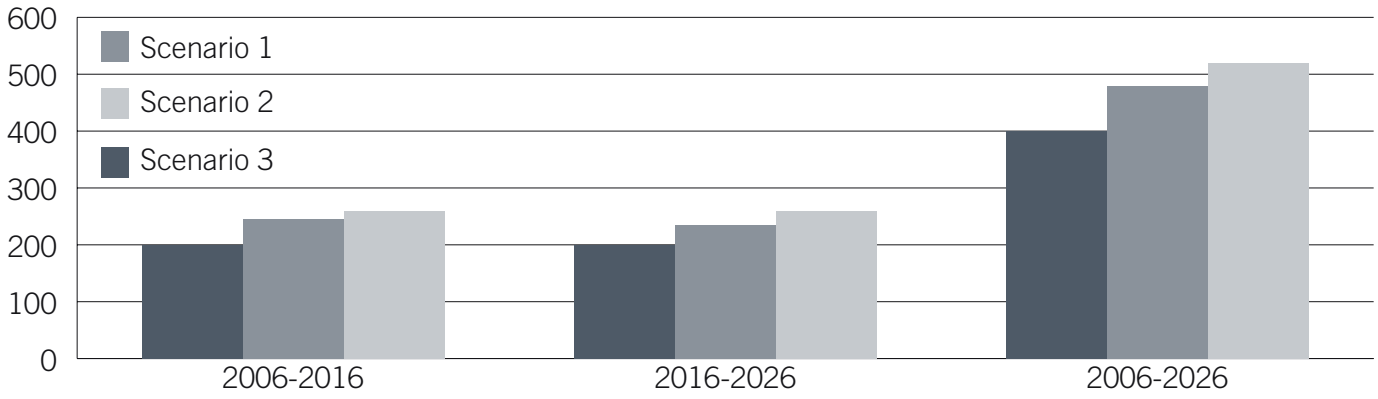
1. The **"First Scenario"** assumes a higher rate of new housing supply than in recent years, reflecting regional desire and various trends in household structure – later marriages, fewer children per household, more living alone. The "persons per dwelling" ratio is assumed to fall from 2.22 to 2.12. This change is very modest: some argue that these social trends will accelerate more. Therefore, the balance of risk is that this ratio decreases more than assumed here and demand for new homes is even higher. Between 1995 and 2005, for example, i.e. in half the time of this twenty year projection, the ratio fell from over 2.33 to 2.24.

The annual build rate increases from about 20,000 per annum now to 24,000 per annum. Perceptions of a current shortfall may raise a debate as to whether this merely stops an existing gap in provision from widening further. With the government calling for increased national housing supply in its response to the Barker Review and given the South West's relatively good economic performance and increasing share of national population, this increase may be modest. This scenario suggests about 480,000 new dwellings need to be created over the 20-year period (see Figure 68). The dwelling per job ratio moves from 1.08 to 1.15.

2. The **"Second Scenario"** shows dwellings supply moving upwards in line with the higher growth rates. Faster growth encourages the "persons per dwelling" ratio to drop a little further – but still modestly compared with recent trends. The number of new dwellings is about 520,000 over the twenty years, about 26,000 per annum. The dwelling per job ratio rises to 1.14.

3. The **"Third Scenario"** shows little change from current housing activity levels; about 400,000 in total, or 20,000 per annum. Dwelling per job reaches 1.17.

Figure 68: SW housing projections (change in thousands)



Conclusion:

The three scenarios outlined are each based on conservative assumptions about economic and population growth and the relationships between these variables and jobs and housing. They imply productivity growth of between 1.8% and 2.3%, in line with the average of 2.0% actually achieved for 1997-2003. Central government departments have described these projections as "sensible" and "realistic".

Based on realistic social and economic trends, this analysis underlines the danger that planning for moderate growth leads to unplanned development in undesirable locations and in excess of these scenarios, which threaten unsustainable outcomes for the region. It is easier to anticipate higher growth and rein back expectations in the event of slower outcomes than to attempt to adjust policy to a higher level if economic and social trends prove stronger than planned. Careful assessment of employment land, housing and other spatial needs based on these assumptions is vital.

ABBREVIATIONS

B&P	Bournemouth & Poole
BCC	British Chambers of Commerce
BEM	Business and Economy Module
BNES	Bath and North East Somerset
CGE	Combined General Equilibrium
CIoS	Cornwall and the Isles of Scilly
Defra	Department for Environment, Food and Rural Affairs
DfES	Department for Education and Skills
DTI	Department of Trade and Industry
E	East of England
EM	East Midlands
EZ	Euro-zone – countries that have adopted the currency
FTE	Full Time Equivalent
GB	Great Britain
GDP	Gross Domestic Product
GOSW	Government Office for the South West
GVA	Gross Value Added
GWNS	Gloucestershire, Wiltshire and North Somerset (including Bristol and Swindon)
ICT	Information and Communications Technology
IMF	International Monetary Fund
IRS	Integrated Regional Strategy
L	London
LFS	Labour Force Survey
NE	North East of England
NI	Northern Ireland
NS/SG	North Somerset & South Gloucestershire
NUTS	Nomenclature of Territorial Units for Statistics
NW	North West of England
ODPM	Office of the Deputy Prime Minister
OECD	Organisation for Economic Co-operation and Development
ONS	Office for National Statistics
R&D	Research and Development
RDA	Regional Development Agency
REEIO	Regional Economy Environment Input Output model
RES	Regional Economic Strategy
RR05	Review of the SW Regional Economic Strategy (2005)
RSS	Regional Spatial Strategy
SC	Scotland
SD	Sustainable Development
SE	South East
S. Glos.	South Gloucestershire
SLIM	Skills and Learning Intelligence Module (of the SW Regional Observatory)
SME	Small- and Medium-Sized Enterprise
SW	South West
SWESA	South West Enterprise and Skills Alliance
SWRA	South West Regional Assembly
UK	United Kingdom
WAL	Wales
WM	West Midlands
YH	Yorkshire & Humberside

GLOSSARY

Additionality:

The total net, hopefully positive, impact of intervention.

Capital:

Physical economic resources, e.g. plant and machinery, factories and offices, available for use as a factor of production with labour to generate output. If "capital" means financial capital it is stated as such.

Consumption:

Expenditure on goods and services which delivers satisfaction in a specific time period.

Comparative Advantage:

A country or sector's ability to produce a good or service at a lower opportunity cost than its trading partners.

Displacement:

Interventions may divert, for good or ill, activity from existing operations.

Disposable Income:

The amount of income left after deductions such as income tax, pension contributions and national insurance.

Employment Location Quotient:

A measure of relative employment concentration geographic areas.

Entrepreneurs:

People who undertake the risks of innovative production of goods and services in the expectation of future returns.

Equilibrium:

A state of market balance – where there is no tendency or incentive to change demand and supply.

Externalities:

The spillover effects of production or consumption for which no market payment is made. Externalities can be positive or negative.

Globalisation:

The growing inter-dependence amongst world economies and enterprises, reflecting new technologies and the removal of barriers to international commerce.

Gross Fixed Capital Formation:

Total spending on fixed investment e.g. machines, factories, offices.

Gross Domestic Product (GDP):

The total value of all goods and services produced in a given time and in a given geographic or politically-defined area, excluding net property income from abroad.

Gross Value Added (GVA):

The aggregated difference between the value of final goods (turnover) minus the cost of bought-in raw materials and intermediate goods.

GDP = GVA (– taxes + subsidies on products)

Human Capital:

The accumulated stock of skills, knowledge and expertise of workers/labour.

Intervention:

The act of intervening in a market to try to influence market outcomes.

Investment:

The accumulation of capital resources that enable economic actors to produce goods and services and yield returns in more than one period.

Labour Market:

The market in which demand and supply for labour is effected – firms willing to employ workers and labour seeking employment.

Leakage:

Benefits/costs of intervention that leak into non-target areas.

Market Failure:

Occurs when the workings of the price mechanism are imperfect and result in an inefficient or unfair allocation of resources from the perspective of society.

Macroeconomics:

The study of groups of economic actors in a whole economy, international, national or regional.

Microeconomics:

The study of the behaviour of an individual, firm or industry.

Opportunity Cost:

The decision to produce or consume a product or service involves a resource commitment that means other products and services cannot be produced or consumed. The real cost of an economic action is the benefit from the next best alternative foregone.

Price Mechanism:

Prices act as a signal of absolute and relative values to firms and consumers to adjust their economic behaviour. For example, a rise in price encourages producers to switch into making that good but encourages consumers to use an alternative substitute product.

Productivity:

Total output divided by total inputs (factors of production).

Real Terms:

The adjustment of monetary values for the effects of inflation.

Resource Efficiency:

Efficient use of land, labour, capital and entrepreneurs.

Substitution:

Positive/negative changes in behaviour induced by intervention.

Sustainable Development (SD):

Development where consideration is given to the quality of life of future as well as current generations.

Transfer Payments:

Payments for which no good or service is exchanged. Money has simply been transferred from one person in society to another.

Wealth:

A stock of all those assets capable of earning an income. Wealth can be human or material.

This document has been printed on Revive uncoated, 100% recycled from 80% de-inked post-consumer waste and 20% mill broke.

All papers are Elemental Chlorine Free.

Designed by Lionheart www.lionheart.co.uk

Printed by MWL Print Group www.mwl.co.uk

Published May 2006

B-12040619v2

South West of England Regional Development Agency
Sterling House
Dix's Field
Exeter
Devon
EX1 1QA

Phone: 01392 214747
Fax: 01392 214848
www.southwestrda.org.uk/res2006
enquiries@southwestrda.org.uk

South West *of* England
Regional Development Agency

South West

England