



***Scottish Enterprise  
Dundee City Region***

**Economic Review**

**March 2009**

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# 1. Introduction

## 1.1 The study

SLIMS, in partnership with Oxford Economics, was commissioned by Scottish Enterprise to carry out a series of economic reviews focusing on the functional economic geographies of Scotland's regions, which form the Scottish Enterprise operating area. These are:-

- Aberdeen City & Shire
- Dundee City Region
- East Region
- West Region
- South of Scotland

The data presented in these reports have been organised around these geographies, full details of which can be found in Appendix 1. The consultants were also commissioned to provide a supplementary data matrix, which includes all of the data contained within the reports across a range of other geographies including local authority and strategic development planning authority areas.

The key objectives of this work have been to:

- provide a review of economic trends and performance since 1999;
- assess the potential contribution of each of the regions to the Government Economic Strategy's (GES) purpose targets; and
- to identify the likely impact of the current economic downturn on each of the regions.

The regional reviews are complemented by a national economic review which provides an overview of recent economic trends, progress towards the GES targets and an economic outlook for Scotland as a whole.

This report represents the economic review for **Dundee City Region**, which comprises the local authority areas of Dundee, Angus and Perth & Kinross, as well as the parliamentary constituency area of North East Fife. The map below illustrates the boundary of the region.



It should be noted that, for the majority of the indicators covered in this report, data is not available below local authority level. For these, we have taken a proxy estimate of 20% of Fife to incorporate the North East Fife element of the region, based on the proportion of Fife jobs located there.

Where possible, we have benchmarked the performance of the region against Scotland and the UK. However, for some indicators, UK figures are not available and in these cases GB has been used as a comparator, though it should be noted that these figures exclude Northern Ireland.

## **1.2 Assessing the contribution of the regions to the GES Purpose Targets**

The Government Economic Strategy (GES) sets out seven purpose targets which will form the basis of assessing progress towards improving Scotland's economic performance. These are referred to throughout the report.

The targets cover a range of timescales and a range of indicators – some of which are not readily available at the regional level. At the beginning of the study, SLIMS agreed a set of measures that would be used in the reviews to assess the contribution of the Scottish Enterprise regions to the purpose targets. These are highlighted in Appendix 2 which includes information on:

- the purpose targets;
- the scale of the gap between current and expected performance;
- the preferred indicators identified by the Scottish Government to measure performance against the target; and
- the data used in this review, and where and why the data differs.

## **1.3 Report Structure**

The remainder of this report is structured as follows:

- **Chapter 2** contains an executive summary of the main findings from the review.
- **Chapter 3** sets out the global and national economic context.
- **Chapter 4** provides a review of recent economic trends and performance in Dundee City Region.
- **Chapter 5** benchmarks the performance of the region against the other regions in Scotland.
- **Chapter 6** reviews the industrial structure of the region, including representation within the key sectors outlined in the Government Economic Strategy and other growth sectors supported by Scottish Enterprise.
- **Chapter 7** looks at infrastructure and place issues.
- **Chapter 8** looks at the performance of the local authority areas within the region.
- **Chapter 9** contains an economic outlook for the region.

In the appendices to the main report:

- **Appendix 1** contains a definition of the regional geographies covered in this set of reviews.
- **Appendix 2** provides details on the GES purpose target.
- **Appendix 3** details the sources of the key performance indicators.
- **Appendices 4 & 5** contain the SIC definitions used for the analysis of the key and other growth sectors.

## 2. Executive Summary

***Dundee City Region is an important part of the Scottish economy, and has a key role to play to help achieve the purpose targets set out in the Government Economic Strategy. Looking across some of the key economic indicators, the region:***

- generated 7% of Scotland's GVA in 2006;
- accounts for 8% of all Scottish jobs; and
- has 9% of Scotland's population.

***Purpose Target 1: Raise Scotland's GDP Growth rate to match that of the UK by 2011.***

***Despite some fluctuation, economic growth in Dundee City Region lagged behind the Scottish and UK averages throughout much of the period between 1999 and 2006.***

***Oxford Economics' forecast suggests that, as the recovery from the current downturn will be largely service sector led, the region will experience a weaker upturn than some other regions in Scotland. This means that the gap between GVA growth rates in Dundee City Region and the UK is likely to remain over the next 10 years...***

- The Dundee City Region economy grew at an average annual rate of 2.1% between 1999 and 2006, slower than the equivalent growth rates 2.8% for Scotland and 3.2% for the UK.
- Growth levels were broadly in line with Scotland as a whole within Dundee, Perth & Kinross and North East Fife. However, limited growth within Angus over the period led to a below average growth rate for the region as a whole.
- Oxford Economics' forecasts suggest that a return to modest GVA growth will begin in 2010 and that this will gather speed during 2011. For the period 2011–2018 GVA growth in Dundee City Region is expected to average 2.6% per annum, slower than the equivalent growth rates of 2.9% expected for Scotland and 3.3% expected for the UK.

***The overall GVA growth picture masks some positive achievements in the performance of the Dundee City Region economy in recent years...***

- There was an increase of 7% in the total number of jobs located in the region between 1999 and 2007, in line with the growth of across GB, but slower than the 11% growth across Scotland.
- Employment growth has been concentrated within the public sector and financial & business services, which expanded by 9,000 and 6,000 jobs respectively between 1999 and 2007.
- There was an increase of 800 in the total number of VAT registered firms in the region between 1999 and 2007, though this growth of 7% was slower than the increase of 10% across Scotland as a whole.

***Purpose Target 2: Rank in the top quartile for productivity amongst key OECD countries.***

***Scotland (14<sup>th</sup> out of 30) and the UK (11<sup>th</sup> out of 30) both rank in the second quartile for productivity as measured by GVA per employee. The Scottish figure is around 96% of the UK average. GVA per employee in Dundee City Region is lower than in both Scotland and the UK, suggesting that the region is currently falling short of the GES target.***

***To help achieve the GES target, Dundee City Region would need to increase productivity at a faster rate than other highly performing OECD economies. However, there is evidence that productivity increases in the region have been slower than across the UK in recent years.***

- GVA per employee in Dundee City Region amounted to £33,800 per employee in 2006, compared to £35,200 in Scotland and £36,900 in the UK.
- There are differences in productivity levels between the local authority areas across the region with GVA per employee highest within Dundee and lowest within Angus in 2006.
- The level of GVA per employee in Dundee City Region increased by 10% between 1999 and 2006. This was in line with Scotland as a whole, but slower than the equivalent increase of 15% for the UK.
- Productivity levels in the region are above the Scottish average within agriculture, public services and other personal services, but lower across all other industry sectors.

***In terms of the wider drivers of productivity identified in the GES, Dundee City Region's performance is mixed...***

- The proportion of Dundee City Region residents that are educated to degree level (34%) is slightly above the Scottish average (33%). Furthermore, just 13% of residents have no qualifications at all, compared to 14% in Scotland.
- The rate of new graduates from the region (10 per 1,000 working age residents) was slightly higher than the Scottish average (9 per 1,000) in 2007. However, graduate retention is low with less two thirds (59%) of new graduates finding their first job in the region in 2007.
- Business density levels and birth rates in Dundee City Region are broadly in line with the Scottish averages, but fall some way below the UK averages.
- Dundee City Region has above average levels of specialisation within two of the key sectors: life Sciences and tourism. The region also has above average levels of specialisation within two of the other growth sectors: textiles and forest Industries.

***Purpose Target 3: Maintain Scotland's position as the top performing country in the UK in terms of labour market participation and close the gap with the top 5 OECD economies by 2017***

***The employment rate in Dundee City Region has been above the Scottish and GB averages since 2004. If this position can be maintained, the region will be in a position to contribute to the national participation target.***

- In 2007, the employment rate in Dundee City Region was 77%, slightly above the Scottish and GB averages of 76% and 75% respectively.
- There are wide disparities within the region on this measure. Dundee has the fifth lowest employment rate of all local authorities in Scotland at just 73%, whilst Angus and Perth & Kinross have among the highest employment rates in the country at 80% and 79% respectively.
- Oxford Economics' forecasts suggest that, whilst economic activity levels in the region will fall over the next couple of years as a result of the economic downturn, they will remain above the average for the UK over the coming decade.

***The region also performs well across a range of other key labour market indicators, including unemployment, inactivity and benefit dependency rates...***

- The ILO unemployment rate in Dundee City Region was 5.4% in 2007. This was in line with the GB average of 5.3%, but slightly higher than the average of 4.7% for Scotland. The economic inactivity rate in the region was 19% in 2007, slightly below the rates of 20% for Scotland and 21% for GB.
- The proportion of the population that claim workless benefits in Dundee City Region (16%) is in line with the average for Scotland, but higher than the GB average of 14%. However, there was an increase of 7% in the total number of Incapacity Benefit claimants in the region between 2000 and 2008, in contrast to a decline of 15% across Scotland.
- Dundee City Region has a relatively self-contained labour market in that just 9% of residents commuted out of the area for work in 2001 and just 6% of the workforce commuted in. Flows within the region are much greater with Dundee City drawing a large share of its workforce from elsewhere within the region.

***Purpose Target 4: To match EU 15 population growth over the period 2007 - 2017***

***Across Scotland, population was falling prior to 2003, but this downward trend has now reversed and there was an overall increase of 1% in total population between 1999 and 2007. By comparison, EU 15 population increased by 4% between 1995 and 2005.***

***The population of Dundee City Region has also been increasing since 2003, following a period of decline, and this growth is expected to continue over the coming decade.***

- In line with the trend across Scotland as a whole, the population decline in Dundee City Region has now halted and total population has been increasing in recent years. There was an overall increase of 1% in the total number of people living in the region between 1999 and 2007.
- The long term population decline within both Angus and Dundee appears to have halted and population levels in these areas have been relatively stable in recent years. There has been consistent population growth within Perth & Kinross and North East Fife since the turn of the century.
- According to official projections, the population of Dundee City Region is expected to continue to increase over the coming decade, growing by 1% by 2018. This is slower than the growth of 3% expected for Scotland and the strong growth of 7% expected for the UK.



***Purpose Target 5: To increase overall income and the proportion of income earned by the lowest 3 deciles as a group by 2017.***

***The preferred measure used by the Scottish Government to track the GES target is not yet available at a sub-national level. However, the median earnings of those working within Dundee City Region are lower than across Scotland as a whole and there is evidence of disparities within the region.***

- The median weekly earnings of all those working in Dundee City Region (full-time and part-time workers combined) were £367 in 2008, below both the Scottish and UK figures of £375 and £388 respectively.
- There are some disparities within the region on this measure. Median weekly earnings for those working in Angus are 8% lower than the regional as a whole, whilst they are 4% higher in Dundee.

***Purpose Target 6: To narrow the gap in participation between Scotland's best and worst Local Authority Areas by 2017.***

***Between 1995 and 2007 the gap in the employment rate between the best and worst performing local authority areas in Scotland fell from 22% to 15%. If this recent trend can be maintained then the GES target will be achievable.***

***Dundee City has the lowest employment rate of all the local authorities within the region and is the only one in which this falls below the Scottish average. Improvement in the participation rate in the city is likely to be required if the region is to help contribute to the GES target.***

- The employment rate in the local authority of Dundee was 73% in 2007, which was the 5th lowest of all 32 local authority areas within Scotland. Participation levels in the city are therefore only slightly above those within the target group.
- The employment rate in each of the other areas in the region was in line with, or above, the national average.
- There are several pockets of deprivation within the region. The majority of these are located within the local authority area of Dundee, where around one in every three residents live in neighbourhoods ranked among the 15% most deprived in Scotland.

***Purpose Target 7: Reduce CO<sub>2</sub> emissions by 2011 and by 80% by 2050***

***Data on the government's preferred measure of Greenhouse Gases is not available at the sub-national level, but data on CO<sub>2</sub> emission is available for regions. Dundee City Region accounts for 9% of all Scottish CO<sub>2</sub> emissions and the level of CO<sub>2</sub> emissions per head from the region is broadly in line with the Scottish and UK averages.***

- Dundee City Region generated 8.8 tonnes of CO<sub>2</sub> emissions per head of population in 2006, broadly in line with both the Scottish and UK averages (8.5 and 8.8 per head respectively).
- Within the region, Dundee generated the lowest levels of CO<sub>2</sub> emissions in 2006 at 8.2 tonnes per head, whilst Angus produced the highest at 9.1 tonnes per head.
- The total volume of CO<sub>2</sub> emissions from the region fell slightly by 0.5% between 2005 and 2006, in contrast to an increase of 0.8% across Scotland and no change across

the UK. However, care should be taken in interpreting any trend from such a limited data set.

- Following a three-fold increase since 2002, the proportion of waste from Dundee City Region that was recycled or composted in 2008 (35%) was above the average for Scotland (32%).

#### **Looking to the future...**

***The review of performance of the Dundee City Region economy covers a period (1999–2007) of uninterrupted economic growth across Scotland and the UK. The recession means that the next 12-18 months will see economic growth stall and reverse.***

***Our forecasts predict that the impact of the recession will be more severe in the region than across Scotland. Furthermore, the region is expected to recover at a slower rate than Scotland as a whole...***

- Output from Dundee City Region is forecast to contract by 2.9% during 2009, compared with a 2.5% fall in Scotland and a drop of 2.9% in the UK.
- In output terms, the region is expected to begin to recover from the downturn in 2010. As the recovery will be largely service sector led, the region will experience a weaker upturn than some other regions in Scotland. Over the period 2011–2018, growth is expected to average 2.6% per annum, compared to 2.9% for Scotland and 3.3% for the UK.
- Employment in Dundee City Region is expected to decline in 2009 and 2010 by 5,800 and 3,100 jobs respectively. There will be a return to jobs growth from 2012 onwards, but we expect that the region will not return to its 2008 employment level until after 2018.
- Manufacturing and extraction will suffer the biggest job losses over the decade ahead, though employment increases in financial & business services, education & health and retail & catering will offset some of this decline.

### 3. Global / National Economic Context

This chapter provides a review of global and national economic trends and outlook with a focus on the issues which may have a particular importance for Dundee City Region, particularly the tourism industry.

#### 3.1 Financial crisis

The credit crunch which began in July 2007 intensified dramatically in September 2008 with a series of bank failures, prompting rescues and effective nationalisation of major financial institutions worldwide. Despite massive intervention, financial stress rose to new highs at the start of Q4 2008 as credit dried up and stock markets plunged. In turn, business and consumer confidence nosedived, world trade seized up and businesses cut investment and employment in an effort to conserve cash.

Faced with the collapse of the financial sector, many governments have recapitalised banking sectors and guaranteed interbank loans and bank deposits to try to shore up confidence in the financial system. Such moves have averted a collapse of the financial system, but second round impacts on the banking system from the weakening economy are likely to mean more write-offs to come from the banks and further measures by governments to bail out the banking system.

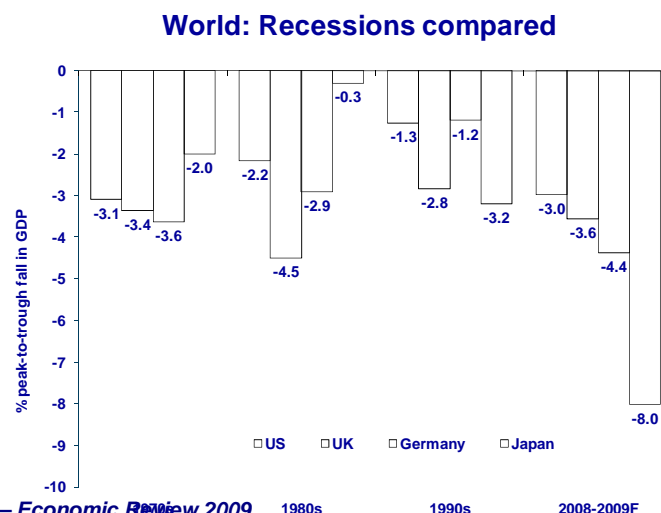
#### 3.2 The global recession

No major economy is bucking the sharp downturn that began last autumn. Output is falling in all the major developed economies, while growth rates have fallen back sharply in China and India. The data releases so far in 2009 underline the extent of the shock to the real economy following the banking crisis in September. In the US, more than three million (or one in every fifty) jobs have been lost since September 2008 – the worst employment performance since 1945. Data for other countries point to a remarkably synchronised and deep downturn. Industrial output data for the UK and France for November were weak, and German factory orders for the same month fell by some 27% on the year. A range of data from key emerging market countries also suggested weakened conditions – exports from Taiwan fell 42% year-on-year, with sales to China falling 57%. In turn Chinese exports have themselves turned negative, falling from an annual growth rate of 13% in early 2008 to a fall of 17% in January 2009, underlining the global nature of the downturn.

Chart 3.1 compares past recessions for major world economies and includes forecasts on how deep the current recession will be. The uniformity of experience across the major economies, reflecting the stronger global linkages that have built up in recent years, points to a more severe recession in world activity than at any time in the post-war era, with world growth forecast to dip to -0.8% in 2009, compared with an average growth rate of 3.5% over the last five years.

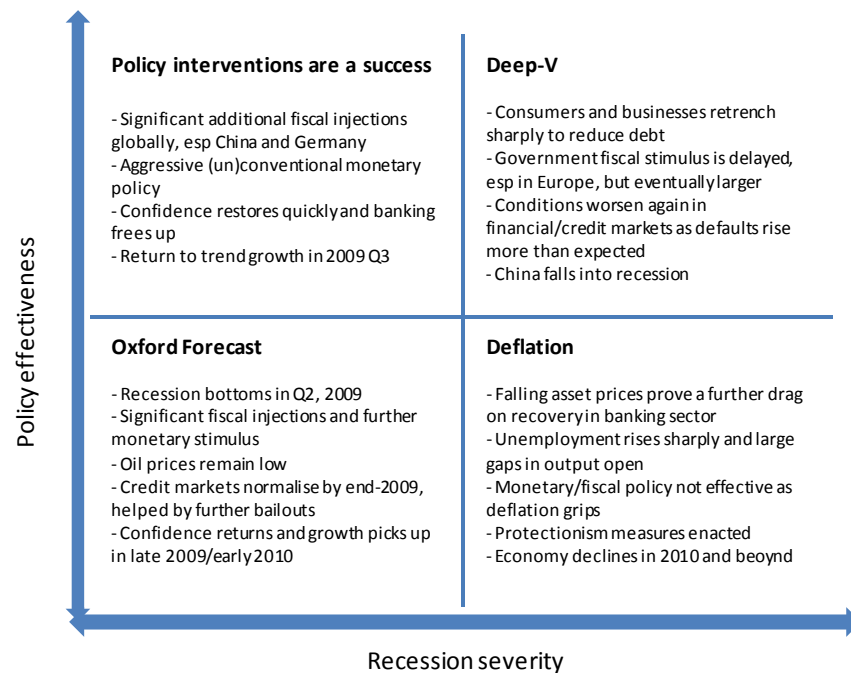
Chart 3.1

Source: Oxford  
Economics / Haver  
Analytics



### 3.3 Global outlook

The unprecedented nature of the crisis and the aggressive global policy response add considerable uncertainty to forecasts for 2009 and beyond. The figure below provides an overview of the possible scenarios that could play out. With policy efforts, particularly unorthodox measures by the Federal Reserve, such as direct purchases of mortgage backed securities, appearing to ease some of the stresses in the credit markets, Oxford Economics believes that the most likely outcome at this stage is for the recession to bottom in mid-2009. The recovery led by the US will be anaemic, with GDP not recovering its mid-2008 level in the US until mid 2010 and not until mid-2011 in the Eurozone and the UK.



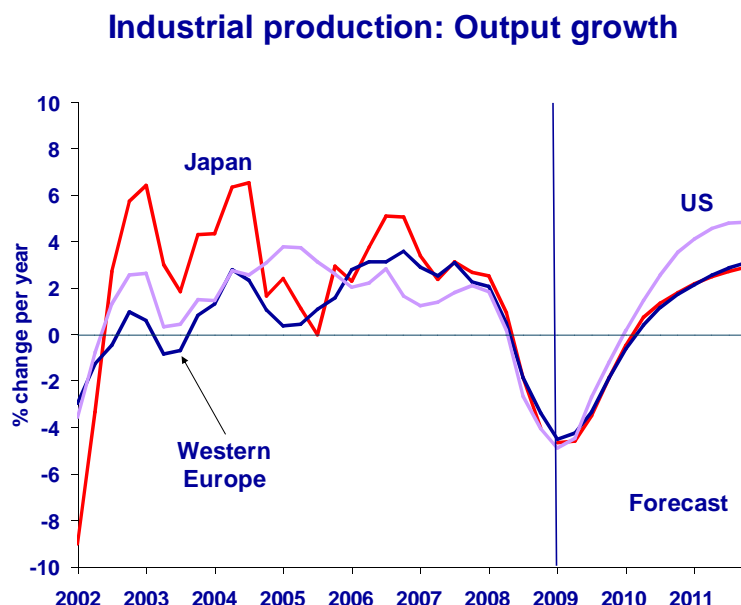
Other outcomes are clearly possible, particularly if credit markets do not normalise or if the fiscal and other stimulus measures are delayed. Indeed a fall into outright deflation, with output continuing to fall through 2010 is a possibility. As a result of its banking / credit market origins we rate the chances of a quick recovery from this recession as the least likely of the scenarios that we have described.

### 3.4 Sectoral Implications

Given its position at the epicentre of the crisis, the financial services sector is one of the most adversely affected. News from the industrial sector is uniformly bad, with output levels across all developed economies showing declines and, at best, slowing sharply in emerging markets. The decline is widespread across sectors with the automobile industry the worst affected. However, other cyclical sectors such as metals, engineering and basic chemicals have all been badly impacted. Even the aerospace sector, which previously had seemed well supported with big order backlogs, is reporting increasingly disturbing news. With orders still generally declining and other indicators, such as the purchasing manager' indexes, hitting new cyclical lows in December it is difficult to see an immediate end to the decline.

**Chart 3.2**

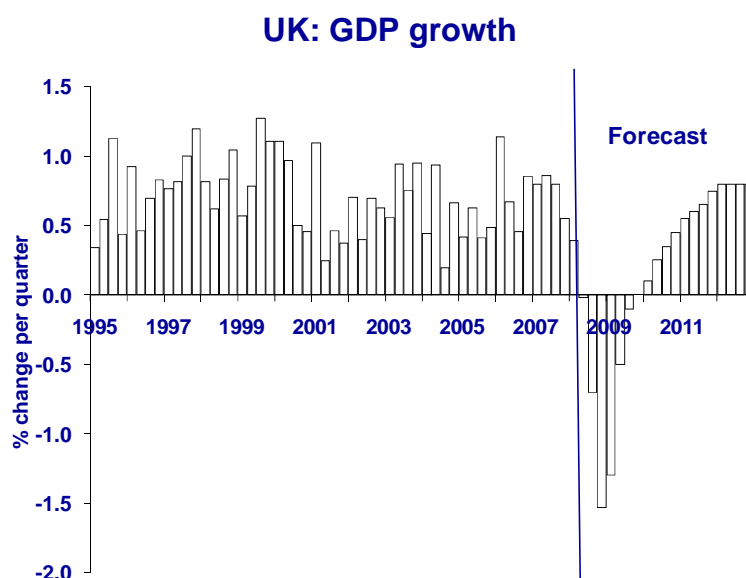
Source: Oxford Economics



As the global financial crisis intensified in late 2008 the UK, with its large financial services sector, was particularly badly affected. GDP growth stalled in Q2 after 15 years of continuous growth and fell by 2.1% in the second half of the year, giving the UK its first recession since 1991. The forecast for the UK economy, on which our forecasts for the SE regions is based, suggests a drop in GDP for the UK in 2009 of 2.9%, with a modest recovery setting in early 2010. The impact of the recession will see sharp falls in investment, consumer spending on durables and house prices. These will be accompanied by increases in unemployment and company liquidations. These effects will be felt right across the UK, with output expected to fall in all regions in 2009. The forecasts suggest that output within Scotland will fall by 2.5% in 2009 – a slightly better performance than the UK as a whole.

**Chart 3.3**

Source: Oxford Economics



## 3.5 UK Industry

Whilst the initial focus in the economic downturn was on the services sectors – particularly financial services and retailing – the manufacturing sector, in line with global experience, is now contracting sharply. The hi-tech, but cyclical, manufacturing sectors such as the automobile, aerospace and engineering sectors are worst affected, with low levels of

incoming new business forcing firms to cut costs through short-time working, plant closures and job cuts. The sharp fall in the value of sterling has, however, improved the cost competitiveness of UK based production and is likely to provide a medium term boost to the sector when demand in the world and UK economy recovers.

**Chart 3.4**

Source: Oxford Economics



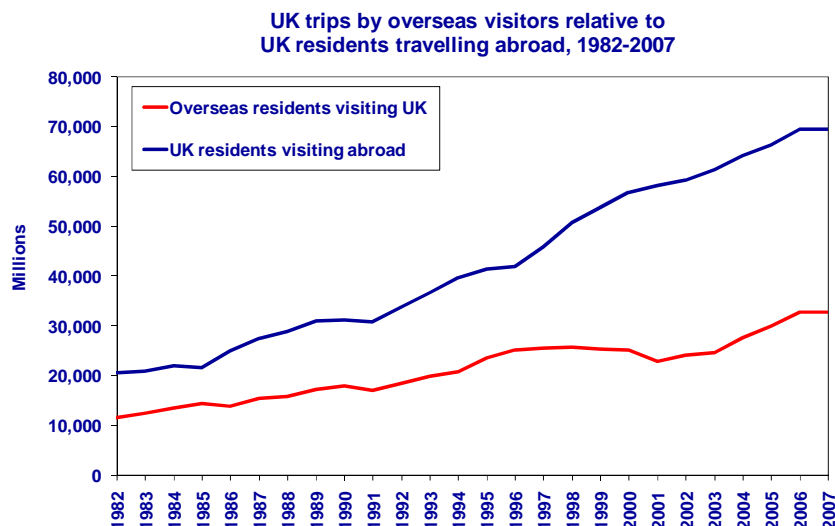
We now expect UK manufacturing output decline to bottom out at -10.8% in Q1 2009, a slightly bigger drop than in the depth of the early 90s recession, and well above the fall of manufacturing output of 4% in 2002 in the wake of the dot-com bust. However, on the basis of our forecast of the recession recovering in the latter half of 2009, a return to positive growth in 2010 is expected with Q3 growth of 0.8% and 1.5% in Q4, rising to the 2-3% range from 2011 onwards.

### 3.6 UK Tourism

The UK tourism sector plays an important role contributing to overall economic growth. Between 1997 and 2007, the number of overseas residents visiting the UK grew by approximately 7.25 billion, an annual growth rate of 2.5%, with a total spend in 2007 of £15.7 billion. However, according to the latest data, the rate of growth from 2006 to 2007 (0.2%) was the slowest in six years. Meanwhile the number of UK residents choosing to travel abroad continues to outstrip the number of incoming visitors from overseas, with the gap widening from the latter half of the 1990s.

**Chart 3.5**

Source: International Passenger Survey



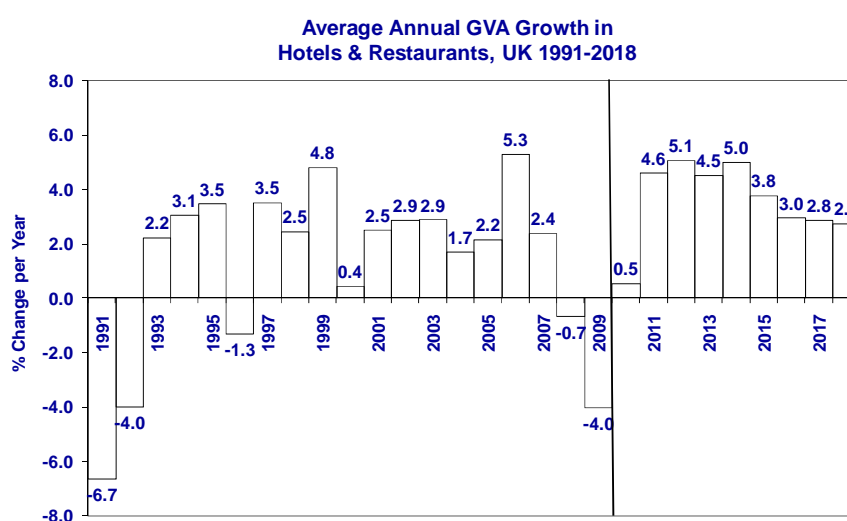
The top 5 locations across the UK for overseas visitors are London (with 15.3 million visitors in 2007), followed by Edinburgh, Manchester, Glasgow and Birmingham. Furthermore, most of the overseas visitors came from Europe, accounting for around 73% of international visitors whilst 13% of the visitors came from North America.

Overall tourism spending in the UK will be impacted by the troubled economic and consumer background, however the sharp fall in the value of sterling will help to soften the blow. The increased cost of overseas holidays may encourage UK residents to switch to domestic locations in 2009 and beyond, while it is likely that a larger number of visitors from the key European market will be attracted to the UK than would otherwise have been the case.

The hotels & restaurants sector is often used as a measure of tourism activity. Chart 3.6 indicates that after a poor 2008, output is expected to fall by another 4% in 2009, with only a marginal pick-up in activity of 0.5% in 2010. In the medium term, however, we expect more positive prospects for the UK tourism sector with average annual growth of 3.9% between 2011-2018.

**Chart 3.6**

Source: Oxford Economics



### 3.7 Scottish outlook

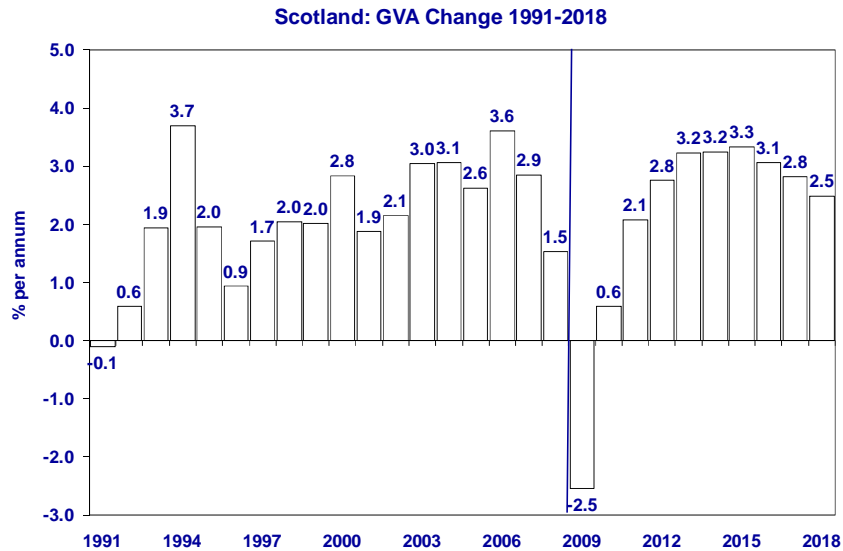
Scotland, with its strong linkages to the UK and global economies, cannot escape the downturn. Falling house prices; rising unemployment and loss of confidence are all in evidence. The professional and financial services bases around the major cities of Glasgow and Edinburgh will be particularly adversely affected in 2009, increasing the vulnerability of the major population centres. Elsewhere the slowing global economy will put the manufacturing base under more pressure, and though tourism (as result of the weak pound) and a significant public sector base will provide an element of support for the labour market, the overwhelming experience will be one of contraction.

#### Output

- Scotland's GVA is expected to contract by 2.5% in 2009, followed by a relatively modest recovery of 0.6% in 2010. This extended period of weakness over the next two years sets up the scope for a rebound in growth to 2.6% per annum in the 2011-2018 period as the economy moves back towards full employment.

**Chart 3.7**

Source: Oxford  
Economics

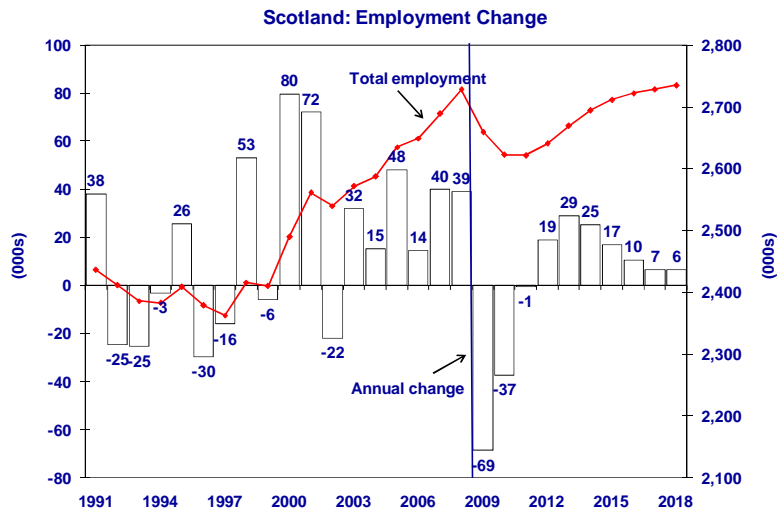


### Employment

- Employment is forecast to fall by approximately 68,700 in 2009 with further contraction expected in 2010 and 2011 before modest growth returns. However it will take until 2017 for employment to return to its 2008 peak. Employment growth over the medium term is expected to be lead by business services, health and other personal services. Financial services employment is not expected to return to its 2008 level until 2018.

**Chart 3.8**

Source: Oxford  
Economics



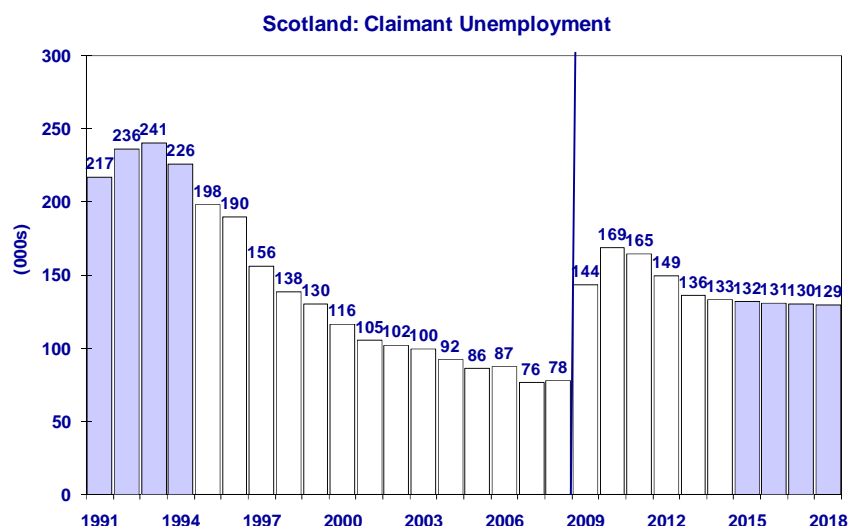
### Unemployment

- In response to the weakening job opportunities, unemployment (claimant count) is forecast to rise above 140,000 in 2009 and reach close to 170,000 by 2010. These figures could be higher but the model predicts a reasonable outflow of migrants who lose their job and do not remain to claim benefits. Unemployment, though falling in the medium term, does not return to below 80,000 until after 2018, though again migration assumptions matter significantly for this forecast.



**Chart 3.9**

Source: Oxford Economics

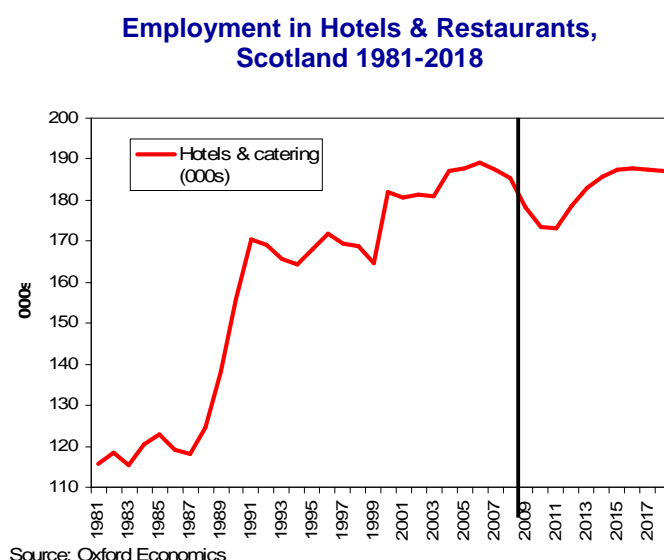


### Tourism

- In 2007, the number of overnight trips to Scotland was just below 16 million, resulting in spending of £4.2bn. The majority of these trips were made by UK residents, representing 82.5% of all trips. Even with the benefit of a lower Sterling exchange rate, the strain of the downturn may see a contraction in the number of overseas visitors in 2009 and 2010. And while domestic UK visitor numbers may increase, spend per trip is likely to remain under pressure.
- Reflecting the difficult economic environment, employment in hotels & restaurants is expected to fall by 12,000 between 2008 and 2011, but recovery thereafter sees employment returning to its 2008 level by 2015.

**Chart 3.10**

Source: Oxford Economics



At the time of writing the economy is heading into perhaps its darkest hours with 2009 looking bleak for the most parts. There is a chance that the economy will exit the year better than it started in terms of confidence and, with a return to global growth and confidence in the domestic housing markets, there could be grounds for optimism in late 2009. However, getting to that point will be painful and recovery in job numbers to their 2008 peak is likely to take to 2017 to be reached.

## 4. Trends in Performance

### 4.1 Introduction

This chapter provides an overview of economic trends within Dundee City Region since 1999. It focuses specifically on the performance of the region in relation to the purpose targets set out in the Government Economic Strategy for Scotland. The remainder of the chapter is set out as follows:

- Key Performance Indicators
- Economic Growth
- Increasing Productivity
- Increasing Labour Market Participation
- Increasing Population
- Ensuring that Growth is *Shared* and *Sustainable*

Chapter 9 sets out our economic forecasts for the region. However, we have made reference to some of the analysis contained within that chapter in the conclusions of each of the sections above, particularly where this may help provide an understanding of the region's potential to meet the GES targets.

## 4.2 Key Performance Indicators

	Dundee City Region	Scotland
<b>Economic Growth</b>		
Total GVA 2006 (£bn)	£6.4	£93.4
Average Annual GVA Growth Rate 1999-2006	2.1%	2.8%
Total Exports 2006 (£bn)	£1.2	£20.6
Change in Export Sales 2002 -2006	-5%	3%
<b>Productivity</b>		
GVA per Employee 2006	£33,800	£35,200
Change in GVA per Employee 1999-2006	10%	10%
% school leavers entering positive destinations 2007	87%	86%
% adults with degree level qualifications 2007	34%	33%
% adults with no qualifications 2007	13%	14%
Businesses per 1,000 adults 2007	32	33
Business Birth Rate per 1,000 adults 2006	2.4	2.8
<b>Labour Market Participation</b>		
Employment Rate 2007	77%	76%
Unemployment Rate 2007	5%	5%
Economic Inactivity Rate 2007	19%	20%
Self Employment Rate 2007	9%	8%
Jobseekers Allowance Claimant Rate 2008	2.4%	2.4%
Incapacity Benefit Claimant Rate 2008	7.7%	8.4%
<b>Population</b>		
Total Population 2007	466,300	5,144,200
Population Change 1999-07	4,100	72,300
% Population Change 1999-07	0.9%	1.4%
% working Age Population Change 1999-07	1.1%	2.6%
Projected Population 2018	483,100	5,294,300
% Change Projected Population 2008-18	3.3%	2.7%
<b>Solidarity &amp; Cohesion</b>		
Median Weekly Wages 2008	£367	£375
% Change in Weekly Wages, 1999-2008	42%	36%
% residents living in 15% most deprived data zones	13%	15%
<b>Sustainability</b>		
CO <sup>2</sup> emissions per head of population 2006	8.8	8.5
% waste recycled or composted 2007/08	35%	32%

*\*Sources for the above data can be found in Appendix 3*

## 4.3 Economic Growth

Economic growth is a key indicator of wealth creation and economic performance. The Government Economic Strategy notes Scotland's economic growth has underperformed relative to both the UK and other small European countries in recent decades. A key target set out in the Strategy is to **raise the country's economic growth rate to the UK level by 2011**.

This section focuses on economic growth within Dundee City Region and covers:

- Total GVA
- GVA by Sector
- GVA Growth
- GVA Growth by Sector
- Exports

### 4.3.1 Total GVA

Total economic output (as measured by Gross Value Added) from Dundee City Region amounted to £6.4bn in 2006<sup>1</sup>. This represented 7% of Scotland's total GVA, slightly below the region's share of national jobs (8%).

### 4.3.2 GVA by Sector

Table 4.1 shows economic output by broad industry sector in Dundee City Region, relative to Scotland as a whole. It shows that:

- *Education & health* is the largest sector in the region in terms of wealth generation, accounting for 19% of all output in 2006 – above the national average of 15%.
- The region also has a substantial *retail & catering* sector, which accounts for 16% of all economic output, highlighting the importance of tourism to the regional economy.
- The *manufacturing* sector in Dundee City Region accounts for a slightly higher share of GVA than across Scotland as a whole. In 2006, this sector was responsible for generating 15% of total economic output, compared to 14% nationally.
- *Financial & business services* accounts for 27% of national economic output. This key industry is significantly underrepresented in Dundee City Region, generating just 18% of total GVA in 2006.

**Table 4.1**

Source: Oxford Economics

<b>GVA by Sector 2006</b>				
	<b>Dundee City Region</b>		<b>Scotland</b>	
	<b>Total (£m)</b>	<b>%</b>	<b>Total (£m)</b>	<b>%</b>
Agriculture	180	3%	1,270	1%
Extraction	20	0%	1,630	2%
Manufacturing	950	15%	12,990	14%
Utilities	260	4%	2,230	2%
Construction	480	7%	6,700	7%
Retail & catering	1,060	16%	12,640	14%
Transport & communications	340	5%	6,020	6%
Financial & business services	1,160	18%	24,870	27%
Public admin & defence	400	6%	5,920	6%
Education & health	1,220	19%	14,330	15%
Other services	360	6%	4,750	5%
<b>Total</b>	<b>6,420</b>	<b>100%</b>	<b>93,360</b>	<b>100%</b>

<sup>1</sup> Source: Oxford Economics. This data is based on the latest UK National Accounts and refers to GVA in current prices.

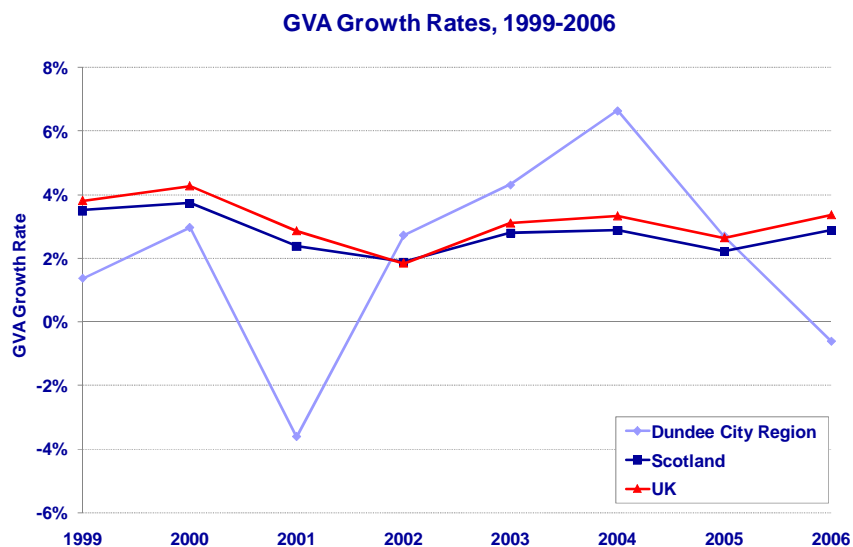
### 4.3.3 GVA Growth

Chart 4.1 shows that there were wide fluctuations in GVA growth rates within Dundee City Region between 1999 and 2006. The region temporarily outperformed the Scottish and UK averages on this measure for three years between 2002 and 2004, but growth rates were below the national averages for each of the other years. **The region is therefore currently falling short of the national target of raising the economic growth rate to the UK level by 2011.**

The Dundee City Region economy grew at an average annual rate of 2.1% between 1999 and 2006. This compares with the equivalent growth rates of 2.8% for Scotland and 3.2% for the UK.

Chart 4.1

Source: Oxford Economics



### 4.3.4 GVA Growth by Sector

Table 4.2 shows change in GVA by broad industry sector in Dundee City Region between 1999 and 2006.

- There were increases in output across almost all industry sectors in the region over the period. *Financial & business services* was the fastest growing sector in absolute terms, with an increase of £260m – growth of 29%.
- *Retail & catering* also grew substantially adding £230m more to the economic output total from the region in 2006 than in 1999, a growth rate of 29%.
- *Agriculture* (+44%), *transport & communications* (+37%) and *construction* (+19%) also grew substantially, resulting in a combined increase of £230m.
- Output from *manufacturing* increased by 18% between 1999 and 2006, against a backdrop of falling employment (see Table 6.3). This is indicative of a move within the industry towards higher value added activities and increasing levels of productivity.
- The only industries to contract over the period were *extraction* and *public admin & defence*, though the actual numbers involved were relatively low.

Table 4.2

Source: Oxford  
Economics

GVA by Industry in Dundee City Region (£m)				
	1999	2006	Change 1999-2006	
			No.	%
Agriculture	130	180	60	44%
Extraction	30	20	-10	-35%
Manufacturing	800	950	150	18%
Electricity, gas & water	250	260	10	4%
Construction	400	480	80	19%
Retail & catering	820	1,060	230	29%
Transport & communications	250	340	90	37%
Financial & business services	900	1,160	260	29%
Public administration & defence	410	400	-10	-1%
Education & health	1,210	1,220	10	1%
Other personal services	350	360	10	3%
<b>Total</b>	<b>5,550</b>	<b>6,420</b>	<b>870</b>	<b>16%</b>

figures in table have been individually rounded to the nearest 10

### 4.3.5 Exports

Exports refer to the sale of goods and services to other countries. The amount of export sales generated by an economy is believed to have an impact on wealth creation and GVA growth. The National Performance Framework for Scotland has set a national target to **grow exports at a faster average rate than GDP**.

The latest export figures from the Global Connections Survey, produced by the Scottish Government, were published in March 2009. They are for 2007 and will be included in the national review as part of this economic review series. They show an overall increase of 4% in the value of exports from Scotland between 2002 and 2007. These latest figures are not available at the regional level and so the analysis contained within this section is based on 2006 figures, which are in current prices.

In 2006, the value of export sales from Dundee City Region amounted to £1.2bn. This represented just 6% of Scotland's total export sales of £20.6bn, lower than the region's share of national jobs (8%).

Table 4.3 shows change in the level of exports by industry from Dundee City Region between 2002 and 2006. The value of export sales from the region fell by 1% over the period, in contrast to an increase of 3% across Scotland as a whole.

This fall can be mainly attributed to a rapid decline in *manufactured* exports, combined with fairly limited growth in *service* exports. The value of export sales from *electronics* fell by 61% between 2002 and 2006, much faster than the decline of 39% in the sector across Scotland as a whole over the period.

The decline in *manufactured* exports was partly offset by increases in export sales from *metals* and *other manufacturing*. There was also some growth in *retail & catering* and *financial & business services* exports, but this was insufficient to compensate for the rapid decline in *electronics*.

**Table 4.3**

Source: Global  
Connections Survey,  
Scottish Government

Dundee City Region Exports by Industry (£m)*				
	2002	2006	Change 2002-06	
			No.	%
Primary & Construction Industries	21	11	-10	-48%
Manufacture of Food & Drink	158	143	-15	-9%
Manufacture of Chemical Products	231	152	-79	-34%
Manufacture of Metals Products	111	267	156	141%
Manufacturing of Electronics	357	141	-216	-61%
Other Manufacturing	95	149	54	57%
Retail & Catering	140	220	80	57%
Financial & Business Services	90	103	13	14%
Other Services	41	44	3	7%
<b>Total Exports</b>	<b>1,238</b>	<b>1,230</b>	<b>-8</b>	<b>-1%</b>

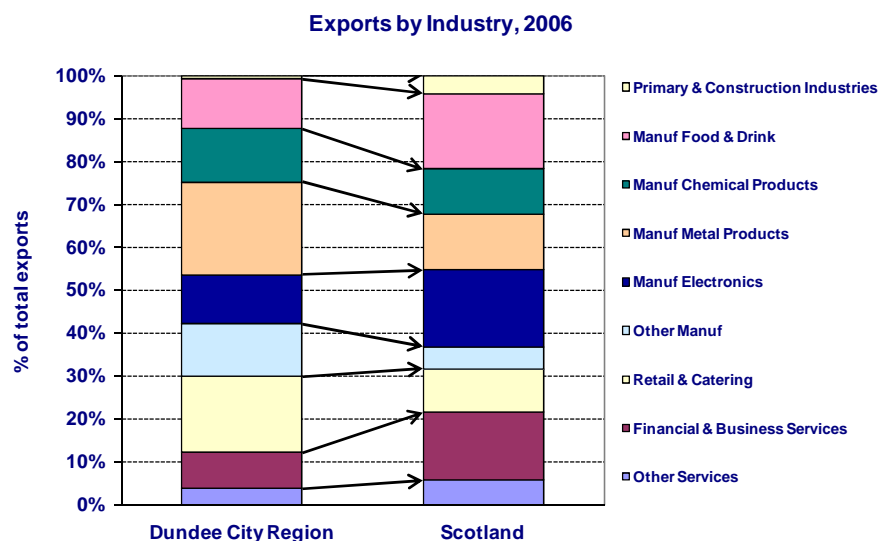
\* Figures refer to value of exports in current prices

Chart 4.2 shows 2006 exports by industry from Dundee City Region, relative to Scotland as a whole. *Retail & catering* is the largest exporting industry within the region, accounting for 18% of the total in 2006, much higher than the equivalent proportion for Scotland (10%). This clearly demonstrates the importance of tourism to the regional economy.

The other key exporting sectors in the region are *metals*, *chemicals* and *other manufacturing*, which combined accounted for nearly half (46%) of all exports from the region in 2006. The region generates relatively little exports from *financial & business services*, which is a key exporting sector and driver of growth nationally.

**Chart 4.2**

Source: Global  
Connections  
Survey, Scottish  
Government



#### 4.3.6 Conclusions – Economic Growth

***Despite some fluctuation, economic growth in Dundee City Region lagged behind the Scottish and UK averages throughout much of the period between 1999 and 2006.***

- GVA growth within Dundee City Region underperformed relative to both Scotland and the UK for most of the period between 1999 and 2006. The region is therefore currently falling short of the national target of raising the country's economic growth rate to the UK level by 2011.
- The region's relatively poor performance on this measure can be partly explained by the fact that it has a higher dependence on several declining *manufacturing* sectors such as *electronics*, and less representation in key growth sectors such as *financial & business services*, than across Scotland as a whole.
- Growth has been mainly driven by the service sector, with particularly large increases in output from *financial & business services* and *retail & catering*. However, total output from the *manufacturing* sector has also been increasing, against a backdrop of falling employment.
- Export success is one of the crucial building blocks of economic growth as trading with others is how an area increases its wealth. The level of foreign exports from Dundee City Region is lower than the region's share of national jobs and fell between 2002 and 2006 in contrast to an increase across Scotland.
- This decline has been largely the result of rapid falls in export sales from *electronics* and some other manufacturing sectors, combined with limited growth in exports from *financial & business services*.
- If the region is to help contribute to the national target of increasing export sales at a rate faster than GDP, a better performance in terms of service sector exports is likely to be required.

#### 4.4 Increasing Productivity & Competitiveness

The Government Economic Strategy identifies increasing productivity and competitiveness as one of the principal drivers of economic growth. In 2005, Scotland (14<sup>th</sup> out of 30) and the UK (11<sup>th</sup> out of 30) both ranked in the second quartile for productivity as measured by GVA per employee. The Scottish figure is around 96% of the UK figure. The government has set a long-term target for Scotland **to rank in the top quartile for productivity amongst our key trading partners in the OECD by 2017.**

This section focuses on Dundee City Region's performance in terms of productivity and competitiveness and covers:

- Productivity
- Productivity by Industry
- Qualifications of the workforce
- The business base
- Investment



#### 4.4.1 Productivity

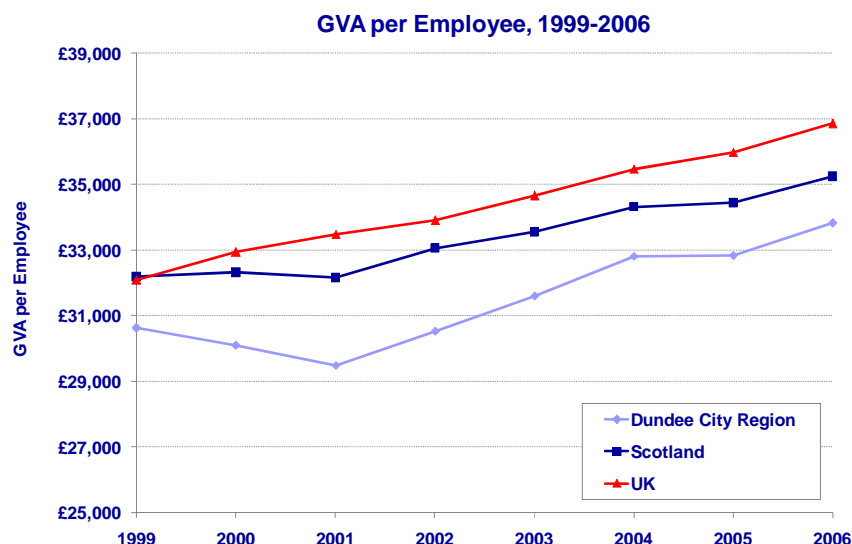
***Productivity levels within Dundee City Region have been consistently lower than across Scotland and the UK since 1999.***

Productivity is a central driver of sustained economic growth and often a key target for economic development policy. A common measure of productivity is GVA per employee, which is calculated by taking the economic output of an area (GVA) and dividing it by the total number employees. Chart 4.3 shows trends in productivity levels within Dundee City Region, Scotland and the UK since 1999.

- GVA per employee in Dundee City Region amounted to £33,800 in 2006. This was below the equivalent figures of £35,200 for Scotland and £36,900 for the UK<sup>2</sup>.
- Productivity levels within the region were consistently below both the Scottish and UK averages between 1999 and 2006.
- The level of GVA per employee in Dundee City Region increased by 10% between 1999 and 2006, in line with the increase across Scotland, but slower than the increase of 15% across the UK. This has led to a widening of the productivity gap with the UK, both within the region and across Scotland as a whole.

**Chart 4.3**

Source: ONS and  
SLIMS / Oxford  
Economics  
Calculations



#### 4.4.2 Productivity by Industry

***Productivity levels in Dundee City Region are above the Scottish average within agriculture, the public sector and other personal services, but below average within all other industries.***

Chart 4.4 shows productivity levels in Dundee City Region by broad industry, relative to Scotland as a whole. It shows that:

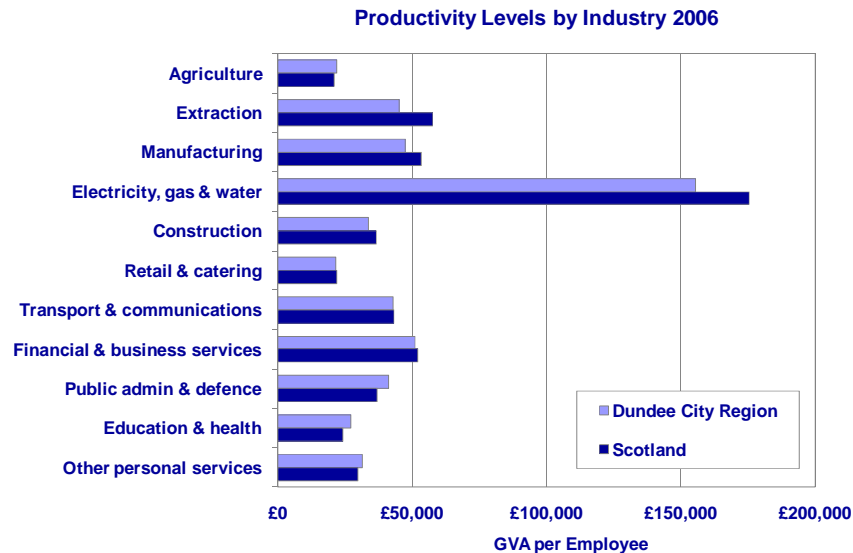
- *Electricity, gas & water* is the most productive sector in terms of the level of GVA generated per employee, both within Dundee City Region and Scotland as a whole. However, in employment terms, the sector is relatively small accounting for just 1% of all jobs in the region.
- *Financial & business services* is the second most productive sector in Dundee City Region. GVA per employee in the sector amounted to £50,900 in 2006, relative to the Scottish average of £52,000.

<sup>2</sup> Figures are calculated by dividing total GVA (2006 prices) by the total number of employees + self-employed (both full and part-time workers)

- GVA per employee within the *manufacturing* sector in Dundee City Region (£47,400) was 11% lower than the average for Scotland as a whole in 2006.
- Productivity levels within the public sector in Dundee City Region are above the Scottish average, with GVA per employee in both *education & health* and *public admin & defence* around 12% higher than across Scotland as a whole.
- The region also has slightly above average levels of productivity within *agriculture* and *other personal services*.

**Chart 4.4**

Source: ONS and SLIMS / Oxford Economics Calculations



#### 4.4.3 Qualifications of the workforce

**Relative to Scotland, Dundee City Region residents are more likely to be educated to degree level and less likely to have no qualifications at all.**

Workforce skills and qualifications are believed to have a direct impact on productivity levels and are a key measure of economic competitiveness. Table 4.4 shows the current breakdown of qualifications amongst the working age population of Dundee City Region. Just over a third of all working age residents in the region were qualified to degree level (NVQ Level 4) or above in 2007 – this was above the averages for both Scotland and UK.

The industrial restructuring that has occurred throughout the UK in recent decades has led to increased demand by employers for individuals with higher levels of skills and qualifications, leaving limited opportunities available to those with no qualifications at all. The share of residents within Dundee City Region with no qualifications is in line with the UK average and slightly lower than that for Scotland.

**Table 4.4**

Source: Annual Population Survey, ONS

Qualifications of the Workforce, 2007*			
Highest Level Qualification:	Dundee City Region	Scotland	UK
NVQ Level 4+	34%	33%	29%
NVQ Level 3	15%	15%	16%
Trade Apprenticeships	7%	6%	5%
NVQ Level 2	14%	14%	16%
NVQ Level 1	10%	10%	14%
Other Qualifications	6%	7%	9%
No Qualifications	13%	14%	13%

\* % of working age population (males aged 16-64, females aged 16-59)

## School Leavers

The Government Economic Strategy has set a target **to increase the proportion of school leavers in positive and sustained destinations (FE, HE, employment or training).**

Table 4.5 shows the destinations of school leavers in Dundee City Region relative to Scotland in 2007. The proportion of school leavers in the region entering HE is below the national average, whilst a much higher proportion of school leavers from the region continue their studies within FE when compared to Scotland as a whole – 31% relative to 23%. School leavers from the region are less likely to go into employment than across Scotland as a whole, whilst the share entering unemployment is broadly in line with the national average.

**Table 4.5**

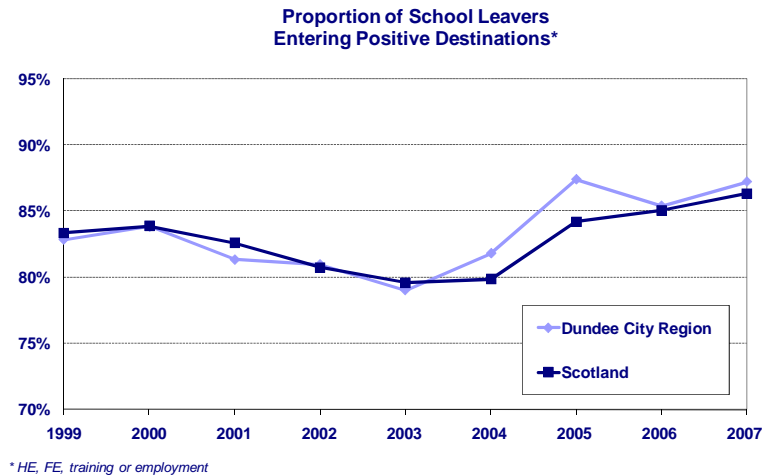
Source: Destinations of School Leavers Survey, Scottish Government

Destination of School Leavers, 2007		
	Dundee City Region	Scotland
Higher Education	27%	30%
Further Education	31%	23%
Training	5%	5%
Employment	25%	28%
Unemployment	11%	12%
Unknown	2%	1%

Chart 4.5 shows change in the proportion of school leavers entering positive destinations in Dundee City Region and Scotland between 1999 and 2007. The proportion of leavers going into positive destinations has been growing in recent years, following a period of decline between 2000 and 2003, both in the region and Scotland as a whole. If this trend can be maintained, the region will be on course to make a positive contribution to the national target.

**Chart 4.5**

Source: Destinations of School Leavers Survey, Scottish Government



## More Choices, More Chances

The Scottish Government launched the *More Choices, More Chances* strategy in 2006, which sets out an action plan aimed at reducing the number of young people aged 16 to 19 years old that are not in employment, education or training. **Dundee City Region has an above average proportion of young people in this category when compared to Scotland as a whole.**

Table 4.6 shows that there were 2,220 16-19 year olds in Dundee City Region not in employment, education or training in 2006. This amounted to 9.3% of all people in this age group, slightly higher than the Scottish average of 8.9%.

There was a decrease of 15% in the number of young people in this category in Dundee City Region between 2003 and 2006, in line with the rate of decline witnessed across Scotland over the period.

**Table 4.6**

Source: Annual Population Survey & DWP, Scottish Government

<b>16-19 Year Olds not in Employment, Education or Training</b>					
	<b>2003</b>	<b>2006</b>	<b>Change 2003-2006</b>		<b>Rate 2006</b>
			<b>No.</b>	<b>%</b>	
Dundee City Region	2,610	2,220	-390	-15%	9.3%
Scotland	27,550	23,530	-4,020	-15%	8.9%

### **Graduates**

Over the past decade, there has been a rapid expansion in the Higher Education sector across the UK in recognition of the key role that graduates play in increasing productivity and competitiveness.

Table 4.7 shows that a total of 4,300 Dundee City Region residents graduated from universities across the UK in 2007<sup>3</sup>. This was 23% higher than the total in 1996, slower than the increase of 39% across Scotland as a whole over the period. Despite this, the rate of new graduates from the region (10 per 1,000 working age residents) remains higher than the Scottish average (9 per 1,000).

**Table 4.7**

Source: Graduate Destinations Survey, HESA

<b>Total Graduates</b>				
	<b>1996</b>	<b>2007</b>	<b>Change 1996-07</b>	
			<b>No.</b>	<b>%</b>
Dundee City Region	3,500	4,300	800	23%
Scotland	374,900	519,800	144,900	39%

### **Graduate Destinations**

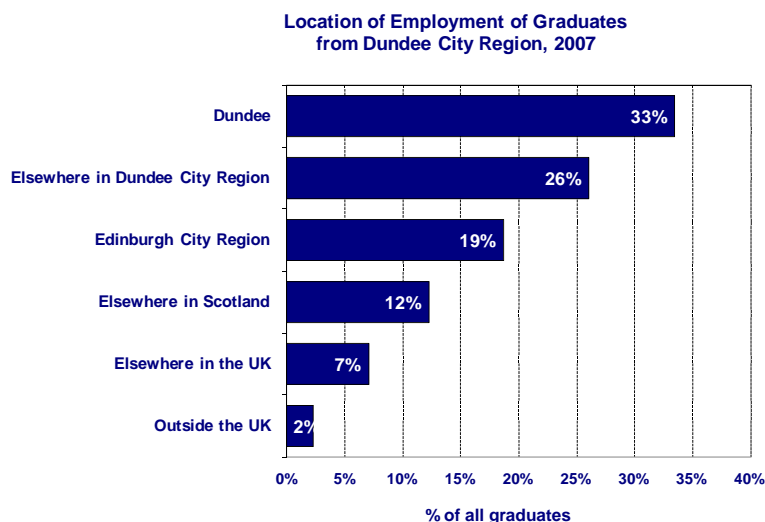
Chart 4.6 shows the location of the first job for 2007 graduates originally from Dundee City Region:

- A third of all graduates from the region found their first job in Dundee immediately following graduation;
- A further quarter went elsewhere within the region;
- Edinburgh City Region attracted almost a fifth of all graduates originally from Dundee City Region in 2007;
- 12% of graduates went elsewhere in Scotland,
- Just 9% left the country – across Scotland, 11% of new graduates left the country in 2007.

<sup>3</sup> It should be noted that this analysis is resident-based – that is, it refers to residents of the region graduating from universities across the UK, rather than the number of graduates from universities located within the region.

**Chart 4.6**

Source: Graduate Destinations Survey, HESA



This analysis shows that less than 60% of graduates originally from Dundee City Region find their first job within the region. This relatively low graduate retention rate may be indicative of a lack of graduate opportunities locally. Although, it should be noted that, whilst a relatively large proportion find work in Edinburgh City Region, many of these may continue to live in Dundee City Region.

### **Graduate Employment**

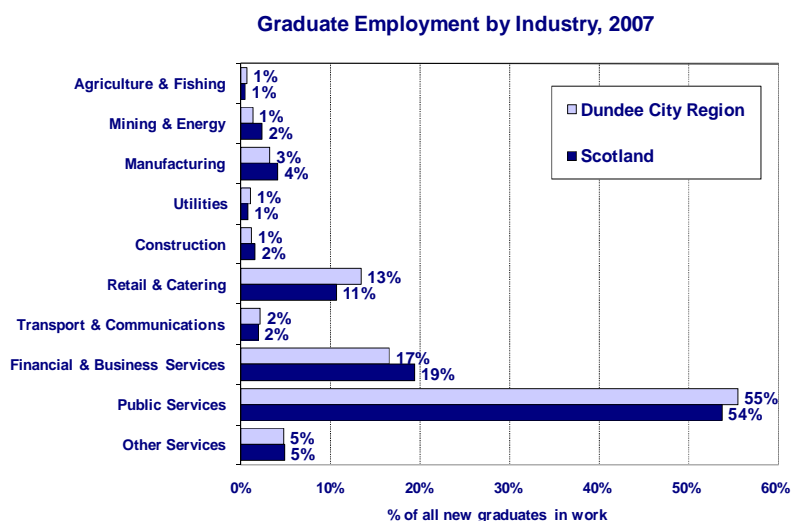
In line with the trend across Scotland as a whole, the majority (75%) of new graduates from Dundee City Region enter the 'traditional' graduate roles of *managerial*, *professional* or *associate professional* jobs.

Chart 4.7 shows graduate employment by industry in Dundee City Region and Scotland in 2007. It shows that more than half of all new graduates from the region find their first job in the public sector, slightly higher than the Scottish average.

The second most popular industry of employment for new graduates from Dundee City Region is *financial & business services*, accounting for 17% of the total in 2007. This was lower than across Scotland as a whole, where 19% of new graduates enter *financial & business services*. Relative to Scotland, a higher proportion of new graduates from Dundee City Region find their first job within *retail & catering*.

**Chart 4.7**

Source: Graduate Destinations Survey, HESA



It should be noted that these figures are gathered at a relatively early stage (6 months) following graduation and the industry of employment for many new graduates at this stage is not necessarily indicative of where they will remain throughout the remainder of their working life.

#### 4.4.4 The Business Base

The Government Economic Strategy identifies the key role that enterprise must play to help Scotland achieve its productivity target and the National Performance Framework sets a target of **growing the business start up rate**.

##### VAT Registrations

Table 4.8 shows that there were 12,300 VAT registered businesses in Dundee City Region in 2007, an increase of 7% from the total in 1999. This was slower than the equivalent rate of 10% for Scotland, and just half the rate of increase of 14% for the UK as a whole.



**Chart 4.8**

Source: Inter-Departmental Business Register (IDBR), ONS

Business Stocks, 1999-2007				
	1999	2007	Change 1999-2007	
			No.	%
Dundee City Region	11,500	12,300	800	7%
Scotland	125,000	136,900	11,900	10%
UK	1,710,600	1,956,800	246,100	14%

##### Business Density

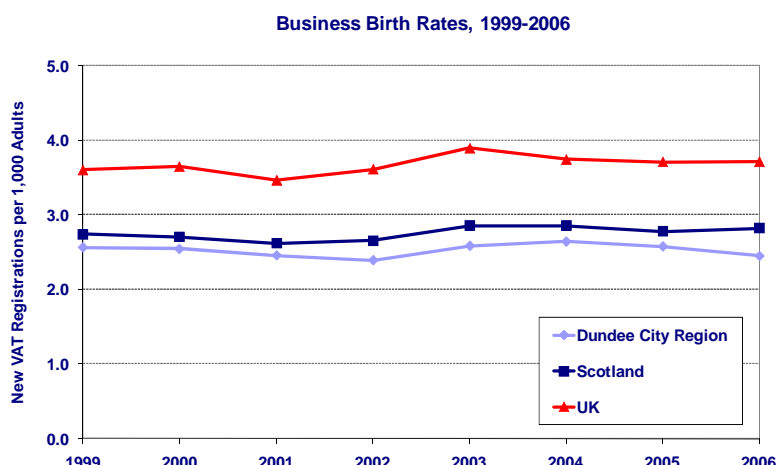
Chart 4.8 shows business density levels, in terms of the number of businesses per head in Dundee City Region, Scotland, and the UK. There were 32 VAT registered businesses per 1,000 people aged 16+ in the region in 2007. This was in line with the equivalent figure for Scotland, but some way below the UK figure of 40 per 1,000.

##### Business Birth Rate

Chart 4.9 shows that the business birth rate in Dundee City Region has been slightly below the Scottish average, and well below the UK average, since 1999. The company birth rate stood at 2.4 per 1,000 adults in 2006, lower than the rate of 2.6 per 1,000 in 1999. This will need to improve if the region is to make a positive contribution to the national target of increasing the business start up rate.

**Chart 4.9**

Source: Inter-Departmental Business Register (IDBR), ONS



#### 4.4.5 Investment

##### *Private Equity Investment*

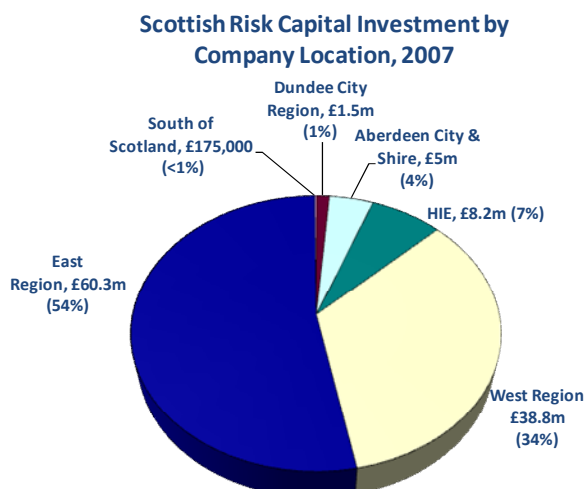
Developing a supportive business environment is one of the key strategic priorities of the Scottish Government. Sitting below this priority is a commitment to provide *'responsive and focused enterprise support to increase the number of highly successful, competitive businesses'*.

One of the key indicators of the competitiveness of a region is the level of risk capital attracted by its business base. Flows of capital are global and regions compete internationally to attract investment. A study into the Risk Capital Market in Scotland<sup>4</sup> estimated that a total of £114m of early stage risk capital was invested in Scottish businesses in 2007.

Chart 4.10 shows how this investment was distributed across the different regions in Scotland. The East & West Regions dominate in terms of the value of investments made, accounting for just under £100m (88%) of all private investments in 2007. Dundee City Region attracted a relatively low share of the risk capital investment market in 2007, amounting to £1.5m or just 1% of the total.

**Chart 4.10**

Source: Scottish Enterprise



<sup>4</sup> Scottish Enterprise (2008) – *The Risk Capital Market in Scotland 2005 – 2007*. This document reported on investment in the regional operations area of East, West, South, Dundee City Region and Aberdeen. These are comparable to the geographical boundaries of the city regions.

The report also analysed the geographic origins of risk capital investments in Scotland between 2005 and 2007. It found that, of the 400 or so investments made over this period, 10% (a total of 40) came from investors based in Dundee City Region. The majority of investments from Dundee City Region were made in the East Region.

Regional level information on private equity investment in the key sectors is limited<sup>5</sup>. However, information on the sectoral preferences of geographically based investors is available. Risk capital investment from investors based in Dundee City Region is largely concentrated within *enabling technologies* (80%) and, to a lesser extent, *life sciences* (13%). This is similar to the national trend, where these two industries tend to dominate investment.

### ***Public Equity Investment in Partnership with Private Sector***

Scottish Enterprise has the facility to make investments alongside the private sector, primarily through the Scottish Co-Investment Fund (SCF) and Scottish Venture Fund (SVF). In line with the level of private equity investment, public equity investment in Dundee City Region is also comparatively low. Analysis of investment activity shows that, of the 59 'deals' that SE were involved in, three were in the Dundee City Region in 2007. This investment totalled £375,000, and accounted for nearly two-fifths (38%) of all investment (public & private investment) in the area in 2007.

### ***Inward Investment***

Inward investment refers to the movement of capital for specific investment purposes where the investor gains control over the investment asset. It can involve companies setting up or buying operations within another region or country and can encompass new projects, expansions of existing projects, or mergers and acquisitions activity. The level of inward investment attracted by a region is a key indicator of competitiveness, though it should be noted that it often varies widely over time meaning that year on year trends can appear quite volatile.

This section provides an overview of known inward investment activity within Dundee City Region, based on data provided by Scottish Enterprise, and covers:

- Total Investment
- Investment by Sector
- Employment Impacts of Investment
- Origin of Investment

### ***Total Investment***

In 2007/08, the total value of known inward investment within Dundee City Region was £1.1m, accounting for less than 1% of the Scottish total of £263.8m. The proportion of Scottish inward investment attracted by Dundee City Region was therefore below the area's share of national economic output (7%).

The value of inward investment in the region in 2007/08 was more than three times higher than the total in 2004/05, as shown in Table 4.9. This was much faster than the increase of 87% across Scotland as a whole over the period. However, it should be noted that these figures are based on a relatively small number of known investments and show wide variations year on year. Despite this, it is clear that the region successfully managed to increase investment levels over the period.

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<sup>5</sup> See Section 6.3 for a detailed discussion of key sectors



**Table 4.9**

Source: Scottish Enterprise

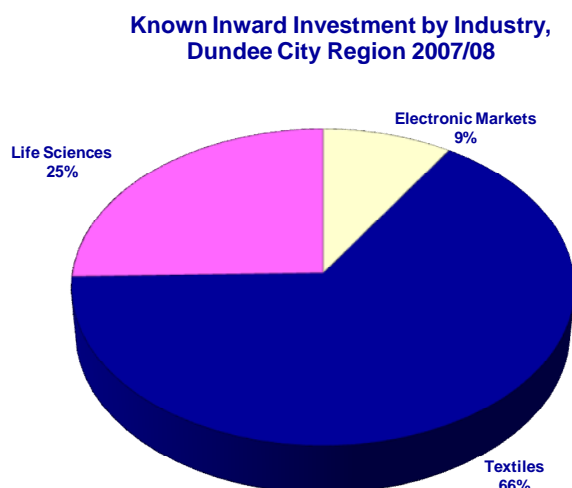
Inward Investment (£m)				
	2004/05	2007/08	Change 2004/05 – 2007/08	
			No.	%
Dundee City Region	£0.3	£1.1	£0.8	309%
Scotland	£140.8	£263.8	£123.0	87%

### Investment by Sector

Chart 4.11 shows how the total value of known inward investment within Dundee City Region was distributed by industry sector in 2007/08. It shows that investment in the region was concentrated within only a few key industries. *Textiles* accounted for two thirds of the total, whilst a further 25% was in *life sciences*. The only other sector to attract substantial inward investment was *electronic markets* (9%).

**Chart 4.11**

Source: Scottish Enterprise



### Employment Impacts of Investment

The £1.1m of inward investment in Dundee City Region in 2007/08 generated a total of 42 new jobs and safeguarded a further four. This means that, in total, the monies were responsible for retaining almost 50 jobs in the region. Of the jobs created or safeguarded through the investment, half were 'high value' and 30% were salaried at £30k or more.

This analysis of the employment impacts of inward investment demonstrates its importance in terms of generating high value / high productivity jobs for the region.

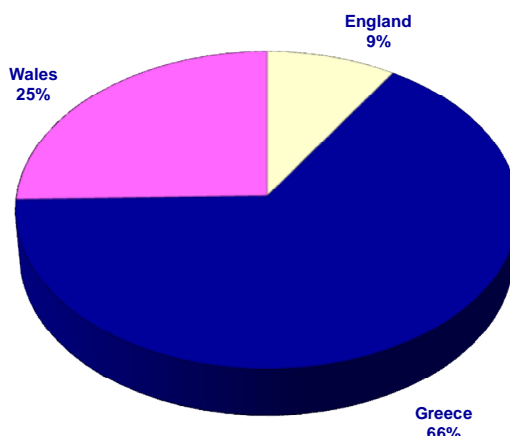
### Origins of Investment

Chart 4.12 shows how the value of known inward investment in Dundee City Region was split by the origin of investors in 2007/08. Two thirds of the total came from Greece, though it should be noted that this was due to one investment in Forfar. The remainder came from elsewhere in the UK, with the majority from Wales.

Chart 4.12

Source: Scottish Enterprise

Origin of Known Inward Investment,  
Dundee City Region 2007/08



#### 4.4.6 Innovation

Innovation is believed to be a key driver of increased productivity and hence economic growth. However, measuring the level of innovation in an economy has traditionally been challenging. A recent NESTA paper<sup>6</sup> asserted that existing innovation metrics fail to capture the 'hidden innovation' which takes place in services, the public sector and creative industries. Traditional R&D expenditure measures are derived from a time when governments spent heavily on large scale military and scientific projects and are therefore poorly suited to adequately measure innovation in a service based economy NESTA argue.

Innovation is covered in detail in the national review and is examined through three measures widely used as a proxy for innovation. These are:

- Business Expenditure on Research and Development (BERD)
- The Community Innovation Survey
- The research quality of Higher Education Institutions.

Data on BERD at the Dundee City Region level is incomplete and the Community Innovation Survey only provides information at the national level. For these reasons, this section focuses on the research quality of Higher Education Institutions (HEIs) in the Dundee City Region.

##### **Research Quality of Higher Education Institutions (HEIs)**

Universities are key drivers of innovation through the research they undertake and disseminate into the wider economy. The Research Assessment Exercise (RAE) assesses the quality of research in HEIs in the UK, enabling the main funding bodies to make informed decisions about where to allocate research grants. Based on the findings of the RAE (2008), the Times Higher Education Supplement produced a 'Table of Excellence' which ranked all the 132 HEIs in the UK<sup>7</sup>.

The 2008 table shows that two of the region's HEIs were ranked within the top five in Scotland. The University of St. Andrews was ranked 14<sup>th</sup> in the UK, making it the second highest ranked HEI in Scotland, just behind the University of Edinburgh, while the University of Dundee was ranked 40<sup>th</sup> in the UK, placing it fifth in Scotland.

<sup>6</sup> NESTA (National Endowment for Science, Technology and the Arts) Policy Briefing – Measuring Innovation – July 2008

<sup>7</sup> Times Higher Education Supplement (2008) – Table of Excellence

In terms of research income, the region's three HEIs attracted a total of £74.8m or 18% of the research grants and contracts awarded in Scotland in 2006/07. The University of Dundee was the best performing in the region securing £45.8m, in comparison to £27.8m at St. Andrews and £1.2m at Abertay.

**Table 4.10**

Source: Times  
Higher  
Education  
Supplement,  
HESA

<b>HEI Rankings and Research Income 2006/07</b>			
<b>University</b>	<b>RAE 2008 - THE Rank*</b>	<b>Total Research Grants &amp; Contracts 2006/2007 (£000's)</b>	<b>% of Total Research Grants &amp; Contracts in Scotland</b>
The University of Edinburgh	12	120,430	29%
The University of St Andrews	14	27,830	7%
The University of Glasgow	33	96,520	23%
The University of Aberdeen	38	46,160	11%
The University of Dundee	40	45,750	11%
Heriot-Watt University	45	15,490	4%
The University of Strathclyde	50	31,080	7%
The University of Stirling	56	8,910	2%
Edinburgh College of Art	66	550	0%
The Robert Gordon University	87	2,910	1%
Glasgow Caledonian University	93	4,180	1%
UHI Millennium Institute	96	11,810	3%
The University of the West of Scotland	107	1,830*	0%
University of Abertay Dundee	109	1,190	0%
Napier University	109	1,920	0%
Queen Margaret University, Edinburgh	129	2,800	1%
Glasgow School of Art	12**	980	0%
The Royal Scottish Academy of Music and Drama	13**	260	0%
<b>Total</b>		<b>420,590</b>	<b>100%</b>

\*Includes Bell College research income

\*\*Ranked only in single subject category

#### **4.4.7 Conclusions – Increasing Productivity & Competitiveness**

**Scotland (14<sup>th</sup> out of 30) and the UK (11<sup>th</sup> out of 30) both rank in the second quartile for productivity as measured by GVA per employee. The Scottish figure is around 96% of the UK average. GVA per employee in Dundee City Region is lower than across both Scotland and the UK, suggesting that the region is currently falling short of the GES target.**

**To help achieve the GES target, Dundee City Region would need to increase productivity at a faster rate than other highly performing OECD economies. However there is evidence that GVA per employee has grown more slowly in the region than across the UK since 1999.**

- GVA per employee in Dundee City Region amounted to £33,800 per employee in 2006, compared to £35,200 in Scotland and £36,900 in the UK.
- The level of GVA per employee in Dundee City Region increased by 10% between 1999 and 2006. This was in line with Scotland as a whole, but slower than the equivalent increase of 15% for the UK.
- Productivity levels in the region are above the Scottish average within agriculture, public services and other personal services, but lower across all other industry sectors.

***In terms of the wider drivers of productivity identified in the GES, Dundee City Region's performance is mixed....***

- The proportion of Dundee City Region residents that are educated to degree level (34%) is slightly above the Scottish average (33%). Furthermore, just 13% of residents have no qualifications at all, compared to 14% in Scotland.
- The rate of new graduates from the region (10 per 1,000 working age residents) was slightly higher than the Scottish average (9 per 1,000) in 2007. However, less than two thirds (59%) of new graduates find their first job in the region, which could be indicative of a lack of graduate opportunities locally.
- Business density levels and birth rates in Dundee City Region are broadly in line with the Scottish averages, but fall some way below the UK averages.

## **4.5 Increasing labour market participation**

Increasing the level of labour market participation in Scotland is the second principal driver of economic growth identified in the Government Economic Strategy. The strategy sets a target **to maintain our position on labour market participation as the top performing country in the UK and close the gap with the five top OECD economies.**

This section provides an overview of labour market participation levels within Dundee City Region and focuses on:

- Resident employment
- Unemployment and Inactivity
- Workless Benefit Claimants

The region's performance across each of the indicators included within this section is benchmarked against Scotland and GB, rather than the UK. This is because labour market participation data for the UK is not available prior to 2003, meaning that a time series from 1999 is not possible, and the DWP do not hold benefit claimant data for Northern Ireland.

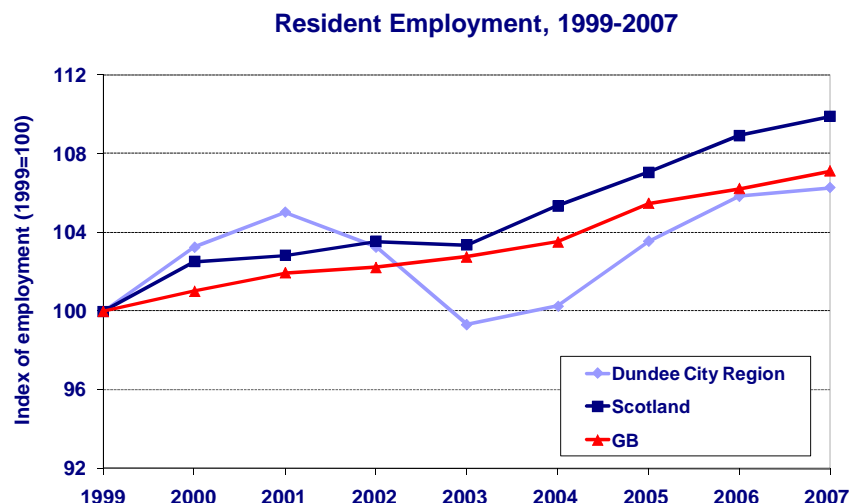
### **4.5.1 Resident Employment**

***Growth in the total number of Dundee City Region residents in work has kept pace with Scotland in recent years, though lagged behind that for GB.***

Chart 4.13 shows change in the total number of residents in work in Dundee City Region, Scotland and GB since 1999. In 2007, there were 215,100 Dundee City Region residents in work, 6% higher than the total in 1999. This was only slightly lower than the equivalent growth of 7% across Scotland, but slower than the increase of 10% across GB.

**Chart 4.13**

Source: Annual Population Survey, 2005-07; Labour Force Survey 1999-2004



It should be noted that the figures for resident employment above include those that are self-employed. Looking at this category separately, there were 24,000 self-employed residents in the region in 2007 accounting for 9% of all those in work. This was broadly in line with the equivalent rates of 8% for Scotland and 9% for GB. High rates of self-employment are a common feature of rural areas, where there is greater dependency on primary and tourism sectors where self-employment is particularly prevalent.

### Employment Rates

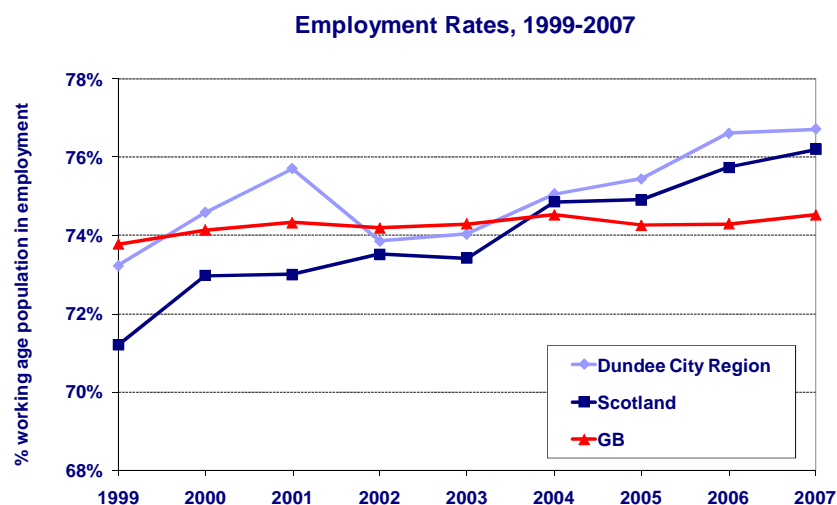
***The employment rate in Dundee City Region has been above the national averages in recent years.***

The 'employment rate' of an area is simply the proportion of the resident working age population that are in work. This is a key labour market participation measure and one of the indicators used to assess Scotland's progress towards the targets set out in the Economic Strategy.

Chart 4.14 shows that the employment rate in Dundee City Region has been mainly above the national averages since 1999. In 2007, the employment rate for the region was 77% - an increase of four percentage points from the position in 1999, and higher than the equivalent rates for both Scotland (76%), and GB (75%). The region is therefore performing well in relation to the national target to maintain our position on labour market participation as the top performing country in the UK

**Chart 4.14**

Source: Annual Population Survey, 2005-07; Labour Force Survey, 1999-2004



## 4.5.2 Unemployment & Economic Inactivity

Reducing unemployment and economic inactivity lies at the heart of the participation target set by the Scottish Government. This section of the report focuses on trends in unemployment, inactivity and workless benefit claimants using official measures of these groups.

### *ILO Unemployment*

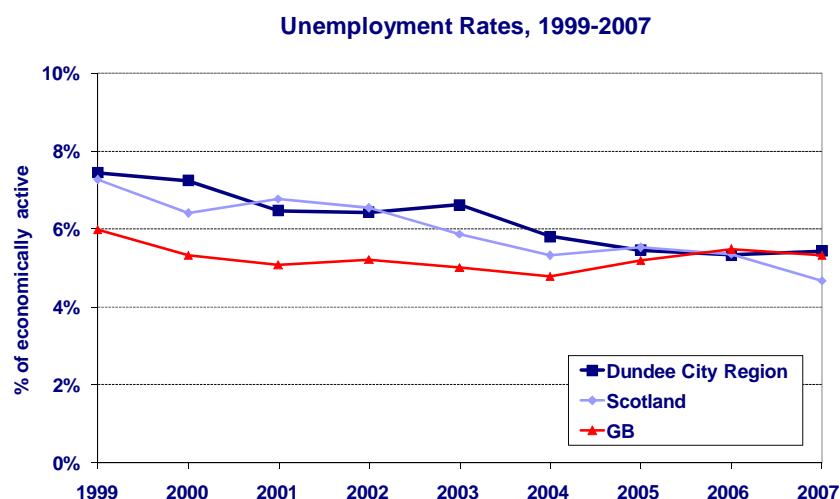
***Following a decline in recent years, the unemployment rate in Dundee City Region is now broadly in line with the averages for Scotland and GB.***

The International Labour Organisation (ILO) definition of unemployment is the UK Government's preferred measure. This is a count of all jobless people who want to work, are available to work, and are actively seeking employment.

In 2007, a total of 12,000 Dundee City Region residents were unemployed, accounting for 5.4% of the working age population – this compares with unemployment rates of 4.7% for Scotland and 5.3% for GB. Chart 4.15 shows that, in line with the national trend, the unemployment rate in the region has been falling consistently since 1999.

**Chart 4.15**

Source: Annual Population Survey, 2005-07; Labour Force Survey, 1999-2004



### *Economic Inactivity*

***Economic inactivity rates in Dundee City Region have been consistently below the national averages since 1999.***

Economic inactivity is a measure of those of working age that are not in work, but who do not show up on traditional measures of unemployment as they are not actively seeking work. Those that are economically inactive represent a much larger group than the official measure of unemployment.

Table 4.11 shows that 53,300 Dundee City Region residents were economically inactive in 2007. This was 7% lower than the total in 1999, a slower rate of decline than across Scotland but in contrast to growth in this group across GB.

**Table 4.11**

Source: Annual Population Survey, 2007; Labour Force Survey 1999

Economically Inactive, 1999-2007				
	1999	2007	Change 1999-2007	
			No.	%
Dundee City Region	57,200	53,300	-3,900	-7%
Scotland	724,000	642,400	-81,600	-11%
GB	7,414,000	7,774,400	360,400	5%

Chart 4.16 shows change in inactivity rates in Dundee City Region, Scotland and GB since 1999. In 2007, around a fifth (19%) of the working age population in the region were economically inactive – slightly below the equivalent rates for Scotland (20%) and GB (21%). Inactivity levels within the region have been consistently lower than the national averages throughout the period.

### 4.5.3 Workless Benefit Claimants

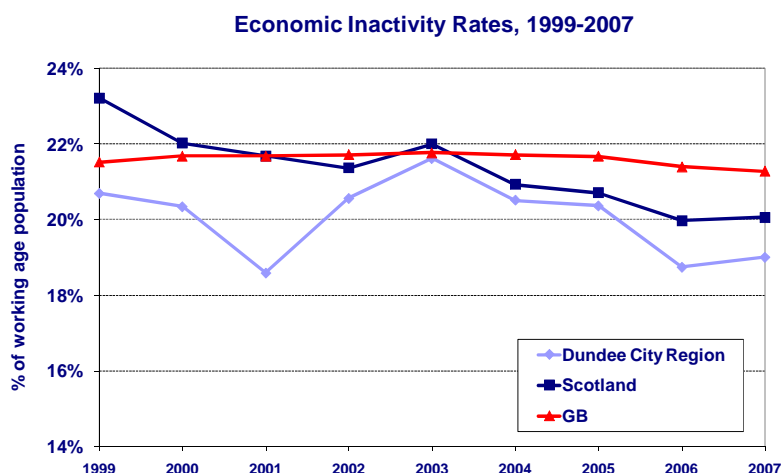
*The workless benefit claimant rate in Dundee City Region is in line with the average for Scotland as a whole, though higher than across GB.*

Table 4.16 shows change in the total number and rate of workless benefit claimants in Dundee City Region, Scotland, and GB, since 2000. These figures include those claiming Jobseekers Allowance, incapacity and other disability benefits, lone parents, carers and others on income related benefits.

The table shows that there were 43,900 Dundee City Region residents in receipt of workless benefits in 2008, representing 16% of the working age population. This rate is in line with the average for Scotland, but higher than the equivalent rate of 14% for GB.

**Chart 4.16**

Source: Annual Population Survey, 2005-07; Labour Force Survey, 1999-2004



The total number of workless benefit claimants in the region fell by 10% between 2000 and 2008. This was slower than the 15% decline across Scotland as a whole over the period, but faster than across GB.

**Table 4.12**

Source: DWP

Workless Benefit Claimants, 2000-08						
	Claimants 2000		Claimants 2008		Change 2000-08	
	Total	Rate	Total	Rate	No.	%
Dundee City Region	48,900	17%	43,900	16%	-5,000	-10%
Scotland	614,500	19%	525,300	16%	-89,100	-15%
GB	5,468,500	16%	5,156,000	14%	-312,500	-6%

## **Incapacity Benefit**

***The proportion of Dundee City Region residents in receipt of Incapacity Benefit is in line with the Scottish average, although the total has increased since 2000.***

Table 4.13 shows change in the total number and rate of Incapacity Benefit (IB) claimants in Dundee City Region, relative to Scotland and GB, since 2000. There were 21,800 Dundee City Region residents in receipt of IB in 2008, accounting for 8% of the working age population. This was in line with the Scottish average, but higher than the equivalent rate of 6% for GB.

There was an increase of 1,500 (+7%) in the total number of incapacity claimants in the region between 2000 and 2008. This was in contrast to a decline in this group across Scotland as a whole, reflecting the increased policy focus on reducing the numbers within this client group. A growing IB population could represent a challenge for the region in terms of future growth, particularly given the relatively small stock of unemployed residents.

**Table 4.13**

Source: DWP

<b>Incapacity Benefit Claimants, 2000-2008</b>						
	<b>Claimants 2000</b>		<b>Claimants 2008</b>		<b>Change 2000-08</b>	
	<b>Total</b>	<b>Rate</b>	<b>Total</b>	<b>Rate</b>	<b>No.</b>	<b>%</b>
Dundee City Region	20,300	7%	21,800	8%	1,500	7%
Scotland	290,800	9%	271,400	8%	-19,400	-7%
GB	2,331,100	7%	2,389,600	6%	58,400	3%

## **Jobseekers Allowance**

***In line with the national trend, the total number of JSA claimants in Dundee City Region has fallen rapidly in recent years.***

Jobseekers Allowance (JSA) is a benefit available to those of working age that are unemployed and seeking work. A total of 6,900 Dundee City Region residents claimed JSA in 2008.

Table 4.14 shows change in the total number and rate of JSA claimants in Dundee City Region, relative to Scotland and GB, since 2000. There was a rapid decline of more than 5,000 in the total number of JSA claimants in the region over the period, a fall of 44%. There were also substantial falls in the JSA total across both Scotland and GB over the period.

Following this decline, the JSA claimant rate in the region fell from 4.4% in 2000, to just 2.4% in 2008 so that it was broadly in line with the national averages.

**Table 4.14**

Source: DWP

<b>JSA Claimants, 2000-08</b>						
	<b>Claimants 2000</b>		<b>Claimants 2008</b>		<b>Change 2000-08</b>	
	<b>Total</b>	<b>Rate</b>	<b>Total</b>	<b>Rate</b>	<b>No.</b>	<b>%</b>
Dundee City Region	12,200	4.4%	6,900	2.4%	-5,400	-44%
Scotland	133,500	4.2%	76,100	2.4%	-57,400	-43%
GB	1,183,000	3.4%	824,300	2.3%	-358,700	-30%

It should be noted that, in the twelve months since these figures were gathered, there has been a steep rise in the totals claiming JSA across all areas.

## **4.5.4 Commuting**

The only reliable source of commuting data remains the 2001 Census. Table 4.15 shows commuting flows for areas within the region in 2001. It is clear that Dundee City Region as a whole has a relatively self-contained labour market and functions effectively as a region for its workforce. In 2001, just 9% of local residents worked outside the region and only 6% of the



workforce commuted in from elsewhere. Of those working outside the region, Aberdeen, Edinburgh and elsewhere in Fife were the most popular destinations.

However, the flows **within** the region are much greater, and demonstrate the dynamic nature of the regional economy very clearly. For example, almost 30% of all those who worked in Dundee – over 21,000 people – were commuters travelling in from elsewhere in 2001. Conversely, a third of all employed residents in both Angus and North East Fife commute out of their area for work, with the majority of these working in Dundee.

**Table 4.15**

Source: Census  
2001, General  
Register Office for  
Scotland

<b>Commuting Flows in Dundee City Region, 2001</b>		
	<b>% residents who work outside the area</b>	<b>% workforce who live outside the area</b>
<b>Angus</b>	33%	14%
<b>Dundee</b>	12%	29%
<b>Perth &amp; Kinross</b>	19%	12%
<b>North East Fife</b>	34%	18%
<b>Dundee City Region</b>	<b>9%</b>	<b>6%</b>

The overall distribution of economic activity is mutually beneficial to both Dundee and its hinterland. Whilst the city is clearly the regional centre in terms of its concentration of job opportunities, it also benefits from the supply of labour available from the rest of the region to fill many of these posts. At the same time, the surrounding areas gain from access to a wider pool of jobs than might otherwise be open to their residents.

#### **4.5.5 Conclusions - Increasing labour market participation**

***The employment rate in Dundee City Region has been above the Scottish and GB averages since 2004. If this position can be maintained, the region will be in a position to contribute to the national participation target.***

- In 2007, the employment rate in Dundee City Region was 77%, slightly above the Scottish and GB averages of 76% and 75% respectively.
- There are wide disparities within the region on this measure. Dundee has the fifth lowest employment rate of all local authorities in Scotland at just 73%, whilst Angus and Perth & Kinross have among the highest employment rates in the country at 80% and 79% respectively.
- Oxford Economics' forecasts suggest that, whilst economic activity levels in the region will fall over the next couple of years as a result of the economic downturn, they will remain above the average for the UK over the coming decade.

***The region also performs well across a range of other key labour market indicators, including unemployment, inactivity and benefit dependency rates:***

- The unemployment rate in Dundee City Region was 5.4% in 2007. This was in line with the GB average of 5.3% and slightly higher than the average of 4.7% for Scotland. The economic inactivity rate in the region was 19% in 2007, slightly below the rates of 20% for Scotland and 21% for GB.
- The proportion of the population that claim workless benefits in Dundee City Region (16%) is in line with the average for Scotland, but higher than the GB average of 14%. However, there was an increase of 7% in the total number of Incapacity Benefit claimants in the region between 2000 and 2008, in contrast to a decline of 15% across Scotland.

## 4.6 Increasing Population

Population growth is a key contributor to, and consequence of, economic performance – and is the third principal driver of economic growth identified in the Government Economic Strategy. GES sets out a clear target for Scotland in the future **to match European (EU-15) population growth over the period from 2007 to 2017**. Scottish Population increased by 1% between 1999 and 2007, compared to an increase of 4% in the EU 15 population between 1995 and 2005.

This section looks at population trends within Dundee City Region and covers:

- Total Population
- Components of Population Change
- Age Structure of the Population
- Population Projections

### **Total Population**

*In line with the trend across Scotland as a whole, the long term population decline in Dundee City Region has reversed and population has been growing in recent years.*

The total population of Dundee City Region was 466,300 in 2007. This was 1% higher than the total in 1999, as shown in Table 4.16. This rate of growth was in line with Scotland as a whole, but slower than the strong growth of 4% across the UK over the period.

**Table 4.16**

Source: GRO  
(Scotland) and  
ONS

Total Population, 1999-2007				
	1999	2007	Change 1999-2007	
			No.	%
Dundee City Region	462,100	466,300	4,100	1%
Scotland	5,072,000	5,144,200	72,300	1%
UK	58,684,400	60,975,400	2,291,000	4%

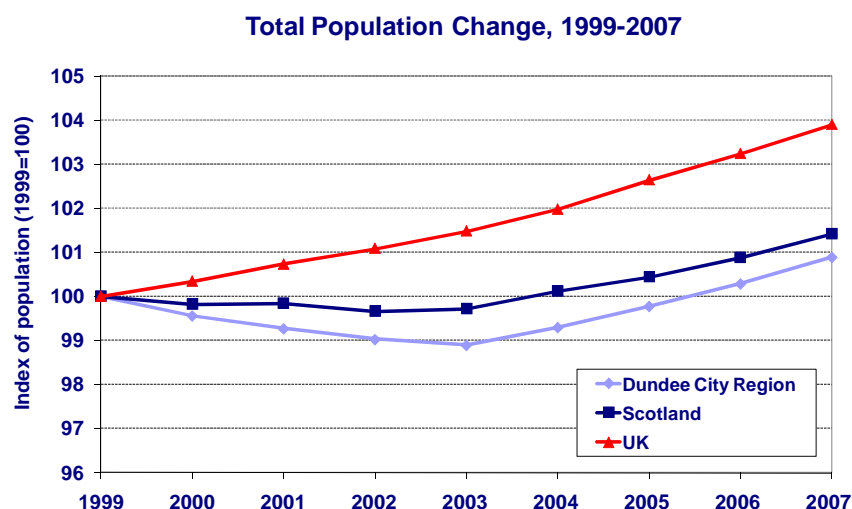
*Figures may not sum to totals as each figure is individually rounded to nearest 100*

Chart 4.17 shows trends in total population levels in Dundee City Region, Scotland and the UK since 1999. It shows that:

- the population of the region was falling through the first half of the period, but this downward trend has now reversed and population has been increasing since 2003;
- the long term decline in Scotland's population has also been reversed and the country as a whole has experienced some population growth in recent years; and
- there has been consistent population growth across the UK throughout the period.

**Chart 4.17**

Source: GRO (Scotland) and ONS



The reversal of population decline within Dundee City Region since 2003 can be attributed to increased in-migration to the area. Natural change, that is the difference between births and deaths, has been negative throughout the period. Prior to 2003, this was compounded by net out-migration, that is more people were moving out the region each year than moving in. However, since then, net migration has been positive resulting in a growing population.

### **Working Age Population**

***Growth in the working age population in Dundee City Region has been much slower than across Scotland and the UK in recent years.***

Table 4.17 shows change in the working age population in Dundee City Region, Scotland and the UK since 1999. The working age population is defined as men aged 16-64 and women aged 16-59.

The working age population of the region grew by 1% over the period, in line with the increase in total population. However, this was much slower than the equivalent growth rates of 3% for Scotland and 6% for the UK.

**Table 4.17**

Source: GRO (Scotland) and ONS

<b>Working Age Population, 1999-2007</b>				
			<b>Change 1999-2007</b>	
	<b>1999</b>	<b>2007</b>	<b>No.</b>	<b>%</b>
Dundee City Region	280,100	283,200	3,100	1%
Scotland	3,143,800	3,226,600	82,800	3%
UK	35,927,700	37,904,500	1,976,800	6%

*Figures may not sum to totals as each figure is individually rounded to nearest 100*

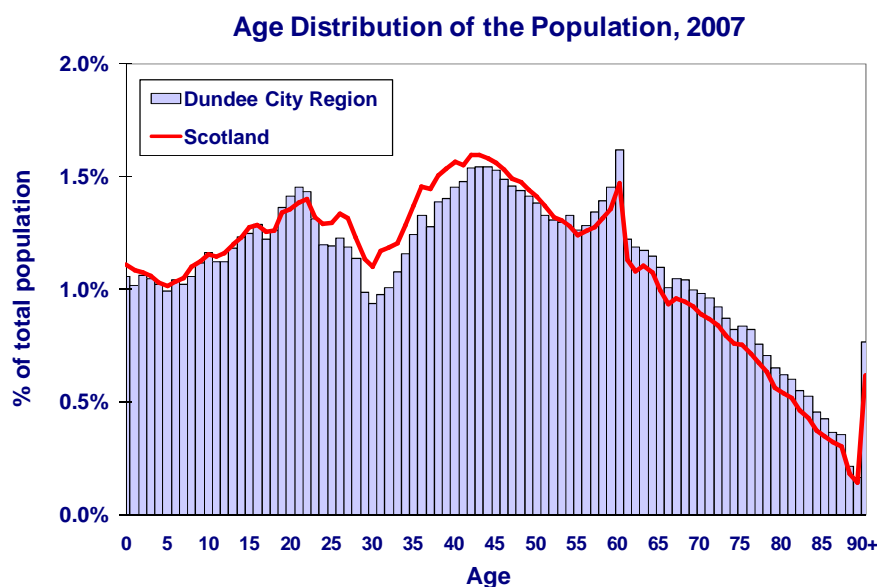
### **Age Distribution**

***Relative to Scotland as a whole, the population of Dundee City Region is characterised by fewer young adults and above average numbers of residents at or nearing retirement age.***

Chart 4.18 shows the current age distribution of the population in Dundee City Region, relative to Scotland as a whole.

**Chart 4.18**

Source: GRO  
(Scotland)



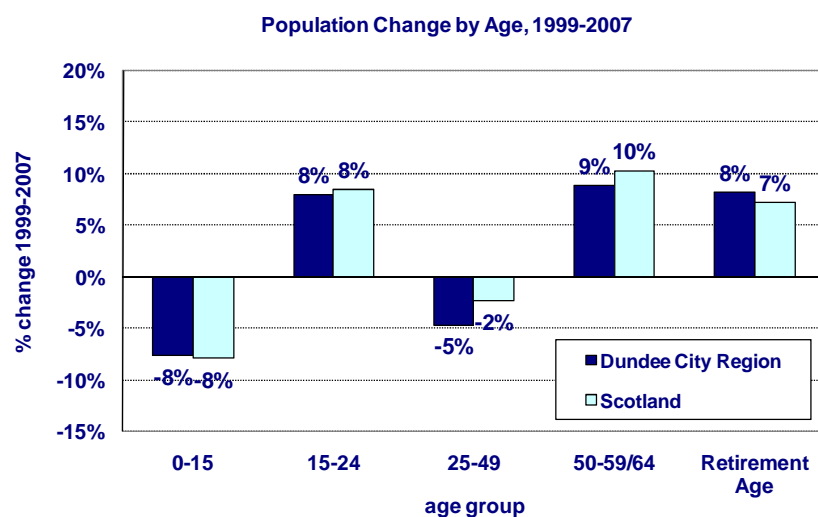
Dundee City Region has fewer residents in their 20s and 30s (the 'prime' working age group) compared to Scotland as a whole. The region also has above average proportions of residents over the age of 55 and above retirement age.

### **Population Change by Age**

There have been important changes in the age structure of the population in both Dundee City Region and Scotland over the past decade, as shown in Chart 4.19.

**Chart 4.19**

Source: GRO  
(Scotland)



This analysis shows:

- greatest population increases among those over the age of 50 in both Dundee City Region and Scotland as a whole;
- a marked decrease in the number of residents in the 'prime' working age group of 25-49 in the region; therefore
- Dundee City Region appears to be experiencing a similar ageing of the population to that witnessed across Scotland as a whole.

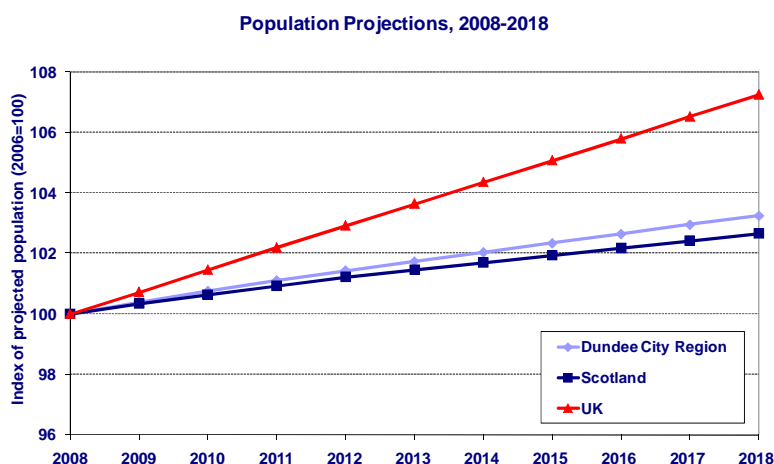
## Population Projections

**The population of Dundee City Region is expected to continue to grow over the coming decade according to the most recent official population projections.**

Total population is expected to reach 483,100 by 2018, 3% higher than the total in 2008. This is in line with the rate of growth expected for Scotland as a whole over the coming decade, though slower than the 7% increase expected for the UK, as shown in the Table and Chart below.

**Chart 4.20**

Source: GRO (Scotland) and ONS



**Table 4.18**

Source: GRO (Scotland) and ONS

Population Projections, 2008-18				
	2008	2018	Change 2008-18	
			No.	%
Dundee City Region	467,800	483,100	15,200	3%
Scotland	5,157,100	5,294,300	137,200	3%
UK	61,411,700	65,867,200	4,455,500	7%

*Figures may not sum to totals as each figure is individually rounded to nearest 100*

### 4.6.1 Conclusions – Increasing Population

**Across Scotland, population was falling prior to 2003, but this downward trend has now reversed and there was an overall increase of 1% in total population between 1999 and 2007. By comparison, EU 15 population increased by 4% between 1995 and 2005.**

**The population of Dundee City Region has also been increasing since 2003, following a period of decline. This growth is expected to continue over the coming decade, though at a slower rate than across Scotland as a whole.**

- In line with the trend across Scotland as a whole, the population decline in Dundee City Region has now halted and total population has been increasing in recent years. There was an overall growth of 1% in the total number of people living in the region between 1999 and 2007.
- According to official projections, the population of Dundee City Region is expected to continue to increase over the coming decade, growing by 1% by 2018. This is slower than the growth of 3% expected for Scotland and the strong growth of 7% expected for the UK.
- The region is unlikely to make a contribution to the GES target in the absence of increased in-migration.

## 4.7 Ensuring that Growth is Shared and Sustainable

The Government Economic Strategy sets out a set of desired characteristics for equitable economic growth in Scotland. These fall under the categories of:

- Solidarity
- Cohesion
- Sustainability

This chapter looks at the performance of Dundee City Region in relation to each these desired characteristics.

### 4.7.1 Solidarity

The Government Economic Strategy identifies *persistent levels of inequality* as one of the biggest challenges facing the economy. The GES sets a specific target **to increase overall income and the proportion of income earned by the three lowest deciles as a group by 2017**. The preferred measure used by the Scottish Government, however, to track the GES target is not yet available at a sub-national level.

This section considers Dundee City Region's performance in relation to levels of solidarity across a number of other measures including:

- Median Weekly Earnings – All People
- Median Weekly Earnings – Full-Time Workers
- Household Income
- Deprivation

#### ***Median Weekly Earnings – All People***

***Median wage levels in Dundee City Region are lower than across Scotland and the UK, but have been increasing at a faster rate in recent years.***

The figures in this section refer to the **median** weekly earnings of all those in employment, including both full-time and part-time workers. Median is the preferred measure (over mean) for earnings data as it is influenced less by extreme values and because of the skewed distribution of earnings data.

The Chart and Table below show change in **median** weekly earnings in Dundee City Region, relative to Scotland and UK, since 1999<sup>8</sup>.

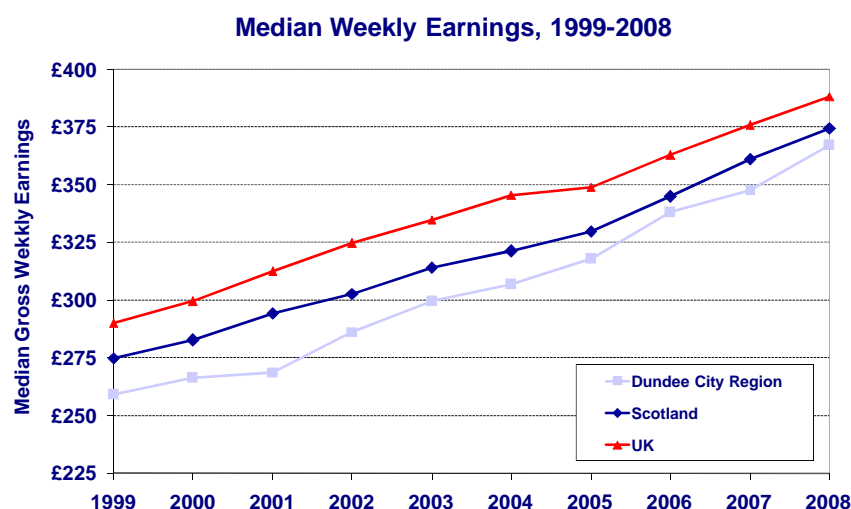
- Median weekly earnings in the region amounted to £367 in 2008;
- This was below the equivalent figures of £375 for Scotland, and £388 for the UK; and
- Wage levels in the region have been consistently below the national averages since 1999, though a faster rate of increase in the region has led to a narrowing of the earnings gap over the period.

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<sup>8</sup> It should be noted that these figures exclude North East Fife.

**Chart 4.21**

Source: Annual Survey of Hours and Earnings, ONS



The figures above are *workplace-based*, that is, they refer to the median earnings of all those employed in Dundee City Region rather than the earnings of residents. Median earnings of residents in the region were £362 in 2008, just 1% lower than the workplace figure.

**Table 4.19**

Source: Annual Survey of Hours and Earnings, ONS

Median Weekly Earnings, 1999-2008				
			Change 1999-2008	
	1999	2008	No.	%
Dundee City Region	£259	£367	£108	42%
Scotland	£275	£375	£100	36%
UK	£290	£388	£98	34%

It should be noted that the headline figure for Dundee City Region masks some variations between the constituent local authority areas that make up the region. Median weekly earnings for those working in Angus are 8% lower than the regional figure, whilst wage levels in Dundee are around 4% higher.

### Median Weekly Earnings – Full-Time Workers

**The earnings of full-time workers in Dundee City Region are also lower than across both Scotland and the UK.**

The previous section looked at the median earnings of all those employed in Dundee City Region. This section looks at the median earnings of **full-time workers** living in the region. Full-time workers are defined as those who work more than 30 paid hours per week or those in teaching professions working 25 paid hours or more per week.

Table 4.20 shows change in the median earnings of full-time workers in Dundee City Region between 2002 and 2008, relative to Scotland and the UK. The earnings of those working full-time are also lower than across both Scotland and the UK. However, the increase in median earnings of full-time workers in the region was broadly in line with Scotland and the UK between 2002 and 2008.

**Table 4.20**

Source: Annual Survey of Hours and Earnings, ONS

Median Weekly Earnings of Full-Time Workers				
			Change 2002-2008	
	2002	2008	No.	%
Dundee City Region	£366	£449	£83	23%
Scotland	£369	£462	£93	25%
UK	£391	£479	£88	22%

## Household Income

**Average household income levels within Angus and Dundee are in line with Scotland as a whole, whilst they are higher than the national average within Perth & Kinross and Stirling.**

Average weekly workplace earnings covers only the income of those who are in employment. Gross Disposable Household Income (GDHI) is a measure of the total amount of money available to each person in the household after taking account of all types of income, and allowing for essential financial outgoings.

GDHI figures are not available for the Dundee City Region as a whole, but are available separately for some areas within the region. Table 4.21 shows average household income levels for the constituent regions, relative to Scotland and the UK.

The table shows that average household income in Perth & Kinross and Stirling combined amounted to £14,300 per person in 2006. This was 9% higher than the Scottish average, though it is unclear the extent to which this is attributable to Stirling or Perth & Kinross. Average income levels in Angus and Dundee combined are broadly in line with the Scottish average. Growth in average income levels in the region has kept pace with Scotland and the UK since 1999.

**Table 4.21**

Source: ONS

Gross Disposable Household Income, 1999-2006				Change 1999-2006	
	1999	2006	% of Scotland's GDHI	No.	%
Perth & Kinross and Stirling	£10,700	£14,300	109%	£3,600	34%
Angus and Dundee	£9,500	£12,900	98%	£3,400	35%
<b>Scotland</b>	<b>£9,700</b>	<b>£13,100</b>	<b>100%</b>	<b>£3,400</b>	<b>35%</b>
<b>UK</b>	<b>£10,400</b>	<b>£13,800</b>	<b>-</b>	<b>£3,400</b>	<b>33%</b>

### 4.7.2 Conclusion – Solidarity

**The preferred measure used by the Scottish Government to track the GES target is not yet available at a sub-national level. However, the median earnings of those working within Dundee City Region are lower than across Scotland as a whole and there is evidence of disparities within the region.**

- The median weekly earnings of all those working in Dundee City Region (full-time and part-time workers combined) were £367 in 2008, below both the Scottish and UK figures of £375 and £388 respectively.
- There are some disparities within the region on this measure. Median weekly earnings for those working in Angus are 8% lower than the regional as a whole, whilst they are 4% higher in Dundee.

### 4.7.3 Cohesion

The GES identifies low participation rates in some regions as a drag on Scotland's overall economic performance. The Cohesion target focuses on the need to address regional disparities in labour market performance and sets a specific target **to narrow the gap in participation between Scotland's best and worst performing regions by 2017.**



This section looks at the level of cohesion within Dundee City Region and covers:

- Participation
- Deprivation

### Participation

The indicator identified within the National Performance Framework for measuring progress towards the GES cohesion target is the employment rate. The extent of progress will be measured by the reduction in the percentage difference between the three local authority areas with the lowest rate and the three with the highest rate.

Table 4.22 compares the employment rates for areas within Dundee City Region with the three Scottish local authority areas with the highest rates, and the three with the lowest. None of the local authority areas within Dundee City Region fall within either the top or bottom three performing areas on this measure. However, the local authority area of Dundee had the lowest employment rate in the region at 73%, which was the 5th lowest of all 32 Scottish local authority areas in Scotland.

**Table 4.22**

Source: Annual Population Survey (APS)

<b>Best &amp; Worst Employment Rates in Scottish LA's, 2008</b>			
	<b>Local Authority</b>	<b>Employment Rate 2008 (%)</b>	<b>Ranking (of all 32 Scottish LAs)</b>
<b>Top 3</b>	Shetland Islands	87.7	1
	Orkney Islands	84.1	2
	Highland	84.0	3
	<b>Angus</b>	<b>79.9</b>	<b>9</b>
	<b>Perth &amp; Kinross</b>	<b>78.9</b>	<b>12</b>
	<b>North East Fife*</b>	<b>75.6</b>	<b>24</b>
	<b>Dundee</b>	<b>73.0</b>	<b>27</b>
<b>Bottom 3</b>	North Ayrshire	70.6	30
	Clackmannanshire	69.3	31
	Glasgow City	68.0	32

\* Parliamentary constituency area

### Deprivation

As well as increasing the employment rate of those areas with low labour market participation levels, the Scottish Government has also identified reducing deprivation and social exclusion as a national priority.

The Scottish Index of Multiple Deprivation (SIMD) is the Scottish Government's official measure for identifying small area concentrations of multiple deprivation across all of Scotland. The SIMD is relevant to policies and funding wholly or partly aimed at tackling or taking account of the causes and effects of concentrations of multiple deprivation.

Table 4.23 shows that Dundee City Region was home to 79 of the 15% most deprived neighbourhoods in Scotland in 2006. To look at this information in another way, 13% of the region's population live in these areas, slightly below the national average.

Dundee was home to the majority (67%) of those neighbourhoods ranked among the 15% most deprived in the region. Almost one in every three (29%) Dundee residents live within these areas, a level of deprivation almost twice the Scottish average.

**Table 4.23**

Source: Scottish  
Index of Multiple  
Deprivation (SIMD)

Concentration of Deprivation, 2006						
	Most deprived 5% of data zones			Most deprived 15% of data zones		
	No. of zones	Population No.	%	No. of zones	Population No.	%
Dundee City Region	16	12,200	3%	79	60,200	13%
Scotland	325	246,052	5%	976	751,130	15%

#### 4.7.4 Conclusions – Cohesion

*Dundee has the lowest employment rate of all the local authorities within the region and is the only one in which this falls below the Scottish average. Improvement in the participation rate in the city is likely to be required if the region is to help contribute to the GES target.*

- The employment rate in Dundee was 73% in 2007, which was the 5th lowest of all 32 local authority areas within Scotland. Participation levels in the city are therefore only slightly above those within the target group.
- The employment rate in each of the other areas in the region was in line with, or above, the national average.
- There are several pockets of deprivation within the region. The majority of these are located within the local authority area of Dundee, where around one in every three residents live in neighbourhoods ranked among the 15% most deprived in Scotland.

#### 4.7.5 Sustainability

The GES identifies the quality of Scotland's environment and natural heritage as a key asset and source of competitive advantage. It states that economic growth should not occur at the expense of this and has set a target **to reduce emissions over the period to 2011 and to reduce emissions by 80% by 2050.**

This section looks at Dundee City Region's performance in relation to sustainable growth and covers:

- CO<sup>2</sup> Emissions
- Waste Recycling

##### **CO<sup>2</sup> Emissions**

*The level of CO<sup>2</sup> emissions per head in Dundee City Region is broadly in line with the national averages.*

Dundee City Region was responsible for generating 4,100kt of CO<sup>2</sup> emissions in 2006, representing 9% of all Scottish emissions<sup>9</sup>. This amounted to 8.8 tonnes per head of population, broadly in line with the Scottish and UK averages (8.5 and 8.8 respectively).

<sup>9</sup> This is an adjusted total which takes account of factors such as land use and forestry, which offset some of the total carbon dioxide produced by the region.

Table 4.24 shows how CO<sup>2</sup> emissions are disaggregated by sector within Dundee City Region relative to Scotland and the UK. It shows that industrial and commercial activities account for a lower share of emissions from the region than across Scotland and the UK. Road transport emissions account for a higher share, with high levels of car usage reflecting the rural character of the region outside of Dundee.

The total level of emissions from the region fell by 0.5% between 2005 and 2006, in contrast to an increase across Scotland as a whole and a slight decline of 0.1% across the UK. If this trend continues, the region could be in a position to contribute to the national target.

**Table 4.24**

Source: DEFRA

<b>CO<sup>2</sup> Emissions 2006</b>					
	<b>Total Emissions (kt)</b>	<b>% Industry &amp; Commercial</b>	<b>% Domestic</b>	<b>% Road Transport</b>	<b>% Change since 2005</b>
Dundee City Region	4,100	38%	34%	28%	-0.5%
Scotland	43,500	47%	30%	24%	0.8%
UK	531,700	46%	29%	25%	-0.1%

### **Waste Recycling**

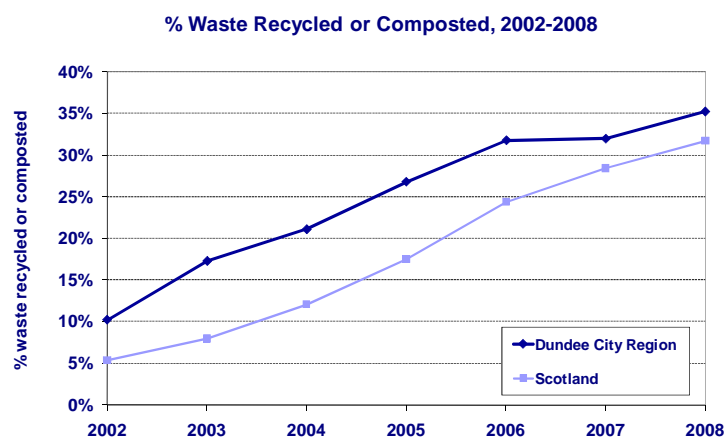
*The proportion of waste that is recycled or composted has increased rapidly in recent years, both in Dundee City Region and across Scotland as a whole.*

The Scottish Government have announced their commitment to reducing the amount of waste currently sent to landfill. In relation to this, they have set long term targets **to increase the level of waste recycled or composted to 70%, and to decrease the levels sent to landfill to just 5%, by 2025.**

In 2008, 35% of all waste from Dundee City Region was recycled or composted – higher than the national average of 32%. Chart 4.22 shows that this has increased rapidly in recent years from a rate of just 10% in 2002. Both Dundee City Region and Scotland as a whole still have some way to go to meet the 70% target, but if the recent upward trend can be maintained this is likely to be achievable.

**Chart 4.22**

Source: Scottish Environment Protection Agency (SEPA)



#### **4.7.6 Conclusions – Sustainability**

*Data on the government's preferred measure of Greenhouse Gases is not available at the sub-national level, but data on CO<sup>2</sup> emission is available for regions. Dundee City Region accounts for 9% of all Scottish CO<sup>2</sup> emissions and the level of CO<sup>2</sup> emissions per head from the region is broadly in line with Scotland and the UK.*

- Dundee City Region generated 8.8 Kilotonnes of CO<sup>2</sup> emissions per 1,000 population in 2008, broadly in line with both the Scottish and UK averages (8.5Kt and 8.8Kt respectively).
- The total volume of CO<sup>2</sup> emissions from the region fell slightly by 0.5% between 2005 and 2006, in contrast to an increase of 0.8% across Scotland and no change across the UK. However, care should be taken in interpreting any trend from such a limited data set.
- Following a three-fold increase since 2002, the proportion of waste from Dundee City Region that was recycled or composted in 2008 (35%) was above the average for Scotland (32%).

## 5. Benchmarking

### 5.1 Introduction

In this section, the economic performance of Dundee City Region is compared to that of the other three SE operating regions that contain cities across the key indicators of:

- GVA Growth
- Productivity
- Labour Market Participation
- Population
- Wage Levels
- Deprivation
- CO<sup>2</sup> Emissions

This analysis will provide an overview of the relative economic strengths and weaknesses of the regional economy. Across each indicator, Dundee City Region will be benchmarked against:

- Aberdeen City & Shire
- East Region
- West Region
- Scotland and UK/GB

### 5.2 GVA Growth

*In terms of economic growth, Dundee City Region has outperformed Aberdeen City & Shire in recent years, but has lagged behind the other regions.*

Table 5.1 shows the total level of economic output (as measured by GVA) from each of Scotland's largest regions in 2006 and the share of national GVA accounted for by each. It also shows average annual GVA growth rates between 1999-2006.

In 2006, economic output from Dundee City Region amounted to £6.4bn, accounting for 7% of Scottish economic output. The region is much smaller in economic terms than the East and West Regions, and also smaller than Aberdeen City & Shire.

Since 1999, economic output from the region has grown at an average annual rate of 2.1%. This was faster than the rate of growth within Aberdeen City & Shire, but slower than each of the other regions.

**Table 5.1**

Source: Oxford  
Economics

Gross Value Added (GVA)			
	Total GVA 2006 (£m)	% Share of Scottish GVA 2006	Average Annual GVA Growth 1999-2006
<b>Dundee City Region</b>	<b>6,400</b>	<b>7%</b>	<b>2.1%</b>
Aberdeen City & Shire	10,900	12%	1.8%
East Region	30,100	32%	4.0%
West Region	38,100	41%	2.5%
Scotland	93,400	100%	2.8%
UK	1,147,800	-	3.2%

## 5.3 Productivity

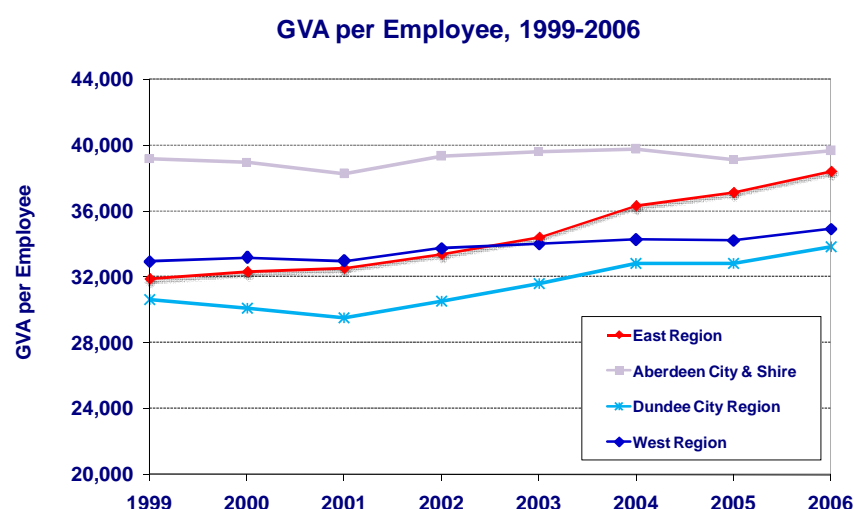
*Productivity levels in Dundee City Region lag somewhat behind the national averages and are the lowest of each of the other Scottish city regions.*

Chart 5.1 shows change in productivity levels (as measured by GVA per employee) in each of the regions between 1999 and 2006. In 2006, the average level of GVA generated per employee in Dundee City Region was £33,800. This was below the national average and the lowest of each of the regions. In fact, productivity levels within Dundee City Region have been consistently below the other regions throughout the period.

Productivity levels in Dundee City Region increased by 10% between 1999 and 2006. This was faster than in Aberdeen City & Shire and the West Region, but slower than the strong growth of 20% across the East Region.

Chart 5.1

Source: ONS and  
SLIMS Calculations



## 5.4 Labour Market Participation

*In terms of labour market participation, Dundee City Region's record is mixed, with a relatively high employment rate, but above average levels of unemployment and benefit dependency.*

Table 5.2 compares the labour market performance of the regions across the key indicators of employment, unemployment, inactivity and benefit claimant rates. Aberdeen City & Shire has the highest employment rate, and lowest levels of economic inactivity and benefit dependency, of each of the regions. By contrast, the West Region underperforms relative to the other regions across each of the indicators. Dundee City Region is an average performer in the context of the other regions and Scotland as a whole in terms of labour market participation.

Table 5.2

Source: Annual  
Population Survey  
05-07 & DWP

Labour Market Participation 2007				
	Employment Rate	Unemployment Rate	Economic Inactivity Rate	Workless Benefit Claimant Rate
<b>Dundee City Region</b>	<b>77%</b>	<b>5.4%</b>	<b>19%</b>	<b>16%</b>
Aberdeen City & Shire	81%	3.5%	17%	11%
East Region	77%	5.1%	19%	14%
West Region	73%	6.0%	22%	20%
Scotland	76%	4.7%	20%	16%
GB	75%	5.3%	21%	14%

## 5.5 Population

*In line with the national trend, Dundee City Region has experienced limited population growth in recent years.*

Table 5.3 shows total population and population change across the regions. There were 466,300 people living in Dundee City Region in 2007, accounting for 9% of Scotland's total population. The region's population was 0.9% higher in 2007 than in 1999, a rate of growth slower than across Scotland as a whole and each of the other regions apart from the West, which experienced population decline of 0.5% over the period.

**Table 5.3**

Source: GRO (Scotland) & ONS

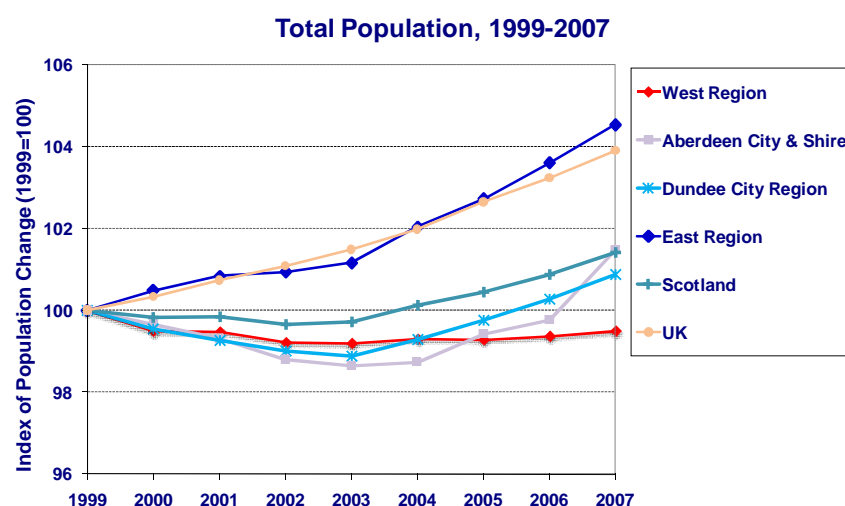
Total Population			
	Total Population 2007	% Share of Scottish Population	Change 1999-2007
<b>Dundee City Region</b>	<b>466,300</b>	<b>9%</b>	<b>0.9%</b>
Aberdeen City & Shire	448,400	9%	1.5%
East Region	1,498,400	29%	4.5%
West Region	2,210,400	43%	-0.5%
Scotland	5,144,200	100%	1.4%
UK	60,975,400	-	3.9%

Chart 5.2 shows population change across each of the regions between 1999-2007, relative to Scotland and the UK. The trend within Dundee City Region has been similar to that within Aberdeen City & Shire and across Scotland as a whole where population was falling until 2003, but has since started to increase.

The population decline in the West also appears to have halted, but unlike the other regions it has not experienced growth in recent years. The trend within the East Region follows a pattern in line with the UK as a whole, which has also experienced strong growth in recent years.

**Chart 5.2**

Source: GRO (Scotland) & ONS



## 5.6 Wage Levels

*Wage levels in Dundee City Region are lower than in each of the other comparator regions, as well as Scotland and the UK.*

Table 5.4 compares the median earnings of all those working in Dundee City Region (including both full-time and part-time workers) with each of the benchmark regions, as well as Scotland and the UK. Median weekly earnings for those working in Dundee City Region amounted to £367 in 2008. This was lower than each of the other regions and also below the national averages. Average wage levels in Dundee were £46 higher than those in Angus, though this disparity was less pronounced than in the other regions.

**Table 5.4**

Source: ASHE

<b>Workplace Earnings 2008</b>		
	<b>Median Gross Weekly Earnings</b>	<b>Disparities Within Regions*</b>
<b>Dundee City Region</b>	<b>£367</b>	<b>£46</b>
Aberdeen City & Shire	£402	£74
East Region	£382	£114
West Region	£372	£110
Scotland	£375	-
UK	£388	-

\*difference in median earnings between local authorities with highest and lowest wage levels within regions

## 5.7 Deprivation

**Dundee City Region is home to several neighbourhoods ranked among the most deprived in Scotland and has the second highest concentration of deprivation of each of the regions behind the West.**

Table 5.5 shows the number of neighbourhoods ranked among the 5% and 15% most deprived in Scotland within each of the regions, as well as the proportion of the population living in these areas.

Over three quarters of Scotland's most highly deprived neighbourhoods are in the West Region. To look at this information in another way, almost one in every ten residents in the West Region live in areas that are among the 5% most deprived in Scotland. None of the other regions have anything like the same concentration of the worst deprivation.

With regard to those neighbourhoods ranked among the 15% most deprived, the West Region again accounts for more than half of these. The level of deprivation in Dundee City Region is the second highest of each of the regions behind the West. The region is home to 79 data zones ranked among the 15% most deprived in Scotland, the majority of which are located within Dundee.

**Table 5.5**

Source: Scottish Index of Multiple Deprivation, 2006

<b>Concentration of Deprivation 2006</b>				
	<b>Most deprived 5% of data zones</b>		<b>Most deprived 15% of data zones</b>	
	<b>No. of zones in each area</b>	<b>% population in these zones</b>	<b>No. of zones in each area</b>	<b>% population in these zones</b>
<b>Dundee City Region</b>	<b>16</b>	<b>3%</b>	<b>79</b>	<b>13%</b>
Aberdeen City & Shire	11	2%	33	5%
East Region	40	2%	165	9%
West Region	252	9%	671	24%
<b>Scotland</b>	<b>325</b>	<b>5%</b>	<b>976</b>	<b>15%</b>



## 5.8 CO<sup>2</sup> Emissions

*The level of CO<sup>2</sup> per head generated in Dundee City Region is lower than in Aberdeen City & Shire and the East Region, but higher than in the West.*

Table 5.6 shows total CO<sup>2</sup> emissions from each of the regions in 2006 and the percentage change from the previous year. It also shows total emissions per head of population and industrial emissions as a proportion of economic output (GVA).

In 2006, Dundee City Region generated 4,100kt of CO<sup>2</sup>, accounting for 9% of total emissions in Scotland. This amounted to 9 tonnes of emissions per head of population, lower than in Aberdeen City & Shire and the East Region, though higher than in the West. Looking at industrial emissions per £1,000 GVA, again Dundee City Region has a low rate of emissions relative to each of the other regions apart from the West.

The total level of emissions from the region fell by 1% between 2005 and 2006 – the second fastest rate of decline of all the regions behind Aberdeen City & Shire and in contrast to an increase across the other regions and Scotland as a whole.

Table 5.6

Source: DEFRA

CO <sup>2</sup> Emissions				
	Total CO <sup>2</sup> Emissions 2006 (kt)	% Change in CO <sup>2</sup> Emissions 2005-06	Total CO <sup>2</sup> per Head of Population	Industrial CO <sup>2</sup> per £1,000 GVA
<b>Dundee City Region</b>	<b>4,100</b>	<b>-1%</b>	<b>9</b>	<b>280</b>
Aberdeen City & Shire	5,200	-2%	12	300
East Region	15,500	1%	10	340
West Region	15,200	2%	7	190
Scotland	43,500	1%	8	260
UK	531,700	0%	9	230

## 6. Industrial Structure

### 6.1 Introduction

This section looks at the industrial structure of Dundee City Region in terms of the number and types of jobs available and recent performance across the key sectors outlined in the Government Economic Strategy and other growth sectors supported by Scottish Enterprise. It will cover:

- Total Employment;
- Industrial Structure; and
- Key and Other Growth Sectors.

The employment data within this section is based on the Annual Business Inquiry (ABI), published by the Office for National Statistics. It is the government's preferred source of information on industrial structure and employment levels. ABI figures are not available for the UK as a whole and so the region's performance has been benchmarked against Scotland and Great Britain (GB) which excludes Northern Ireland.

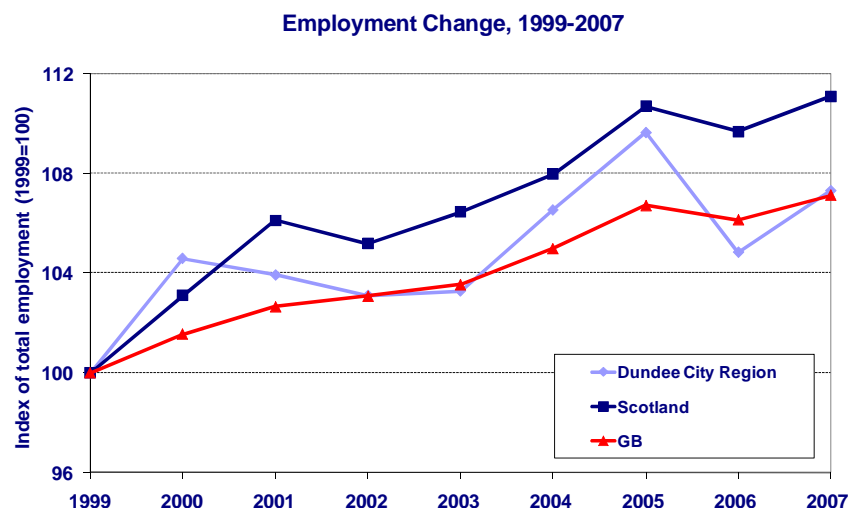
### 6.2 Total Employment

*Since 1999, the rate of jobs growth within Dundee City Region has kept pace with GB, but has been slower than across Scotland as a whole.*

Chart 6.1 shows the change in the total number of jobs located within Dundee City Region, relative to Scotland and GB, since 1999. In 2007, there were 199,500 jobs in the region representing an increase of 7% from the total in 1999. This was in line with the rate of growth across GB, but slower than the growth of 11% for Scotland.

Chart 6.1

Source: Annual Business Inquiry



#### 6.2.1 Employment by Gender and Type

Table 6.1 shows employment change in Dundee City Region by gender and type since 1999. There were 10,700 more women working in the region in 2007 than in 1999, an increase of 12%. This was much faster than the increase of 2,900 in the number of men working in the region over the period, growth of 3%.

The expansion of the Dundee City Region economy has not just been the result of ever increasing levels of part time work. The number of part time jobs did grow by 9,500 over the period, but there was also an increase of 4,100 in the number of full time jobs in the region. The differences in the types of employment taken by men and women do remain. More than half (48%) of women employees in the region worked part-time in 2007, the same as in 1999, while the proportion of men working part-time increased from 12% in 1999 to 17% in 2007.

**Table 6.1**

Source: Annual Business Inquiry

<b>Employment Change by Gender &amp; Type in Dundee City Region</b>				
	1999	2007	<b>Change 1999-2007</b>	
			<b>No.</b>	<b>%</b>
Male full-time	82,000	80,300	-1,700	-2%
Male part-time	11,700	16,400	4,700	40%
<b>All males</b>	<b>93,700</b>	<b>96,600</b>	<b>2,900</b>	<b>3%</b>
Female full-time	47,800	53,600	5,800	12%
Female part-time	44,400	49,300	4,800	11%
<b>All Females</b>	<b>92,200</b>	<b>102,900</b>	<b>10,700</b>	<b>12%</b>
All full-time	129,800	133,900	4,100	3%
All part-time	56,100	65,600	9,500	17%
<b>All Employees</b>	<b>185,900</b>	<b>199,500</b>	<b>13,600</b>	<b>7%</b>

Figures may not sum to totals as each figure is individually rounded to nearest 100

## 6.2.2 Industrial Structure

The largest employing industries in Dundee City Region are *public services* (31% of all jobs), *retail & catering* (25%) and *financial & business services* (13%). Table 6.2 shows that, relative to Scotland as a whole, the region has higher shares of jobs within *retail & catering* and *public services* and a much smaller *financial & business services* sector.

**Table 6.2**

Source: Annual Business Inquiry

<b>Employment by Industry, 2007</b>				
	<b>Dundee City Region</b>		<b>Scotland</b>	
	<b>Total</b>	<b>%</b>	<b>Total</b>	<b>%</b>
Agriculture	6,800	3%	39,200	2%
Utilities	3,100	2%	42,500	2%
Manufacturing	20,500	10%	220,900	9%
Construction	11,800	6%	137,600	6%
Retail & catering	50,400	25%	528,700	22%
Transport & communications	7,800	4%	130,300	5%
Financial & business services	25,400	13%	451,500	19%
Public services	62,300	31%	729,600	30%
Other services	11,400	6%	127,300	5%
<b>Total</b>	<b>199,500</b>	<b>100%</b>	<b>2,407,700</b>	<b>100%</b>

Figures may not sum to totals as each figure is individually rounded to nearest 100

Table 6.3 shows the change in employment by sector, between 1999 and 2007:

- *Financial & business services* was the fastest growing sector in percentage terms, increasing by 29%;
- *Public services* generated the largest volume of new jobs adding 9,000 to the employment total in the region;
- *Retail & catering* and *agriculture* also grew strongly, each increasing by around 3,000 jobs;

- *Transport & communications, utilities, construction and other services* also experienced employment growth, though the numbers involved were much smaller; and
- The only industry to experience a decline in employment in the region was *manufacturing*, with 8,000 jobs lost in the sector over the period.

**Table 6.3**

Source: Annual Business Inquiry

<b>Employment Change in Dundee City Region, 1999-2007</b>				
	<b>1999</b>	<b>2007</b>	<b>Change 1999-2007</b>	
			<b>No.</b>	<b>%</b>
Agriculture	4,200	6,800	2,600	62%
Utilities	2,700	3,100	400	13%
Manufacturing	28,400	20,500	-8,000	-28%
Construction	11,700	11,800	100	1%
Retail & catering	47,300	50,400	3,200	7%
Transport & communications	7,300	7,800	500	7%
Financial & business services	19,700	25,400	5,700	29%
Public services	53,300	62,300	9,000	17%
Other services	11,300	11,400	100	1%
<b>Total</b>	<b>185,900</b>	<b>199,500</b>	<b>13,600</b>	<b>7%</b>

*Figures may not sum to totals as each figure is individually rounded to nearest 100*

### 6.3 Key and Other Growth Sectors

The Government Economic Strategy outlines six key sectors which provide Scotland with the best prospects to raise Scotland's underlying trend rate of sustainable economic growth. The key sectors are:

- energy
- financial & business services (though the analysis in this report focuses on financial services)
- food & drink
- life sciences
- tourism
- creative industries (digital media & enabling technologies)

Scottish Enterprise focuses on identifying and responding to the needs of the key sectors. Its contribution to the Creative Industries which encapsulates a number of markets and capabilities is focused on Digital Media and Enabling Technologies.

A further five 'other growth sectors' have been identified by Scottish Enterprise which merit further Public Sector support. These are:

- textiles
- aerospace, defence & marine
- chemicals
- construction
- forest industries

### 6.3.1 Definition of Sectors

The majority of the six key sectors and five other growth sectors can be defined using Standard Industrial Classification (SIC) codes, which can then be used to gather relatively good, though not perfect, local information on their size and scale based on official data sources. However, some of these industries do not lend themselves well to this method of classification due to the nature of companies operating in their sectors, as well as issues around the characteristics of supply chain firms. For example, many people employed in *life sciences* work in universities and would therefore be classed in official figures as being employed in *education*.

The sectors that cannot be defined easily using SIC codes are *life sciences*, *digital media & enabling technologies* and *energy*. Scottish Enterprise is currently working with the Government to develop a bespoke dataset for *digital media & enabling technologies*, though this is not yet available.

The *energy* sector is made up of three sub-sectors: *oil and gas*, *power generation* and *renewable energy*. The *renewable energy* sector cannot be captured using SIC codes and, whilst the other sectors are partially covered by SIC codes, their respective supply chains are not included. The Scottish Government, Scottish Enterprise and other partners are currently undertaking research to identify the *renewable energy* and *power generation* sectors along with their associated supply chains with a view to extending the supply chain work to the *oil and gas* sector. This research should be completed in 2009. Similarly, aspects of the *aerospace, defence & marine* sector are not adequately covered because of the nature and characteristics of the industry.

Sections 6.3.2 and 6.3.3 look at employment and workplaces in Dundee City Region across the key and other growth sectors. For these, a proxy definition of *life sciences* based upon SIC codes has been used, though it is recognised that this does not cover the whole sector. Analysis of employment and workplaces within *creative industries* has been included to provide a proxy for *digital media & enabling technologies*, though again it should be noted that this is not a wholly accurate definition of this sector. A full list of the SIC codes used in Sections 6.3.2 and 6.3.3 can be found in Appendix 4.

Section 6.3.4 looks at the contribution of some of the key sectors to national economic output. This data is only available at a limited level of detail and so the coverage does not exactly match the definitions of the key sectors. A full list of the SIC codes included in the analysis in Section 6.3.5 can be found in Appendix 5.

### 6.3.2 Employment within Sectors

Table 6.4 shows total employment across the eleven key and other growth sectors in Dundee City Region in 2007. For each industry, it also shows the share of total employment, employment change between 1999 and 2007 and specialisation scores in the region relative to Scotland<sup>10</sup>.

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<sup>10</sup> The term specialisation refers to the concentration of employment within an industry locally relative to the Scottish average. A score of greater than 100 indicates that an area has an above share of employment within a particular industry. A score of less than 100 indicates that the area has a below average share of employment in an industry.

Table 6.4

Source: Annual  
Business Inquiry  
& SLIMS  
Calculations

Employment within Sectors, 2007					
	No Jobs in Scotland	No Jobs in Dundee City Region	% Share of all jobs in Region	% Change since 1999 in Region	Specialisation in Region (Scotland = 100)
<b>Key Sectors</b>					
Energy	40,700	2,800	1%	22%	83
Financial Services	91,600	5,100	3%	9%	68
Food & Drink	46,000	2,700	1%	-16%	71
Life Sciences	18,400	1,900	1%	-1%	124
Tourism	219,900	20,000	10%	11%	110
Creative Industries	62,200	4,800	2%	21%	93
<b>Other Growth Sectors</b>					
Textiles	12,700	1,900	1%	-35%	184
Aerospace, Defence & Marine	30,300	1,600	1%	-59%	64
Chemicals	14,200	900	0%	-40%	72
Construction*	215,800	17,500	9%	4%	98
Forest Industries	19,200	2,000	1%	n/a	124

\* it should be noted that this Scottish Enterprise other growth sector includes various elements of the industry supply chain as well as core construction activity, which is why the employment total is higher than that in Tables 6.2 and 6.3. See Appendix 4 for a full SIC definition of what is included in this analysis.

To summarise employment within the key sectors in Dundee City Region:

- Relative to Scotland as a whole, the region has a high concentration of employment within **life sciences**, although this sector only accounts for a relatively small proportion of total employment in the region (1%). However, it should be noted that the SIC definition used in this table does not cover the whole of **life sciences** – see Section 6.3.5 for a detailed discussion of the sector at the national level.
- **Tourism** is the largest employer among the key sectors within Dundee City Region, accounting for 10% of total employment. It also has an above average level of specialisation relative to Scotland as a whole, and employment in this sector increased by 11% between 1999 and 2007.
- Dundee City Region has a relatively small **financial services** sector relative to Scotland as a whole. However, the region appears to have benefited from the rapid expansion in this sector in recent years, with employment increasing by 9% between 1999 and 2007.
- There was strong growth of 21% in the total number of jobs in **creative industries** in Dundee City Region between 1999 and 2007, though the region has a slightly below average level of specialisation in the sector relative to Scotland as a whole. This sector has been included in the analysis as it incorporates some parts of the SE growth sector of **digital media & enabling technologies**.

Looking at employment within Dundee City Region across the other growth sectors:

- **Construction** is the largest employer among the other growth sectors within Dundee City Region, accounting for 9% of total employment in 2007. This was the only other growth sector within the region to experience employment growth in recent years, increasing by 4% between 1999 and 2007.

- **Textiles** employment fell by 35% between 1999 and 2007, though the region retains a high level of specialisation in the industry. The concentration of employment within textiles was almost double the national average in 2007, though the sector accounts for just 1% of all jobs in the region.
- **Forest industries** is the only other growth sector within which the region has an above average level of specialisation. The sector employed 2,000 people in the region in 2007.
- The region has low levels of specialisation with **chemicals** and **aerospace, defence & marine** and employment within both of these sectors contracted between 1999 and 2007.

### 6.3.3 Workplaces by Sector

#### Total Workplaces

Table 6.5 shows the number of workplaces and percentage share of all workplaces within each of the key sectors and other growth sectors in Dundee City Region in 2007<sup>11</sup>. It also shows change in the total number of workplaces within each between 1999 and 2007.

**Table 6.5**

Source: Annual Business Inquiry & SLIMS Calculations

Workplaces by Sectors, 2007			
	Total Workplaces 2007	% of All Workplaces	% Change since 1999
<b>Key Sectors</b>			
Energy	40	0.3%	-26%
Financial Services	280	1.8%	-5%
Food & Drink	100	0.7%	-48%
Life Sciences	50	0.3%	41%
Tourism	1,850	11.9%	7%
Creative Industries	610	3.9%	37%
<b>Other Growth Sectors</b>			
Textiles	80	0.5%	-28%
Aerospace, Defence & Marine	60	0.4%	-20%
Chemicals	30	0.2%	0%
Construction	2,290	14.8%	19%
Forest Industries	210	1.3%	-8%

**Tourism** and **construction** are the largest of the key and other growth sectors in Dundee City Region in terms of the volume of workplaces they account for. There were more than 4,100 workplaces in the region operating within these industries in 2007, accounting for more than a quarter of all workplaces. The total number of workplaces within each of these industries increased between 1999 and 2007.

**Life sciences** accounts for 0.3% of all workplaces in Dundee City Region, a total of 50 in 2007. This was 41% higher than the total in 1999, the fastest rate of increase of all of the key

<sup>11</sup> Workplaces refer to individual places of work, rather than companies. For example, a bank may have several branches and offices within a region, and each one of these would be counted as a separate workplace.

and other growth sectors in the region. The number of workplaces operating in the **creative industries** also grew substantially over the period, increasing by 37% to a total of 610.

There was a decline of 5% in the total number of **financial services** workplaces in the region between 1999 and 2007. The total number of employees in the sector actually increased by 9% over the same period, suggesting that there has been a move within the industry towards larger firms.

The other sectors are relatively small in that each accounts for less than 2% of all workplaces in the region. Furthermore, they have all been shrinking, with particularly sharp falls in the numbers of **energy**, **food & drink** and **textiles** workplaces.

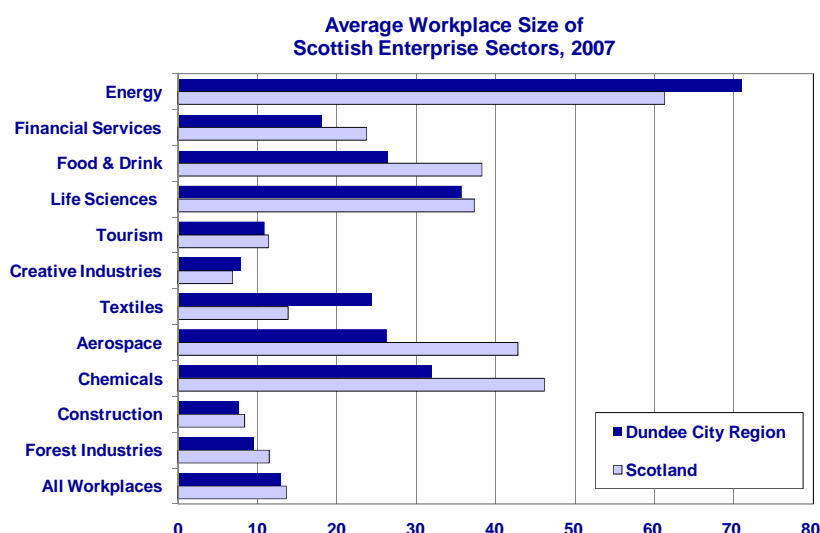
### Workplace by Size

Chart 6.2 shows the average size of workplaces across each of the key and other growth sectors in Dundee City Region, relative to Scotland as a whole. Across all industries, the average workplace in the region employs 13 people, slightly below the average of 14 for Scotland as a whole.

The average size of workplaces in Dundee City Region is above the Scottish average within **energy**, **creative industries** and **textiles** and below average across each of the other sectors. The difference is proportionately widest within **food & drink**, **aerospace** and **chemicals**, where the average size of firm in the region is more than 30% lower than across Scotland as a whole.

Chart 6.2

Source: Annual Business Inquiry & SLIMS Calculations



### 6.3.4 GVA from Key and Other Growth Sectors

Analysis of the levels of economic output (GVA) from the key and other growth sectors can be used to give a broad indication of their contribution to the Scottish economy. It should be noted that the GVA figures reported in this section refer to GVA at current prices that have not been adjusted to take account of taxes or inflation. That is why the figures appear much higher than those reported elsewhere in this report. The other key difference with these figures is that, in contrast to those contained within Sections 4.3 and 4.4, they **include** offshore oil & gas activity.

Table 6.6 shows GVA and productivity levels within the key and other growth sectors. The figures are taken from the Annual Business Inquiry (ABI) published by the Scottish Government and are the best available fit with the key and other growth sectors, though they are not an exact match<sup>12</sup>. Despite this limitation, the data are useful to give a proxy indication of the contribution of the sectors to the national economy.

<sup>12</sup> A full list of the SIC codes used in this analysis can be found in Appendix 4.



Table 6.6

Source: Annual Business Inquiry for GVA and productivity figures; Total for all industries from ONS National Accounts

Economic Output from Scottish Enterprise Sectors, Scotland 2006			
	Total GVA 2006 (£m)	% Scottish GVA	Productivity (GVA per Employee)
<b>Key Sectors</b>			
Energy	15,400	*	£625,400
Food & Drink	3,000	3.2%	£65,200
Life Sciences	1,400	1.5%	£51,000
Tourism	4,000	4.3%	£19,600
Creative Industries	2,200	2.4%	£38,700
<b>Other Growth Sectors</b>			
Textiles	400	0.4%	£37,300
Aerospace, Defence & Marine	400	0.4%	£75,000
Chemicals	2,600	2.8%	£169,000
Construction	5,900	6.3%	£46,800
Forest Industries	700	0.8%	£38,600
<b>All Industry Sectors**</b>	<b>93,361</b>	<b>100%</b>	<b>£47,200</b>

\* calculation not possible as the total for all industries excludes offshore oil & gas activities

\*\* excluding offshore oil & gas activities

To summarise the contribution of the key sectors to the Scottish economy:

- **Energy** is a large and important part of the Scottish economy, accounting for £15.4bn of total economic output in 2006 and generating over £625,000 GVA per employee<sup>13</sup>;
- The **food & drink** industry is responsible for 3.2% of all Scottish economic output and productivity in the sector is above the national average;
- Productivity levels within **life sciences** are above the Scottish average for all industries, though the sector is relatively small, accounting for 1.5% of Scottish output in 2006. Section 6.3.5 looks in more detail at this key sector in Scotland;
- The **tourism** sector has among the lowest levels of productivity of all industry sectors, partly as a result of the prevalence of part-time working in the industry. The importance of the industry to the national economy is demonstrated by the fact that it accounted for 4.3% of all output in 2006; and
- Overall productivity levels within the **creative industries** sector are below the average for all industries, though the sector accounts for 2.4% of all Scottish output.

Looking at the economic contribution of the other growth sectors in Scotland:

- **Construction** is responsible for generating 6.3% of national economic output, making it the second largest of the key and other growth sectors in Scotland. Productivity levels in the industry are broadly in line with the average for all industry sectors;
- **Chemicals** accounts for 2.8% of the Scottish economy and, with levels of GVA per employee more than three times the national average, it is the second most productive sector shown;

<sup>13</sup> It should be noted that these figures include the off-shore oil & gas industry and refer to GVA at current prices, which have not been adjusted to take account of taxes or inflation.

- **Textiles** and **forestry industries** are relatively small parts of the Scottish economy, each accounting for less than 1% of national economic output in 2006 and with productivity levels around a fifth lower than the average for all industries.
- Productivity levels within the **aerospace, defence & marine** industry are above the average for all industries. The sector accounted for 0.4% of total national economic output in 2006.

## 6.4 Key Sectors

This section looks in more detail at recent trends within the following key industry sectors in Dundee City Region:

- Digital Media & Enabling Technologies (DMET)
- Tourism
- Life Sciences

### 6.4.1 Digital Media & Enabling Technologies (DMET)

As outlined in Section 6.3.1, digital media & enabling technologies (DMET) is one of the key sectors that cannot be defined easily using SIC codes, which makes it difficult to obtain data on the size and scale of the sector from official sources.

Scottish Enterprise recently commissioned a review of economic trends within Tayside, which included analysis of changes within key and other growth sectors in the region<sup>14</sup>. The report looked at recent trends in the DMET sector based on data from the Inter Departmental Business Register (IDBR). This section summarises the main findings from this analysis.

*It should be noted that the analysis was carried out on the former Scottish Enterprise Tayside region, which includes the local authority areas of Angus, Dundee and Perth & Kinross. It does not include North East Fife, which forms part of the wider Dundee City Region.*

#### Employment

Table 6.7 shows total employment within DMET and the share of all jobs accounted for by the sector in Tayside and Scotland in 2007:

- There were 5,200 people in Tayside working in DMET in 2007, accounting for 3.7% of all jobs in the region;
- This was lower than across Scotland as a whole, where DMET accounts for 4.5% of all employment; and
- The region was home to 5.9% of all DMET jobs in Scotland in 2007.

**Table 6.7**

Source: IDBR / EKOS

DMET Employment 2007		
	Total	% of all employment
Tayside	5,200	3.7%
Scotland	87,200	4.5%

<sup>14</sup> EKOS (2008) *Tayside Economic Opportunities : Technical Report for Scottish Enterprise, April 2008*

Table 6.8 shows that employment within DMET has actually fallen in recent years, both within the region and across Scotland as a whole. There were 300 fewer jobs in the DMET sector in Tayside in 2007 than in 2003, a fall of 6%. However, this was much slower than the 13% fall in employment in the sector across Scotland as a whole over the period – a decline of 12,900 jobs.

**Table 6.8**

Source: IDBR / EKOS

<b>Change in DMET Employment, 2003-07</b>				
			<b>Change 2003-2007</b>	
	<b>2003</b>	<b>2007</b>	<b>No.</b>	<b>%</b>
Tayside	5,500	5,200	-300	-6%
Scotland	100,100	87,200	-12,900	-13%

### **Business Base**

The report also looked at business stock within the DMET sector. Table 6.9 shows that there were 555 businesses in Tayside operating within DMET in 2007, 4% fewer than the total in 2003.

Across Scotland as a whole, there was an increase of 1% in the total number of DMET firms between 2003 and 2007. This rise in the DMET business stock, combined with falling employment, suggests a move within the Scottish industry towards smaller firms.

**Table 6.9**

Source: IDBR / EKOS

<b>DMET Business Stock, 2003-07</b>				
			<b>Change 2003-2007</b>	
	<b>2003</b>	<b>2007</b>	<b>No.</b>	<b>%</b>
Tayside	580	555	-25	-4%
Scotland	8,605	8,695	90	1%

DMET accounts for a smaller proportion of total business stock in Tayside than across Scotland as a whole (4.2% compared to 5.2%). This means that there would need to be an additional 112 DMET firms in Tayside for the business stock in the sector to reach a level comparable with Scotland as a whole.

### **Digital Media**

The figures above show a decline in DMET employment and business stock in recent years. However, there is evidence to suggest that digital media – a sub-sector of DMET – is in fact a growth sector in the region offering significant potential for future growth.

Scottish Enterprise Tayside, in partnership with Interactive Tayside, carried out an on-line survey of digital media firms in the region in 2007. The objectives of the study were to gain a better understanding of the size of the sector and to identify recent trends and future prospects for the industry.

A total of 69 digital media firms took part in the survey, a response rate of 20%. The findings were grossed up to provide estimates for the industry as a whole. In terms of employment in the sector, the key findings were that:

- There were 3,500 people working in the digital media sector in Tayside in 2007;

- The total number of people working in the sector increased by 52% between 2002 and 2007;
- The majority (93%) of digital media jobs in the region are full-time and 80% are taken by men; and
- The number of full-time equivalent (FTE) jobs in the sector is expected to increase by 29% in 2007/08 and 59% by 2010.

As well as employment growth, the survey findings also suggest that turnover levels within digital media companies in the region have been increasing. It was estimated that total turnover in the sector grew by 38% between 2003 and 2007 to a total of £185m. Respondents also reported a substantial increase in the value of export sales. Total exports from digital media companies in the region were estimated at £50m in 2007, more than double the figure of £20m in 2003.

In terms of future growth, more than half (58%) of all respondents expected their business turnover to grow during 2007/08 and, of these, 25% predicted that this growth would be in excess of 50%. The three year growth projections for the industry suggest that turnover in the sector could reach £308m by 2010, a 66% increase from the level in 2007. However, as the study was carried out prior to the downturn, the outlook for the sector is likely to be less optimistic now given current economic conditions.

One issue identified as a potential constraint on the future growth of the sector was skills shortages. Over a quarter (29%) of all respondents reported that they were experiencing difficulties in recruiting staff with the appropriate levels of skills and experience.

### **Recent Achievements**

There are a number of globally-renowned, award winning digital media firms based in Dundee City Region. Recent industry achievements include:

**Insights** – an international learning and development company with operations in 20 countries worldwide are to locate their global headquarters in Dundee. Construction began on the £4 million development, to be located in the Dundee Technology Park, in August 2008. The HQ will initially house 50 Insights employees with capacity for up to 135 staff.

**Realtime Worlds** – one of the largest and most successful independent game developers in the world recently announced that they had secured \$50m USD in development funding. The Dundee-based firm employs over 200 people and has been responsible for creating some of the world's bestselling video games including 'Grand Theft Auto'.

**Denki** – the games studio based in Dundee won the Best Developer award at the 2008 TIGA Awards. The award is given to the development company viewed to have made the greatest contribution to independent game development in the UK the previous year.

**Dynamo Games** – the mobile gaming experts won a BAFTA award for their mobile phone version of Championship Manager, which was voted the best interactive title at the Scottish BAFTAs. The Dundee-based firm also received two nominations in the International Mobile Games Awards 2007 making them the only UK company in the competition and one of only two companies worldwide to receive multiple nominations.

**Voodoo Boogy** – a team of students from the University of Abertay in Dundee won the very first BAFTA "Ones to Watch" Award in 2007. The team named 'Voodoo Boogy' comprises five students on Abertay's computer games technology and computer arts degree courses.

### **Summary – Digital Media & Enabling Technologies (DMET)**

Tayside is relatively strong in some sub-sectors of DMET, particularly games and other software, but has less representation in TV, music and publishing. Although digital media and

enabling technologies (DMET) is a relatively small sector in Tayside (in terms of employment and the size of its business base) it a key source of high value added and high wage level employment in the region and offers significant potential for future growth.

The industry has been in decline nationally in recent years, but the region has shown some signs of resilience in that employment has been falling at a much slower rate than across Scotland as a whole. However, the region has a long history of excellence, particularly in games software, is very well established globally and accommodates a couple of large international firms.

There is evidence that the digital media sub-sector of DMET has experienced strong growth in the region in recent years and offers significant opportunities for future expansion. An online survey of businesses in the region found increases in employment, turnover and exports from the sector as well as significant optimism for continued growth in the coming years.

The University of Abertay will have a key role to play in the future growth of the sector in the region. It was recently awarded £3m funding from the Scottish Government to develop the first university Centre for Excellence for computer games. The majority of this investment will be spent on the development of two new industry designed postgraduate courses and teaching and learning space to accommodate them. The university was responsible for developing *Dare to be Digital* – the UK's premier computer games design competition for students which annually attracts entrants from universities all over the world.

## **6.4.2 Tourism**

### ***Total Employment***

***Tourism accounts for 10% of all jobs within Dundee City Region and, relative to Scotland, the region has above average levels of employment specialisation within most of the sub-sectors of the industry.***

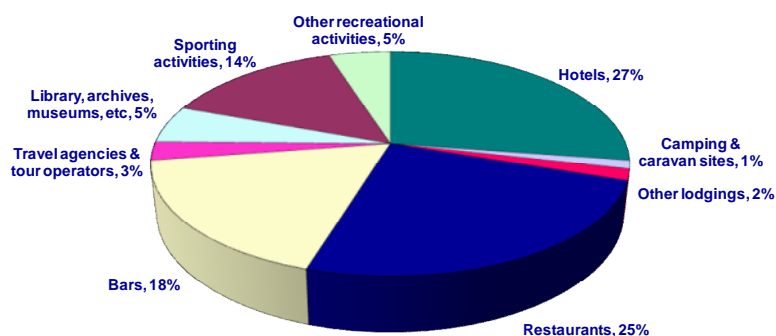
In 2007, 20,000 people were employed within the tourism industry in Dundee City Region. The sector accounted for 10% of all jobs in the region, slightly above the equivalent share of 9% for Scotland and 8% for GB. Chart 6.3 shows how these jobs were distributed across the various sub-sectors of the industry in 2007:

- Hotels represent the largest sub-sector of the tourism industry within the region, accounting for 27% of all jobs in the industry;
- Restaurants and bars combined account for over two thirds (43%) of tourism-related employment;
- Around a quarter (24%) of tourism jobs in the region are in recreational, cultural or sporting activities; and
- The remaining 6% is split between travel agencies and other forms of accommodation other than hotels.

**Chart 6.3**

Source: Annual  
Business Inquiry

**Tourism Employment in Dundee City Region, 2007**



### Employment Specialisation

**Relative to Scotland as a whole, Dundee City Region has particularly high levels of employment within hotels, camping & caravan sites and other lodgings.**

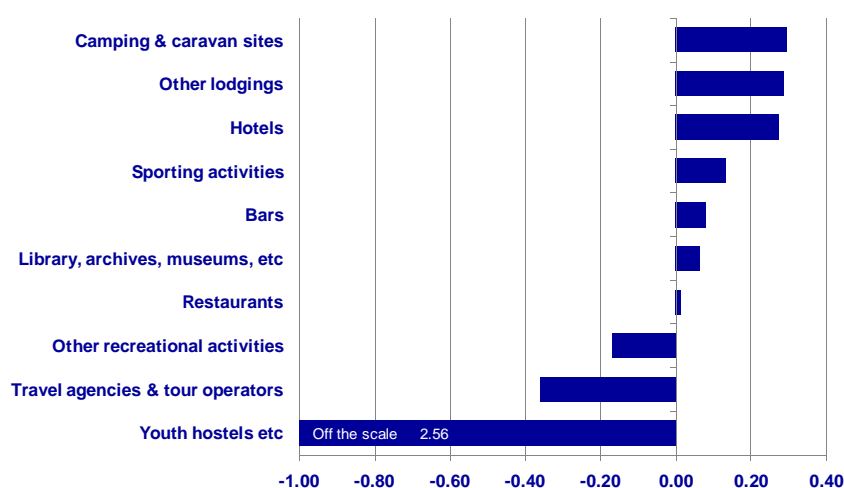
Chart 6.4 shows how employment levels in the sub-sectors of tourism in Dundee City Region compare with the Scottish average, which provides a good indication of region's level of specialisation within each. A positive specialisation score indicates the industry is over-represented in the region, relative to Scotland as a whole. Conversely, a negative score indicates the industry is under-represented relative to Scotland as a whole. This analysis shows that:

- Relative to Scotland as a whole, Dundee City Region has an above average level of employment specialisation within 7 of the 10 sub-sectors of tourism. This demonstrates the relative importance of the industry to the regional economy;
- The share of jobs within *hotels*, *camping & caravan sites* and *other lodgings* in Dundee City Region are 27-30% higher than the average for Scotland as a whole;
- The region also employs above average numbers within sporting activities and, to a lesser extent, *bars*, *restaurants* and *cultural activities*; and
- The only tourism sub-sectors that are under-represented within the region relative to Scotland as a whole are *other recreational activities*, *travel agencies* and *youth hostels*.

**Chart 6.4**

Source: Source: Annual  
Business Inquiry &  
SLIMS Calculations

**Specialisation in Tourism Sub-Sectors in  
Dundee City Region relative to Scotland 2007**



## Recent Trends

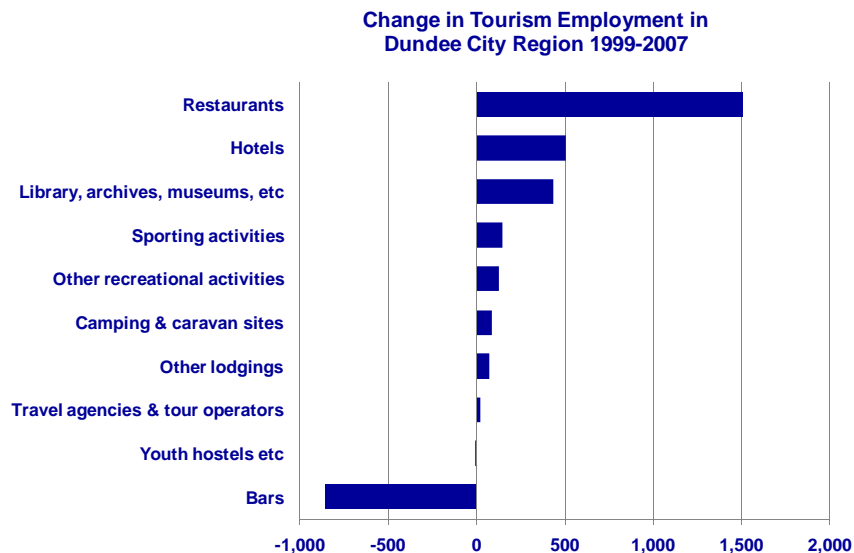
***The expansion of the tourism industry within Dundee City Region between 1999 and 2007 was largely driven by increased employment within restaurants, hotels and cultural sectors.***

The total number of tourism jobs within Dundee City Region increased by 11% between 1999 and 2007. However, this was much slower than the growth of 23% across the Scottish industry as a whole over the period. Chart 6.5 shows employment change within each of the sub-sectors of *tourism* between 1999 and 2007:

- *Restaurants* was the fastest growing tourism sub-sector within Dundee City Region over the period, with an increase of 1,500 jobs;
- Employment within *hotels* and *library, archives, museums, etc* also grew substantially, combined accounting for over 900 new jobs in the region;
- The only tourism sub-sector to contract between 1999 and 2007 was *bars*, in which there were 850 fewer jobs in 2007 than in 1999.

**Chart 6.5**

Source: Annual Business Inquiry



## The Tourism Market in Dundee City Region

### Tourism Expenditure

***There was a fall between in the value of tourism expenditure in Dundee City Region between 2003 and 2006, but this was slower than the decline across Scotland as a whole.***

Table 6.10 shows change in levels of tourism expenditure within Dundee City Region between 2003 and 2008, relative to Scotland as a whole. The figures include expenditure from both UK and overseas tourists and show that:

- Tourists to the region spent a total of £369m in 2006, accounting for 9% of total tourism expenditure in Scotland;
- There was a fall of 4.7% in the value of tourism expenditure in the region between 2003 and 2006, but this was slower than the equivalent fall of 6.3% across Scotland as a whole;



- Perth & Kinross attracts the highest share of tourism expenditure of all the areas within the region, accounting for over half (51%) of the total in 2007;
- Angus & Dundee was the only area within the region to experience an increase in tourism expenditure over the period, with growth of 1.8%; and
- There was a slight decline of 1.7% in the value of tourism expenditure within North East Fife between 2002 and 2003.

**Table 6.10**

Source: Visit Scotland

<b>Tourism Expenditure (£m)</b>		<b>Change 2003-07</b>		
	<b>2003</b>	<b>2007</b>	<b>No.</b>	<b>%</b>
Angus & Dundee	113	115	2	1.8%
Perth & Kinross	207	188	-19	-9.2%
North East Fife	67	66	-1	-1.7%
<b>Dundee City Region Total</b>	<b>387</b>	<b>369</b>	<b>-18</b>	<b>-4.7%</b>
<b>Scotland</b>	<b>4484</b>	<b>4203</b>	<b>-281</b>	<b>-6.3%</b>

### ***Tourist Bednights***

***The number of bednights taken by tourists to the region fell at a faster rate than across Scotland as a whole between 2003 and 2006.***

Table 6.11 shows the number of bednights taken by visitors to the region, relative to Scotland, in 2003 and 2006. There were 600,000 fewer visitor bednights in Dundee City Region in 2006 than in 2003, a fall of 8.5%. This compares to a fall of 7.8% in the number of tourist bednights taken across Scotland as a whole over the period.

There were falls in the total number of bednights taken across all of the areas within the region, but the decline was most marked within North East Fife (-13.3%) and least severe within Perth & Kinross (-7.0%).

**Table 6.11**

Source: Visit Scotland

<b>Bednights (m)</b>		<b>Change 2003-07</b>		
	<b>2003</b>	<b>2007</b>	<b>No.</b>	<b>%</b>
Angus & Dundee	2.4	2.2	-0.2	-7.9%
Perth & Kinross	3.7	3.4	-0.3	-7.0%
North East Fife	1.4	1.2	-0.2	-13.3%
<b>Dundee City Region Total</b>	<b>7.5</b>	<b>6.9</b>	<b>-0.6</b>	<b>-8.5%</b>
<b>Scotland</b>	<b>78.1</b>	<b>72.0</b>	<b>-6.1</b>	<b>-7.8%</b>

### ***Purpose of Trip***

Table 6.12 shows the purpose of trips to the region by UK visitors in 2008:

- Over two thirds (68%) of all trips to the region were from holiday-makers, though this proportion rises to 73% for visitors to Perth & Kinross;
- Overall, 17% of all trips to the region from elsewhere in the UK were to visit friends and relatives, though this figure ranged from 14% in Perth & Kinross to 27% in North East Fife; and
- A lower share of UK trips to the region (12%) were for business / conferences than across Scotland as a whole (18%).



**Table 6.12**

Source: Visit Scotland

<b>Purpose of Trip - UK visitors 2008</b>				
	<b>Holiday</b>	<b>Visiting friends &amp; relatives</b>	<b>Business / Conference</b>	<b>Other</b>
Angus & Dundee	62%	18%	16%	4%
Perth & Kinross	73%	14%	10%	3%
North East Fife	62%	27%	9%	2%
<b>Dundee City Region</b>	<b>68%</b>	<b>17%</b>	<b>12%</b>	<b>3%</b>
<b>Scotland</b>	<b>66%</b>	<b>14%</b>	<b>18%</b>	<b>3%</b>

Table 6.13 shows the purpose of trips to the region by overseas visitors in 2008:

- Relative to Scotland as a whole, overseas visitors to Dundee City Region were more likely to be holiday-makers and less likely to be there to visit friends and relatives or for businesses / conferences;
- Visiting friends and relatives was the most popular reason for trips to Angus & Dundee from overseas visitors in 2008;
- The majority (71%) of all overseas visitors to Perth & Kinross were for holiday, whilst a very small proportion (3%) were for business / conferences; and
- Holiday-makers accounted for half of all overseas visits to North East Fife in 2008.

**Table 6.13**

Source: Visit Scotland

<b>Purpose of Trip - Overseas visitors</b>				
	<b>Holiday</b>	<b>Visiting friends &amp; relatives</b>	<b>Business / Conference</b>	<b>Other</b>
Angus & Dundee	36%	40%	19%	5%
Perth & Kinross	71%	25%	3%	1%
North East Fife	50%	36%	10%	4%
<b>Dundee City Region</b>	<b>55%</b>	<b>32%</b>	<b>10%</b>	<b>3%</b>
<b>Scotland</b>	<b>49%</b>	<b>30%</b>	<b>12%</b>	<b>9%</b>

### **Origin of Overseas Visitors**

The fall in the value of sterling means that the pound is at its weakest in many years against foreign currency, including the American dollar and the Euro. These conditions may make the UK a more attractive place for foreign travel and may represent an area for growth in times of recession.

In 2007, over two thirds (68%) of all tourism expenditure in Dundee City Region was attributable to domestic visitors – a total of £250m. The remaining 32% came from overseas visitors. This was broadly in line with the trend across Scotland as a whole, where a third of all tourism expenditure comes from overseas visitors, more than double the proportion within the region.

Tourism expenditure by overseas visitors in Dundee City Region totalled £119m in 2007. Table 6.14 shows a breakdown of tourism expenditure by country of origin in the region, relative to Scotland as a whole:

- American visitors were responsible for around a quarter (24%) of all overseas tourism expenditure in Dundee City Region in 2007, compared to 19% across Scotland as a whole;

- Germany was the second largest source of tourism expenditure in the region, accounting for 16% of the total – slightly higher than the Scottish average of 14%; and
- Relative to Scotland as a whole, the region attracts a lower share of overall tourism expenditure from some EU countries such as France, Italy, the Irish Republic and Spain.

**Table 6.14**

Source: Visit Scotland

<b>Tourism Expenditure by Overseas Visitors 2007</b>				
	<b>Dundee City Region</b>		<b>Scotland</b>	
	<b>£m</b>	<b>%</b>	<b>£m</b>	<b>%</b>
USA	£29	24%	£260	19%
Germany	£19	16%	£191	14%
France	£3	3%	£55	4%
Italy	£6	5%	£96	7%
Irish republic	£5	4%	£96	7%
Australia	£5	4%	£55	4%
Spain	£4	3%	£82	6%
Canada	£6	5%	£82	6%
Netherlands	£6	5%	£55	4%
Sweden	£3	3%	£41	3%
Other	£31	26%	£355	26%
<b>Total</b>	<b>£119</b>	<b>100%</b>	<b>£1,367</b>	<b>100%</b>

### **Top Attractions**

*The top visitor attractions within Dundee City Region include several castles, distilleries and specialist visitor centres and museums, as the world famous golf courses in St Andrews.*

Table 6.15 lists the top visitor attractions in Dundee City Region and change in the number of visits to each between 2007 and 2008.

**Table 6.15**

Source: Visit Scotland

<b>Top Visitor Attractions in Dundee City Region*</b>				
<b>Name &amp; Location of Attraction</b>	<b>Total Visits</b>		<b>Change 2007-08</b>	
	<b>2007</b>	<b>2008</b>	<b>No.</b>	<b>%</b>
Queens' View Visitor Centre, Dunkeld	158,100	140,000	-18,100	-11%
Tullibardine Distillery, Blackford	135,000	130,000	-5,000	-4%
Glamis Castle, Glamis	118,800	107,300	-11,500	-10%
Scone Palace, Perth	99,200	104,300	5,100	5%
Stuart & Waterford Crystal, Creiff	90,300	89,600	-700	-1%
Edradour Distillery, by Pitlochry	95,300	87,900	-7,400	-8%
Scottish Fisheries Museum, Anstruther	78,500	85,400	6,900	9%
Perth Museum & Art Gallery, Perth	95,200	79,300	-15,900	-17%
Sensation - The Dundee Science Centre, Dundee	61,700	72,100	10,300	17%
Dunkeld Cathedral, Dunkeld	69,900	70,000	100	0%
Camperdown Wildlife Centre, Dundee	73,400	62,300	-11,100	-15%
St Andrews Castle, St Andrews	58,100	54,900	-3,200	-6%
Discovery Point, Dundee	59,200	53,600	-5,600	-10%
British Golf Museum, St Andrews	55,900	47,500	-8,300	-15%

### *Perth & Kinross*

Perth & Kinross was home to 7 of the top 10 visitor attractions in the region in 2008, including the top attraction which was the Queens' View Visitor Centre in Dunkeld. Perthshire has been identified as one of six Scottish Enterprise key tourism destinations and forms a central component of the region's tourism industry. Among the other top attractions within the area are Tullibardine and Edradour distilleries, Scone Palace, Perth Museum and Art Gallery and the Stuart & Waterford Crystal factory shop.

### *Dundee & Angus*

Of the top attractions in the region shown in the table, 3 were located in Dundee. These include Sensation – The Dundee Science Centre, Camperdown Wildlife Centre and Discovery Point Visitor Centre. The only attraction within Angus to rank among the top attractions in 2008 was Glamis Castle.

### *North East Fife*

North East Fife is a key tourism destination in Dundee City Region and was home to 4 of the top visitor attractions in 2008. These include the Scottish Fisheries Museum and the British Golf Museum, which attracted a combined total of 132,900 visitors in 2008. St Andrews Castle was also among the top attractions. The area is also home to St Andrews World Class, another of the six key tourism destinations identified by Scottish Enterprise.

### *Golf Tourism*

It should be noted that the list of top attractions in Table 6.16 excludes the numerous golf courses located within Dundee City Region, some of which are among the most popular tourist attractions both in the region and across Scotland as a whole.

Golf dominates the tourism industry within St Andrews and the town annually attracts thousands of visitors from all over the world to play on its famous courses or to attend major golfing championships. The Old Course in St Andrews is one of the most prestigious golf clubs in the world, has hosted the The Open Championship more times than any other course and is home to the Royal and Ancient Golf Club, the international golf rules and development body.

The Carnoustie Golf Links course in Angus is also world class and has hosted The Open Championship on numerous occasions, most recently in 2007. The Gleneagles Resort in Perthshire is home to three of the top championship golf courses in Scotland including the PGA Centenary Course, which will be the venue for the Ryder Cup in 2014.

### *Resort Developments*

A number of resort developments are currently planned or underway within Dundee City Region and some of these are outlined below. Over the coming years, these will enhance the tourism offering of the region and are likely to provide many more job opportunities in the sector.

**Croft na Caber, Perthshire** – In May 2009, it was announced that planning permission had been granted for a £20m project to develop Croft na Caber in Perthshire into a world-class sailing resort. The development includes plans for a sailing school, restaurant, children's club, health spa and swimming pool, as well as a variety of holiday accommodation units. It is estimated that the development will create up to 42 new jobs at the resort and construction work could be underway within a year, with the earliest completion date expected to be 2012.

**Forbes of Kingennie, Angus** – Plans have been unveiled for a new championship 18-hole golf course and youth academy in Angus. The £55m development, which is backed by Ryder Cup winner Darren Clarke, would also include a five-star hotel and spa and new homes at Wellbank. It is estimated that the development could create more than 100 jobs for the area.

**Taymouth Castle, Aberfeldy / Kenmore Braid Golf Course** – A £74m development is underway to transform the 450-acre estate and historic Taymouth Castle in Perthshire into a unique luxury resort. The Castle will be restored and developed into a hotel and state-of-the-art health spa. Proposed outdoor activities include river and loch fishing, as well as golf at the James Braid 18-hole golf course, which forms part of the landscaped estate grounds.

**Fairmont Hotel, St Andrews** – The award winning Fairmont Hotel in St Andrews is currently awaiting planning permission for a major expansion project, which includes plans for 37 new holiday lodges, redevelopment of a steading to form a spa, holiday apartments, a restaurant, public house and bistro.

**Pittormie Castle Estate, St Andrews** – There are possible expansion plans for the creation of timeshare / fractional ownership accommodation within the Pittormie Castle Estate in St Andrews.

### 6.4.3 Life Sciences

The *life sciences* sector does not lend itself well to Standard Industrial Classification (SIC), which makes it difficult to measure the size and scale of the sector using official data sources. In order to address this, Scottish Enterprise and partners carried out a survey of *life sciences* firms in the Dundee City Region in 2008. The key findings from this were that:

- *Life sciences* has been one of the fastest growing sectors in the region over the past decade, employing 4,300 people in 2007 – almost four times higher than the total of 1,100 in 1997;
- There were 65 organisations operating with the *life sciences* sector in the region in 2007, representing a nine-fold increase from the total of 7 in 1997; and
- The *life sciences* sector accounts for around 16% of the regional economy.

#### *University of Dundee*

With more than 750 staff and research students and external funding in excess of £48m per year, the College of Life Sciences located within the University of Dundee is larger and more productive than the National Institute for Medical Research in London. The research undertaken there has been a key contributing factor to the rapid growth in the *life sciences* sector in the region over the past decade.

Researchers at the university have collaborated with some of the world's major pharmaceutical and biotechnology companies to carry out research into diseases such as cancer, diabetes and rheumatoid arthritis. The recently completed Sir James Black Centre within the university supports research to develop drugs for the treatment of neglected tropical diseases including malaria and African sleeping sickness. The university is also leading on a global UNESCO project that is carrying out a situation assessment of the occurrence and impacts of toxic blue-green algal blooms in lochs, reservoirs and rivers throughout the world.

It is clear that the University of Dundee will continue to have an important role to play in developing and maintaining the region's specialisation within the *life sciences* sector. Some key recent achievements include:

- ranking the highest of all Higher Education Institutes (HEIs) in Scotland, and the third highest within the UK, in terms of life science research in 2006;
- being within the top three universities in the UK in terms of the level of research income per capita;

- the generation of several successful spin-out companies operating within the *life sciences* sector in Dundee City Region including CXR Biosciences, Millipore and Cypex;
- voted “*best scientific workplace in Europe*” by The Scientist in 2004 and 2005; and
- shortlisted for University of the Year 2008 by the Times Higher Education Supplement.

### **Infrastructure**

***There are a number of sites within Dundee offering high quality accommodation for start-up or growing life sciences firms.***

**Dundee Technology Park** is a business park located around four miles from Dundee City Centre. Companies within the Park include Axis-Shield, W L Gore and ITI Life Sciences. It is designed for companies in the high growth technology sector and provides a campus style environment with high quality landscaping, prestigious buildings and easy access to the main roads connecting Dundee to Aberdeen, Glasgow and Edinburgh.

**Dundee MediPark** is a joint venture between Scottish Enterprise and Ninewells Teaching Hospital. It is located adjacent to the hospital and to the Technology Park and currently houses three life sciences companies, a Health Informatics Centre and the Institute for Medical Science & Technology (IMSaT). It offers biomedical, biotech or medical device companies the opportunity to develop laboratory, production and office space close to the local biosciences research community.

**Dundee Technopole** is situated adjacent to the University of Dundee and the Wellcome Trust Biocentre. Companies currently located on the site include Cyclacel and CXR Biosciences. The Dundee University Incubator (DUI) is also located within Technopole. The aim of the DUI is to maximise the growth potential of science and technology based spin out companies by offering high quality lab and office spaces in a central location with easy access to the University.

## 7 Infrastructure & Place

### 7.1 Vacant & Derelict Land

#### *Introduction*

The Scottish Government publish annual estimates of the amount of urban vacant and derelict land located within each local authority in Scotland. This data can be used to give an indication of the scale and quality of the land available for development within an area.

Urban vacant land can be defined as land located within settlements with a population of 2,000 or more, which is currently not being used for the purposes for which it is held and is therefore viewed as an appropriate site for development. This land must either have had prior development on it or preparatory work has taken place in anticipation of future development.

Derelict land is land which has been so damaged by development, that it is incapable of development for beneficial use without rehabilitation. In addition, the land must currently not be used for the purpose for which it is held. Land also qualifies as derelict if it has an unremedied previous use which could constrain future development. For both urban vacant and derelict land, site records must be at least 0.1 hectares in size to be included.

#### *Land Availability*

In 2008, there were a total of 465 hectares of urban vacant or derelict land within Dundee City Region, accounting for 4% of the Scottish total – less than half the region's share of total land mass in Scotland (11%). Chart 7.1 shows how this land was distributed across the region. Dundee and Angus have the largest amount of available land for development, combined accounting for over three quarters of the regional total in 2008.

**Chart 7.1**

Source: Vacant & Derelict Land Survey, Scottish Government

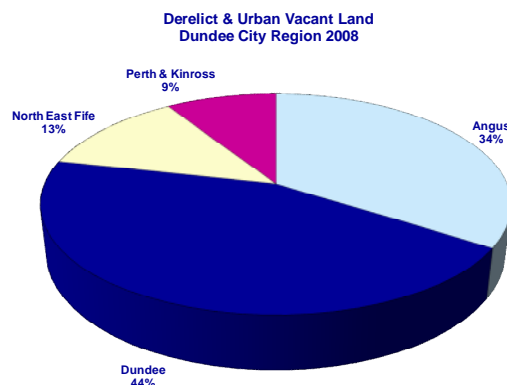


Table 7.1 shows that Dundee has the largest volume of vacant and derelict land within the region spread over the largest number of sites. The average size of site in the City, at just over one hectare, is below both the regional and national averages. Angus has the second highest volume of land available for development in the region, though this is spread over fewer sites resulting in an average site size of over three hectares.

The proportion of land available for development within Angus, North East Fife and Perth & Kinross is broadly in line with the national average. However, more than 3% of all land in Dundee is vacant or derelict, much higher than the equivalent rate of just 0.1% across Scotland as a whole.

Table 7.1

Source: Vacant & Derelict Land Survey, Scottish Government

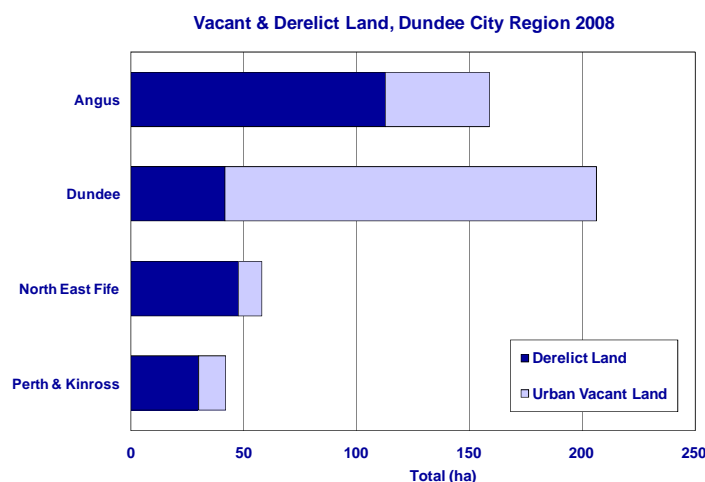
Vacant & Derelict Land 2008				
	Total Derelict or Urban Vacant Land (ha)	Number of Derelict or Urban Vacant Sites	Average Site Size (ha)	Derelict & Urban Vacant Land as % of all land
Angus	159	48	3.3	0.1%
Dundee	206	190	1.1	3.4%
North East Fife	58	52	1.1	0.1%
Perth & Kinross	42	49	0.9	0.0%
<b>Dundee City Region</b>	<b>465</b>	<b>339</b>	<b>1.4</b>	<b>0.0%</b>
<b>Scotland</b>	<b>10,970</b>	<b>4,012</b>	<b>2.7</b>	<b>0.1%</b>

Of the 465 hectares of available land within Dundee City Region as a whole in 2008, half was derelict – that is, it requires remedial work before it can be used for development. The remainder was vacant and therefore available for immediate development. This compares favourably with Scotland as a whole, where 75% of all available land for requires some form of remedial work.

Chart 7.2 shows how each of the areas within the region compare on this measure. The majority of all available land in Angus, North East Fife and Perth & Kinross requires some form of remedial work before it can be developed, which could pose problems in terms of attracting investment. By contrast, 80% of all available land in Dundee is ready for immediate development.

Chart 7.2

Source: Vacant & Derelict Land Survey, Scottish Government



## 7.2 Transport & Connectivity

Effective transport infrastructure is a key contributor to economic performance and is critical in providing efficient access to and from local labour markets and goods and services. At the same time, strategic transport networks provide important connections both to and from the rest of the country, and internationally. The quality of a region's transport offer can also have a bearing on inward investment decisions, and the perceived attractiveness of a location for tourism.

The *Eddington Transport Study (2006)*<sup>15</sup> recently reviewed the long-term linkages between transport and UK economic performance. In order to avoid adversely impacting upon national productivity and competitiveness, the study sets three strategic economic priorities for transport over the next 20 years:

<sup>15</sup> The Eddington Transport Study - The Case for action: Sir Ron Eddington's advice to Government, December 2006

- inter-regional transport connections
- strategic transport linkages between city regions
- international transport links

This section of the report looks at the transport infrastructure of the Dundee City Region and provides commentary on the following:

- travel to work patterns
- internal & external connectivity

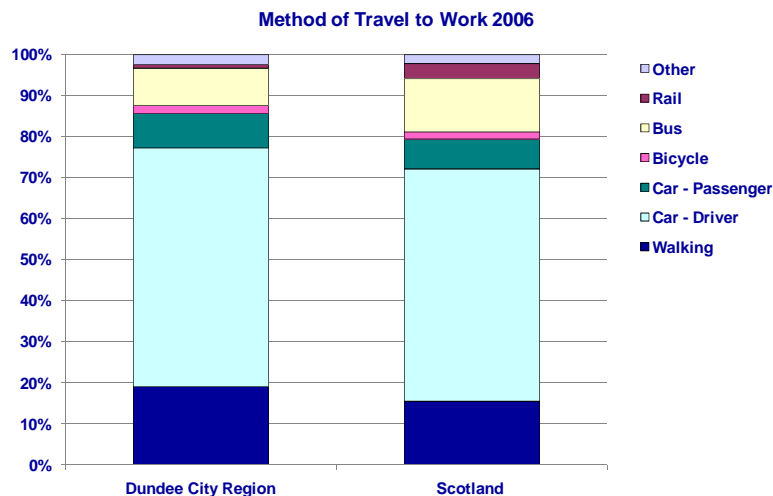
### 7.2.1 Travel to Work

Relative to Scotland as a whole, residents of Dundee City Region are slightly more reliant on the car as a means of travel to work. Chart 7.3 shows that, in 2006, 66% of Dundee City Region residents used the car as their main method of travel to work – slightly higher than the national equivalent of 64% (this includes both drivers and passengers).

However, underlying this headline figure there are a number of variations between the constituent local authority areas that make up the region. For instance, the figure rises to 71% and 72% for residents of Fife and Perth & Kinross respectively, while the more urban environment of Dundee is reflected in an equivalent figure of just 58%. At the same time, Dundee residents are much more likely to walk to work compared to the other local authority areas within the Region.

**Chart 7.3**

Source: Scottish Household Survey



### 7.2.2 External & Internal Connectivity

In international terms, Scotland as a whole is considered to have below average connectivity in relation to the rest of the EU<sup>16</sup>, particularly outside of Glasgow & Edinburgh. In this context, the Dundee City Region can be considered relatively peripheral in Scottish, UK and European terms. Whilst the Region's geographical position underlines the requirement for quality transport infrastructure to ensure wider access to and from the area, there is also a need to ensure efficient transport links to destinations *within* the region. This section considers both of these aspects, as well as developments in the Region's digital infrastructure.

#### Air Connectivity

Located around 2 miles from the city centre, Dundee Airport is a small regional airport offering regular scheduled flights to London City Airport, Belfast City, and Birmingham. In 2007,

<sup>16</sup> National Planning Framework 2 Discussion Draft, 2008



passenger throughput at the airport was around 65,000, most of whom were business passengers and largely reflecting the airports' regional function. The UK Government's Air Transport White Paper - *The Future of Air Transport* – provides the strategic framework for the development of air transport until 2030 and concludes that the close proximity of the RAF Leuchars base is likely to inhibit future commercial aviation development of facilities at the Airport. While it is felt that capacity exists for growth in passenger numbers up to around 250,000 per annum, any future expansion is likely to be confined to growth in business aviation services.

The small scale of the Airport makes it necessary for residents within Dundee City Region to travel to Edinburgh, Aberdeen or Glasgow airports in order to fly directly to international destinations. Outside Scotland, London City and Birmingham Airports are also increasingly being used as hubs to facilitate access to international destinations. In this context, road and rail connections to Edinburgh Airport – currently reachable from Dundee within 90 minutes by both – are recognized in the *National Planning Framework* as offering potential to better connect Dundee City Region with wider national and international markets. The *Framework* notes that reduced journey times between Dundee and Edinburgh (to below one hour) could make a significant contribution to Dundee's competitiveness as a place for businesses to locate and invest.

### *Road & Rail*

There was no mention of proposals to strengthen rail links between Dundee and Edinburgh in the recently published *Strategic Transport Projects Review*. However, the frequency of the train service between the two cities was increased from one to two per hour from December 2008. This doubling of frequency saw the introduction of an hourly express service resulting in reduced journey times between Dundee and Edinburgh by up to 10 minutes.

In the longer-term, proposals for high speed rail (HSR) links between Scotland and England are increasingly on the policy agenda with the UK government currently exploring options for high speed links between London and the Midlands, and possibly into Scotland. However the early stage of these proposals means it is likely to be a number of years before any potential economic benefits of HSR would be realised.

In respect of external connectivity, there are two key road infrastructure projects of significance in Dundee City Region – the building of a northern relief road around Dundee; and the upgrading of the A9 between Perth and Inverness. The planned improvements in Dundee would see the construction of a bypass to the northern part of the city, with an expected reduction in levels of congestion around the Kingsway - a particular congestion 'hotspot' within the Region. These works also have implications for national connectivity, as they form part of a wider scheme aimed at improving road links between the central belt and Aberdeen.

At the same time, commitment has been given to upgrade the A9 northwards from Dunblane to Inverness. Although it is accepted that project delivery is likely to be a long-term undertaking, the completion of this project should significantly improve the quality of Dundee City Region's linkages with northern Scotland, while again improving linkages at a national level. Commitment to a replacement Forth crossing, and upgrades to the A9 north of Perth should also ensure that important linkages with Edinburgh and Inverness are maintained in future years.

A number of transport infrastructure constraints can also be identified *within* the Region, with a resultant increase in congestion and delays. Rather than being widespread, congestion is largely concentrated in a number of key locations at peak periods. Sources of delay on strategic transport corridors include single carriageway sections of the A9 between Perth and Pitlochry, east of Dundee to Arbroath, and the A92 Tay Bridge crossing to Dundee. The key local congestion issues centre upon the Kingsway in Dundee as well as a number of locations in Perth including the Broxden Roundabout, and Crieff Road.

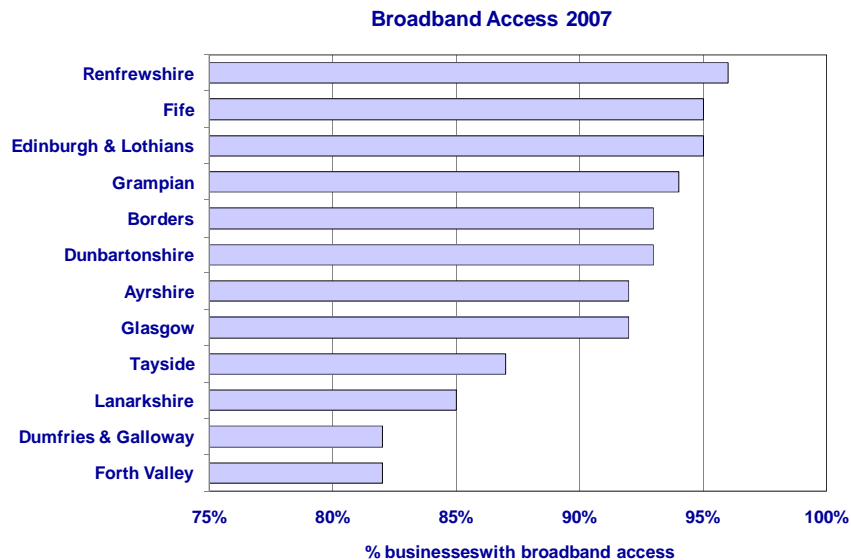
## Electronic Connectivity

The relationship between connectivity and competitiveness extends beyond transport infrastructure and encompasses issues of digital connectivity and communications. The provision of high speed broadband in particular can make an important contribution to the growth of local and regional economies and influence business location and investment decisions.

Recent evidence from the *Scottish Enterprise e-Business Survey* (2007) suggests that in a Scottish context, Dundee City Region performs relatively well in terms of the access that businesses have to broadband. Chart 7.4 shows the proportion of businesses with broadband access across Scottish Enterprise (2007) areas. It shows that 87% of business located in SE Tayside, and 95% of business located in SE Fife, had access to broadband services in 2007, relative to the Scottish average of 90%.

Chart 7.4

Source: Scottish Enterprise e-Business Survey



As well as the extent of coverage, the speed of digital connection is equally important in maintaining a competitive business environment for existing businesses and in attracting new investment. In this regard, Dundee has recently been selected to become Scotland's first "Fibre City", a development that could enhance digital infrastructure significantly within the Region.

The private sector company Fibrecity has invited households and businesses in the city to connect for free to its city-wide fibre-optic network, in which it is investing around £30m. Ultimately the project could enable super fast broadband speeds of up to 100Mbps for around 70,000 Dundee households and businesses – much greater speeds than are currently available. Digital infrastructure improvements of this nature could help to improve Dundee's competitiveness as a business location in the future, particularly for sectors such as software, the creative industries, and financial services, which are already well established within the City.

## 7.3 Physical Development Priorities

A number of physical developments are underway within the Dundee City Region, many of which are concentrated within Dundee's waterfront area. This section provides a summary of key projects shaping physical development within the Region.

**Dundee Waterfront Regeneration** – The Dundee Waterfront Masterplan (2001 – 2031) sets out Dundee's strategy for delivering infrastructural improvements, creating sites for mixed use development and extending the City Centre down to the waterfront. The ongoing regeneration of the Waterfront includes the following projects:

- [Forensic Laboratory for the Scottish Police Services Authority \(SPSA\)](#) – construction began on an office development to house SPSA's forensic science laboratory in 2008. This £16.2million development, which is located at the City Quay, is expected to be completed in late 2010.
- [Waterfront Housing Projects](#) – housing developments at Merchant's Quay and the Southern Wharf have been completed, although recent reports indicate that the construction company behind the current development on Victoria Dock has gone into administration. The most recent reports suggest that approximately two thirds of the complex remains unfinished.
- [Marketgait](#) – In early 2008, work began on the site at the corner of Hawkhill and Marketgait to create an 8-storey entertainment and leisure complex, including a casino, offices and restaurant and hotel. Completion of this project has been estimated for August 2009.
- [Seabraes Yard](#) – this site, which was previously a disused railway yard, has been redeveloped to offer a range of specialist accommodation for start-up businesses and inward investors and is now home to Dundee's creative media district. The Seabraes facility still offers 9 fully serviced plots, providing potential for further investment in the area.
- [Dundee Central Waterfront](#) – In March 2009, it was announced that the final £33m of a £73m funding package was to be made available for the 10-year project aimed at reconnecting Dundee city centre with the River Tay. The money will be spent on developing a massive storm water tank, a new northern boulevard and demolishing and re-building exit and access ramps at the Tay Road Bridge. The project is expected to create up to 1,000 jobs, and attract £270m of private investment, over the next decade.

[Victoria and Albert Museum](#) – The feasibility of opening a branch of the V&A museum in Dundee, it's first outside London, has been appraised and is actively being pursued. It is estimated that the project could generate £18m a year for the local economy, attract up to 130,000 extra tourists a year by 2015 and create more than 850 full-time jobs. Officials are set to build an iconic building to house the museum, which will hold up to two exhibitions a year and some of the V&A's finest collections.

[Western Gateway Redevelopment](#) – the Dundee and Angus Structure Plan earmarks the Western Gateway area, which contains land in both Dundee and Angus, as a site for a mixed use development, including residential, business and retail space. Dundee City Council, along with housebuilders Cala and Gladedale, may build as many as 1,500 homes on the land South of Liff Village.

[Mill O' Mains Regeneration](#) – at the time of writing, a draft Masterplan outlining plans to regenerate 16 vacant sites within the Mill O' Mains area in Dundee was being circulated for consultation. The draft plan outlines aims to create a range of new mixed tenure housing and integrating this with existing provision. The initial draft Masterplan suggests that the project is likely to take place over five stages, with interim estimates pointing to a completion date of January 2013.

[University of Abertay](#) – Work has recently begun on the £25m new Abertay student village in Dundee. The new 10-storey complex, which is forecast for completion in time for the 2010/11 academic year, will be based on Parker Street in close proximity to the University's City Centre campus. It was announced earlier this year that the University is to receive £3m investment from the Scottish Government to become the UK's first ever university Centre of Excellence for computer games. The majority of the investment will be spent on the development of two new industry designed postgraduate courses and teaching and learning space to accommodate them.

**University of St Andrews** – The University has submitted plans to build a £45m School of Medicine within its science campus. This development is expected to be commissioned in September 2010 and will be designed to foster interdisciplinary collaboration between medics and scientists based at the university with the view to creating advances in medical research.

**Scottish Oceans Institute (SOI)** – A new institute designed to help lead research of Scotland's oceans, assess the effects of climate change, monitor marine life and advise Government policy opened in the East Sands area of St Andrews in March 2009. The institute was launched by St Andrews University and has been designed to promote interdisciplinary marine research. Estimates suggest that the facility could expand the current number of specialist researchers in this area from 120 to more than 200.

**Life Sciences Sector** – Dundee has a thriving and significant Life Sciences Sector. The sector encompasses the *Scottish Institute for Cell Signalling*, a £10million facility which opened in October 2008. Other institutions include *Dundee Medipark*, a specialist business park providing premises and infrastructure for biotechnology firms wishing to locate in the area as well as a base for spin-out enterprises from Ninewells Hospital and the Medical School. It is hoped that the continued growth and development of the life sciences sector in Dundee will attract further investment to the area.

**Bairds Malt** – a new malting plant has been planned for Arbroath, which will employ the best current thinking in process control and malting. It is due to be commissioned in late 2009 and malt production should commence by the end of that year with full production established by January 2010.

**Elliot Industrial Estate** – Elliot Estates Ltd have recently taken over the former Seedcrushers plant in Arbroath and plan to convert the five acre site into a complex of warehouses and industrial units that will be available for lease.

**Brechin Business Park** – Enterprise North East Trust has taken over a building in the business park, which was previously home to the Angus Digital Media Centre. It will be re-named Enterprise Business Centre and will provide a range of offices available for lease to individual businesses on flexible terms. It represents the first provision of this type of managed office space in Angus.

## 8. Sub-Regional Performance




This section provides a broad overview of how each of the local authority areas within Dundee City Region perform against the purpose targets set out in the Government Economic Strategy. It should be noted that the whole of the local authority area of Fife has been included in this analysis, even though only the North East Fife parliamentary constituency area is located within Dundee City Region.

### 8.1 Economic Growth

**GES Target: to raise Scotland's GDP growth rate to the UK level by 2011.**

The average annual GVA growth rate for Dundee City Region between 1999 and 2006 was 2.1%. This compares to the UK average of 3.2%, meaning that the region as a whole is currently falling somewhat short of the national growth target.





Table 8.1 ranks each of the local authority areas within Dundee City Region on how they perform on this measure using the following coding:

-  = below the national average
-  = broadly in line with the national average
-  = above the national average

This analysis shows that the GVA growth rates achieved by Dundee, Fife and Perth & Kinross over the period were broadly in line with Scotland as a whole. However, the Angus economy contracted throughout much of the period, which had the effect of bringing down the regional average. Higher growth rates are likely to be required across all areas in the region, particularly Angus, if the region as a whole is to achieve a better performance on this measure and be in a position to contribute to the national target.

**Table 8.1**

Source: Oxford  
Economics

Economic Growth	
	GVA Growth Rate 1999-2006
Dundee City Region	2.1%
Scotland	2.8%
Angus	
Dundee	
Fife	
Perth & Kinross	

*Local authority figures are included in the data matrix  
which accompanies this review*





### 8.2 Productivity

**GES Target: to rank in the top quartile for productivity amongst our key trading partners in the OECD by 2017.**

In 2006, productivity within Dundee City Region (as measured by GVA per employee) amounted to £33,800. This was below the equivalent figure for Scotland and just 92% of the UK average of £36,900. Table 8.2 shows how each of the local authority areas within the region perform on this measure, using the same coding as above. Productivity levels within Angus, Fife and Perth & Kinross are all below the Scottish average. Dundee is the only local authority area in the region to match the national average on this measure.

**Table 8.2**

Source: Oxford  
Economics & Annual  
Business Inquiry

Productivity	
	GVA Growth Rate 1999-2006
<b>Dundee City Region</b>	<b>£33,800</b>
<b>Scotland</b>	<b>£35,200</b>
Angus	
Dundee	
Fife	
Perth & Kinross	

Local authority figures are included in the data matrix  
which accompanies this review

### 8.3 Participation





**GES Target: maintain our position on labour market participation as the top performing country in the UK and close the gap with the top 5 OECD economies by 2017.**

The employment rate is a key indicator of labour market participation as it essentially a measure of the proportion of the working age population that are in work. The employment rate in Dundee City Region was 77% in 2007, slightly above the national average of 76%. The region is therefore currently well placed to make a positive contribution to the national target.

Table 8.3 shows how the areas within the region compare to the national average on this measure, using the same coding as the previous sections. It shows that Angus and Perth & Kinross are driving the region's good performance on this measure, whilst labour market participation levels in Dundee are below the Scottish average.

**Table 8.3**

Source: Annual  
Population Survey

Participation	
	Employment Rate 2007
<b>Dundee City Region</b>	<b>77%</b>
<b>Scotland</b>	<b>76%</b>
Angus	
Dundee	
Fife	
Perth & Kinross	

Local authority figures are included in the data matrix  
which accompanies this review

### 8.3 Population

**GES Target: to match European (EU-15) population growth over the period from 2007 to 2017.**

The population of Dundee City Region grew by 0.9% between 1999 and 2007, slightly slower than the growth of 1.4% across Scotland over the period. A faster rate of growth is likely to be required if the region is to make a contribution to the national growth target.

Table 8.4 shows how the areas within the region have performed against the national average on this measure since 1999. It shows that both Fife and Perth & Kinross experienced a faster rate of population growth than across Scotland as a whole. However, this was partly offset by falling population in both Angus and Dundee.

**Table 8.4**

Source: General  
Register Office for  
Scotland

Population	
	Population Change 1999-2007
Dundee City Region	0.9%
Scotland	1.4%
Angus	●
Dundee	●
Fife	●
Perth & Kinross	●

Local authority figures are included in the data matrix  
which accompanies this review

## 8.4 Solidarity

**GES Target: to increase overall income and proportion of income earned by three lowest income deciles as a group by 2017.**

Median earnings for those working in Dundee City Region were £367 per week in 2008, broadly in line with the Scottish average of £375. However, there are variations on this measure within the region as shown in Table 8.5.

The median earnings of those working in Dundee and Perth & Kinross are higher than across Scotland as a whole, whereas in Angus and Fife they are lower. The region therefore has more to do in terms of reducing disparities in wage levels.

**Table 8.5**

Source: Annual  
Survey of Hours  
and Earnings  
(ASHE)

Solidarity	
	Average Weekly Earnings 2008
Dundee City Region	£367
Scotland	£375
Angus	●
Dundee	●
Fife	●
Perth & Kinross	●

Local authority figures are included in the data matrix  
which accompanies this review

## 8.5 Cohesion

**GES Target: to narrow the gap in participation between Scotland's best and worst performing regions by 2017.**

The indicator identified within the National Performance Framework for measuring progress towards the cohesion target is the employment rate. The extent of progress will be measured by the reduction in the percentage difference between the three local authority areas with the lowest rate and the three with the highest rate.

Currently, none of the local authority areas within Dundee City Region fall within the bottom three in Scotland on this measure. However, labour market participation levels in Dundee are relatively low and an improvement is likely to be required if the region is to make a contribution towards achieving the national target.



## 8.6 Sustainability





**GES Target: to reduce emissions over the period to 2011 and to reduce emissions by 80% by 2050.**

In 2006, Dundee City Region was responsible for around 7% of all CO<sup>2</sup> emissions from Scotland. This amounted to 8.8 tonnes per 1,000 population, slightly above the Scottish average of 8.5 per 1,000. Table 8.6 shows how each of the areas within the region fare on this measure.

The above average level of CO<sup>2</sup> emissions from the region can be attributed to particularly high levels of emissions from Angus and Fife. The rate of emissions from Dundee and Perth & Kinross broadly match the national average.

**Table 8.6**

Source: DEFRA

Sustainability	
	CO2 (t) per Head 2006
Dundee City Region	8.8
Scotland	8.5
Angus	
Dundee	
Fife	
Perth & Kinross	

Local authority figures are included in the data matrix which accompanies this review



## **9 Outlook for Dundee City Region**

### **9.1 Introduction**

The production of the economic review has been carried out against a backdrop of huge economic turmoil at the global, UK and Scottish levels. The UK and Scottish economies are now officially in recession and there is emerging evidence that Dundee City Region is beginning to feel the effects of the global economic downturn.

In this final chapter of the report we present our understanding of the future prospects for Dundee City Region based on:

- Our understanding of the recent economic performance of the region;
- Oxford Economics recently published Economic Forecasts for the UK, Scotland and the Regions, published in March 2009;
- The insights we have gained from stakeholders during the consultation process to identify the emerging impacts of the recession; and
- Our own understanding of how the recession might impact on Dundee City Region.

This chapter of the report set outs:

- Dundee City Region's recent performance in relation to the GES targets;
- Oxford's understanding of the drivers of the recession and the impacts thus far;
- Economic Forecasts for Dundee City Region, and the uncertainties and risks that surround those forecasts;
- The implications of the recession for Dundee City Region;
- The potential contribution the Region might make to the GES targets going forward; and
- A framework of potential policy responses.

### **9.2 What contribution has Dundee City Region made to the GES targets?**

#### **9.2.1 Contribution to the Scottish Economy**

Looking across some key economic indicators, Dundee City Region:

- generated 7% of Scotland's GVA in 2006;
- accounts for 8% of all Scottish jobs;
- has above average productivity levels within agriculture, public service and other personal services;
- has specialisation in a number of key sectors, with:
  - 24% more life sciences jobs than the average for Scotland as a whole
  - almost double the share of national average of jobs in textiles

- approximately 25% more jobs within forest industries
- an above average concentration of employment within tourism.

Dundee City Region has been an average performer in terms of economic growth over the past decade. Since 1999:

- Some 13,600 jobs have been created in the region, although this excludes self employment;
- Productivity levels in Dundee City Region have been consistently below the national average;
- In terms of economic output, Dundee City Region has lagged behind the Scottish average with an average annual GVA growth rate of just 2.1%; and
- Export sales in Dundee City Region fell by 1% between 2002 and 2006, in contrast to growth of 3% in Scottish exports.

At the same time, Dundee City Region also has a number of people and place assets that provide a basis for a stronger economic performance going forward:

- The region has a relatively well qualified workforce with a higher proportion of residents educated to degree level and a lower share with no qualifications at all, relative to Scotland as a whole.
- Labour market participation (as measured by the employment rate) in Dundee City Region is above the national average
- Following a period of decline, the population of the region has been growing in recent years and this upward trend is expected to continue over the coming decade.

## 9.2.2 Contribution to the achievement of the GES targets

Dundee City Region, on the basis of recent trends, needs a step change in performance if it is to make a meaningful and positive contribution to the Scottish Government's purpose targets, as set out on the Government Economic Strategy.

- GVA has grown at an average annual rate of 2.1% between 1999 and 2006 - below the UK average of 3.2%;
- Productivity, as measured by GVA per employee, amounted to £33,800 in 2006, 8% below the UK average of £36,900;
- The employment rate is above the Scottish average at 77%;
- There has been some population growth in recent years following a long period of decline; and
- The Region is characterised by below-average wages and income levels.

**Table 9.1**

Source: SLIMS Analysis

**Relative performance against GES Purpose Targets**

	East Region	West Region	Dundee City Region	Aberdeen City & Shire
Economic Growth				
Productivity				
Participation				
Population				
Solidarity + Cohesion				
Sustainability				

Colour coding: Green – above Scottish average  
 Amber – in line with Scottish average  
 Red – below Scottish average

### **9.2.3 Looking ahead – the impact of the recession**

A key question for the study, however, is to understand the potential future contribution that Dundee City Region might make to the achievement of the GES targets. In the remainder of this chapter we set out our understanding of what is driving the recession, outline some uncertainties and scenarios relating to the base Oxford Forecast and the views of the SLIMS/Oxford team on the impact that the recession will have on Dundee City Region. We conclude by highlighting some potential policy implications from the review findings.

## **9.3 What is driving the recession?**

The roots of the financial crisis are complex, involving global savings imbalances, policy & regulatory failures, over-indebted consumers in a number of developed economies and the squeeze on household incomes from high commodity prices. However, the financial crisis that broke in the autumn of 2008 will be remembered as the event that destroyed consumer and business confidence. Activity, which was already weakening, has fallen precipitously in the last 4 months, with investment spending cut back and unemployment rising sharply. Policy reactions saved the banking system from systemic collapse, with the central banks slashing official interest rates and implementing unorthodox measures to supply liquidity to both banks and the rest of the economy. However, credit remains much harder to get even for the best of borrowers, and government finances are deteriorating rapidly as economies weaken and stimulus programmes are enacted.

### **9.3.1 Evidence so far**

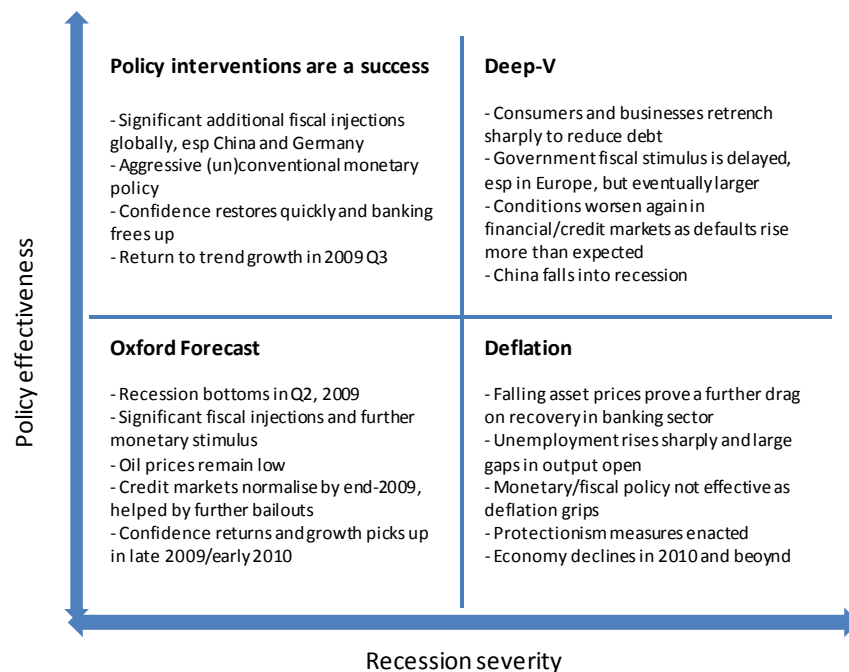
The shock to the real economy is evident from the recent data releases which show a synchronised, sharp fall in activity. Some of the headline indicators are:

- The loss of nearly three million (or one in fifty) jobs in the US since September – the worst labour market experience in the post-war era;
- German factory orders down 27% in the year to November;
- The transmission of the downturn to emerging nations reliant on trade – with Chinese exports in January 17.5% lower than a year earlier;
- UK GDP down 2.1% in the second half of 2008;
- The PMI employment measure for Scotland in January stood at a record low of 39.5; and
- The total number of JSA claimants in Dundee City Region increased by 3,800 in the twelve months to February 2009, an increase of 55%.

### **9.3.2 Uncertainties and scenarios**

The sharp falls in output over the last 4 months are now aggravating the financial aspects of the crisis by raising the prospect of corporate failures and further asset writedowns, nullifying the efforts to revive the banking system. These feedback loops from the severity of the downturn, combated by the unprecedented policy response, add considerable uncertainty to forecasts for 2009 and beyond.

Oxford Economics believes that the most likely outcome at this stage is for the recession to bottom in the second quarter of 2009. The recovery led by the US will be anaemic, with GDP not recovering its mid-2008 level in the US until mid 2010 and not until mid-2011 in the Eurozone and the UK. As illustrated in the table below, other outcomes are clearly possible, and only a little less likely than the base case, particularly if credit markets do not normalise or if the fiscal and other stimulus measures are delayed. This includes a fall into outright deflation with output falls stretching into 2010 and beyond.



#### Oxford Economics forecast scenarios

## 9.4 Economic Forecast for the Dundee City Region

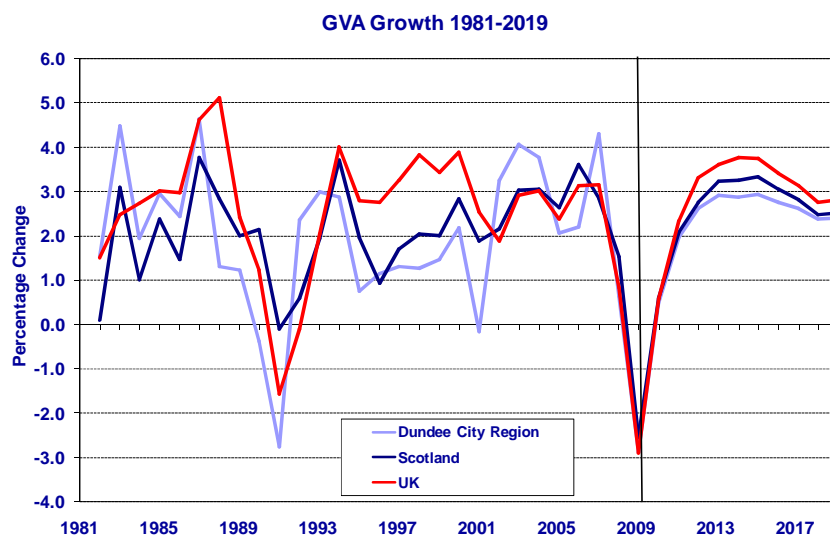
### 9.4.1 GVA growth

One of the Government targets set out within the GES is to improve economic growth, with GDP growth to reach the UK level by 2011. Our forecasts for GVA growth are set out below.

GVA growth in Dundee City Region, although at times volatile, has followed a similar pattern to Scotland and the UK. The UK and Scotland have enjoyed continuous growth since the early 1990s recession. With the exception of a marginal fall in 2001, when GVA fell by 0.2%, Dundee City Region shares this picture. Our expectation for 2009 is that the region will experience a more severe contraction compared with Scotland, and line with the UK.

Chart 9.1

Source: Oxford Economics



Currently the biggest sectors in terms of output in Dundee City Region are *education & health*, *retail & catering* and *manufacturing*, each accounting for 17% of total GVA, while *financial & business services* accounts for 16% of the total. Of these, only *education & health* will show any growth in 2009.

Total output from Dundee City Region is forecast to contract by 2.9% in 2009. This is more severe than the forecast decline of 2.5% for Scotland as a whole and in line with the fall of 2.9% expected across the UK. *Construction* (-6.7%), *financial & business services* (-1.6%) and *manufacturing* (-8.3%) are all expected to suffer larger falls in output in the Region than across Scotland.

Growth in 2010 will be modest (+0.5%), but thereafter there is likely to be a period of relatively fast growth from 2011 to 2015 of 2.7% per annum, as the economy returns towards full employment. However, this is slower than the projected recovery rates for both Scotland (2.9%) and the UK (3.4%). As in Scotland and the UK, the region's recovery is led by the service sector, with financial & business services (4.6% per annum), distribution & hotels (3.5% per annum) and transport & communication (3.2% per annum) leading the growth.

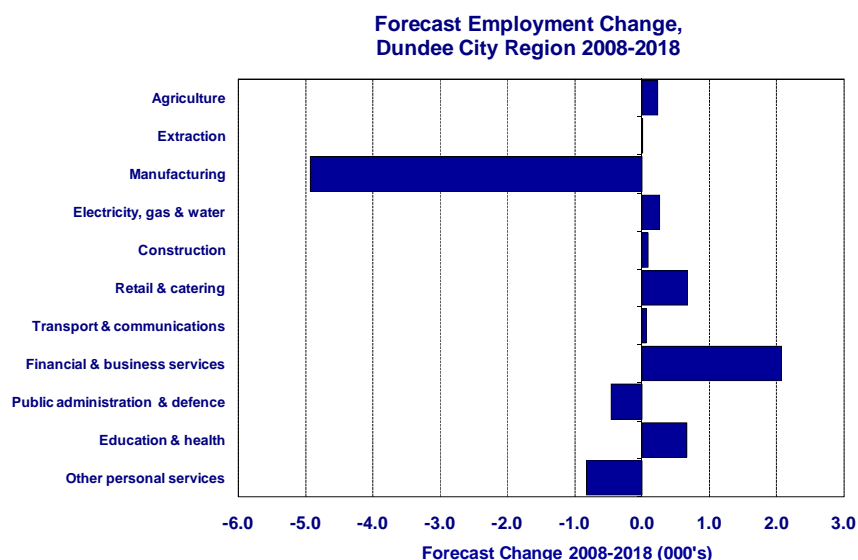
### 9.4.2 Employment

The base forecasts suggest that total employment will contract by 2,200 over the decade ahead. In total, 7,800 jobs are forecast to be lost over 2008-10 due to the recession. The subsequent employment performance during the recovery phase from 2011 is relatively strong with 5,600 jobs expected to be created between 2011 and 2018.

On a sectoral basis, the *manufacturing sector*, which is projected to contract by 5,900 jobs (-27%) in the decade ahead, more than accounts for all of the net loss in employment. There are particularly marked falls in textiles (-43%), machinery & equipment (-34%), electrical & optical equipment (-31%), metals (-31%) and food, drink & tobacco (-21%). Jobs growth to 2018 will be concentrated in the financial & business services sector (2,500 jobs), education & health (700 jobs) and retail & catering (700 jobs).

Chart 9.2

Source: Oxford Economics



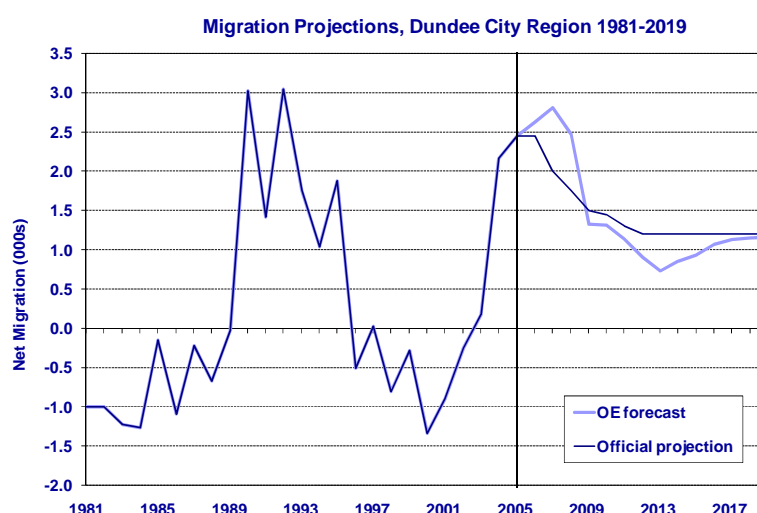
### 9.4.3 Population

Dundee City Region is expected to attract an annual average net inflow of 1,200 migrants over the next decade. The Oxford Economics approach to forecasting migration, which factors in the economic growth profile of each area, contrasts with the official approach. As a result our forecast for the period to 2018 is considerably lower than the official projections which are largely trend based and were published in 2006. Our outlook accounts for the

impact of the recession when we expect a sharp contraction in the level of migrant inflows and we forecast that in the medium term the level of migrant inflows will be lower than the official estimates, only recovering to the level suggested by the official projection in 2018.

**Chart 9.3**

Source: Oxford Economics



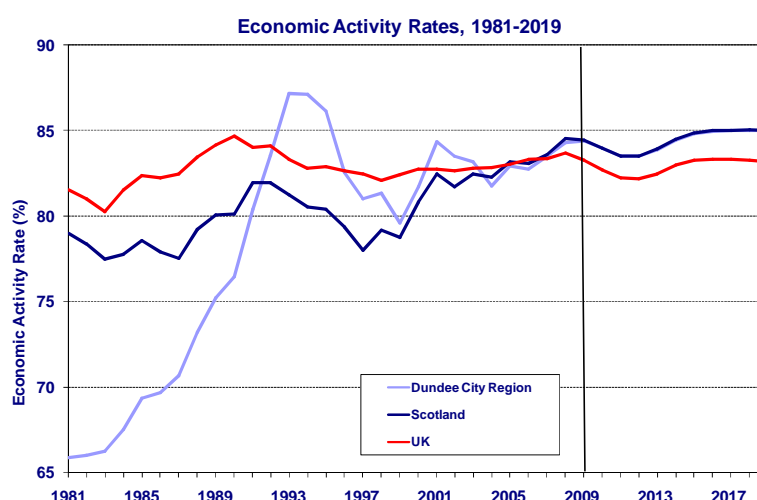
#### 9.4.4 Economic Activity

The economically active population consists of those of working age who are either in work or available for and actively seeking work. In other words, it is a measure of the total employed + unemployed and is used to give an indication of the size of the potential labour force available within an area. The economic activity rate in Dundee City Region in 2008 was 84%, broadly in line with the Scottish and UK averages. Economic activity levels in the region have been broadly in line with Scotland as a whole in recent years, having previously been somewhat above the national average since the early 1990s.

While the economic activity rate in Dundee City Region is forecast to remain static in 2009, it is forecast to decline to 83.5% in 2011. This fall is typical of recessions when, as a result of the weaker demand for labour some people of working age leave the labour force. This effect is often described as the discouraged worker effect. By 2014 the forecast economic activity rate of 83.9% is more or less back to its 2008 level.

**Chart 9.4**

Source: Oxford Economics



### 9.4.5 Local outlook

The tables below summarise the outlook for employment and GVA by local authority within Dundee City Region.

#### Tables 9.2 – 9.4

Source: Oxford  
Economics

<b>Employment (000's)</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Dundee	80	77	76	75	75
Perth & Kinross	74	72	72	72	73
Angus	44	43	42	42	42
NE Fife	30	29	29	29	29
<b>Dundee City Region</b>	<b>227</b>	<b>221</b>	<b>218</b>	<b>218</b>	<b>220</b>

<b>Employment Change (%/year)</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Dundee	-1.2	-3.2	-1.8	-0.5	0.2
Perth & Kinross	1.9	-2.0	-0.9	0.5	1.2
Angus	1.3	-2.4	-1.4	-0.1	0.4
NE Fife	0.2	-2.5	-1.2	0.2	0.8
<b>Dundee City Region</b>	<b>0.4</b>	<b>-2.6</b>	<b>-1.4</b>	<b>0.0</b>	<b>0.7</b>

<b>GVA Growth (%/year)</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
Dundee	-0.3	-3.7	0.2	1.6	2.2
Perth & Kinross	1.7	-1.9	0.9	2.3	3.1
Angus	0.5	-3.1	0.5	1.9	2.5
NE Fife	0.3	-2.9	0.8	2.3	2.9
<b>Dundee City Region</b>	<b>0.6</b>	<b>-2.9</b>	<b>0.5</b>	<b>2.0</b>	<b>2.7</b>

Within Dundee City Region, the City of Dundee is the largest local authority with 40% of the region's employment, followed by Perth & Kinross with 37% and Angus with 22%. The impact of the recession on these local authorities varies according to the sectoral mix of each area.

- Dundee City is forecast to be the worst impacted. A number of high value added exporting companies (including NCR Corporation, Michelin) are based in Dundee, and both HBOS and RBS have substantial operations in the city.
- The total number of jobs within Dundee City Region is expected to be 1,700 lower in 2018 than in 2008. This is made up of a loss of 4,400 jobs in Dundee City and a loss of 1,200 jobs in Angus, partly offset by gains of 3,400 jobs in Perth & Kinross and 500 jobs in North East Fife.
- Longer term changes in employment will be made up of two phases, with the loss of 8,900 jobs between 2008 and 2011, followed by a period of rising employment. Perth & Kinross is forecast to lead the recovery with average annual employment growth between 2012 and 2018 of 0.8% per annum, followed by North East Fife, with 0.3% jobs growth per annum and Dundee and Angus at less than 0.1% per annum.
- GVA is forecast to contract by 3.7% in Dundee City in 2009, a sharper setback than for Scotland (2.5%) or the UK (2.9%). In Angus GVA is expected to fall by 3.1% in 2009, while Perth & Kinross suffers only a 1.9% contraction in output.
- For the 2008-2018 period Perth & Kinross is forecast to lead GVA growth in the Region averaging 2.4% per annum. Angus is expected to grow by 1.6% per annum, while



Dundee lags with GVA growth of 1.5% per annum compared with the regional average of 1.9% per annum.

- The tourism sector is an important part of the local economy and indeed contributes a significant amount to economic growth within Dundee City Region. According to VisitScotland there were 1.49 million overnight stays in the region in 2007, 9% of the Scottish total. These visitors spent an estimated £303m in the region, 7% of total spend in Scotland as a whole. Of these visitors, UK residents accounted for 84% - higher than the proportion of UK residents visiting Scotland as a whole (83%).
- The majority (64%) of overnight trips were to Perthshire, whose main attractions were Queen's View Visitor Centre at Dunkeld with an estimated 158,140 visitors, Blair Castle near Pitlochry at 143,260 visitors and Tullibardine Distillery with an estimate 135,000 visitors during 2007.
- Around 36% of total overnight trips in Dundee City Region were to Angus & Dundee with the main attractions being the country parks including Monikie Country Park in Dundee with almost 271,500 visitors, Forfar Loch Country Park with an estimated 185,850 visitors and Crombie Country Park which attracted 121,580 visitors.
- The hotels & restaurants sector in Dundee City Region accounts for 8.5% of total employment. Of these jobs 48% are in Perth & Kinross, 32% in Dundee City and the remaining 20% in Angus.

#### **9.4.6 Forecast summary**

At the time of writing (March 2009), the economy is heading into perhaps its sharpest setback period since the war, with the weakness in 2009 likely to be widespread. The projected decline in output in Dundee City Region of 2.9% in 2009 is more severe than that expected for Scotland as a whole and in line with the expected UK contraction.

GVA is expected to begin to recover from the downturn in 2010, with growth averaging 1.9% per annum over the decade ahead. This is below the Scottish national average of 2.1% per annum and well below expected annual average growth in the UK of 2.4%.

Employment is set to decline in 2009 and 2010 by 5,100 and 2,700 jobs respectively, although most of these job losses will be recovered by 2018. In net terms, manufacturing continues to shed jobs over the next decade, while increases in employment are forecast in financial & business services, distribution & hotels and education & health.

### **9.5 Potential Policy Implications**

The review concludes by highlighting a number of potential policy implications from the research. These are categorised as both risks and opportunities which could impact upon the outlook for Dundee City Region. Most of these apply in equal measure to Scotland and indeed the UK. These are outlined briefly below:

#### **9.5.1 Risks**

**Risk: Changed credit markets** – individuals and companies will find credit hard to access and for many this will prevent spending or at worst lead to closures and insolvencies. Even if government interventions to free up credit markets are successful, lending criteria are likely to remain much tougher than in the recent past, with worries over the economic outlook underscoring a cautious approach by the banks. And on the demand side fears over the economic outlook may also hit demand for credit for investment, house purchases and consumer finance from more risk-averse businesses and households.

**Risk: Stalling of strategic and regeneration work** – many existing projects requiring private finance may grind to a halt further weakening the fragile economy. Private sector money is unlikely to be available for many construction schemes and thus housing schemes and



regeneration projects could be left unfinished, or fail to start on schedule – if at all. This will be damaging in a direct sense, but also indirectly as it will reduce the attractiveness of many locations.

**Risk: Adoption of ‘survival’ mode strategies** – the growing expectation that the recession will be more prolonged than first thought, difficulty in accessing credit and the desire to conserve cash reserves will lead many firms to move into a survival mode that sees investment, R&D, marketing spend and jobs cut, with implications both for both short-term trends and long-term dynamism.

**Risk: Labour market challenges** – the labour market will be under considerable strain as unemployment rises sharply, with the numbers claiming benefit potentially doubling from the 2007 level. This is a sharp reversal of the strong labour market conditions over recent years and will be a new experience for many younger workers and a challenge for employment services organisation.

- **Skills related issues:**

- unemployed workers face an erosion of their skills while they remain out of work
- many workers, even if highly educated and trained, will face a need to retrain or to re-orient their skills in the face of reduced demand from previously fast growing sectors such as finance and business services
- the flow of young workers into sectors under particular stress, such as construction, may aggravate skill-shortages when the economy recovers
- youth unemployment will rise significantly in the short-term and graduates may not be able to find jobs commensurate with their educational attainment or on-the-job training needs.

- **Participation issues**

- some people of working age will drop out of the labour force, potentially adding to the existing challenge of bringing many long-standing benefit recipients back into gainful employment

**Risk: Public sector restraint** – given the damage to the public finances from the downturn, growth in public expenditure is likely to be heavily constrained over the medium term, with implications for jobs growth in the sector and for businesses dependent on the public sector as a purchaser.

## **9.5.2 Opportunities**

**Opportunity: Tourism** – a weak pound and a more cost conscious UK consumer could provide a boost to the tourist sector if prices can be kept competitive and service maintained. Though the boost may be temporary, promoting Dundee City Region as a location to travellers both within the UK and further afield should be an easier ‘sell’ than in the recent past.

**Opportunity: Trade** – the weak pound should also provide a cost benefit to Scottish producers, both in competing against imports in the home market and in export markets. This is particularly the case for the service sector where imported inputs make up a smaller portion of total costs. For example, many firms with contracts in Dollars and Euros will already have seen a direct boost to profits over the last 3 months. Against this weak demand abroad will limit the scope for export growth and may encourage foreign suppliers to lower their margins in an attempt to hang on to market share.

**Opportunity: Restructuring** – weak demand and reduction in capacity in some sectors could become opportunities for local economies that hold specific attractions for businesses that decide to consolidate their operations into a single or fewer locations.

**Opportunity: Slack to innovate** – a period of weaker growth that creates slack within organisations may provide the room for some businesses to innovate in terms of products or processes, or to explore new markets.

**Opportunity: Older skilled workers** – older workers with specific skills whose retirement income plans have been disrupted by the financial crisis may decide to continue working for longer providing a pool of skilled workers that would not otherwise have been available to firms.

**Opportunity: Necessity entrepreneurship** – with employment opportunities limited by the recession there may be an increase in the number of people with a desire to start their own businesses.

**Opportunity: Falling cost base** – high quality resources may become available to businesses and organisations much more cheaply than when the economy was working much closer to full capacity. Space costs, which are high for good quality offices in Scotland, are likely to fall. This provides an opportunity for service based businesses to lock into a lower cost base without compromising on either location or quality of accommodation. Similar effects could also operate in the labour market as highly-skilled, experienced, staff become more readily available.

**SLIMS / OXFORD ECONOMICS: MARCH 2009**

## Appendix 1 – Geographical Definitions

<b>Functional Economic Geography</b>	<b>Local Authority Areas</b>
<b>Aberdeen City &amp; Shire</b>	Aberdeen City Aberdeenshire
<b>Dundee City Region</b>	Angus Dundee City Perth & Kinross North East Fife*
<b>East Region</b>	Borders Clackmannanshire East Lothian Edinburgh City Falkirk Fife (excluding NE Fife) Midlothian Stirling West Lothian
<b>West Region</b>	Argyll & Bute East Ayrshire East Dunbartonshire East Renfrewshire Glasgow City Inverclyde North Ayrshire North Lanarkshire Renfrewshire South Ayrshire South Lanarkshire West Dunbartonshire
<b>South of Scotland</b>	Scottish Borders Dumfries & Galloway

\* *parliamentary constituency area*

## Appendix 2 – GES Targets

Purpose Target	Description	Scale of the Gap	GES Measure	Measure used in Economic Review	Why different
Economic Growth	To raise Scotland's GDP growth rate to the UK level by 2011  To match the GDP growth rate of small independent EU countries by 2017	1995 – 2005: GDP Growth:  Scotland: 2.2% UK: 2.8% Small EU: 3.1%:	Growth in Gross Domestic Product (GDP)  (Scottish Government)	Gross Value Added (Oxford Economics)	GDP data is not available at the sub-national level.
Productivity	To rank in the top quartile for productivity amongst Scotland's key trading partners in the OECD	2006 data on productivity:  - Scotland: bottom of second quartile in 2006 (14 <sup>th</sup> out of 20) - UK: top of second quartile (11 <sup>th</sup> out of 20) - Scottish GVA per hour 97.5% of UK level	GDP per employee per hour worked	GVA per employee	As above – plus data on average hours worked not available at sub-national level
Participation	Maintain Scotland's position as the top performing country in the UK and close the gap with top 5 OECD economies by 2017	Employment rates for UK countries, 2007 – Q2: Scotland – 77.2% England – 74.4% Wales – 72.3% N. Ireland – 70.5% New Zealand – n/a (5 <sup>th</sup> OECD)	Employment rate	Employment rate	-
Population Growth	To match average EU population growth over the period 2007 - 2017	Population change EU 15 and Scotland  EU – 15: 4.0% (95-05); 2.6% (00-05) Scotland: -0.2% (95-05); 0.6% (00-05)	Population change	Population change	-
Solidarity	To increase overall income and the proportion of income earned by the lowest income deciles as a group by 2017.	Income earned by deciles 1-3 in 2005/06 was 14% (unchanged since 2001/01)	Equivalised net disposable income before housing costs	Gross Household Disposable Income	ENDI not available at sub-national level and data not regularly published
Cohesion	To narrow the gap in participation between Scotland's best and worse performing regions (Local Authority areas) by 2017	Gap in participation between best three and worst three LA areas:  1995: 22% - 2006: 16%	Employment rate	Employment Rate	-
Sustainability	To reduce greenhouse gas emission over the period to 2011  To reduce greenhouse gas emissions by 80% by 2050	Scottish greenhouse gas emissions (Mt Carbon Equivalent) 1990: 18.6Mt 1996: 17.9Mt 2005: 15.3Mt	Greenhouse gas emissions (Mt Carbon Equivalent)	CO2 emissions (KT equivalent)	Data on other greenhouse gases (CH4, N2O, HFC's etc) not available at sub-national level)

## Appendix 3 – Sources of Key Performance Indicators

Indicator	Source
<b>Economic Growth</b>	
Total GVA 2006 (£bn)	Oxford Economics
Average Annual GVA Growth Rate 1999-2006	Oxford Economics
Total Exports 2006 (£bn)	Global Connections Survey, Scottish Government
Change in Export Sales 2002 -2006	Global Connections Survey, Scottish Government
<b>Productivity</b>	
GVA per Employee 2006	Oxford Economics
Change in GVA per Employee 1999-2006	Oxford Economics
% school leavers entering positive destinations 2007	Scottish Government
% adults with degree level qualifications 2007	Annual Population Survey
% adults with no qualifications 2007	Annual Population Survey
Businesses per 1,000 adults 2007	Small Business Statistics, ONS
Business Birth Rate per 1,000 adults 2006	Small Business Statistics, ONS
<b>Labour Market Participation</b>	
Employment Rate 2007	Annual Population Survey
Unemployment Rate 2007	Annual Population Survey
Economic Inactivity Rate 2007	Annual Population Survey
Self Employment Rate 2007	Annual Population Survey
Jobseekers Allowance Claimant Rate 2008	DWP
Incapacity Benefit Claimant Rate 2008	DWP
<b>Population</b>	
Total Population 2007 (m)	General Register Office for Scotland (GROS)
Population Change 1999-07	General Register Office for Scotland (GROS)
% Population Change 1999-07	General Register Office for Scotland (GROS)
% working Age Population Change 1999-07	General Register Office for Scotland (GROS)
Projected Population 2018 (m)	General Register Office for Scotland (GROS)
% Change Projected Population 2018	General Register Office for Scotland (GROS)
<b>Solidarity &amp; Cohesion</b>	
Median Weekly Wages 2008	Annual Survey of Hours & Earnings, ONS
% Change in Weekly Wages, 1999-2008	Annual Survey of Hours & Earnings, ONS
% residents living in 15% most deprived data zones	Scottish Index of Multiple Deprivation
<b>Sustainability</b>	
CO <sup>2</sup> emissions per head of population 2005	Dept for Environment, Food & Rural Affairs (DEFRA)
% CO <sup>2</sup> emissions domestic 2005	Dept for Environment, Food & Rural Affairs (DEFRA)
% CO <sup>2</sup> emissions industrial 2005	Dept for Environment, Food & Rural Affairs (DEFRA)
% MSW recycled or composted 2007/08	Scottish Environment Protection Agency (SEPA)

*\*calculated by averaging growth rates over the period from 1998/99 to 2005/06*

## Appendix 4 – SIC Definitions of Key and Other Growth Sectors

### Key Sector: Energy

#### SIC Description

10	Mining of coal & lignite, extraction of peat
11	Extraction of crude petroleum & natural gas: Related service activities
23	Manuf of coke, refined petroleum products & nuclear fuel
40	Electricity, gas, steam & hot water supply
41	Collection, purification & distribution of water

### Key Sector: Financial Services

#### SIC Description

65	Financial intermediation, except insurance & pension funding
66	Insurance & pension funding, except compulsory social security
67	Activities auxiliary to financial intermediation

### Key Sector: Food & Drink

#### SIC Description

15	Manuf of food & beverages
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### Key Sector: Life Sciences

#### SIC Description

244	Manuf of pharmaceuticals, medicinal chemicals & botanical products
331	Manuf of medical & surgical equipment & orthopaedic appliances
731	Research & experimental development on natural sciences & engineering

### Key Sector: Tourism

#### SIC Description

5510	Hotels
5521	Youth hostels and mountain refuges
5522	Camping sites, including caravan sites
5523	Other provision of lodgings not elsewhere classified
5530	Restaurants
5540	Bars
633	Activities of travel agencies and tour operators; tourist assistance activities not elsewhere classified
925	Library, archives, museums and other cultural activities
926	Sporting activities
927	Other recreational activities

### Key Sector: Creative Industries

#### SIC Description

2211	Publishing of books
2212	Publishing of newspapers
2213	Publishing of journals & periodicals
2214	Publishing of sound recordings
2215	Other publishing (50%)
2231	Reproduction of sound recording (25%)
2232	Reproduction of video recording (25%)
2233	Reproduction of computer media (25%)
5248	Other retail sale in specialised stores (5%)
7221	Publishing of software
7222	Other software consultancy & supply
7481	Photographic activities (25%)
7487	Other business activities not elsewhere classified (2.5%)
9211	Motion picture & video production

9212	Motion picture & video distribution
9213	Motion picture projection
9231	Artistic & literary creation & interpretation
9232	Operation of arts facilities
9234	Other entertainment activities not elsewhere classified (50%)
9272	Other recreational activities not elsewhere classified (25%)
525	Retail sale of second-h& goods in stores (5%)
742	Architectural & engineering activities & related technical consultancy (25%)
744	Advertising
922	Radio & television activities
924	News agency activities
<i>Also includes 0.5% of 9 subsectors of clothing manufacturing -</i>	
<i>SIC Codes 1771, 1772, 1810, 1821, 1822, 1823, 1824, 1830, 1930</i>	

#### Other Growth Sector: Textiles

SIC	Description
17	Manuf of textiles
18	Manuf of wearing apparel; dressing & dyeing of fur
19	Manuf of leather & leather products
2954	Manuf of machinery for textile, apparel & leather production
5141	Wholesale of textiles
5142	Wholesale of clothing & footwear

#### Other Growth Sector: Aerospace, Defence & Marine

SIC	Description
1752	Manuf of cordage, rope, twine & netting
2830	Manuf of steam generators, except central heating hot water boilers
2911	Manuf of engines & turbines, except aircraft, vehicle & cycle engines
2960	Manuf of weapons & ammunition
3110	Manuf of electric motors, generators & transformers
3320	Manuf of instruments & appliances for measuring, checking, testing, etc.
3340	Manuf of optical instruments & photographic equipment
3511	Building & repairing of ships
3512	Building & repairing of pleasure & sporting boats
3530	Manuf of aircraft & spacecraft
7122	Renting of water transport equipment
7123	Renting of air transport equipment
7522	Defence activities

#### Other Growth Sector: Chemicals

SIC	Description
23	Manuf of coke, refined petroleum products & nuclear fuel
24	Manuf of chemicals & chemical products

#### Other Growth Sector: Construction

SIC	Description
1411	Quarrying of stone for construction
2030	Manuf of builders carpentry & joinery
2523	Manuf of builders ware of plastic
2640	Manuf of bricks, tiles & construction products, in baked clay
2651	Manuf of cement
2652	Manuf of lime
2653	Manuf of plaster
2661	Manuf of concrete products for construction purposes
2662	Manuf of plaster products for construction purposes
2663	Manuf of ready-mixed concrete
2664	Manuf of mortars

2665	Manuf of fibre cement
2666	Manuf of other articles of concrete, plaster & cement
2812	Manuf of builders' carpentry & joinery of metal
2952	Manuf of machinery for mining, quarrying & construction
4511	Demolition & wrecking of buildings; earth moving
4512	Test drilling & boring
4521	General construction of buildings & civil engineering works
4522	Erection of roof covering & frames
4523	Construction of highways, roads, airfields & sports facilities
4524	Construction of water projects
4525	Other construction work involving special trades
4531	Installation of electrical wiring & fittings
4532	Insulation work activities
4533	Plumbing
4534	Other building installation
4541	Plastering
4542	Joinery installation
4543	Floor or wall covering
4544	Painting & glazing
4545	Other building completion
4550	Renting of construction or demolition equipment with operator
5113	Agents involved in the sale of timber & building materials
5153	Wholesale of wood, construction materials & sanitary equipment
5154	Wholesale of hardware, plumbing & heating equipment & supplies
5182	Wholesale of mining, construction & civil engineering machinery
7132	Renting of construction & civil engineering machinery & equipment
7420	Architectural & engineering activities & related technical consultancy

#### Other Growth Sector: Forest Industries

SIC	Description
201	Forestry & logging
202	Forestry & logging related service activities
2010	Saw milling & planing of wood, impregnation of wood
2020	Manuf of veneer sheets; Manuf of plywood, laminboard, particle board, fibre board & other panels & boards
2030	Manuf of builders carpentry & joinery
2040	Manuf of wooden containers
2051	Manuf of other products of wood
2111	Manuf of pulp
2112	Manuf of paper & paperboard
2121	Manuf of corrugated paper & paperboard & of containers of paper & paperboard
2122	Manuf of household & sanitary goods & of toilet requisites
2123	Manuf of paper stationery
2124	Manuf of wallpaper
2125	Manuf of other articles of paper & paperboard not elsewhere classified



## Appendix 5 – SIC Definitions used in Table 6.6

Industry	SIC	Description
<b>Energy</b>	10	Mining of coal & lignite, extraction of peat
	11	Extraction of crude petroleum & natural gas: Related service activities
<b>Food &amp; Drink</b>	15	Manuf of food & beverages
<b>Life Sciences</b>	-	Scottish Government source book data used - no SIC definition
<b>Tourism</b>	551	Hotels
	552	Camping sites & other provision of short-stay accommodation
	553	Restaurants
	554	Bars
	633	Activities of travel agencies & tour operators; other tourist assistance activities
	925	Library, archives, museums and other cultural activities
	926	Sporting activities
	927	Other recreational activities
<b>Creative Industries</b>	-	Same definition used in Sections 6.3.2 and 6.3.3 - See Appendix 4, Page 85
<b>Textiles</b>	17	Manuf of textiles
	18	Manuf of wearing apparel; dressing & dyeing of fur
	19	Manuf of leather & leather products
<b>Aerospace</b>	34	Manufacture of motor vehicles, trailers and semi-trailers
	3511	Building and repairing of ships
	3512	Building and repairing of pleasure and sporting boats
	352	Manufacture of railway and tramway locomotives and rolling stock
	353	Manufacture of aircraft and spacecraft
	354	Manufacture of motorcycles and bicycles
	355	Manufacture of other transport equipment nec
<b>Chemicals</b>	23	Manuf of coke, refined petroleum products & nuclear fuel
	24	Manuf of chemicals & chemical products
<b>Construction</b>	45	Construction
<b>Forest Industries</b>	2	Forestry, logging & related service activities
	20	Manuf of wood & wood products
	21	Manuf of pulp, paper & paper products