



***Scottish Enterprise
Aberdeen City & Shire***

Economic Review

March 2009

Contents

1.	Introduction	Page 1
2.	Executive Summary	Page 3
3.	Global / National Economic Outlook	Page 8
4.	Trends in Performance	Page 14
4.1	<i>Introduction</i>	<i>Page 14</i>
4.2	<i>Key Performance Indicators</i>	<i>Page 15</i>
4.3	<i>Economic Growth</i>	<i>Page 16</i>
4.4	<i>Increasing Productivity & Competitiveness</i>	<i>Page 20</i>
4.5	<i>Increasing Labour Market Participation</i>	<i>Page 30</i>
4.6	<i>Increasing Population</i>	<i>Page 36</i>
4.7	<i>Ensuring Growth is Shared & Sustainable</i>	<i>Page 40</i>
5.	Benchmarking	Page 47
5.1	<i>Introduction</i>	<i>Page 47</i>
5.2	<i>GVA Growth</i>	<i>Page 47</i>
5.3	<i>Productivity</i>	<i>Page 48</i>
5.4	<i>Labour Market Participation</i>	<i>Page 48</i>
5.5	<i>Population</i>	<i>Page 49</i>
5.6	<i>Wage Levels</i>	<i>Page 49</i>
5.7	<i>Deprivation</i>	<i>Page 50</i>
5.8	<i>CO² Emissions</i>	<i>Page 51</i>
6.	Industrial Structure	Page 52
6.1	<i>Introduction</i>	<i>Page 52</i>
6.2	<i>Total Employment</i>	<i>Page 52</i>
6.3	<i>Key & Other Growth Sectors</i>	<i>Page 54</i>
6.4	<i>Energy</i>	<i>Page 60</i>
7.	Infrastructure & Place	Page 64
7.1	<i>Land & Property Supply</i>	<i>Page 64</i>
7.2	<i>Transport & Connectivity</i>	<i>Page 64</i>
7.3	<i>Physical Development Priorities</i>	<i>Page 67</i>
8.	Economic Outlook	Page 69
	Appendices	Page 79

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 **Aberdeen City & Shire** which comprises the local authority areas of Aberdeen City and Aberdeenshire. 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.

These 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 at the national level

- 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 Aberdeen City & Shire.
- **Chapter 5** benchmarks the performance of the region against the other SE operating regions.
- **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** 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 targets.
- **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

An important part of the Scottish economy

In comparison to its share of Scottish population, Aberdeen City & Shire makes a disproportionately large contribution to economic output in Scotland and will therefore have an important role to play to help achieve the GES targets. The region:

- Generated 12% of Scotland's GVA in 2006;
- Accounts for 11% 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

Economic growth in Aberdeen City & Shire has lagged behind the Scottish and UK averages since 1999. Annual GVA growth in the region was lower than the UK for most of the period between 1999 and 2006. However, it should be noted that, in line with the official data, these figures exclude offshore oil and gas activities and therefore do not represent a complete picture of the performance of the economy¹.

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 most other regions in Scotland, meaning that the gap between GVA growth rates in Aberdeen City & Shire and the UK could widen over the next 10 years.

- The Aberdeen City & Shire economy grew at an average annual rate of 1.8% between 1999 and 2006, slower than the equivalent growth rates 2.8% for Scotland and 3.2% for the UK.
- Oxford's 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 Aberdeen City & Shire is expected to average 2.7% per annum, though this is slower than the equivalent growth rates of 2.9% expected for Scotland and the 3.3% expected for the UK.

The overall GVA growth picture masks some positive achievements in the performance of the Aberdeen City & Shire economy in recent years:

- There was an increase of 9% in the total number of jobs located in the region between 1999 and 2007, faster than the growth of 7% 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 11,000 and 15,000 jobs respectively between 1999 and 2007.
- There was strong growth of 18% in the value of exports from the region between 2002 and 2006, six times faster than the growth of 3% across Scotland as a whole.

¹ Within the ONS National Accounts, GVA generated from offshore activities is not allocated to any UK region and is instead assigned to a separate category entitled 'Extra-Regio'.

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

Scotland (14th out of 30) and the UK (11th 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 Aberdeen City & Shire is higher than across both Scotland and the UK, which suggests that the region is currently making a positive contribution to the achievement of the GES target.

However, to help achieve the GES target, Aberdeen City & Shire would need to increase productivity at a faster rate than other highly performing OECD economies. There is evidence that GVA per employee has grown more slowly in the region than across Scotland and the UK since 1999.

- GVA per employee in Aberdeen City & Shire amounted to £39,700 per employee in 2006, above the equivalent figures of £35,200 in Scotland and £36,900 in the UK.
- The level of GVA per employee in Aberdeen City & Shire increased by 1% between 1999 and 2006, slower than the growth rates of 10% for Scotland and 15% for the UK.
- Productivity levels are above the Scottish average across almost all industry sectors in the region, with the exception of the public sector.

In terms of some of the wider drivers of productivity identified in the GES, Aberdeen City & Shire again performs well...

- The proportion of Aberdeen City & Shire residents that are educated to degree level (36%) is above the Scottish average (33%). Furthermore, just 10% of residents have no qualifications at all, compared to 14% across Scotland.
- The rate of new graduates from Aberdeen City & Shire (10 per 1,000 working age residents) was slightly higher than the Scottish average (9 per 1,000) in 2007. The majority (70%) of graduates find their first job within the region immediately following graduation.
- Business density levels and birth rates in Aberdeen City & Shire are above the Scottish averages, which is indicative of high levels of entrepreneurialism in the region.
- Aberdeen City & Shire has above average levels of specialisation within two of the key sectors: energy and food & drink. The region also has above average levels of specialisation within two of the other growth sectors: construction 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 Aberdeen City & Shire has been consistently above both the Scottish and GB averages since 1999. The region is therefore in a strong position to contribute to the national participation target.

- In 2007, the employment rate in Aberdeen City & Shire was 81%, compared to a Scottish average of 76% and a GB figure of 75%.

- Oxford Economics' forecasts suggest that, whilst economic activity rates will fall in the region over the next couple of years as a result of the economic downturn, they will remain well above the national averages.

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 Aberdeen City & Shire was 3% in 2007, below the average of 5% for both Scotland and GB. Similarly, the economic inactivity rate in the region was 17% in 2007, below the rates of 20% for Scotland and 21% for GB.
- The proportion of the population that claim workless benefits (11%) is much lower in Aberdeen City & Shire than across both Scotland (16%) and GB (14%). However, there was an increase of 10% in the total number of Incapacity Benefit claimants in the region between 2000 and 2008, in contrast to a decline of 15% across Scotland.
- Aberdeen City & Shire is a net importer of labour, drawing 10% of its workforce from outside the region in 2001. This is partly the result of large numbers of people travelling from across the UK and beyond to work in the offshore oil and gas industry.

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 Aberdeen City & Shire has also been increasing since 2004, 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 Aberdeen City & Shire 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 Aberdeen City & Shire is expected to continue to increase over the coming decade, growing by 3% by 2018. This is in line with the forecast for Scotland, but slower than 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 in Aberdeen City & Shire are higher than across Scotland as a whole, though there is some evidence of disparities within the region...

- The median weekly earnings of all those working in Aberdeen City & Shire (full-time and part-time workers combined) were £402 in 2008, above the equivalent figures for Scotland and the UK of £375 and £388 respectively.
- The median weekly earnings of full-time workers living in the region was £498 in 2008, again this was higher the Scottish and UK figures of £462 and £479 respectively.

- There are some disparities within the region on this measure, with the median earnings of those working in Aberdeenshire 17% lower than in Aberdeen City in 2008.

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.

The employment rates within the two local authority areas in Aberdeen City & Shire are both above the Scottish and GB averages. If this position can be maintained, the region will therefore have relatively little to do in terms of helping achieving the GES target – the onus will be on improving participation levels within those areas with the lowest rates.

- The employment rate in Aberdeenshire was 82% in 2007, which was among the highest of all local authority areas within Scotland.
- The employment rate in Aberdeen City is also relatively high at 79% in 2007, compared to the Scottish average of 76%.

Purpose Target 7: Reduce CO₂ 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 CO₂ emission is available for regions. Aberdeen City & Shire accounts for 12% of all Scottish CO₂ emissions and has a higher level of CO₂ emissions per head of population than the Scottish and UK averages.

- Aberdeen City & Shire generated 12 tonnes of CO₂ emissions per head of population in 2006, above both the Scottish and UK averages (8t and 9t respectively)
- More positively, CO₂ emissions fell by 2.2% between 2005 and 2006, in contrast to relatively little change across both Scotland and the UK. However, care should be taken in interpreting any trend however from such a limited data set.
- Despite a six fold increase since 2002, the proportion of waste from Aberdeen City & Shire (27%) that was recycled or composted in 2008 was below the average for Scotland (32%).

Looking to the future...

The review of performance of the Aberdeen City & Shire 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 slightly less severe in the region than across Scotland. However, the region is expected to recover at a slower rate than Scotland as a whole...

- Output from the Aberdeen City & Shire economy is forecast to contract by 2.7% during 2009, compared with a 2.5% fall in Scotland and a drop of 2.9% in the UK. The forecast for the region is more optimistic than for the UK as a whole, largely as a result of the economy being less dependent on high value added manufacturing, professional and financial services.

- 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 most 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 Aberdeen City & Shire is expected to decline in 2009 and 2010 by 7,200 and 4,200 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 and education and health will offset some of this decline.
- We expect the fall in participation rates in Aberdeen City & Shire between 2009 and 2011 to be sharper than across Scotland and the UK. However, overall participation levels will remain comfortably above the national averages over the decade ahead.

3. Global / National Economic Context

This chapter provides a review of national and global economic trends and outlook with a particular focus on the issues which may have a particular importance for Aberdeen City & Shire.

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.

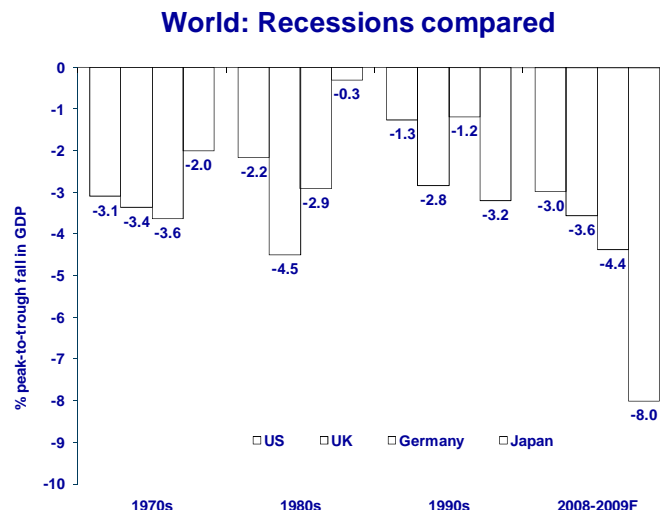
3.2 The global recession

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 (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.

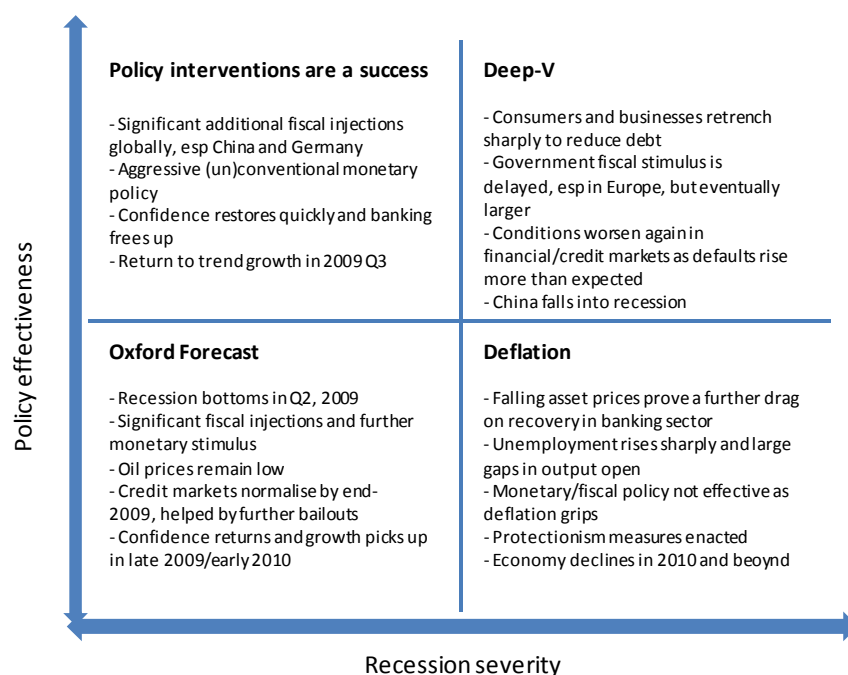
Chart 3.1

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 chart 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 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.



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 Oil Prices Slump

After peaking at around \$145 per barrel (Brent Crude) in July 2008, oil prices have since slumped to just over US\$50. As a result OPEC has announced production cuts to try to reverse some of the fall. To date the weakness in the global economy has overwhelmed these efforts – for example the latest data show US stocks at their highest level since early 2004. The potential remains for sharp swings in the price that make forward planning in the exploration and production industry difficult. And, if prices settle around current levels the incentive to explore for new reserves is undermined, while some existing production is rendered unprofitable.

3.5 Continued cuts in OPEC oil production

Global oil supply was flat in December 2008 at 86.2 million barrels per day as lower OPEC oil production was offset by increases in non-OPEC oil output. OPEC supply in December was 30.9 million barrels per day, down 330,000 barrels per day from November and nearly 2 million barrels per day below mid-2008 highs. OPEC oil supply is expected to fall further in 2009 as the new agreed target of 24.8 million barrels per day comes into effect in January 2009. This is equivalent to OPEC-13 output of 28.2 million barrels per day – a 14% decline in

production since its peak of 32.8 million barrels per day in July 2008. Additional cuts in OPEC oil quotas are expected as Saudi Arabia has already announced ahead of the March meeting that they will cut production beyond the latest agreed quotas. The International Energy Agency (IEA) has revised its projection for non-OPEC output in 2009 to 50 million barrels per day, with weaker Former Soviet Union supply being countered by increases in production from Azerbaijan, Brazil and the US. However, this increase in non-OPEC oil supply will not be enough to offset the expected fall in OPEC supply.

3.6 Demand for Oil to Decline

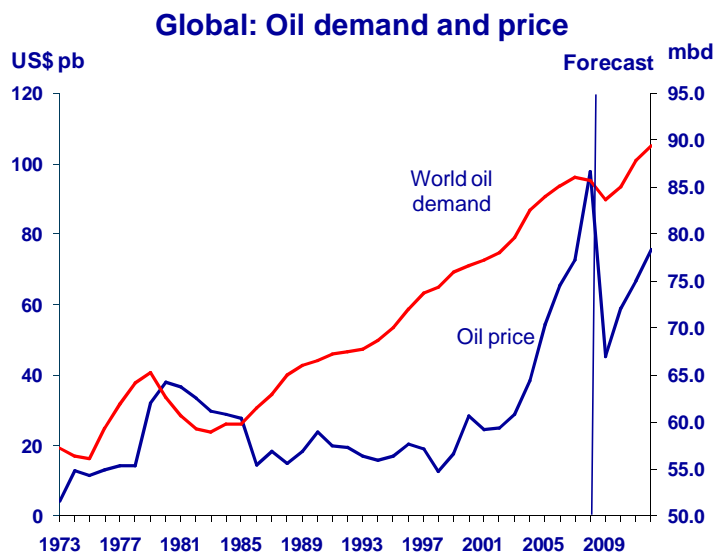
The January report from the IEA suggests that demand for oil contracted in 2008 by 300,000 barrels per day. In response to a lower world growth forecast from the IMF for 2009, the IEA has lowered its forecast for global oil demand in 2009. Global oil demand this year is now projected by the IEA to be on average 85.3 million barrels per day, a 0.6% contraction from 2008. Similar to the IEA, Oxford Economics has also forecast a two-year contraction in global oil demand – the first since 1982/83.

3.7 Oil Price Forecast

Oxford Economics' forecast is for headline oil prices to stabilise around current levels in the first half of 2009, averaging \$40 per barrel, before rising to \$50 per barrel by the end of the year. This projection assumes that significantly lower world economic growth will continue to dominate any reductions in oil supply by OPEC. As the economic recovery gets underway we expect the oil price to firm further, reaching around US\$80 per barrel by 2012.

Chart 3.2

Source: Oxford Economics

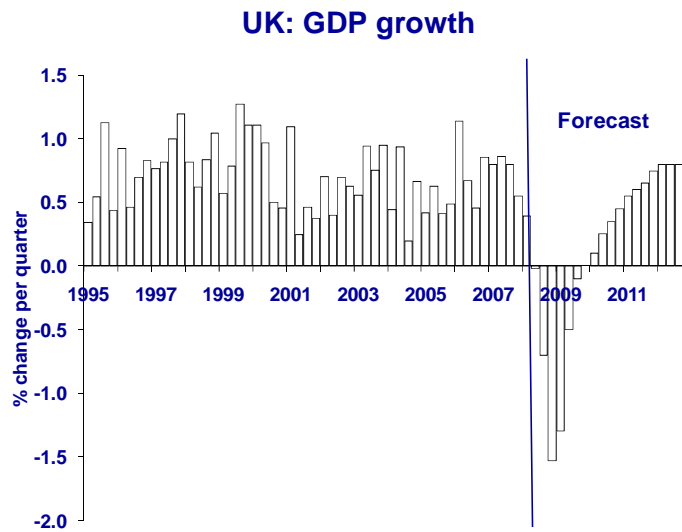


3.8 UK Outlook

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

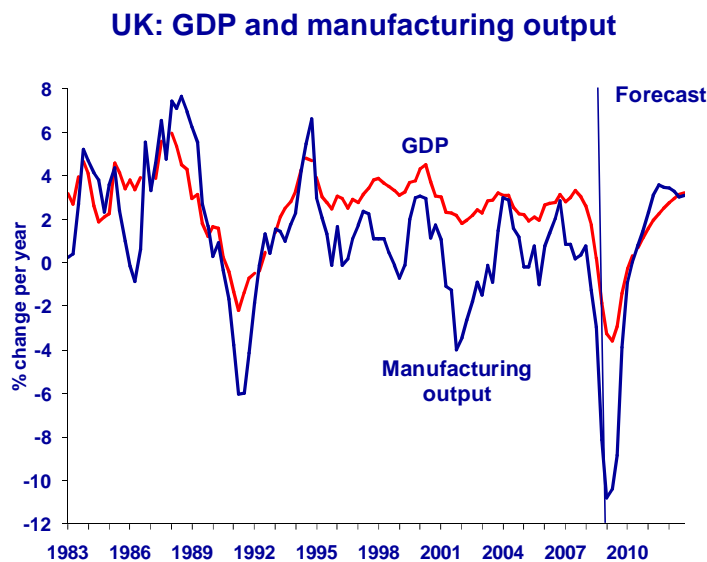


3.9 UK Industry

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.

3.10 Scottish outlook

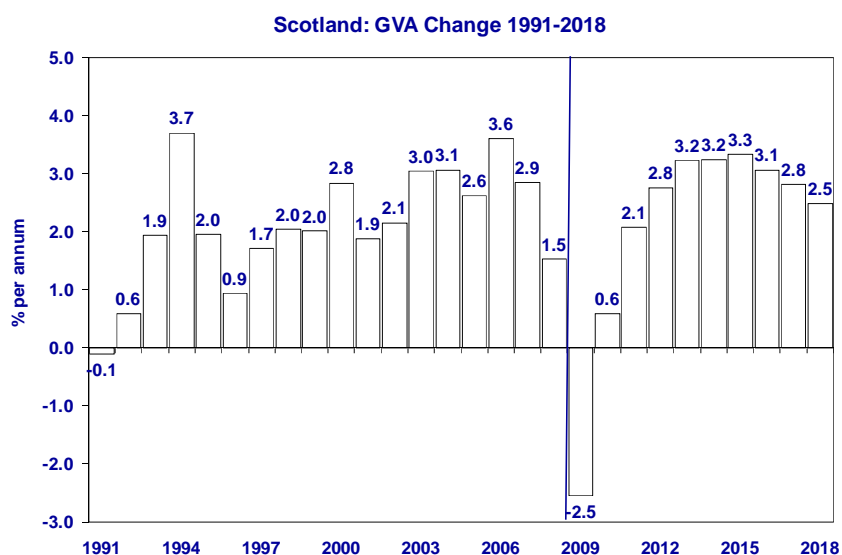
Scotland, with its strong linkages to the UK and global economies, cannot escape the downturn. Falling house prices; rising unemployment and loss of confidence are all in evidence. The professional and financial services bases around the major cities of Glasgow and Edinburgh will be particularly adversely 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 2.9% per annum in the 2011-2018 period as the economy moves back towards full employment.

Chart 3.5

Source: Oxford Economics

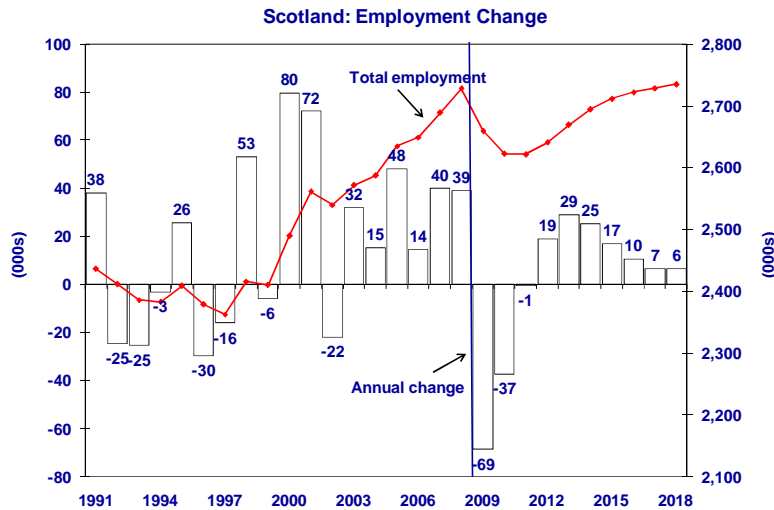


Employment

- 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 led by business services, health and other personal services. Financial services employment is not expected to return to its 2008 level until 2018.

Chart 3.6

Source: Oxford Economics

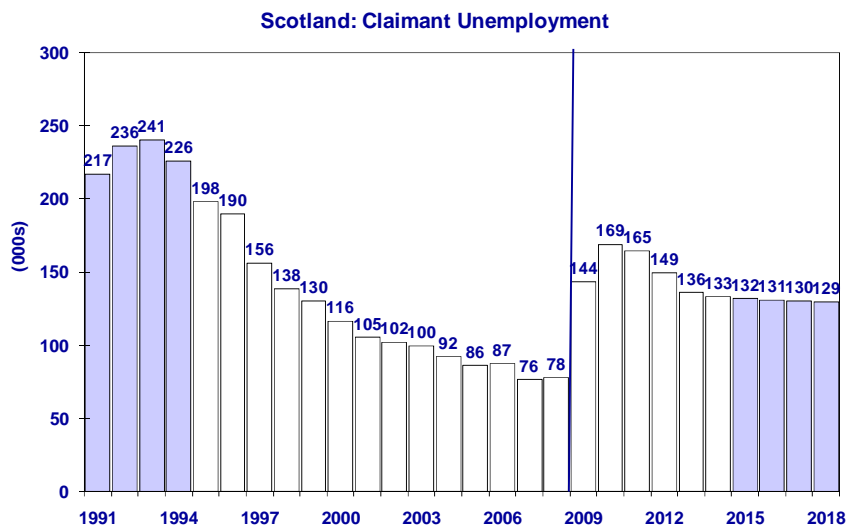


Unemployment

- 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 3.7

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. Perhaps 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. Key Performance Indicators / Trends in Performance

4.1 Introduction

This chapter provides an overview of economic trends within Aberdeen City & Shire 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 8 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

	Aberdeen City & Shire	Scotland
Economic Growth		
Total GVA 2006 (£bn)	£10.9	£93.4
Average Annual GVA Growth Rate 1999-2006	1.8%	2.8%
Total Exports 2006 (£bn)	£2.8	£20.6
Change in Export Sales 2002 -2006	18%	3%
Productivity		
GVA per Employee 2006	£39,700	£35,200
Change in GVA per Employee 1999-2006	1%	10%
% school leavers entering positive destinations	90%	86%
% adults with degree level qualifications	36%	33%
% adults with no qualifications	10%	14%
Businesses per 1,000 adults	47	33
Business Birth Rate per 1,000 adults	3.8	2.8
Labour Market Participation		
Employment Rate 2007	81%	76%
Unemployment Rate 2007	4%	5%
Economic Inactivity Rate 2007	17%	20%
Self Employment Rate 2007	8%	8%
Jobseekers Allowance Claimant Rate 2008	1.0%	2.4%
Incapacity Benefit Claimant Rate 2008	5.8%	8.4%
Population		
Total Population 2007	448,400	5,144,200
Population Change 1999-07	6,600	72,300
% Population Change 1999-07	1.5%	1.4%
% working Age Population Change 1999-07	1.4%	2.6%
Projected Population 2018	464,100	5,294,300
% Change Projected Population 2008-18	3.2%	2.7%
Solidarity & Cohesion		
Average Weekly Wages	£402	£375
% Change in Weekly Wages, 1999-2007	44%	36%
% residents living in 15% most deprived data zones	5%	15%
Sustainability		
CO ² emissions per head of population 2006	11.7	8.5
% waste recycled or composted 2007/08	27%	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 that 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 Aberdeen City & Shire and covers:

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

It should be noted that, in line with the national accounts, the GVA figures reported in this section **exclude** economic output generated from offshore activities and therefore do not take account of large parts of the oil & gas industry within the region.

4.3.1 Total GVA

Total economic output (as measured by Gross Value Added) from Aberdeen City & Shire amounted to £10.9bn in 2006². This represented 12% of Scotland's total GVA, slightly above the region's share of national jobs (11%).

4.3.2 GVA by Sector

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

- In terms of wealth generation, *financial & business services* is the largest industry in the region accounting for 29% of total GVA in 2006, compared to 27% nationally. It is likely that, in Aberdeen City & Shire, this includes some parts of the onshore oil and gas industry, as well as its associated supply chain.
- The dominance of the region as the centre for Scotland's oil and gas industry is shown by the fact that it is responsible for generating over 80% of Scotland's total economic output from *extraction*. In line with the national accounts, these figures only include **onshore** *extraction* activities and therefore substantially underestimate the actual level of economic output generated from oil and gas activities within the region.
- The region is less dependent on *public services* to generate economic output than Scotland as a whole. The sector, which includes *public admin & defence* and *education & health*, accounted for 16% of total GVA in 2006, relative to 21% nationally.
- The relative contributions of *retail & catering* and *manufacturing* are also significant, accounting for 13% and 12% of total output respectively – slightly below the national averages.

² Source: Oxford Economics. This data is based on the latest UK National Accounts and refers to GVA in current prices.

Table 4.1

Source: Oxford Economics

GVA by Sector 2006				
	Aberdeen City & Shire		Scotland	
	Total (£m)	%	Total (£m)	%
Agriculture	200	2%	1,270	1%
Extraction	1,330	12%	1,630	2%
Manufacturing	1,340	12%	12,990	14%
Utilities	70	1%	2,230	2%
Construction	680	6%	6,700	7%
Retail & catering	1,370	13%	12,640	14%
Transport & communications	690	6%	6,020	6%
Financial & business services	3,150	29%	24,870	27%
Public admin & defence	410	4%	5,920	6%
Education & health	1,250	12%	14,330	15%
Other services	390	4%	4,750	5%
Total	10,880	100%	93,360	100%

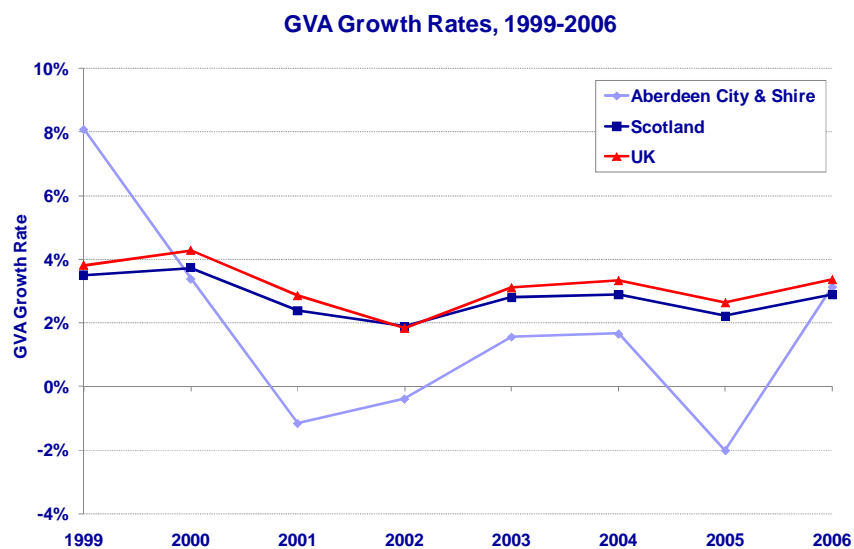
4.3.3 GVA Growth

Chart 4.1 shows that GVA growth in Aberdeen City & Shire lagged behind the Scottish and UK averages throughout much of the period between 1999 and 2006. **The region is therefore currently falling short of the national target of raising the economic growth rate to the UK level by 2011.**

The average annual growth rate for the region between 1999 and 2006 was 1.8%, behind the Scottish average of 2.8% and even further behind the UK average of 3.2%. However, again, it should be noted that these figures exclude offshore oil and gas activity and therefore do not fully reflect the performance of the regional economy.

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 Aberdeen City & Shire between 1999 and 2006.

- There were increases in output across almost all industry sectors within the region over the period, with the notable exception of *extraction*, which experienced a fall in output of £590m or 31%.

- In absolute terms, *financial & business services* was the fastest growing sector in the region between 1999 and 2006. GVA from the industry increased by over a fifth (+22%), a total of £570m.
- There was growth in output across all service sector industries in Aberdeen City & Shire, with the exception of *other personal services* which experienced a small decline. *Retail & catering* and *education & health* combined added £280m more to the total economic output from the region in 2006 than in 1999.
- Output from *manufacturing* increased by almost a quarter over the period (+24%), against a backdrop of falling employment (see Table 6.3), which is indicative of a move within the industry towards higher value added activities and increasing levels of productivity.

Table 4.2

Source: Oxford Economics

GVA by Industry in Aberdeen City & Shire (£m)				
	1999	2006	Change 1999-2006	
			No.	%
Agriculture	190	200	10	6%
Extraction	1,920	1,330	-590	-31%
Manufacturing	1,080	1,340	260	24%
Electricity, gas & water	100	70	-40	-36%
Construction	670	680	10	1%
Retail & catering	1,210	1,370	170	14%
Transport & communications	590	690	100	16%
Financial & business services	2,580	3,150	570	22%
Public administration & defence	340	410	70	21%
Education & health	1,140	1,250	110	10%
Other personal services	410	390	-30	-7%
Total	10,250	10,880	630	6%

figures in table have been individually rounded to the nearest 10

4.3.5 Exports

Exports refers 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. These figures are for 2007 and will be included in the national review as part of this economic review series. However, the latest figures are not available at the regional level and so the analysis contained within this section is based on 2006 figures, which are reported in current prices.

In 2006, the value of export sales from Aberdeen City & Shire amounted to £2.8bn. This represented 13% of Scotland's total export sales of £20.6bn, slightly higher than the region's share of national jobs (11%).

Table 4.3 shows change in the level of exports by industry from the region between 2002 and 2006. It shows a strong performance with total export sales increasing by 18% over the period, six times faster than the equivalent Scottish growth rate of 3%.

This was mainly driven by rapid growth in export sales from *primary & construction industries*, which includes large parts of the oil and gas sector. Based on a business survey of oil and gas firms, the Scottish Council for Development and Industry (SCDI) recently estimated that total international sales from the UK oil and gas sector (and associated supply chain) was as

high as £5.6bn in 2007/08³. As the centre for the UK oil and gas industry, a large proportion of these overseas sales would be from firms located within Aberdeen City & Shire.

There was also some growth in exports from *metals* and *electronics*, though the numbers involved were much smaller. The only sectors to experience a decline in overseas sales were *retail & catering*, *food & drink* and *financial & business services* – in contrast to export growth within each of these sectors across Scotland as a whole over the period.

Table 4.3

Source: Global Connections Survey, Scottish Government

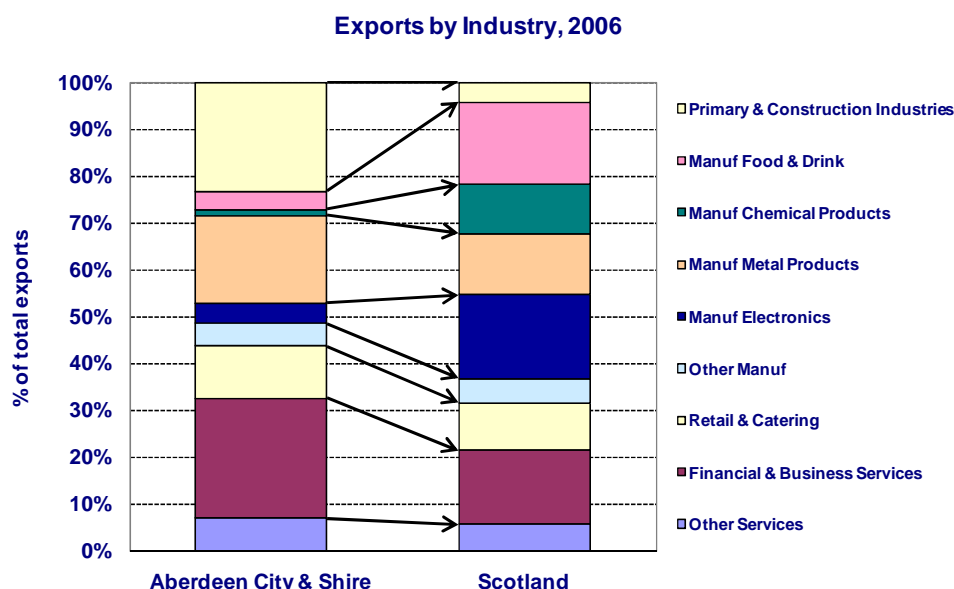
Aberdeen City & Shire Exports by Industry (£m)				
	2002	2006	Change 2002-06	
			No.	%
Primary & Construction Industries	380	640	260	68%
Manufacture of Food & Drink	125	110	-15	-12%
Manufacture of Chemical Products	20	35	15	75%
Manufacture of Metals Products	445	515	70	16%
Manufacturing of Electronics	65	120	55	85%
Other Manufacturing	130	135	5	4%
Retail & Catering	330	305	-25	-8%
Financial & Business Services	710	705	-5	-1%
Other Services	145	190	45	31%
Total Exports	2,340	2,760	420	18%

*Figures refer to value of exports in current prices

Chart 4.2 shows 2006 exports by industry from Aberdeen City & Shire, relative to Scotland. The two largest exporting industries from the region are *financial & business services* and *primary & construction industries*, which combined accounted for more than half of all exports in 2006. Relative to Scotland as a whole, the region is less dependent on *electronics*, *chemicals* and *food & drink* to generate export sales.

Chart 4.2

Source: Global Connections Survey, Scottish Government



³ Survey of International Activity in the Oil & Gas Sector 2007/08 – Scottish Council for Development and Industry.

4.3.6 Conclusions – Economic Growth

Economic growth in Aberdeen City & Shire has lagged behind the Scottish and UK averages since 1999. Annual GVA growth in the region has been lower than the UK for most of the period between 1999 and 2006. However, it should be noted that, in line with the official data, these figures exclude offshore oil and gas activities and therefore do not represent a complete picture of the performance of the economy.

- Growth has been mainly driven by the *financial & business services* sector, which now accounts for 29% of all economic output from the region. There was also strong growth in output from *manufacturing, retail & catering* and *education & health*.
- The fact that *manufacturing* output has increased, against a backdrop of falling employment, suggests a move within the industry towards higher value added activities.
- The percentage of overseas sales from Aberdeen City & Shire is slightly higher than the region's share of national jobs and has been growing rapidly in recent years. This good performance can be attributed to strong growth in the value of export sales from *primary & construction industries*, which includes large parts of the oil & gas sector.
- The region is currently on course to make a positive contribution to the national target of increasing export sales at a rate faster than GDP.

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 (14th out of 30) and the UK (11th 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 the performance of Aberdeen City & Shire in terms of productivity and competitiveness and covers:

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

4.4.1 Productivity

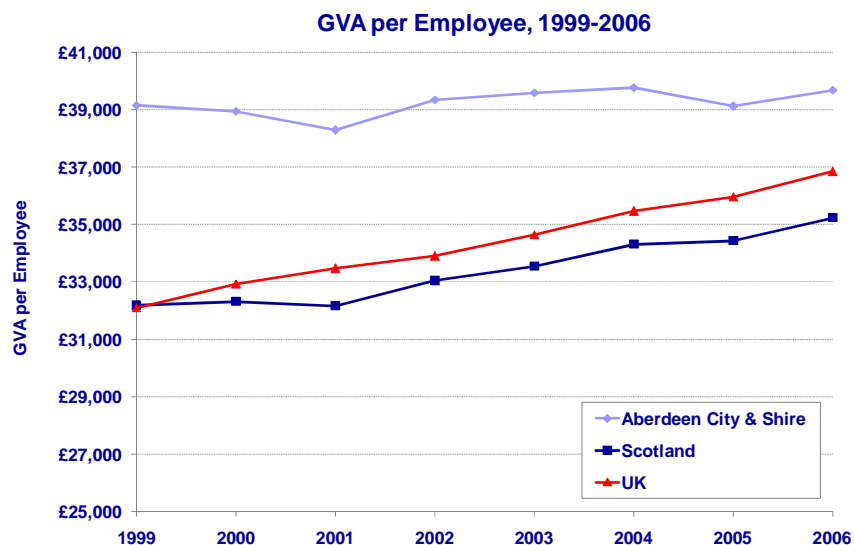
Productivity levels within Aberdeen City & Shire have been consistently higher than across both Scotland and the UK in recent years.

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 economic output of an area (GVA) and dividing it by the total

number of employees⁴. Chart 4.3 shows trends in productivity levels within Aberdeen City & Shire, Scotland and the UK since 1999.

Chart 4.3

Source: ONS and SLIMS / Oxford Economics Calculations



- GVA per employee in the region amounted to £39,700 in 2006. This was higher than the equivalent figures of £35,200 for Scotland and £36,900 for the UK.
- There was a marginal increase of just 1% in the level of GVA per employee in the region between 1999 and 2006. This contrasts with growth of 10% for Scotland and 15% for the UK.
- Despite this limited growth, productivity levels within the region have been consistently above both the Scottish and UK averages since 1999.

4.4.2 Productivity by Industry

Productivity levels in Aberdeen City & Shire are above the Scottish average across most industry sectors, with the exception of public services and manufacturing.

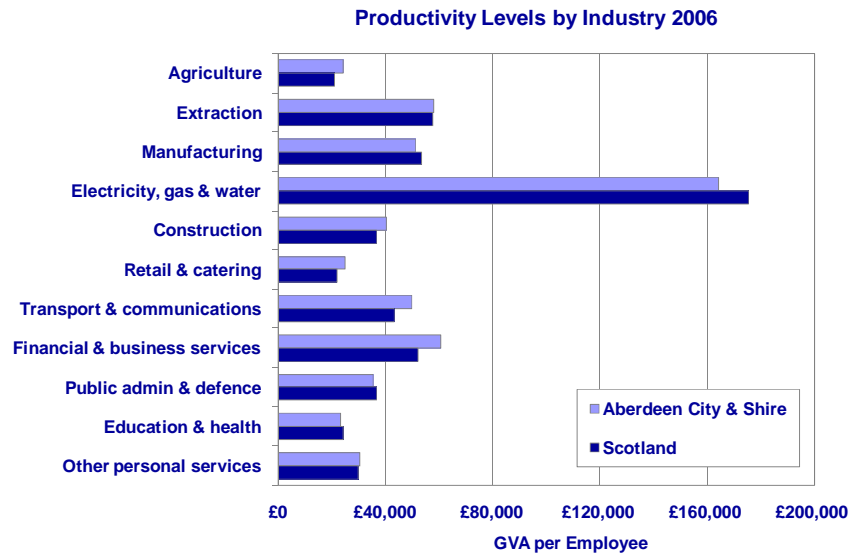
Chart 4.4 shows productivity levels in Aberdeen City & Shire by broad industry, relative to Scotland as a whole. It shows that:

- *Electricity, gas & water* is the most productive sector in terms of the level of GVA generated per employee, both within Aberdeen City & Shire and Scotland as a whole. However, in employment terms the sector is very small accounting for less than 1% of all jobs in the region.
- GVA per employee in the region is above the Scottish average across all industry sectors apart from those within the *public sector, electricity, gas & water* and *manufacturing*.
- Productivity levels within *financial & business services* in Aberdeen City & Shire are 17% higher than across Scotland as a whole. The sector accounts for a fifth of all jobs in the region and is therefore a key driver of overall productivity levels.
- *Retail & catering* generates among the lowest levels of GVA per employee of all industry sectors within both Aberdeen City & Shire and Scotland as a whole. However, productivity levels in the sector in the region are around 14% above the Scottish average.

⁴ Figures are calculated by dividing total GVA at 2006 prices by the total number of employees + self-employed

Chart 4.4

Source: ONS and SLIMS / Oxford Economics Calculations



4.4.3 Qualifications of the workforce

Relative to Scotland as a whole, a higher proportion of Aberdeen City & Shire residents are educated to degree level and fewer 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 Aberdeen City & Shire. Over a third of all working age residents in the region were qualified to degree level (NVQ Level 4) or above in 2007 – higher than the equivalent rates for both Scotland and the 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 Aberdeen City & Shire with no qualifications is lower than both the Scottish and UK averages.

Table 4.4

Source: Annual Population Survey

Qualifications of the Workforce, 2007*			
Highest Level Qualification:	Aberdeen City & Shire	Scotland	UK
NVQ Level 4+	36%	33%	29%
NVQ Level 3	15%	15%	16%
Trade Apprenticeships	7%	6%	5%
NVQ Level 2	14%	14%	16%
NVQ Level 1	11%	10%	14%
Other Qualifications	7%	7%	9%
No Qualifications	10%	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 Aberdeen City & Shire relative to Scotland in 2007. A higher proportion of school leavers in the region enter HE or employment than across Scotland as a whole and the proportion of unemployed leavers is below the national average.

Table 4.5

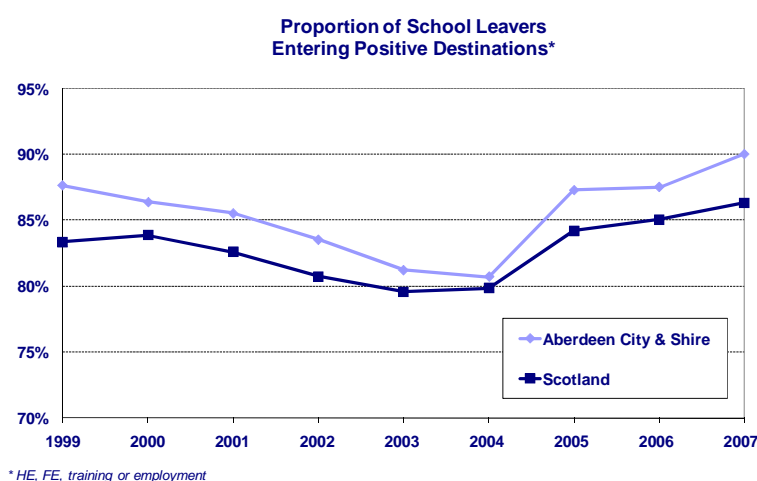
Source: Scottish Government

Destination of School Leavers, 2007		
	Aberdeen City & Shire	Scotland
Higher Education	34%	30%
Further Education	22%	23%
Training	1%	5%
Employment	32%	28%
Unemployment	8%	12%
Unknown	2%	1%

Chart 4.5 shows change in the proportion of school leavers entering positive destinations in Aberdeen City & Shire and Scotland since 1999. 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: 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. **Aberdeen City & Shire has a lower proportion of young people in this category than across Scotland as a whole.**

Table 4.6 shows that there were 1,340 16-19 year olds in Aberdeen City & Shire not in employment, education or training in 2006. This amounted to 5.9% of all young people in this age group, below the Scottish average of 8.9%.

The total number of young people in the region in this category fell by 27% between 2003 and 2006, almost double the rate of decline across Scotland as a whole (-15%).

Table 4.6

Source: Scottish Government

16-19 Year Olds not in Employment, Education or Training					
	2003	2006	Change 2003-2006		Rate 2006
			No.	%	
Aberdeen City & Shire	1,840	1,340	-500	-27%	5.9%
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.

A total of 4,500 Aberdeen City & Shire residents graduated from universities across the UK in 2007, as shown in Table 4.7. This was more than four times higher than the total in 1996, much faster than the growth rate of 39% across Scotland as a whole. In 2007, the rate of new graduates from the region was 10 per 1,000 working age residents, above the Scottish average of 9 per 1,000.

Table 4.7

Source: HESA

Total Graduates				
			Change 1996-07	
	1996	2007	No.	%
Aberdeen City & Shire	1,000	4,500	3,500	364%
Scotland	374,900	519,800	144,900	39%

Graduate Destinations

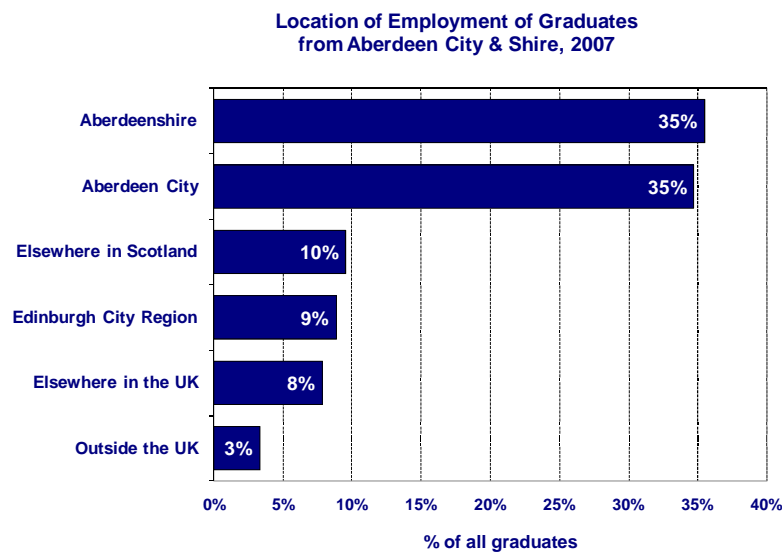
Chart 4.6 shows the location of the first job or place of further study for 2007 graduates originally from Aberdeen City & Shire:

- The majority (70%) remained within the region, with Aberdeenshire and Aberdeen City attracting equal shares
- Around a fifth went elsewhere in Scotland, with around half of these finding work within Edinburgh City Region
- Just 11% left the country, in line with the average for Scotland as a whole.

As well as retaining a high proportion of its graduates, the region is also an attractive destination for graduates from elsewhere in the country. The high retention rate and attractiveness of Aberdeen City & Shire to new Scottish graduates is indicative of a buoyant graduate labour market, which is likely to be a key driver of the region's high productivity and wage levels.

Chart 4.6

Source: HESA



Graduate Employment

In line with the trend across Scotland as a whole, the vast majority (82%) of new graduates from Aberdeen City & Shire enter the 'traditional' graduate roles of *managerial, professional or associate professional jobs*.

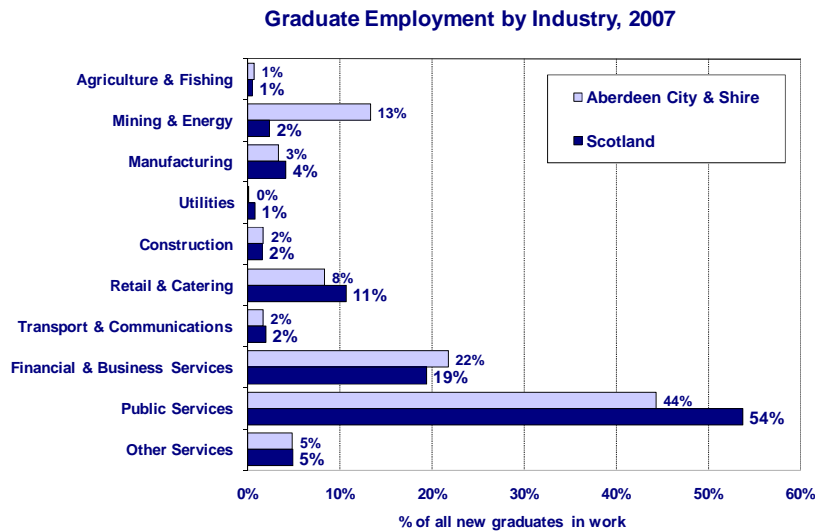
Chart 4.7 shows graduate employment by industry in Aberdeen City & Shire and Scotland in 2007. It shows that more than two-fifths of all new graduates from the region find their first job in the public sector, though this is below the Scottish average.

The second most popular industry of employment for new graduates from Aberdeen City & Shire is *financial & business services*, accounting for 22% of the total in 2007. This was higher than across Scotland as a whole, where 19% of new graduates enter *financial & business services*.

One in every eight (13%) graduates from the region find their first job within the *mining & energy* sector, six times higher than the average of 2% for all Scottish graduates. This demonstrates the draw of the *oil & gas* sector in the region for new graduates.

Chart 4.7

Source: 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 17,200 VAT registered businesses in Aberdeen City & Shire in 2007, an increase of just 4% from the total in 1999. This was less than half the equivalent growth rate of 9% for Scotland and even further behind the UK average of 14%.

Table 4.8

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

Business Stocks, 1999-2007				
	1999	2007	Change 1999-2007	
			No.	%
Aberdeen City & Shire	16,600	17,200	600	4%
Scotland	125,000	136,900	11,900	9%
UK	1,710,600	1,956,800	246,100	14%

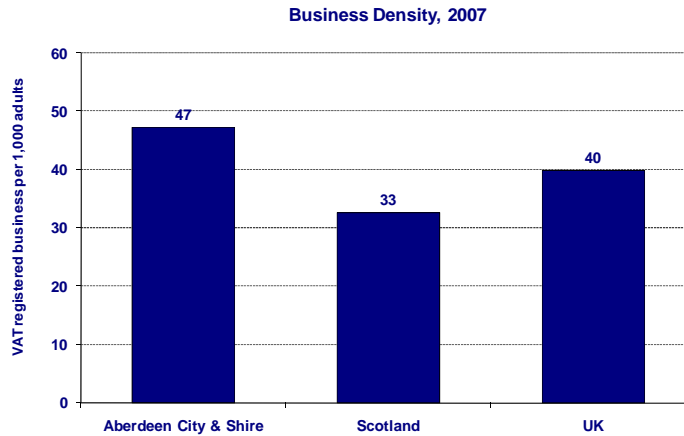
Business Density

Chart 4.8 shows business density levels, in terms of the number of businesses per head in Aberdeen City & Shire, Scotland, and the UK. There were 47 VAT registered businesses per 1,000 adults in the region in 2007. This was well above the equivalent figures for Scotland (33, per 1000) and the UK (40 per 1,000).

Business density levels are often higher in rural parts of the UK than in urban areas. In Aberdeen City & Shire, this partly reflects the relative importance of agriculture, particularly in Aberdeenshire, where businesses are often small.

Chart 4.8

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

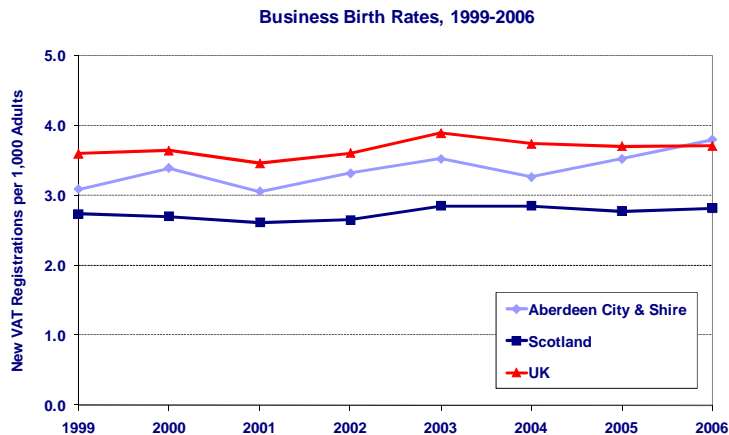


Business Birth Rate

Chart 4.9 shows change in the business birth rates in Aberdeen City & Shire, Scotland and the UK between 1999 and 2006. In 2006, the company birth rate in the region was 3.8 per 1,000 adults, above both the Scottish average of 2.8 per 1,000 and the UK average of 3.7 per 1,000.

Chart 4.9

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



The business birth rate in the region has been consistently above the Scottish average over the period and overtook the UK average in 2006. A high business birth rate is indicative of the level of entrepreneurial dynamism within an area and Aberdeen City & Shire performs well on this measure.

4.4.5 Investment

Private Equity Investment

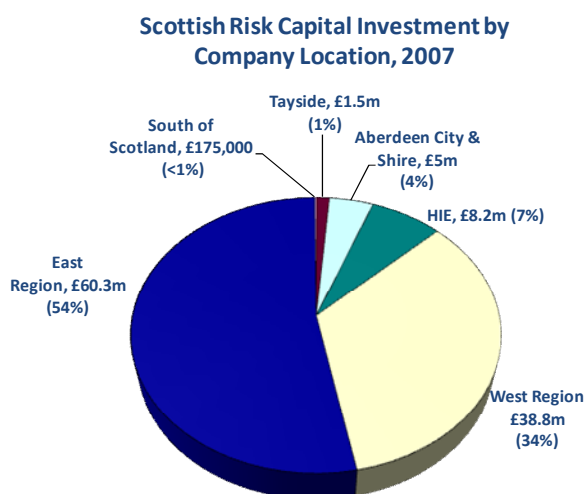
Developing a supportive business environment is one of the key strategic priorities of the Scottish Government. Sitting below this priority is a commitment to provide *'responsive and focused enterprise support to increase the number of highly successful, competitive businesses'*.

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 Scotland⁵ 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. Aberdeen City & Shire attracted just 4% of all Scottish risk capital investment in 2007, amounting to £5m.

Chart 4.10

Source: Scottish Enterprise 2008



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, 3% (a total of 11) came from investors based in Aberdeen City & Shire. The majority of these investments were made within the region.

Information on private equity investment in key sectors at a regional level is limited⁶. However, information on the sectoral preferences of geographically based investors is available. Risk capital investment from investors based in Aberdeen City & Shire was concentrated within Energy (55%), Enabling Technologies (27%) and Life Sciences (18%) in

⁵ 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, Tayside and Aberdeen. These are comparable to the geographical boundaries of the city regions.

⁶ See Section 6.3 for a detailed discussion of Scottish Enterprise Key Sectors

2007. Across Scotland, Enabling Technologies and Life Sciences tend to dominate investment, with Energy accounting for around a fifth of the total.

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 Aberdeen City & Shire is also comparatively low. Analysis of investment activity shows that, of the 59 'deals' that SE were involved in, 3 were in Aberdeen City & Shire in 2007. This investment totalled £500,000 and accounted for 10% 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 has control over the investment asset. It usually involves 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.

Scottish Enterprise identified three inward investments in Aberdeen City & Shire in 2007/08. Figures relating to the value of these investments are not available. However, we know that they were responsible for creating a total of 11 new jobs in the region. Each of these new jobs were 'high value' and salaried at £30k or more, demonstrating the impact of inward investment in terms of generating high value / high productivity jobs. All of the known inward investments were in *energy & engineering*, again reflecting the contribution of the *oil & gas* sector in terms of attracting investment into the region.

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 paper⁷ 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 Aberdeen City and Shire 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 Aberdeen City & Shire.

⁷ NESTA Policy Briefing – Measuring Innovation – July 2008

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 (2008) assessed 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 UK⁸. The 2008 table shows that the University of Aberdeen was ranked in the top 50, at 38th in the UK, while the Robert Gordon University was 87th (Table 4.9).

The region's two universities performed reasonably well in terms of research income. Together they attracted £49.1m or 12% of the research grants and contracts awarded in Scotland in 2006/07, with the University of Aberdeen attracting £46.2m of the total.

Table 4.9

Source: Times Higher Education Supplement, HESA

HEI Rankings and Research Income 2006/07			
University	RAE 2008 - THE Rank	Total Research Grants and Contracts 2006/2007 (£000's)	% of Total
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%
Total		420,590	100%

*Includes Bell College research income

**Ranked only in single subject category

4.4.6 Conclusions – Increasing Productivity & Competitiveness

GVA per employee in Aberdeen City & Shire is higher than across both Scotland and the UK, which suggests that the region is currently making a positive contribution to the achievement of the GES target.

However, to help achieve the GES target, Aberdeen City & Shire would need to increase productivity at a faster rate than other highly performing OECD economies. There is evidence that GVA per employee has grown more slowly in the region than across Scotland and the UK since 1999.

- GVA per employee in Aberdeen City & Shire amounted to £39,700 per employee in 2007, compared to £32,600 in Scotland and £34,800 in the UK.
- The level of GVA per employee in Aberdeen City & Shire increased by 1% between 1999 and 2006 compared to equivalent growth rates of 10% for Scotland and 15% for the UK.
- Productivity levels are above the Scottish average across almost all industry sectors in the region, with the exception of the public sector.

In terms of the wider drivers of productivity identified in the GES, Aberdeen City & Shire demonstrates mixed performance....

- Relative to Scotland as a whole (33%), a similar proportion of residents in Aberdeen City & Shire (36%) are educated to degree level. Furthermore, just 10% of residents have no qualifications at all, compared to 14% in Scotland.
- The rate of new graduates from Aberdeen City & Shire (10 per 1,000 working age residents) was slightly higher than the Scottish average (9 per 1,000) in 2007. The majority (70%) of graduates find their first job within the region immediately following graduation.
- Business density levels and birth rates in Aberdeen City & Shire are above the Scottish averages, which is indicative of high levels of entrepreneurialism in the region.
- Aberdeen City & Shire has above average levels of specialisation within two of the SE Key Sectors: Energy and Food & Drink. The region also has above average levels of specialisation within two SE Other Growth Sectors: construction and forest industries.

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 Aberdeen City & Shire 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 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.

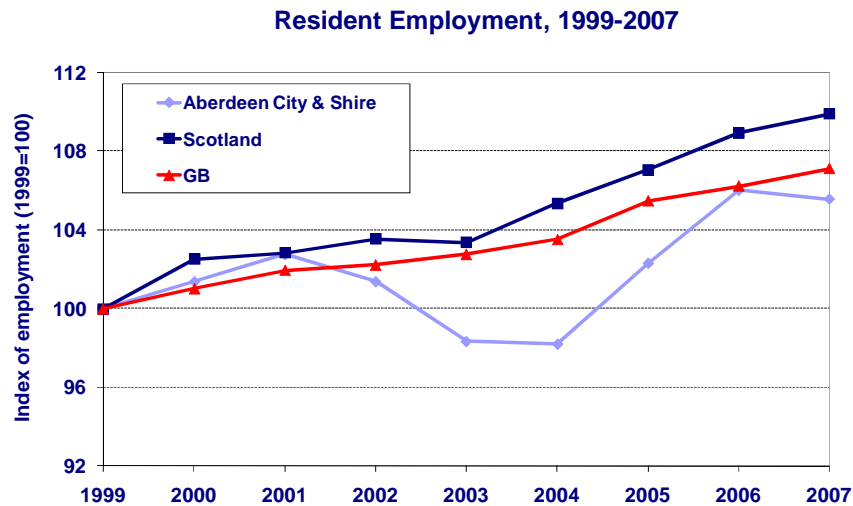
4.5.1 Resident Employment

Growth in the total number of Aberdeen City & Shire residents in work has kept pace with Scotland as a whole in recent years.

Chart 4.11 shows change in the total number of residents in work in Aberdeen City & Shire, Scotland and GB since 1999. In 2007, there were 229,100 Aberdeen City & Shire residents in work, 6% higher than the total in 1999. This growth rate was broadly in line with GB (+7%), but slower than the 10% increase across Scotland as a whole over the period. However, as we will see in the next section which looks at *employment rates*, the region already has above average levels of labour market participation meaning that the scope for continued increases in total resident employment is therefore limited.

Chart 4.11

Source: Annual Population Survey (APS), 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 23,100 self-employed residents in the region in 2007 accounting for 8% of all those in work. This was in line with the equivalent rate for Scotland, but behind the GB average of 9%.

Employment Rates

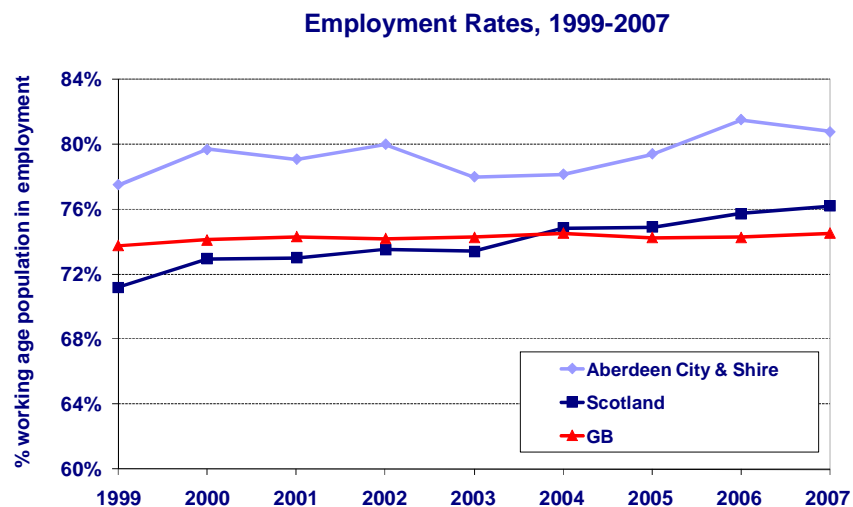
The employment rate in Aberdeen City & Shire has been consistently above the national averages since 1999.

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 4.12 shows that the employment rate in Aberdeen City & Shire has consistently outperformed the national averages since 1999. In 2007, the employment rate in the region was 81% - up three percentage points from the position in 1999, and higher than the equivalent rates for both Scotland (76%), and GB (75%). The region is currently in a good position to make a positive contribution to the national participation target of maintaining our position on labour market participation as the top performing country in the UK.

Chart 4.12

Source: Annual Population Survey (APS), 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

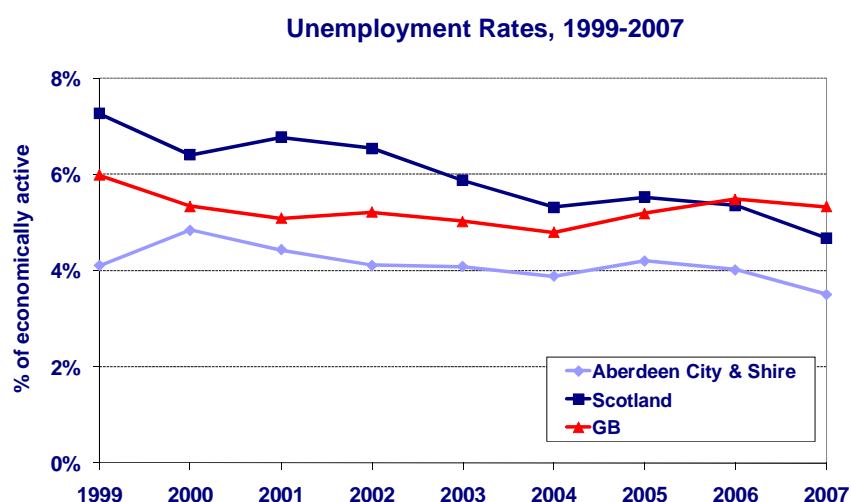
Unemployment levels in Aberdeen City & Shire has been consistently below the national averages since 1999.

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 4,200 Aberdeen City & Shire residents were unemployed, accounting for 3.2% of the working age population. This was below the equivalent rates of 4.7% for Scotland and 5.3% for GB. Chart 4.13 shows that the unemployment rate in the region has been consistently below the national averages since 1999.

Chart 4.13

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



Economic Inactivity

Relative to Scotland and GB, a lower proportion of Aberdeen City & Shire residents are economically inactive.

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 4.10 shows that the economically inactive total in Aberdeen City & Shire amounted to 47,200 in 2007. This was 6% lower than the total in 1999, a slower decline than across Scotland as a whole, but in contrast to growth in this group across GB.

Table 4.10

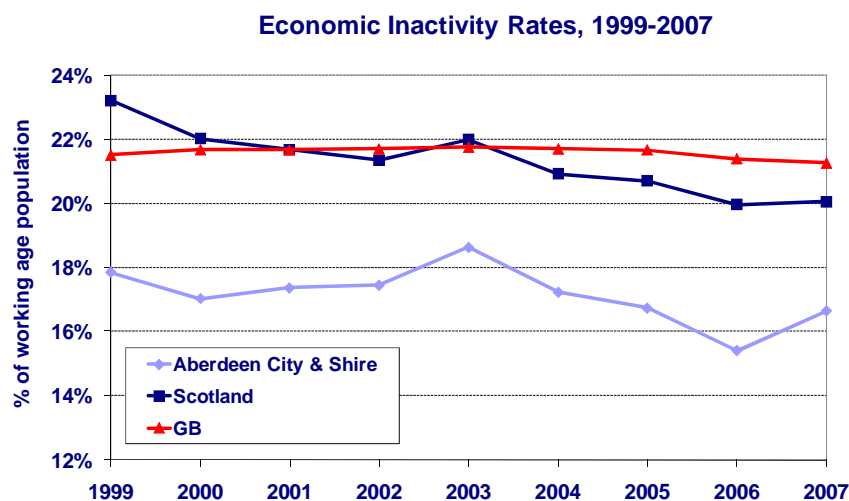
Source: Annual Population Survey (APS), 2007; Labour Force Survey 1999

Economically Inactive, 1999-2007				
	1999	2007	Change 1999-2007	
			No.	%
Aberdeen City & Shire	50,000	47,200	-2,800	-6%
Scotland	724,000	642,400	-81,600	-11%
GB	7,414,000	7,774,400	360,400	5%

Chart 4.14 shows change in inactivity rates in Aberdeen City & Shire, Scotland and GB since 1999. In 2007, just 17% of the working age population in the region were economically inactive. This was below the equivalent rates of 20% for Scotland and 21% for GB. In fact, inactivity levels within the region have been consistently lower than the national averages throughout the period.

Chart 4.14

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



4.5.3 Workless Benefit Claimants

Aberdeen City & Shire has low levels of benefit dependency, relative to Scotland and GB.

Table 4.11 shows change in the total number and rate of workless benefit claimants in the Aberdeen City & Shire, relative to 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.

There were 29,800 residents in receipt of workless benefits in 2008, accounting for 11% of the working age population, lower than the equivalent rates for both Scotland and GB.

The total number of workless benefit claimants in the region has fallen by 12% since 2000. This was slower than the rate of decline across Scotland (-15%), but the claimant rate in the region has remained below the national average throughout the period.

Table 4.11

Source: DWP

Workless Benefit Claimants, 2000-08						
	Claimants 2000		Claimants 2008		Change 2000-08	
	Total	Rate	Total	Rate	No.	%
Aberdeen City & Shire	33,720	12%	29,810	11%	-3,910	-12%
Scotland	614,480	19%	525,340	16%	-89,140	-15%
GB	5,468,490	16%	5,156,000	14%	-312,490	-6%

Incapacity Benefit

The proportion of Aberdeen City & Shire residents in receipt of incapacity benefits is below the Scottish average, though the total number has been increasing in recent years.

Table 4.12 shows change in the total number and rate of Incapacity Benefit (IB) claimants in Aberdeen City & Shire, relative to Scotland and GB, since 2000. There were 16,500 residents in receipt of IB in the region in 2008, accounting for 6% of the working age population. This was below the Scottish average and in line with the equivalent rate for GB.

There was an increase of almost 1,500 (+10%) in the total number of IB 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.

Table 4.12

Source: DWP

Incapacity Benefit Claimants, 2000-2008						
	Claimants 2000		Claimants 2008		Change 2000-08	
	Total	Rate	Total	Rate	No.	%
Aberdeen City & Shire	15,060	5%	16,520	6%	1,460	10%
Scotland	290,780	9%	271,390	8%	-19,390	-7%
GB	2,331,140	7%	2,389,560	6%	58,420	3%

Jobseekers Allowance

In line with the national trend, the total number of JSA claimants in Aberdeen City & Shire has fallen rapidly in recent years.

Jobseekers Allowance (JSA) is a benefit available to those of working age that are unemployed and seeking work. There were 2,800 JSA claimants in Aberdeen City & Shire in 2008.

Table 4.13 shows change in the total number and rate of JSA claimants in Aberdeen City & Shire, relative to Scotland and GB, since 2000. There was a rapid decline of 4,500 in the total number of JSA claimants in the region over the period, a fall of 61%. There were also substantial falls in the JSA totals across Scotland and GB over the period.

As a result of this decline, the JSA claimant rate in Aberdeen City & Shire fell from 2.6% in 2000 to just 1% in 2008. The claimant rate in the region has been below the equivalent rates for both Scotland and GB throughout the period.

Table 4.13

Source: DWP

JSA Claimants, 2000-08						
	Claimants 2000		Claimants 2008		Change 2000-08	
	Total	Rate	Total	Rate	No.	%
Aberdeen City & Shire	7,300	2.6%	2,800	1.0%	-4,500	-61%
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.

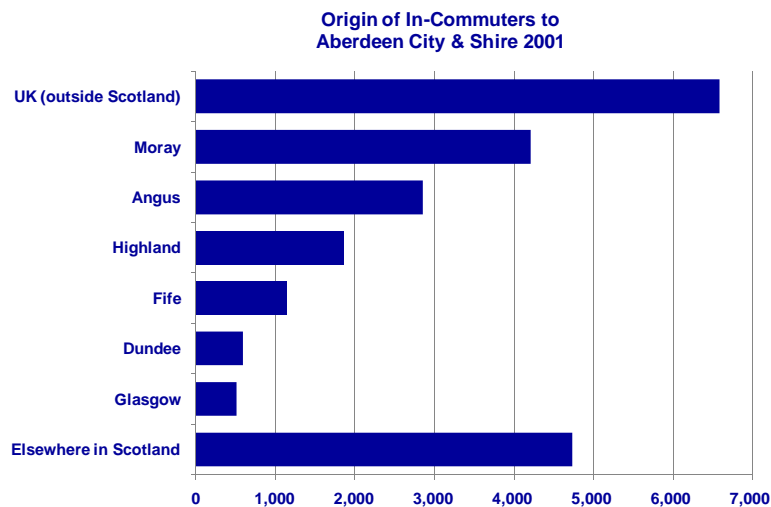
4.5.4 Commuting

The only reliable source of commuting data remains the 2001 Census. Just 2% of Aberdeen City & Shire residents worked outside the region in 2001, whilst 10% of the workforce commuted in from elsewhere. The region is therefore a net-importer of labour.

Chart 4.15 shows the origin of in-commuters to the region in 2001. More than 6,500 people (30% of the total) commuted into the region from outside Scotland. It is likely that the majority of these commuters were travelling in to work offshore in the *oil & gas* industry. The majority of commuters to the region from elsewhere in Scotland come from the surrounding areas of Moray (19%), Angus (13%) and Highland (8%).

Chart 4.15

Source: Census 2001,
Origin-Destination
Statistics



Analysis of commuting flows **within** Aberdeen City & Shire demonstrates that the city is clearly the economic centre of the region. In 2001, over a third of all Aberdeenshire residents in work were employed in Aberdeen City – a total of 39,000 people. Conversely, just 6,000 city residents worked in Aberdeenshire accounting for just 5% of all employed residents.

4.5.5 Conclusions - Increasing labour market participation

The employment rate in Aberdeen City & Shire has been consistently above both the Scottish and GB averages since 1999. The region is therefore in a strong position to contribute to the national participation target.

- In 2007, the employment rate in Aberdeen City & Shire was 81%, compared to a Scottish average of 76% and a GB figure of 75%.
- Oxford Economics' forecasts suggest that, whilst economic activity rates will fall in the region over the next couple of years as a result of the economic downturn, they will remain well above the national averages.

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 Aberdeen City & Shire was 3% in 2007, below the average of 5% for both Scotland and GB. Similarly, the economic inactivity rate in the region was 17% in 2007, below the rates of 20% for Scotland and 21% for GB.
- The proportion of the population that claim workless benefits (11%) is much lower in Aberdeen City & Shire than across both Scotland (16%) and GB (14%). However, there was an increase of 10% in the total number of Incapacity Benefit claimants in the region between 2000 and 2008, in contrast to a decline of 15% across Scotland.
- Aberdeen City & Shire is a net importer of labour, drawing 10% of its workforce from outside the region in 2001. This is partly the result of large numbers of people travelling from across the UK and beyond to work in the offshore oil and gas industry.

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 the Aberdeen City & Shire 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 Aberdeen City & Shire has reversed and population has been growing in recent years.

The total population of Aberdeen City & Shire was almost 450,000 in 2007. This was 1% higher than the total in 1999, as shown in Table 4.14. This rate of growth was in line with Scotland as a whole, meaning that the region's share of total Scottish population (8.7%) remained unchanged over the period. The UK experienced strong population growth of 4% between 1999 and 2007.

Table 4.14

Source: GRO (Scotland) and ONS

Total Population, 1999-2007						
	1999		2007		Change 1999-2007	
	No.	%	No.	%	No.	%
Aberdeen City & Shire	441,900		448,400		6,600	1%
Scotland	5,072,000		5,144,200		72,300	1%
UK	58,684,400		60,975,400		2,291,000	4%

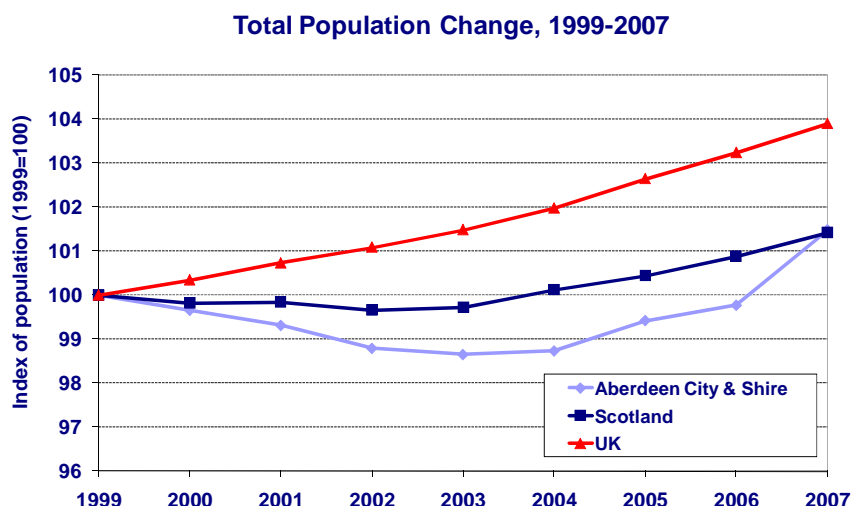
Figures may not sum to totals as each figure is individually rounded to nearest 100

Chart 4.16 shows trends in total population levels in Aberdeen City & Shire, Scotland and the UK since 1999. It shows that:

- The population of Aberdeen City & Shire was falling through the early part of this decade, but has been growing consistently since 2004.
- The long term decline in Scotland's population has also been reversed and the country as a whole has experienced population growth in recent years.
- There has been consistent population growth across the UK over the period.

Chart 4.16

Source: GRO (Scotland) and ONS



The reversal of population decline within Aberdeen City & Shire since 2004 has largely been the result of increased in-migration to the area. Natural change, that is the difference between births and deaths, has been neutral throughout the period having little effect on overall population levels. Prior to 2004, more people were moving out the region each year than moving in causing total population to fall. However, since then, net migration has been positive resulting in a growing population.

Working Age Population

Growth in the working age population in Aberdeen City & Shire has been much slower than across Scotland and the UK in recent years.

Table 4.15 shows change in the working age population in Aberdeen City & Shire, 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 4.15

Source: GRO (Scotland) and ONS

Working Age Population, 1999-2007				
			Change 1999-2007	
	1999	2007	No.	%
Aberdeen City & Shire	283,000	286,800	3,800	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

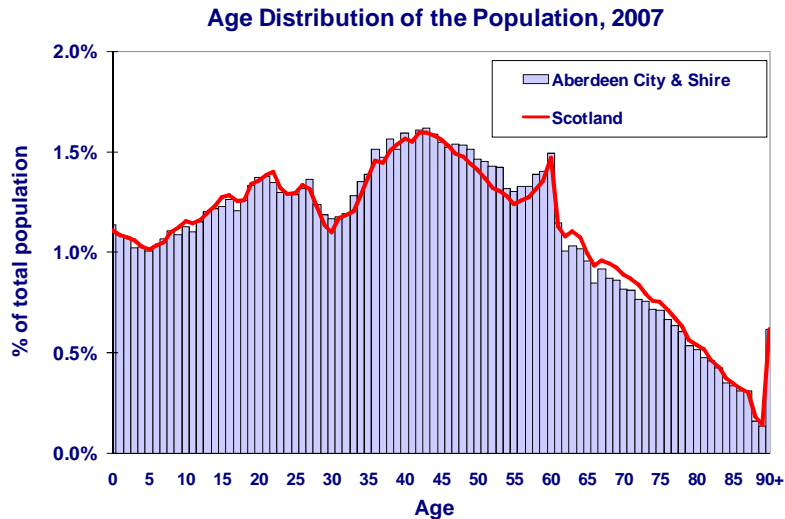
Age Distribution

Relative to Scotland as a whole, the population of Aberdeen City & Shire is characterised by above average numbers of people of 'prime' working age and fewer retired residents.

Chart 4.17 shows the current age distribution of the population in Aberdeen City & Shire, relative to Scotland as a whole.

Chart 4.17

Source: GRO (Scotland)



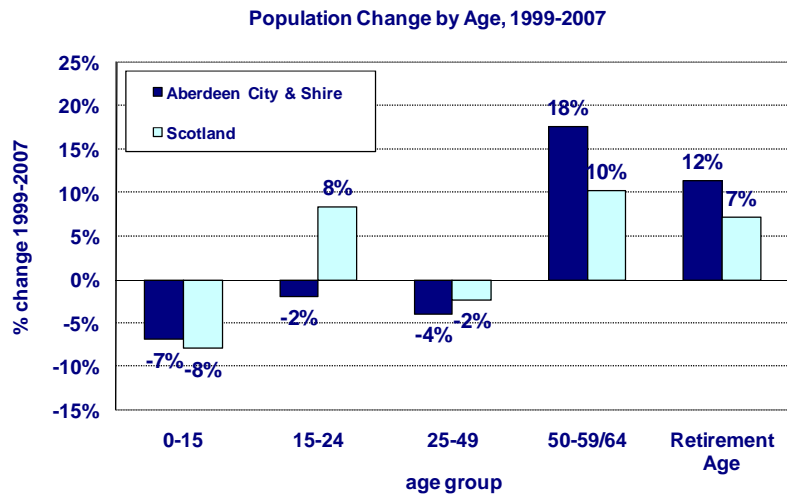
Aberdeen City & Shire has above average numbers of people aged between 25 and 40 (the 'prime' working age group) compared to Scotland as a whole. The region also has a higher share of residents in their 50s, but fewer retired residents, relative to the national average.

Population Change by Age

Despite modest overall growth, there have been important changes in the age structure of the population in both Aberdeen City & Shire and Scotland over the past decade, as shown in Chart 4.18.

Chart 4.18

Source: General Register Office for Scotland



This analysis shows:

- Greatest population increases among those over the age of 50 in both Aberdeen City & Shire and Scotland as a whole.
- A slight decline in the number of young people aged 15-24 in Aberdeen City & Shire in contrast to growth in this group across Scotland as a whole.
- Rapid decline in the number of young people under the age of 16 in both Aberdeen City & Shire and across Scotland.
- Aberdeen City & Shire appears to be experiencing an even more pronounced ageing of the population than that witnessed across Scotland as a whole.

Population Projections

The population of Aberdeen City & Shire is expected to continue to increase over the coming decade, according to the most recent official population projections.

The Table and Chart below show expected population change within Aberdeen City & Shire, Scotland and the UK over the coming decade. The total population of Aberdeen City & Shire is expected to reach 464,100 by 2018, 3% higher than the total in 2008. This is in line with the rate of growth expected for Scotland, but much slower than the 7% increase expected for the UK.

Chart 4.19

Source: GRO
Scotland

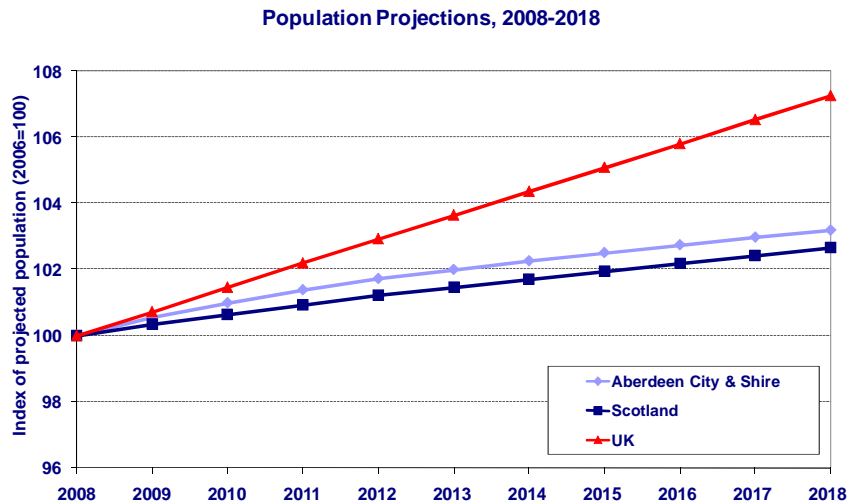


Table 4.16

Source: GRO
Scotland

Population Projections, 2008-18				
			Change 2008-18	
	2008	2018	No.	%
Aberdeen City & Shire	449,800	464,100	14,300	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 Aberdeen City & Shire has also been increasing since 2004, 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 Aberdeen City & Shire 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 Aberdeen City & Shire is expected to continue to increase over the coming decade, growing by 3% by 2018. This is in line with the forecast for Scotland, but slower than the strong growth of 7% expected for the UK.

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 Aberdeen City & Shire in relation to each of 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 Aberdeen City & Shire's performance in relation to levels of solidarity across a number of other measured including:

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

Median Weekly Earnings – All People

The median weekly earnings of those working in Aberdeen City & Shire are among the highest of all areas in Scotland and above the equivalent figures for both Scotland and the UK.

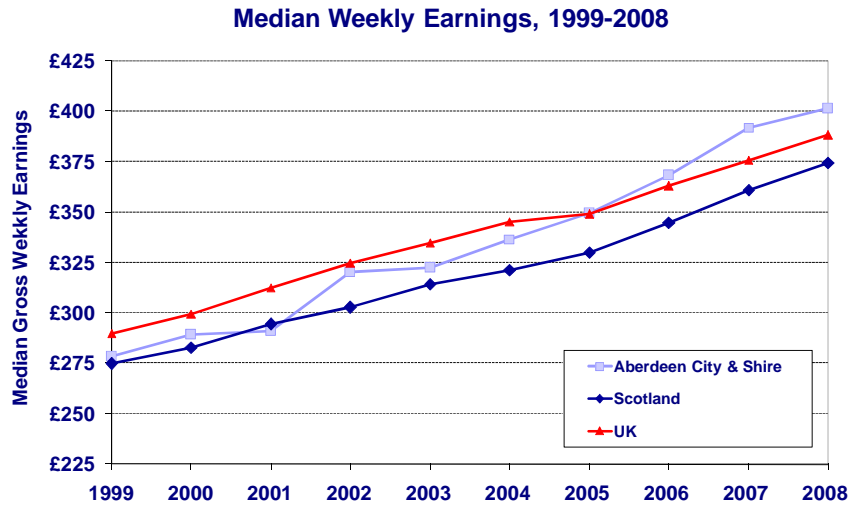
All of the figures in this section refer to the **median** weekly earnings of all those in employment, including both full-time and part-time workers. Median is the preferred measure (over mean) for earnings data as it is influenced less by extreme values and because of the skewed distribution of earnings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

The Chart and Table below show the change in **median** weekly earnings of those working in Aberdeen City & Shire, relative to Scotland and the UK, since 1999.

- Median weekly earnings in Aberdeen & City Shire amounted to £402 in 2008;
- This was higher than both the equivalent figure of £375 for Scotland and £388 for the UK;
- In recent years, median earnings in Aberdeen City & Shire have grown at a faster rate than both Scotland and the UK.

Chart 4.20

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 Aberdeen City & Shire rather than the earnings of residents. The median earnings of residents of the region were £389 in 2008. This was 3% lower than the workplace figure.

Table 4.17

Source: Annual Survey of Hours and Earnings, ONS

Median Weekly Earnings, 1999-2008				
	1999	2008	Change 1999-2008	
			No.	%
Aberdeen City & Shire	£278	£402	£123	44%
Scotland	£275	£375	£100	36%
UK	£290	£388	£98	34%

Whilst median weekly earnings in Aberdeen City & Shire are higher than across Scotland as a whole, there are disparities within the region on this measure. In 2008, median weekly earnings in Aberdeen City were £431, whereas the corresponding figure for Aberdeenshire was just £356 (which was below the national average).

An increased focus on reducing the disparities within the region will be necessary if Aberdeen City & Shire is to maximise the contribution that it can make to the national solidarity target.

Median Weekly Earnings – Full-Time Workers

The earnings of full-time workers in Aberdeen City & Shire are also higher than across both Scotland and the UK.

The previous section looked at the median earnings of all those employed in Aberdeen City & Shire. 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 4.18 shows change in the median earnings of full-time workers in Aberdeen City & Shire between 2002 and 2008, relative to Scotland and the UK. The earnings of those working full-time in Aberdeen City & Shire are higher than across both Scotland and the UK. The increase in full-time wage levels in the region was broadly in line with Scotland and the UK between 2002 and 2008.

Table 4.18

Source: Annual Survey of Hours and Earnings, ONS

Median Weekly Earnings of Full-Time Workers				
	2002	2008	Change 2002-2008	
			No.	%
Aberdeen City & Shire	£406	£498	£92	23%
Scotland	£369	£462	£93	25%
UK	£391	£479	£88	22%

Household Income

Average household income levels within Aberdeen City & Shire are higher than across Scotland as a whole and in line with the UK.

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 Aberdeen City & Shire alone, but are available for the wider Aberdeen, Aberdeenshire and North East Moray area. Table 4.19 shows average household income levels for Aberdeen City, Aberdeenshire and North East Moray relative to Scotland and the UK.

- In 2006, average household income in Aberdeen City, Aberdeenshire and North East Moray was £13,800 per person
- This was 5% higher than the equivalent Scottish figure and in line with the UK as a whole
- Growth in GDHI in Aberdeen City, Aberdeenshire and North East Moray in recent years has matched that of Scotland, and exceeded the UK.

Table 4.19

Source: ONS

Gross Disposable Household Income, 1999-2006				Change 1999-2006	
	1999	2006	% of Scotland's GDHI	No. %	
				Aberdeen City & Shire and North East Moray	£10,200
Scotland	£9,700	£13,100	100%	£3,400	35%
UK	£10,400	£13,800	-	£3,400	33%

4.7.2 Conclusions – 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 in Aberdeen City & Shire are higher than across Scotland as a whole, though there is some evidence of disparities within the region...

- The median weekly earnings of all those working in Aberdeen City & Shire (full-time and part-time workers combined) were £402 in 2008, above the equivalent figures for Scotland and the UK of £375 and £388 respectively.
- There are some disparities within the region on this measure, with the median earnings of those working in Aberdeenshire 17% lower than in Aberdeen City in 2008.

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 Aberdeen City & Shire 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.

The employment rate of 82% in Aberdeenshire is among the highest of all local authority areas in Scotland and well above the national average of 76%. Aberdeen also has a relatively high employment rate at 79%.

Table 4.20 shows how the employment rates for the two local authorities in the region compare with the top and bottom three performing areas in Scotland. It shows that Aberdeenshire has the 4th highest employment rate of all local authority areas in the country, whilst Aberdeen City has the 10th highest rate. If these positions can be maintained, the region's contribution to the target will be limited in that the focus will be on raising participation levels within those areas currently in (or at risk of falling into) the bottom three.

Table 4.20

Source: ONS

Best & Worst Employment Rates in Scottish LA's, 2008			
	Local Authority Area	Rate 2008 (%)	Ranking 2008
Top 3	Shetland Islands	87.7	1
	Orkney Islands	84.1	2
	Highland	84.0	3
	Aberdeenshire	82.2	4
	Aberdeen City	79.2	10
Bottom 3	North Ayrshire	70.6	30
	Clackmannanshire	69.3	31
	Glasgow City	68.0	32

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 4.21 shows that Aberdeen City & Shire contains 33 data zones which are within the 15% most deprived neighbourhoods in Scotland in 2006. To look at this information in

another way, 5% of residents live among areas ranked among the 15% most deprived in Scotland – considerably below the Scottish average of 15%. Over three quarters of these neighbourhoods are located within Aberdeen City (a total of 27), with the remaining six in Aberdeenshire.

Table 4.28

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.	%
Aberdeen City & Shire	11	7,426	2%	33	22,380	5%
Scotland	325	246,052	5%	976	751,130	15%

4.7.4 Conclusions – Cohesion

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.

The employment rates within the two local authority areas in Aberdeen City & Shire are both above the Scottish and GB averages. If this position can be maintained, the region will therefore have relatively little to do in terms of helping achieving the GES target – the onus will be on improving participation levels within those areas with the lowest rates.

- *The employment rate in Aberdeenshire was 82% in 2007, which was among the highest of all local authority areas within Scotland.*
- *The employment rate in Aberdeen City is also relatively high at 79% in 2007, compared to the Scottish average of 76%.*

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 the performance of Aberdeen City & Shire in relation to sustainable growth and covers:

- CO² Emissions
- Waste Recycling

CO² Emissions

Aberdeen City & Shire generates an above average level of CO² emissions per head of population, although total emissions from the region have been falling in recent years.

Aberdeen City & Shire produced a total of 5,200kt of CO² in 2006, accounting for 12% of all CO² emissions from Scotland. This amounted to 11.7 tonnes per head of population, above both the Scottish and UK averages (8.5 and 8.8 respectively).

Table 4.22 shows a breakdown of CO² emissions in 2006 by sector within Aberdeen City & Shire relative to Scotland and the UK. It shows that emissions from industrial & commercial activities account for a higher share of emissions from the region than across Scotland and the UK, whilst road transport accounts for a smaller proportion.

Total CO² emissions in Scotland increased by almost 1% between 2005 and 2006, although the level of emissions fell by 2% in Aberdeen City & Shire over the same period. This relatively fast rate of decline is indicative of the positive contribution that Aberdeen City and Shire can make to the national sustainability target.

Table 4.22

Source: DEFRA

CO ² Emissions 2006					
	Total Emissions (kt)	% Industry & Commercial	% Domestic	% Road Transport	% Change since 2005
Aberdeen City & Shire	5,200	53%	25%	18%	-2.2%
Scotland	43,500	51%	33%	26%	0.8%
UK	531,700	46%	29%	25%	-0.1%

Waste Recycling

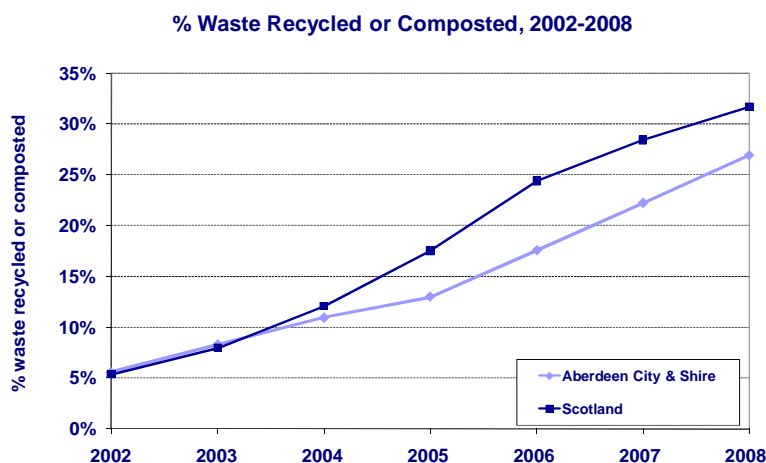
The proportion of waste that is recycled or composted has increased rapidly in recent years, both in Aberdeen City & Shire and across Scotland as a whole.

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, 27% of all waste from Aberdeen City & Shire was recycled or composted – below the national average of 32%. Chart 4.21 shows how this has increased rapidly in recent years from a rate of just 5% in 2002. Both Aberdeen City & Shire 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 4.21

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 CO² emission is available for regions. Aberdeen City & Shire accounts for 12% of all Scottish CO² emissions and has a higher level of CO² emissions per head of population than the Scottish and UK averages.

- Aberdeen City & Shire generated 11.7 tonnes of CO₂ emissions per head of population in 2008, above both the Scottish and UK averages (8 and 9 tonnes respectively).
- More positively, CO² emissions fell by 2.2% between 2005 and 2006, in contrast to relatively little change across both Scotland and the UK. However, care should be taken in interpreting any trend however from such a limited data set.
- Despite a six fold increase since 2002, the proportion of waste from Aberdeen City & Shire (27%) that was recycled or composted in 2008 was below the average for Scotland (32%).

5. Benchmarking

5.1 Introduction

In this section, the economic performance of Aberdeen City & Shire 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
- CO² Emissions

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

- East Region
- Dundee City Region
- West Region
- Scotland and the UK/GB

5.2 GVA Growth

In terms of economic growth, Aberdeen City & Shire has been an average performer in recent years relative to the other SE 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 since 1999.

In 2006, economic output from Aberdeen City & Shire amounted to £10.9bn, accounting for 12% of Scottish economic output. The region is therefore much smaller in economic terms than the East and West regions, though larger than Dundee City Region.

Economic output from the region grew at an average annual rate of 1.8% between 1999 and 2006. This was slower than the growth achieved by each of the other regions as well as Scotland and the UK. However, it should be kept in mind that these figures exclude offshore oil and gas activities and therefore do not represent a complete picture of the performance of the regional economy.

Table 5.1

Source: ONS and
SLIMS Calculations

Gross Value Added (GVA)			
	Total GVA 2006 (£m)	% Share of Scottish GVA 2006	Average Annual GVA Growth 1999-2006
Aberdeen City & Shire	10,900	12%	1.8%
Dundee City Region	6,400	7%	2.1%
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

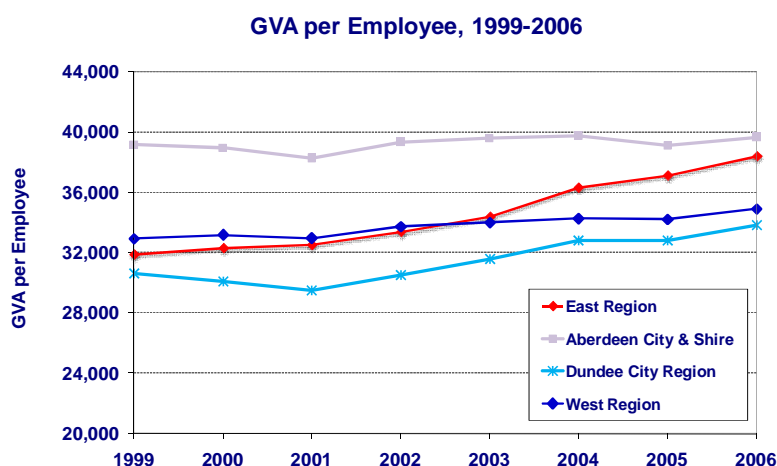
Productivity levels with Aberdeen City & Shire are above the national average and higher than in the West Region and Dundee City Region.

Chart 5.1 shows change in productivity levels (as measured by GVA per employee) in each of the regions since 1999. In 2006, the average level of GVA generated per employee in Aberdeen City & Shire was £39,700. This was higher than across both Scotland and the UK and the highest of all the regions shown.

Productivity levels in Aberdeen City & Shire have been relatively stable in recent years, increasing by just 1% between 1999 and 2006. This compares with growth rates of at least 6% for each of the other regions, and strong growth of 20% in the East Region, over the period. This analysis suggests that the region is home to a relatively high value jobs market, but productivity increases have not been keeping pace with some other areas in recent years.

Chart 5.1

Source: ONS and SLIMS Calculations



5.4 Labour Market Participation

Aberdeen City & Shire has an excellent record in terms of labour market participation, with a high employment rate and low levels of unemployment and benefit dependency relative to the other regions.

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 performs well across each of these measures, with the highest employment rate and lowest levels of unemployment, inactivity and benefit dependency of each of the regions.

The only potential difficulty faced by the region in terms of the current high levels of labour market participation, is that it now has a very restricted labour supply, which could pose problems for future growth. More positively, this restricted supply is a contributing factor to the high wage levels on offer in the region.

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
Aberdeen City & Shire	81%	3.5%	17%	11%
East Region	77%	5.1%	19%	14%
Dundee City Region	77%	5.4%	19%	16%
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, Aberdeen City & Shire has experienced limited population growth in recent years.

Table 5.3 shows total population and population change across the regions. There were around 450,000 people living in Aberdeen City & Shire in 2007, accounting for 9% of Scotland's total population. The region's population was 1% higher in 2007 than in 1999, a rate of growth in line with Scotland as a whole and each of the other regions apart from the East, which experienced strong growth of 5% over the period.

Table 5.3

Source: GRO (Scotland) & ONS

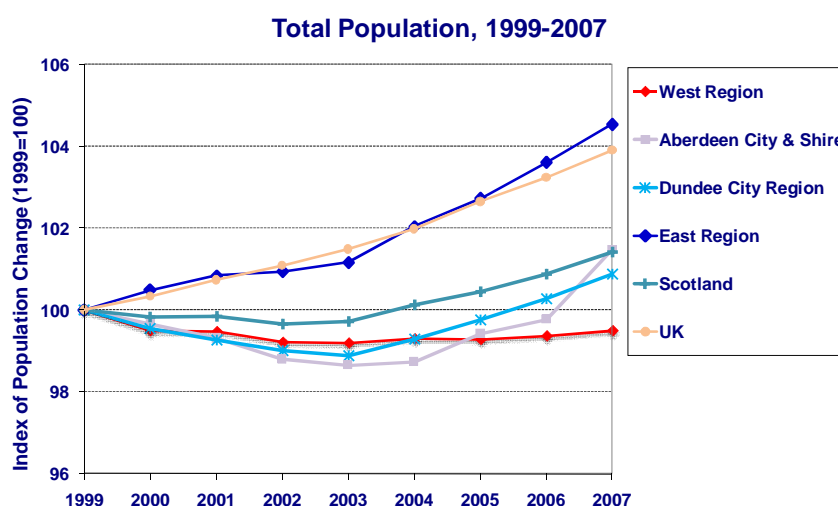
Total Population			
	Total Population 2007	% Share of Scottish Population	Change 1999-2007
Aberdeen City & Shire	448,400	9%	1%
East Region	1,498,400	29%	5%
Dundee City Region	466,300	9%	1%
West Region	2,210,400	43%	0%
Scotland	5,144,200	100%	1%
UK	60,975,400	-	4%

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

The population decline in the West that occurred between 1999 and 2003 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, which has also experienced strong growth in recent years.

Chart 5.2

Source: GRO (Scotland) & ONS



5.6 Wage Levels

Wage levels in Aberdeen City & Shire are higher than in each of the other comparator regions, as well as across Scotland and the UK.

Table 5.4 shows median earnings across the regions, as well as the disparities within the regions on this measure. Median weekly earnings for those working in Aberdeen City & Shire amounted to £402 in 2008. This was higher than each of the other regions and also above the national averages. Wage levels in Aberdeen City were £74 higher than those in Aberdeenshire, though this disparity was less pronounced than in the East and West regions.

Table 5.4

Source: ASHE

Workplace Earnings 2008		
	Median Gross Weekly Earnings	Disparities Within Regions*
Aberdeen City & Shire	£402	£74
East Region	£382	£114
Dundee City Region	£367	£46
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

Aberdeen City & Shire is home to several neighbourhoods ranked among the most deprived in Scotland. However, the proportion of residents living within deprived areas is very low relative to the other regions.

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 Aberdeen City & Shire is below the average for each of the other comparator regions as well as Scotland as a whole.

Table 5.5

Source: Scottish Index of Multiple Deprivation, 2006

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

5.8 CO² Emissions

The overall level of CO² per head of population generated in Aberdeen City & Shire is higher than each of the other regions, though industrial emissions are lower than in the East.

Table 5.6 shows total CO² 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 relative to economic output (GVA). In 2006, Aberdeen City & Shire generated 5,200kt of CO², accounting for 12% of total emissions in Scotland. This amounted to 12 tonnes of emissions per head of population – the highest of all the regions. Looking at industrial emissions per £1,000 GVA, Aberdeen City & Shire has a higher rate of emissions than each of the other regions apart from the East, which has very high emissions due to the large oil refinery at Grangemouth.

The total level of emissions from the region fell by 2% between 2005 and 2006 – the fastest rate of decline of all the regions. This represents a success for the region where there has been a policy focus in recent years on reducing carbon emissions and increasing energy efficiency. For example, Aberdeen City Council was the first Scottish local authority to publish a Climate Change Action Plan in 2002 and last year the North East Scotland Climate Change Partnership (NESCCP) was formally launched to raise awareness of climate change issues in the region. In addition, NHS Grampian was the first health board to complete the NHS Climate Change Management programme in 2008.

Table 5.6

Source: DEFRA

CO² Emissions				
	Total CO² Emissions 2006 (kt)	% Change in CO² Emissions 2005-06	Total CO² per head of Population	Industrial CO² per £1,000 GVA
Aberdeen City & Shire	5,200	-2%	12	300
East Region	15,500	1%	10	340
Dundee City Region	4,100	-1%	9	280
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 Aberdeen City & Shire 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 covers:

- Total Employment
- Industrial Structure
- Key and Other Growth Sectors
- Energy
- Risk Assessment

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 GB.

It should be noted that the figures in this section are workplace based and **exclude** self-employment. This is in contrast to the resident employment figures reported in Section 4.5.1.

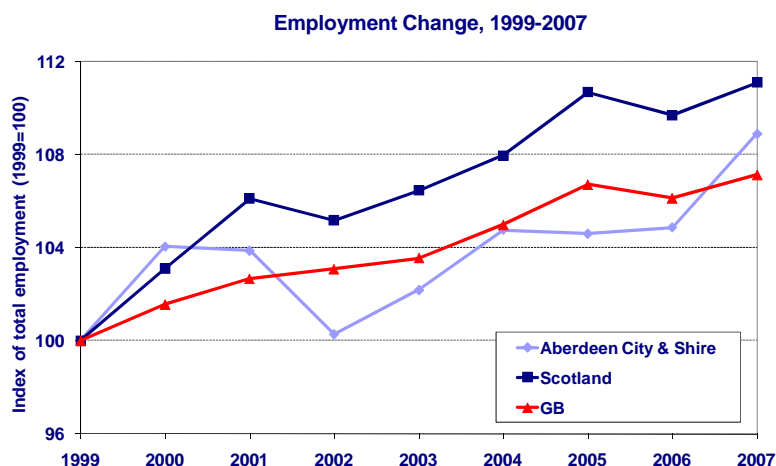
6.2 Total Employment

The rate of jobs growth within Aberdeen City & Shire has outpaced GB in recent years, but has lagged behind Scotland as a whole.

Chart 6.1 shows the change in the total number of jobs within Aberdeen City & Shire, relative to Scotland and GB, since 1999. In 2007, there were 259,200 jobs in the region representing an increase of 9% from the total in 1999. This rate of growth was slower than across Scotland (+11%), but was faster than the equivalent growth rate for GB (+7%).

Chart 6.1

Source: Annual Business Inquiry



6.2.1 Employment by Gender and Type

Table 6.1 shows that the growth in workplace jobs in Aberdeen City & Shire in recent years has benefited both men and women. There were 9,600 more women working in the region in 2007 than in 1999, an increase of 9%. The number of men working in the region grew at the same rate, though the actual increase amounted to 11,600.

The expansion of the region's economy has been largely driven by a rapid increase in part-time working. There were 16,800 more part-time jobs in Aberdeen City & Shire in 2007 than in 1999, an increase of 26%. This was much higher than the equivalent increase of just 3% in the number of full-time jobs.

The differences in the types of employment taken by men and women do remain. More than half (53%) of women employees in the region worked part-time in 2007, higher than the equivalent rate of 50% in 1999. The proportion of men working part-time increased from 10% in 1999 to 15% in 2007.

Table 6.1

Source: Annual Business Inquiry

Employment Change by Gender & Type in Aberdeen City & Shire				
	1999	2007	Change 1999-2007	
			No.	%
Male full-time	119,000	122,400	3,400	3%
Male part-time	13,100	21,200	8,100	62%
All males	132,100	143,600	11,600	9%
Female full-time	53,500	54,500	1,000	2%
Female part-time	52,500	61,100	8,600	16%
All Females	105,900	115,600	9,600	9%
All full-time	172,500	176,900	4,400	3%
All part-time	65,600	82,300	16,800	26%
All Employees	238,000	259,200	21,200	9%

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 Aberdeen City & Shire are *public services* (26% of all jobs), *financial & business services* (20%) and *retail & catering* (20%). Table 6.2 shows that, relative to Scotland as a whole, the region has a lower share of employment within *public services* and *retail & catering* and a higher share within *utilities*, which includes some parts of the oil & gas sector.

Table 6.2

Source: Annual Business Inquiry

Employment by Industry, 2007				
	Aberdeen City & Shire		Scotland	
	Total	%	Total	%
Agriculture	5,400	2%	39,200	2%
Utilities	21,800	8%	42,500	2%
Manufacturing	25,100	10%	220,900	9%
Construction	13,400	5%	137,600	6%
Retail & catering	50,900	20%	528,700	22%
Transport & communications	12,900	5%	130,300	5%
Financial & business services	52,400	20%	451,500	19%
Public services	66,300	26%	729,600	30%
Other services	11,000	4%	127,300	5%
Total	259,200	100%	2,407,700	100%

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:

- *Public services* was the fastest growing sector in the region, both in absolute and percentage terms;
- *Financial and business services* also grew strongly over the period, creating almost 11,000 new jobs within the region;
- The *manufacturing* sector continued its long term trend decline, with almost 3,000 jobs lost in the sector since 1999; and
- The only other sectors to experience a substantial decline were *construction* and *agriculture*, though the numbers involved were much smaller.

Table 6.3

Source: Annual Business Inquiry

Employment Change in Aberdeen City & Shire, 1999-2007				
	1999	2007	Change 1999-2007	
			No.	%
Agriculture	5,800	5,400	-400	-7%
Utilities	21,700	21,800	100	0%
Manufacturing	27,900	25,100	-2,800	-10%
Construction	14,300	13,400	-900	-7%
Retail & catering	51,000	50,900	-200	0%
Transport & communications	13,000	12,900	-100	-1%
Financial & business services	41,600	52,400	10,800	26%
Public services	51,400	66,300	14,900	29%
Other services	11,200	11,000	-200	-2%
Total	238,000	259,200	21,200	9%

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 define 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. 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 Aberdeen City & Shire across the 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. Similarly, the data for the *energy* sector is also based on a relatively narrow definition and does not capture the full scale of the sector in the region. Other estimates of the size and scale of the *energy* sector in Aberdeen City & Shire can be found in Section 6.4.1. 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 Key Sectors

Table 6.4 shows total employment across the eleven key and other growth sectors in Aberdeen City & Shire 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 Scotland⁹.

⁹ 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 Aberdeen City & Shire	% Share of all jobs in Region	% Change since 1999 in Region	Specialisation in Region (Scotland = 100)
Key Sectors					
Energy*	40,700	21,500	8%	1%	491
Financial Services	91,600	2,800	1%	-16%	28
Food & Drink	46,000	5,500	2%	-29%	111
Life Sciences	18,400	1,900	1%	62%	98
Tourism	219,900	19,900	8%	32%	84
Creative Industries	62,200	8,900	3%	65%	133
Other Growth Sectors					
Textiles	12,700	600	0%	-49%	46
Aerospace, Defence & Marine	30,300	2,200	1%	-30%	68
Chemicals	14,200	700	0%	37%	43
Construction*	215,800	36,500	14%	33%	157
Forest Industries	19,200	2,200	1%	n/a	107

* this analysis is based on a relatively narrow definition and excludes large parts of the supply chain – other estimates of the true size and scale of the sector in the region can be found in Section 6.4.1.

** it should be noted that this SE 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 Aberdeen City & Shire:

- The importance of the oil & gas sector to the regional (and Scottish) economy is demonstrated by the high level of specialisation within **energy** in Aberdeen City & Shire. The sector employs over 21,000 people, accounting for 8% of all jobs. However, as noted above, this estimate is based on a relatively narrow definition and therefore excludes large parts of the supply chain and other activities associated with the industry.
- The region also has a high concentration of employment within the **creative industries** sector and the level of overall employment in this industry grew by 65% between 1999 and 2007.
- The concentration of employment within **life sciences** in Aberdeen City & Shire is in line with Scotland as a whole. The number of people employed within this industry grew strongly by 62% between 1999 and 2007.
- Relative to Scotland as a whole, the region has a very low concentration of employment within **financial services**, which accounts for just 1% of total employment. The sector has been a key driver of economic growth across the country in recent years, but the number employed in the industry locally declined by 16% between 1999 and 2007.
- The region retains an above average level of specialisation within **food & drink**, despite a rapid decline in employment of 29% in the sector between 1999 and 2007. This industry employs more than 5,500 people in the region and accounts for 2% of total employment.

- **Tourism** is the second largest employing sector among the key sectors in Aberdeen City & Shire, accounting for 8% of total employment in the region and growing strongly by 32% since 1999. It has a below average level of specialisation relative to Scotland as a whole, showing that low specialisation scores do not necessarily equate to low levels of employment and vice versa.

Looking at employment within Aberdeen City & Shire across the other growth sectors:

- The region has an above average concentration of employment within the **construction** industry. Employment in this sector has grown by a third since 1999, meaning that it is now the largest of the other growth sectors within the region with a 14% share of total employment in the area.
- The only other growth sector within which Aberdeen City & Shire has an above average level of specialisation is **forest industries**. However, employment within this industry has fallen by more than a third since 1999 and so it is unlikely to offer much potential for future growth.

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 Aberdeen City & Shire in 2007¹⁰. 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
Key Sectors			
Energy	250	1.2%	12%
Financial Services	290	1.4%	-5%
Food & Drink	180	0.9%	-47%
Life Sciences	60	0.3%	43%
Tourism	1,560	7.8%	7%
Creative Industries	1,410	7.1%	31%
Other Growth Sectors			
Textiles	80	0.4%	7%
Aerospace, Defence & Marine	130	0.6%	-10%
Chemicals	40	0.2%	16%
Construction	4,450	22.3%	18%
Forest Industries	170	0.9%	-10%

Tourism and **construction** are the largest of the sectors in Aberdeen City & Shire in terms of the volume of workplaces they account for. There were more than 6,000 workplaces in the

¹⁰ 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.

region operating within these industries in 2007, accounting for 30% of all workplaces. The total number of workplaces within each of these industries increased between 1999 and 2007.

Energy accounted for 1.2% of all workplaces in the region in 2007, a total of 250 which was 12% higher than the number in 1999. **Life sciences** accounts for 0.3% of all workplaces in Aberdeen City & Shire, a total of 60 in 2007. This was 43% higher than the total in 1999, the fastest rate of increase of all of the key and other growth sectors in the region. The number of workplaces operating in the **creative industries** also grew substantially over the period, increasing by 31% to a total of 1,410.

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 also fell over the period but at a faster rate (-16%) 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, several have been shrinking, with particularly sharp falls in the number of **food & drink** workplaces.

Workplace by Size

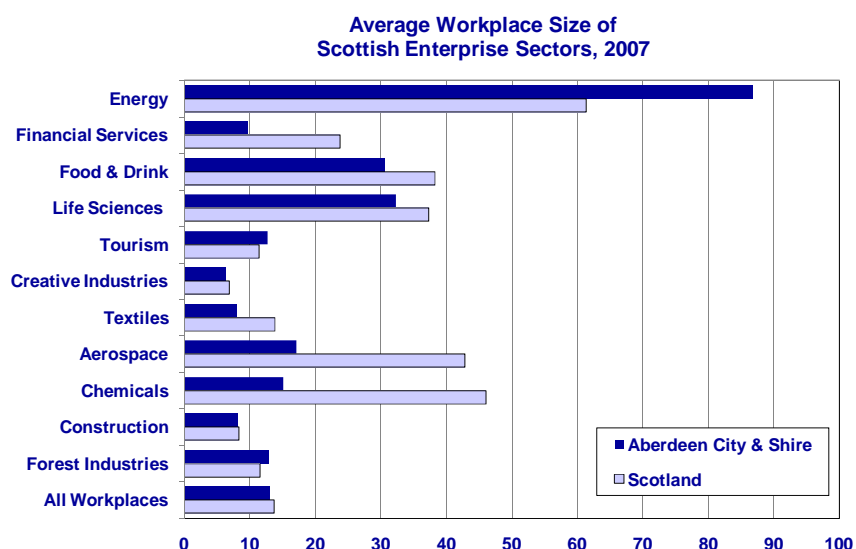
Chart 6.2 shows the average size of workplaces across each of the key sectors in the Aberdeen City & Shire, relative to Scotland as a whole. Across all industries, the average workplace in the region employees 13 people, slightly below the average of 14 across Scotland as a whole.

The average size of workplaces in the region is below the Scottish average across the majority of the sectors. The gap between the regional and national average is widest within the **aerospace**, **chemicals** and **financial services** sectors.

The average workplace size in the **energy** sector in Aberdeen City & Shire is considerably higher than the Scottish average, with an average of 87 employees compared to 61 across Scotland as a whole. The region also has an above average workplace size in the **tourism** and **forest industries** sectors, although the gap between regional and national average is relatively small.

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 match¹¹. Despite this limitation, the data are useful to give a proxy indication of the contribution of the sectors to the national economy.

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)
Key Sectors			
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
Other Growth Sectors			
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
All Industry Sectors**	93,361	100%	£47,200

* 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 employee¹²;
- 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.

¹¹ A full list of the SIC codes used in this analysis can be found in Appendix 4.

¹² 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.

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;
- **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 Energy

Aberdeen City & Shire is the centre for the Oil & Gas industry within the UK. The sector is not only important to the region in terms of the number of jobs it supports (both directly and indirectly) and wealth generation, but is of national importance, accounting for 30% of total UK corporation tax in 2008. This section of the report looks at the contribution of the Oil & Gas industry to the economic performance of Aberdeen City & Shire.

It should be noted that various definitions of the Oil & Gas industry are available. Whilst some focus on core extraction activities, others encompass the wider supply chain associated with the industry. The bulk of the analysis contained within this section is focussed on the activities of those companies directly involved in oil extraction and activities ancillary to extraction¹³. However, some analysis of the economic impact of supply chain activities has also been included.

The remainder of this section covers:

- Employment
- Economic Output
- Exports
- Future Challenges

Employment

The Oil & Gas industry directly accounts for 8% of all jobs in Aberdeen City & Shire. However, when supply chain and other associated activities are taken into account, estimates suggest that the industry could support as much as half of all jobs in the region.

Table 6.7 shows employment change within the Oil & Gas industry in Aberdeen City & Shire, relative to Scotland and GB since 1999:

- There were 21,000 people directly employed in the Oil & Gas industry in the region in 2007, accounting for 8% of total employment.
- The region was home to 95% of all Scottish jobs, and 71% of all British jobs, in the sector.

¹³ Based on Standard Industrial Classification (SIC) 1110 : *Extraction of crude petroleum and natural gas* and 1120 : *Service activities incidental to oil and gas extraction (excluding surveying)*

- Oil & Gas employment has been relatively stable in recent years, increasing by just 1% since 1999, both within the region and across Scotland as a whole.
- This was in contrast to a fall of 3% in the number of Oil & Gas jobs across GB over the period.

Table 6.7

Source: Annual Business Inquiry

Employment Change in Oil & Gas, 1999-2007				
	1999	2007	Change 1999-2007	
			No.	%
Aberdeen City & Shire	20,700	21,000	300	1%
Scotland	21,700	22,000	200	1%
GB	30,100	29,300	-800	-3%

Other estimates suggest that the Oil & Gas industry could support up to half of all jobs in the region.

Oil & Gas UK is the leading representative body for the UK offshore oil and gas industry. In their 2008 Economic Report, they estimate that the industry supports a total of 350,000 jobs across the UK. Of these:

- A relatively small proportion is in core extraction (10%).
- Two thirds (66%) are in supply chain activities – a diverse mixture of businesses including parts of engineering, construction, manufacturing, technical consultancy and renting of machinery.
- The remaining 25% are induced by employees' spending throughout the economy.

The report estimates that around two-fifths (39%) of all UK jobs supported by the Oil & Gas industry are located within Aberdeen City & Shire. This analysis brings to the total number of jobs supported by the Oil & Gas in the region to over 136,000, or around half of all employment.

Economic Output

GVA from the Oil & Gas industry accounts for around a fifth of total economic output from Scotland and has been increasing rapidly in recent years.

Economic output (as measured by Gross Value Added) from the Oil & Gas sector in Scotland amounted to £22.5bn in 2006. This represented 15% of national output, much higher than the industry's share of national jobs (1%).

Table 6.8 shows change in the level of GVA generated from the Oil & Gas sector in Scotland, relative to all industry sectors, between 1999 and 2006. Output from the sector more than doubled over the period, a rate of growth more than twice that for all industry sectors.

Table 6.8

Source: Scottish Business Statistics

Economic Output (£m)				
	1999	2006	Change 1999-2006	
			No.	%
Oil & Gas	10,100	22,500	12,400	123%
All Industries	101,400	153,100	51,700	51%

According to Oil & Gas UK, these figures may underestimate the weight of the Oil & Gas sector as a whole, because they do not include the value added by supply chain companies. **Oil & Gas UK estimate that total economic output from the industry, including supply chain, is close to £35bn across the UK.**

Exports

Oil & Gas is Scotland's largest exporting sector and overseas sales from supply chain activities have also been increasing in recent years.

According to Scottish Development International (SDI), Oil & Gas is Scotland's single largest exporting industry by some distance, generating overseas sales of more than £5bn per year.

Whilst the industry supply chain was originally developed to support domestic activities, Oil & Gas UK report that it is increasingly reaching out into international markets and diversifying into other parts of the energy sector, both at home and overseas. A recent report estimated that overseas export sales from the UK Oil & Gas supply chain amounted to around £4bn in 2005¹⁴. This direct export activity supports around 100,000 jobs throughout the UK and is likely to offer significant potential for future growth given the internationally recognised expertise that exists within the UK supply chain.

Productivity

The Oil & Gas industry is the most productive, in terms of the level of GVA generated per employee, of all industry sectors in Scotland.

Table 6.9 shows change in productivity levels within the Oil & Gas sector in Scotland, relative to all industry sectors, since 1999. In 2006, the level of GVA generated per employee in the Oil & Gas sector in Scotland amounted to almost £700k, around fifteen times higher than the average of £47k for all industries. Productivity levels in the sector more than doubled between 1999 and 2006, relative to an increase of 57% across the Scottish economy as a whole. This indicates that companies operating in the sector have been increasingly more productive over the period.

Table 6.9

Source: Scottish Business Statistics

Productivity (GVA per Employee), Scotland				
	1999	2006	Change 1999-2006	
			No.	%
Oil & Gas	£320,700	£698,900	£378,200	118%
All Industries	£30,100	£47,200	£17,000	57%

Wages

The average earnings of those employed within the Oil & Gas sector in Scotland are around three times the national average for all industries and have increased rapidly in recent years.

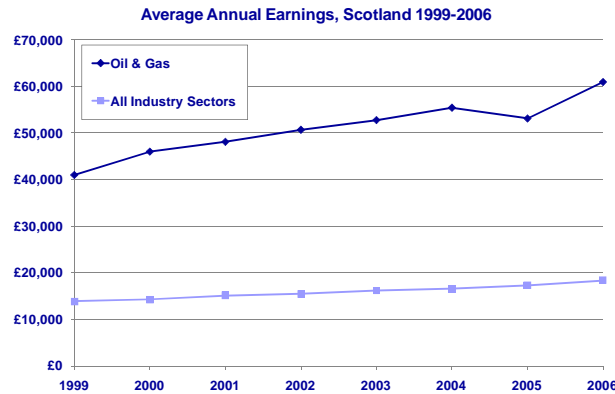
As well as being very high value added, the Oil & Gas industry is an important source of high wage jobs. Average annual earnings for those working within Oil & Gas were £61k in 2006, more than three times higher than the average of £18k for all industry sectors.

Chart 6.3 shows change in earnings levels within the Oil & Gas industry, relative to the Scottish economy as a whole, between 1999 and 2006. Average wage levels in the Oil & Gas industry increased by 50% over the period, much faster than the growth of 33% across all industry sectors.

¹⁴ Sizing the Export Market of the UK Offshore Operators Supply Chain , UKOOA 2006

Chart 6.3

Source: Scottish Business Statistics



Future Challenges

The majority of Oil & Gas extraction and supply chain firms in the region expect to reduce total employment levels in 2009 and make less use of contract and temporary staff.

The Aberdeen and Grampian Chamber of Commerce published findings from their 10th annual Oil & Gas Survey in February 2009. The key findings from this were that:

- The current economic downturn is likely to lead to a period of consolidation activities for many Oil & Gas firms, the outcome of which will be more significant by 2010, although declining levels of business confidence were evident by late 2008.
- The majority of Oil & Gas firms expect to reduce employment in 2009, though a net balance of supply chain firms expect to increase employment throughout the coming year.
- Both core Oil & Gas firms and supply chain firms expect to make less use of contract and temporary staff in 2009.
- The recent increases in R&D spend are not expected to continue and R&D investment is expected to decline over the next two years.
- The main concerns affecting both Oil & Gas extraction and supply chain firms were the current declining global demand for oil and gas and the worldwide recession.

The current economic and financial climate therefore has a number of implications for the Oil & Gas sector. Production is likely to slow due to a decline in global demand and the business strategy for some smaller exploration and production companies that relied on raising capital to finance exploration will be less sustainable. A wave of consolidation is likely to occur due to the current issues around the availability and cost of credit and the recent increased investment in exploration and R&D is likely to slow. This could lead to a situation where the future upturn in prices will emerge in a context of reduced investment levels in the medium-term.

7. Infrastructure & Place

7.1.1 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 was a total of 181 hectares of urban vacant or derelict land within Aberdeen City & Shire, accounting for less than 2% of the Scottish total. This was much lower than the region's share of total land in Scotland (8%). The majority of vacant and derelict land in the region is located in Aberdeenshire, with the city home to just 29% of the total.

Table 7.1 shows that the average size of vacant or derelict sites in Aberdeen City & Shire (1.8ha) is much lower than the average for all vacant or derelict sites in Scotland (2.7ha). This low volume of available sites for development, combined with the fact that many are relatively small, restricts the potential for large scale development in the region.

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
Aberdeen City	53	31	1.7	0.3%
Aberdeenshire	128	72	1.8	0.0%
Aberdeen City & Shire Total	181	103	1.8	0.0%
Scotland	10,970	4,012	2.7	0.1%

Of the 181 hectares of available land in Aberdeen City & Shire, less than half is derelict – that is, requiring remedial work before it can be used for development. Across Scotland, 75% of all available land for development is designated as derelict. This means that, although there are fewer sites available within the region, many may be attractive to investors given that they are available for immediate development.

7.2 Transport & Connectivity

Effective transport infrastructure is a key contributor to economic performance. Transport provides access to and from local labour markets and goods and services, while strategic networks provide connections to and from the rest of the country and beyond. The quality of

a region's transport 'offer' can also influence inward investment decisions, and the attractiveness of a location for tourism.

Connectivity, both internal and external, has been identified as a crucial characteristic contributing to the competitiveness of cities¹⁵. This view is also reflected in the *Eddington Transport Study*¹⁶, which reviewed the long-term linkages between transport and UK economic performance. The study concluded that prioritisation of future policy efforts was required to avoid an adverse impact upon the nation's productivity and competitiveness. The study outlined three strategic economic priorities for transport over the next 20 years:

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

This section of the report looks at the transport infrastructure of Aberdeen City & Shire and provides commentary on the following:

- travel to work patterns
- external connectivity
- internal connectivity

7.2.1 Travel to Work

Rural geography, combined with other factors such as relatively high levels of income, and the dispersed nature of employment sites in relation to transport nodes, means that car usage in the Aberdeen City & Shire Region is relatively high, particularly outside of Aberdeen City.

Chart 7.1 compares the method of travel used by Aberdeen City & Shire residents compared to residents across Scotland as a whole. The chart shows that across both Aberdeen City & Shire, and Scotland, the car is the predominant method of travel to work. In 2006, 64% of Aberdeen City & Shire residents used a car to get to work – largely in line with the national average of 65%.

However, this headline position masks significant variations *within* the region. In contrast to Aberdeen City, the proportion of residents in Aberdeenshire that uses a car to get to work is 74%. This figure is much higher than the equivalent figure for the largely urban area of Aberdeen City (56%).

Chart 7.1

Source: Scottish Household Survey



¹⁵ Hutchins & Parkinson, 2005, *Competitive Scottish Cities?*

¹⁶ *The Eddington Transport Study - The Case for Action: Sir Ron Eddington's advice to Government, December 2006*

7.2.2 External Connectivity

The National Planning Framework recognizes that within the EU, Scotland as a whole is considered to have below average connectivity, particularly those areas that are located outside of the central belt. The need to enhance the quality of regional transport infrastructure (in terms of connections to and from, as well as within the region) is recognized by the *Nestrans Regional Transport Strategy* as especially important to supporting the future competitiveness of the region.

Air Connectivity

In this context, Aberdeen Airport's pivotal role is in connecting internationally based businesses to and from the offshore energy sector. The airport provides connections to over 30 UK and international destinations, and is also home to Europe's busiest commercial heliport. Despite North Sea oil production levels having peaked, passenger throughput at Aberdeen Airport has continued to increase in recent years. In 2007 passenger throughput at Aberdeen Airport was 3.4m – an increase from around 2.5m in 1999. This growth in passenger numbers is forecast to increase further to around 4m by 2015 and up to 5.9m by 2030¹⁷.

In setting the strategic framework for the development of air transport until 2030, the UK Government's Air Transport White Paper – *The Future of Air Transport* – concludes that there is a good case for the existing terminal facilities to be developed incrementally as traffic increases. Depending on the extent of these increases, there may also be a future need to safeguard additional land to allow the runway to be lengthened which would open up to the airport to a wider range of aircraft. Widening the number and range of direct international air links, including North America has also been identified as an important component of the future development of the airport.

Road & Rail Connectivity

Efficient road and rail connections between Aberdeen and the central belt can help to reinforce Aberdeen's strategic role as global energy centre, and strengthen economic relationships with Scotland's other city regions. The main trunk road linking Aberdeen City & Shire to the rest of the UK is the A90, extending to Dundee, Perth and the central belt, while the main connection to the Highlands & Islands is via the A96. However, the main planned improvements in terms of external connectivity centre upon enhancing the quality of the rail services.

Network Rail is currently progressing with a delivery plan to develop enhancements to rail services between Aberdeen and the central belt. The improvements would see a reduction of journey times between the two regions of around 20 minutes while offering opportunities to increase rail freight capacity. A similar plan is under development with respect to journey times between Aberdeen and Inverness, with proposals to increase service frequency, and cut journey times by around 20 minutes. It is estimated that both of these schemes could potentially be implemented between 2009 and 2014¹⁸.

In the longer-term, the outcome of proposals for high speed rail (HSR) linking Scotland to England is yet to be resolved. The UK government is currently exploring options for a high speed rail link between London and the Midlands, and will consider the case for extending this link into Scotland. As a relatively peripheral region of the UK, implementation of HSR has clear potential to significantly impact upon the connectivity of Aberdeen City & Shire. However, the early stage of these proposals means that it is likely to be some years before a decision is reached on this.

¹⁷ *Aberdeen Airport Masterplan, BAA Aberdeen, December 2006*

¹⁸ *Strategic Transport Projects Review, 2008*

7.2.3 Internal Connectivity

The key road infrastructure project within Aberdeen City & Shire region is the development of the Aberdeen Western Peripheral Route (AWPR). The proposals would see the construction of 46km of dual carriageway providing a new route around the city and a fast link to Stonehaven. Implementation of the scheme should relieve congestion in a number of areas including the southern approach to Aberdeen, and remove traffic from several congested city routes.

Plans to provide dual carriageway between Balmedie and Tipperty are progressing which, once complete, would provide a continuous dual carriageway between Aberdeen & Ellon. At the same time, dual carriageway links to strategic locations such as the airport and industrial areas should also be strengthened, while providing more efficient commuting connections within the region. The Aberdeen City & Shire Structure Plan also includes proposals for a third crossing of the River Don aimed at relieving congestion at the Haudagain roundabout, a major congestion blackspot within the region.

Improving the quality of internal rail transport links, in terms of cross city and cross regional links has been identified as a priority for action in Aberdeen City & Shire. However, through the *Strategic Transport Projects Review* the Scottish Government has confirmed that it does not intend to proceed with full implementation of the Aberdeen Crossrail scheme, which would have seen improved services and new stations between Inverurie, Aberdeen and Stonehaven.

Instead, elements of these proposals are to be included within the wider package of improvements of links to and from the region with Inverness and the central belt. This primarily includes improved timetabling and frequency of regional services, while future consideration will be given to one new station in Kintore. It is unclear as to the extent to which these changes will address long-standing concerns over the quality of the internal rail connections, indicating that more may need to be done in the future to improve the region's rail infrastructure.

7.3 Physical Development Priorities

The Draft Aberdeen City & Shire Structure Plan sets the strategic framework for physical development in the region over the next 20 years. The plan identifies three strategic growth areas within which the majority of future development is expected to be focused – Aberdeen City; the Huntly-Aberdeen-Laurencekirk corridor; and the Aberdeen to Peterhead corridor to the north of the city.

The Structure Plan has been developed in conjunction with a number of local strategies, in particular, the *Nestrans' Regional Transport Strategy*, and also recognizes and is supportive of proposals to emerge from the ACSEF Economic Manifesto. Some of the key developments taking place within the region are summarized below.

Energetica – In recognition of the need to reduce the region's dependency on the oil & gas sector over the coming decades, the Energetica initiative seeks to position Aberdeen City & Shire as a global hub for development of renewable technology. The aim is to attract and retain a critical mass of organisations and businesses focussed upon energy research through the creation of a 'technology corridor' stretching 30 miles from Aberdeen to Peterhead. Allied to the creation of new business space, the masterplan for the area proposes a range of developments for educational, retail, residential and leisure use.

Aberdeen Science Parks – An Energy Development Centre offering high-quality workshop and laboratory space for growth companies is near completion at the Aberdeen Science & Energy Park. Developed by Scottish Enterprise, the project will provide 12 individual business units, aimed at growing companies involved in energy research, design or development. The plans will play a key role in supporting future development of Energetica,

with a further 15 units planned for construction commencing in 2010. Longer-term, the aim is to double the number of jobs located at the Park, and its sister Aberdeen Science & Technology Park, over the coming decade.

Trump International Golf Links – Planning approval has now been granted for development of the £300m Trump International Golf Links scheme in Balmedie, Aberdeenshire. The project will see the construction of a golf resort, 450 bedroom hotel, over 1000 holiday apartments and golf villas, as over 500 homes for sale. It is expected that the development will enhance the area's attractiveness as a tourist destination while strengthening the 'lifestyle offer' of the Energetica initiative.

Aberdeen City Centre – The redevelopment of Aberdeen City Centre has key role to play in supporting the long-term vision of *Building on Energy - The Economic Manifesto for Aberdeen City & Shire*. The Strategic Development Framework for the area proposes a number of large-scale retail, leisure employment and residential projects in the city centre. Key projects include the relocation of the City Council offices to the Marischal College, releasing the existing site for mixed use development; retail redevelopment at Union Square and the Bon Accord Centre; and the provision of new office space in Union Street, and City South/Poynerook Road. In addition, a feasibility study is currently looking at proposals to develop a major new street level square on the site of Union Terrace Gardens.

Protein Therapeutics Laboratory – The Wyeth Pharmaceuticals research centre, based at Aberdeen University's Foresthill Campus, opened in March 2009. Research at the laboratory will focus on the discovery and development of the next generation of biopharmaceutical therapies, which may lead to the development of novel protein treatments for neuroscience, oncology, inflammation and metabolic diseases. The centre represents a major economic investment and provides a further boost to the region's rapidly expanding life sciences sector.

8. Outlook for Aberdeen City & Shire

8.1 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, which will ultimately have an impact on the performance of all regional economies across Scotland.

In this final chapter of the report we present our understanding of the future prospects for Aberdeen City & Shire based on:

- Our understanding of the recent economic performance of the region;
- Oxford Economics most recent 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 Aberdeen City & Shire.

This chapter of the report set outs:

- Aberdeen City & Shire'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 Aberdeen City & Shire, and the uncertainties and risks associated with these;
- The implications of the recession for Aberdeen City & Shire;
- The potential contribution the Region might make to the GES targets going forward; and
- A framework of potential policy responses.

8.2 What contribution has Aberdeen City & Shire made to the GES targets?

8.2.1 Contribution to the Scottish Economy

Aberdeen City & Shire has an important role to play within the Scottish Economy. Looking across some key economic indicators, the Region:

- Generated 12% of Scotland's GVA in 2006;
- Accounts for 11% of all Scottish jobs;
- Is characterised by relatively high value added companies: GVA per head is above the national average across most industrial sectors;
- Has significant specialisation in some of the key and other growth sectors, with:
 - 5 times the national average of jobs in the energy industry
 - Twice the national share of jobs within food & drink
 - 50% more jobs in the construction sector, relative to Scotland.

Over the last decade, Aberdeen City & Shire has made a significant contribution to Scottish economic growth. Since 1999:

- Some 21,000 new jobs have been created in the region, accounting for 9% of all jobs growth in Scotland – though this excludes self employment;
- Productivity levels in Aberdeen City & Shire have been consistently above both the Scottish and UK averages; and
- The value of export sales from the region has increased at a rate six times faster than across Scotland as a whole.

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

- Labour market participation, as measured by the employment rate, is significantly above the national average at 81% (compared with 76% in Scotland) and exceeds the government's definition of full employment (80%).
- As well as a high participation rate, Aberdeen City & Shire also performs well across the key indicators of unemployment and inactivity, although a relatively tight labour market may inhibit future growth.
- Relative to Scotland, the region has a well qualified workforce, with a higher proportion of people with degree-level qualifications and a lower share of people with no qualifications.
- In Aberdeen City & Shire, business density is also considerably higher than the national average, with 47 businesses per 1,000 population. Business birth rates are also significantly above the Scottish average.
- Wage levels in the region exceed both the Scottish and UK averages, and are amongst the highest in Scotland.

8.2.2 Contribution to the achievement of the GES targets

The recent performance of Aberdeen City & Shire in relation to the purpose targets set out in the Government Economic Strategy for Scotland has been mixed. Since 1999:

- GVA has grown at an average rate of 1.8% - below both the Scottish average of 2.8% and the UK average of 3.2%;
- Productivity levels have been higher than across both Scotland and the UK;
- Labour market participation levels have been well above the Scottish and GB averages;
- Population has grown by 1%; and
- Wage and disposable income levels have been among the highest in the country.

Table 8.1

Source: SLIMS Analysis

Relative performance against GES Purpose Targets

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

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

8.2.3 Looking ahead – the impact of the recession

A key question for the study, however, is to understand the potential future contribution that Aberdeen City & Shire 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 Aberdeen City & Shire. We conclude by highlighting some potential policy implications from the review findings.

8.3 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.

8.3.1 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 3 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
- Claimant unemployment in Aberdeen City & Shire has risen by around 1,600 since February 2008, an increase of 57%.

8.3.2 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 half 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 Chart 7.1, 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.

8.4 Economic Forecast for Aberdeen City & Shire

8.4.1 GVA growth

One of the Government targets set out within the GES is to improve economic growth, with GDP growth to reach the level by 2011. Our forecasts for GVA growth are set out below. Please note that the GVA presented below is non-oil GVA and therefore does not fully reflect the fortunes of the region.

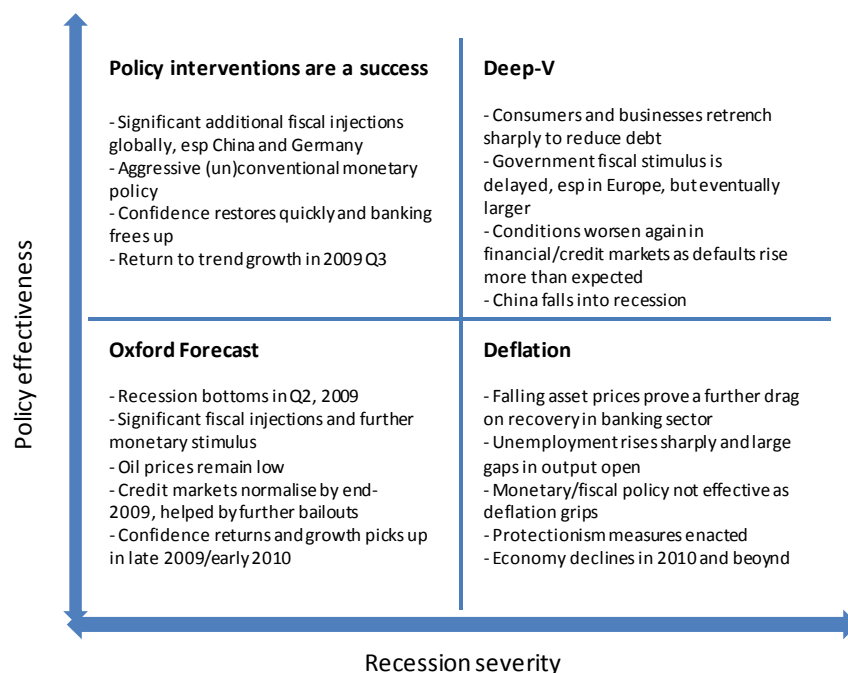


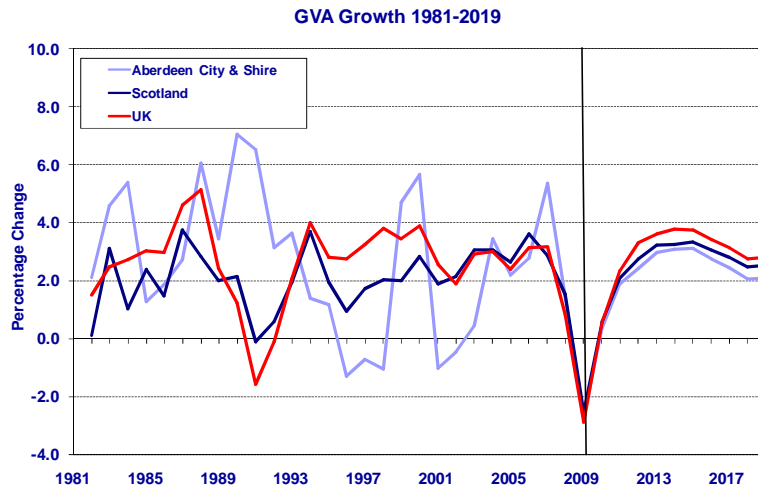
Chart 8.1 shows non-oil GVA growth in Aberdeen City & Shire, Scotland and the UK. GVA growth in Aberdeen City & Shire is a volatile series and has been negative in 5 out of the last 12 years, whilst Scotland and the UK have both enjoyed continuous growth since the early 1990s recession. Despite a historical under-performance in the region, relative to Scotland and the UK, it has performed on par with the national economies since 2004 and even out-performed both in 2007, with GVA growth of 5.4% compared with 2.9% in Scotland and 3.2% in the UK.

Oxford Economics forecast that the Aberdeen City & Shire economy will contract by 2.7% during 2009. Scotland as a whole is expected to contract by 2.5% and the UK by 2.9%. This slightly better outcome for Aberdeen City & Shire, relative to the UK as a whole, is a result of less dependence on high value added manufacturing, on professional services, and on the financial services sector. There is also an element of 'cushioning' from the downturn by the public sector, particularly with regards to education given that the region houses two universities.

Aberdeen City & Shire's economy is based on high-tech electronic design and development, agriculture & fishing research, education and most importantly the oil industry and related services (which contributed to the rapid economic growth in the region since North Sea Oil was discovered in the 1970s). The sectors that account for the largest shares of total GVA in Aberdeen City & Shire are financial & business services (26%), manufacturing (15%), retail & catering (14%) and education & health (12%). The comparative figures for Scotland are 25% for financial & business services and 14-15% for each of the others.

Chart 8.1

Source: Oxford Economics



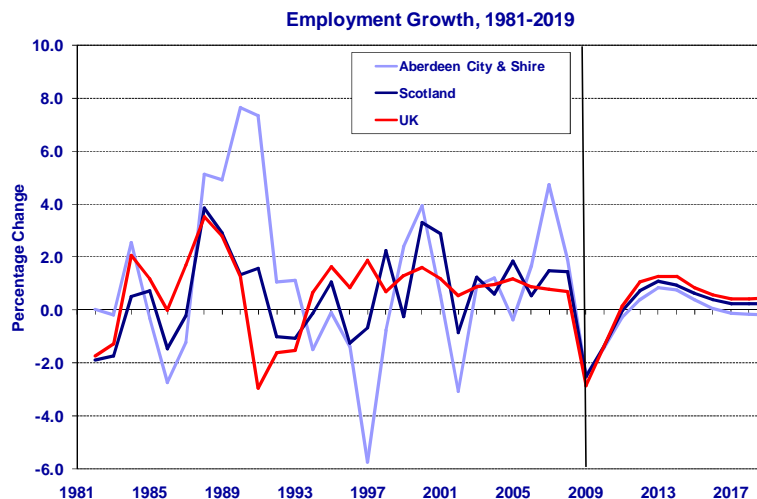
As we expect the recovery from the current downturn to be largely service sector led, the region will experience a weaker upturn than most other regions in Scotland and indeed the UK. Average annual GVA growth between 2011 and 2015 in the Aberdeen City & Shire is expected to be 2.7% compared with 2.9% for Scotland and the much stronger recovery in the UK of 3.4%.

8.4.2 Employment

The base forecasts suggest that employment in Aberdeen City & Shire will contract over the decade ahead with a loss of around 6,000 jobs. The majority of these jobs will be lost during the downturn, with an estimated 12,100 jobs lost between 2008 and 2011. Thereafter the recovery adds 5,000 jobs in the 2012-2018 period. As a result, the 2008 employment level is not regained in the next decade.

Chart 8.2

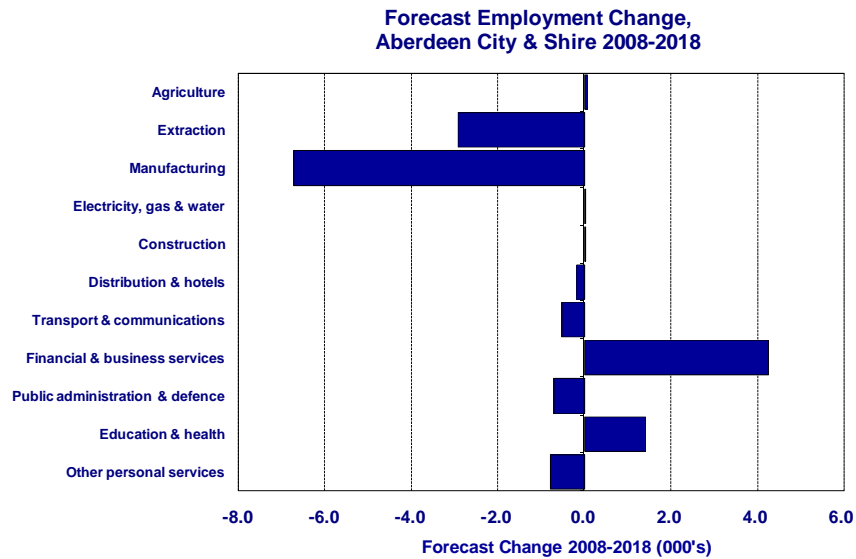
Source: Oxford Economics



The worst affected sectors will be manufacturing and extraction, with estimated losses of 6,700 jobs and 2,900 jobs by 2018 respectively. The majority of these jobs are direct results of the current economic crisis with 43% of total losses in extraction occurring between 2008 and 2011 and 41% of manufacturing losses over the same period. Transport & communications is also expected to contract over the decade ahead by over 500 jobs. The only sectors that are expected to enjoy some growth over the next ten years are education & health and financial services, which combined are expected to add 4,900 jobs by 2018. However, they do not grow rapidly enough to offset the losses in extraction and manufacturing during the downturn, thus resulting in a net job loss by 2018.

Chart 8.3

Source: Oxford Economics



8.4.3 Population

The base migration forecast for Aberdeen City & Shire anticipates an average annual net inflow of 700 migrants over the decade. The current downturn will halt the trend to higher levels of net in-migration evident since 2002. This outlook factors in the economic growth profile over the period, and is marginally lower than the largely trend based, and now somewhat dated (2006), ONS official projections. While the ONS official projection under-predicted the level of migration in Aberdeen City & Shire by some 2,350 migrants for 2007, our expectation is that the downturn will significantly reduce migration flows to the region in the short-term and will stay below the official projection between until 2017

8.4.4 Economic Activity

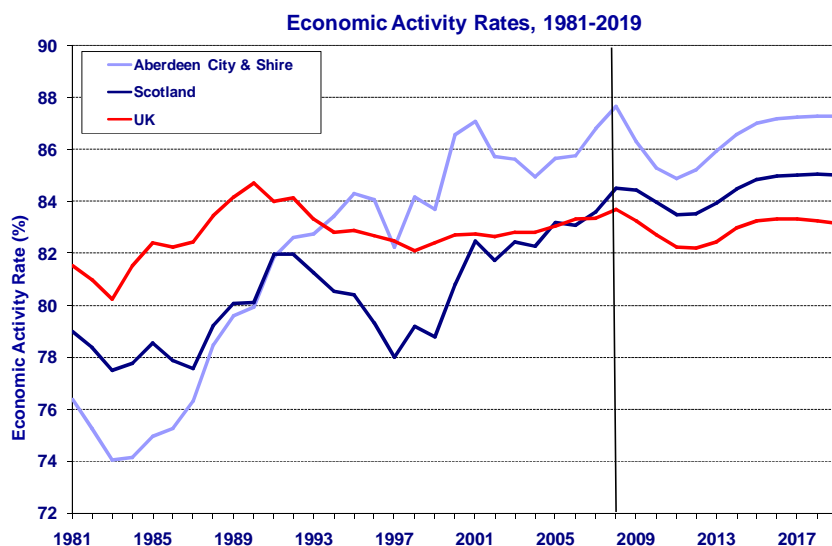
The economically active population consists of those of working age who are either in work or available for and actively seeking work. In other words, it is a measure of the total employed + unemployed and is used to give an indication of the size of the potential labour force available within an area. The economic activity rate in Aberdeen City & Shire has been increasing steadily since 2005 and stood at 88% in 2008. This was 3.2 percentage points above the Scottish rate and 4 percentage points above the UK average. Indeed the economic activity rate in the region has been above the Scottish and UK rates since 1998.

The downturn pushes the economic activity rate in Aberdeen City & Shire down by 1.4 percentage points in 2009 - a much sharper fall than in Scotland, where the rate is expected to contract by 0.1 percentage points and the UK where the drop is 0.4 percentage points.

This fall in economic activity is expected to continue until 2012, with an overall drop in the region of 2.8 percentage points – much sharper than in Scotland and the UK, where the fall is 1 and 1.9 percentage points respectively. In the long term, economic activity levels in Aberdeen City & Shire suffer from the expected loss of jobs in manufacturing and extraction, but remain well above the Scottish and UK averages.

Chart 8.4

Source: Oxford Economics



8.4.5 Local Outlook

The tables below summarises the outlook for employment and GVA by local authority within Aberdeen City & Shire.

Tables 8.2 – 8.4

Source: Oxford Economics

Employment (000's)	2008	2009	2010	2011	2012
Aberdeen City	187	182	179	178	178
Aberdeenshire	105	103	102	103	104
Aberdeen City & Shire	293	285	281	280	282

Employment Change (%/year)	2008	2009	2010	2011	2012
Aberdeen City	1.3	-2.7	-1.7	-0.6	0.1
Aberdeenshire	3.0	-1.9	-1.0	0.4	1.0
Aberdeen City Region	1.9	-2.5	-1.5	-0.3	0.4

GVA Growth (%/year)	2008	2009	2010	2011	2012
Aberdeen City	1.2	-2.8	0.1	1.6	2.1
Aberdeenshire	1.9	-2.5	0.9	2.5	3.1
Aberdeen City & Shire	1.4	-2.7	0.4	1.9	2.4

Aberdeen City & Shire is made up of the two local authority areas of Aberdeen City and Aberdeenshire. The City is the larger of the two accounting for almost two thirds of the entire regional labour market and is also home to most of the region's North Sea Oil related activities. The impact of the recession is therefore felt hardest in the City in contrast with the Shire.

- The total job loss expected in Aberdeen City & Shire between 2008 and 2011 is 12,100 jobs, with 9,500 (78%) of these losses in the City compared with an estimated 2,700 (22%) jobs lost in Aberdeenshire.
- Aberdeenshire sees a return to jobs growth in 2011, but the region as a whole does not reverse the downward trend in employment until 2012, while slow jobs growth in

Aberdeen City in the subsequent years is the main factor behind the failure of the City Region to replace the jobs lost in the downturn by 2018.

- GVA is expected to fall by 2.8% in Aberdeen City in 2009, show very little growth in 2010, before growing by 1.6% and 2.1% in 2011 and 2012 respectively. Aberdeenshire is expected to suffer a GVA fall of 2.5% in 2009 before a sharper recovery (relative to Aberdeen City) of 0.9% in 2010. Growth then picks up pace at 2.5% and 3.1% over the following two years.
- The oil industry has been one of the biggest contributors to economic growth in the city region over the last 40 years. With the recession driving a slump in oil prices the oil industry is expected to go through a period of decline. Although Oxford Economics GVA estimates, in line with the official data sources, exclude oil, the employment forecast is a useful barometer of the impact of the downturn on non-oil related activity.
- Despite the incentive to boost output that was provided by high energy prices for most of last year, UK output in the extraction sector declined by nearly 7%. When oil prices hit a peak above \$140 per barrel last summer there was at least a hope that this would encourage the extraction of some remaining but previously uneconomic oil finds. However, the subsequent decline in oil prices has removed this possibility. Consequently, with North Sea oil production now clearly well past its peak, output is expected to continue to gradually decline over the next decade resulting in a loss of 7,600 jobs in the sector across Scotland.
- The recession will see a sharp decline in total employment in both local authorities, with Aberdeen City set to lose around 9,500 jobs by 2011, whilst Aberdeenshire will contract by just under 2,700 employees during the same period. By 2018 the total decline in the city region will be around 6,000 jobs with 8,300 jobs lost in the City combined with an equivalent increase of 2,200 in the shire.
- The recently published UK Oil & Gas Report forecasts a decrease in oil production between 2007 and 2018 of 44% from 1.64 million barrels per day in 2007 to 910,000 barrels per day by 2018.

8.4.6 Forecast Summary

At the time of writing (March 2009), the economy is heading into perhaps its sharpest setback since the war, with the weakness in 2009 likely to be widespread. Aberdeen City & Shire suffers less than some other parts of Scotland in GVA terms and is expected to contract by 2.7% in 2009, compared to an expected decline of 2.5% across Scotland as a whole.

In output terms the region is expected to begin to recover from the downturn in 2010, with growth averaging 1.8% per annum over the decade ahead. This is below the Scottish average of 2.1% per annum and even further below expected annual average growth in the UK of 2.2%.

Employment is set to decline in 2009 and 2010 by 5,100 and 3,100 jobs respectively, with employment in 2018 6,000 below today's levels. Most of the net job losses will be in manufacturing and the regionally important oil industry.

8.5 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 Aberdeen City & Shire. Most of these apply in equal measure to Scotland and indeed the UK. These are outlined briefly below:

8.5.1 Risks

There are a number of risks and opportunities which could impact upon the outlook for Aberdeen City & Shire. Most of these apply in equal measure to Scotland and indeed the UK. These are outlined briefly below:

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 organisations.

- **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; and
 - 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.

8.5.2 Opportunities

Opportunity: Tourism – a weak pound and cost conscious UK consumer should provide a boost to the tourist sector if prices can be kept competitive and service maintained. Though

the boost may be temporary, promoting Aberdeen City & Shire 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 oil-service 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

Functional Economic Geography	Local Authority Areas
Aberdeen City & Shire	Aberdeen City Aberdeenshire
Dundee City Region	Angus Dundee City Perth & Kinross North East Fife*
East Region	Borders Clackmannanshire East Lothian Edinburgh City Falkirk Fife (excluding NE Fife) Midlothian Stirling West Lothian
West Region	Argyll & Bute East Ayrshire East Dunbartonshire East Renfrewshire Glasgow City Inverclyde North Ayrshire North Lanarkshire Renfrewshire South Ayrshire South Lanarkshire West Dunbartonshire
South of Scotland	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 th out of 20) - UK: top of second quartile (11 th 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 th 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)	Equivalent 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 worst 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
Economic Growth	
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
Productivity	
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
Labour Market Participation	
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
Population	
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)
Solidarity & Cohesion	
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
Sustainability	
CO ² emissions per head of population 2005	Dept for Environment, Food & Rural Affairs (DEFRA)
% CO ² emissions domestic 2005	Dept for Environment, Food & Rural Affairs (DEFRA)
% CO ² 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

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

*Also includes 0.5% of 9 subsectors of clothing manufacturing -
SIC Codes 1771, 1772, 1810, 1821, 1822, 1823, 1824, 1830, 1930*

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
Energy	10	Mining of coal & lignite, extraction of peat
	11	Extraction of crude petroleum & natural gas: Related service activities
Food & Drink	15	Manuf of food & beverages
Life Sciences	-	Scottish Government source book data used - no SIC definition
Tourism	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
Creative Industries	-	Same definition used in Sections 6.3.2 and 6.3.3 - See Appendix 4, Page 83
Textiles	17	Manuf of textiles
	18	Manuf of wearing apparel; dressing & dyeing of fur
	19	Manuf of leather & leather products
Aerospace	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
Chemicals	23	Manuf of coke, refined petroleum products & nuclear fuel
	24	Manuf of chemicals & chemical products
Construction	45	Construction
Forest Industries	2	Forestry, logging & related service activities
	20	Manuf of wood & wood products
	21	Manuf of pulp, paper & paper products