ARTICLE

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Regional economic indicators

with a focus on industries in the UK regions

SUMMARY

This quarter, the regional economic indicators article focuses on performance of industries in the UK regions, and examines the contributions of specific industries to aggregate productivity in each region. The regular part of the article then gives an overview of the economic activity of UK regions in terms of their Gross Value Added (GVA), GVA per head and labour productivity. This is followed by a presentation of headline indicators of regional welfare, other drivers of regional productivity and regional labour market statistics. The indicators cover the nine Government Office Regions of England and the devolved administrations of Northern Ireland, Scotland and Wales. These 12 areas comprise level 1 of the European Nomenclature of Units for Territorial Statistics (NUTS level 1) for the UK. The term 'region' is used to describe this level of geography for convenience in this article.

Focus on industries in the UK regions

Previous Regional Economic Indicators (REI) articles have shown significant and persistent differences in economic performance between and within the UK regions and identified some of the factors that might account for such differences. 2007 and 2008 REI articles, for example, focused on explaining the differences in sub-regional Gross Value Added (GVA) per head and the development of these differences in recent years by decomposing the differences into four explanatory factors: productivity, employment rate, commuting rate and activity rate.

Industry structure can also be significant for understanding regional comparisons of overall productivity. Some regions may have a greater specialisation in economic activities with relatively high levels of productivity while others may have an industry mix skewed toward low productivity activities. This can impact on the extent to which gaps in overall productivity between regions can be closed or reduced.

This article seeks to enhance the evidence base on the determinants of inter-regional productivity differences by examining the contributions of specific industries to aggregate productivity in each region. It covers 10 industry groups in NUTS1 regions, which are comprised of the nine Government Office Regions of England and Scotland, Wales and Northern Ireland. The analysis does not specifically cover the following sectors: education, health and

social work, public administration and defence, community, social and personal services and activities of private households as employers. However, the estimates of Gross Value Added (GVA) and hours worked for these sectors are included in the totals.

Industry structure in the regions

There are two widely accepted methods of defining industry structure. These are either using output such as shares of Gross Value Added or inputs such as the shares of total hours worked. The focus of this article is on industry productivity, particularly labour productivity in industry. Defining the industry structure in terms of the inputs, therefore, appears to be more appropriate than using the output definition. In the following analysis, labour input is measured by the number of hours worked. This is also ONS's preferred measure in productivity analysis.

Factors, such as geography, history, natural resources and policy settings can shape the industry structure of a region's economy and its productivity. Therefore, before looking at regional variations in industry level productivity, it is useful to look at the industry structure both in the UK and the regions. This will show the importance of different industries in the regional economy and allow comparisons to be made.

UK industry structure using both definitions is presented in **Figure 1**. It shows, for 10 industry groups, each industry's share of total hours worked and its share of workplace-based GVA for the UK as a whole in 2007. Industries whose share of

Figure 1
UK Industry structure, 2007

Note:

1 UK less Extra-region.

Source: Office for National Statistics

national hours worked is lower than their share of GVA can be considered to be more productive per hour compared with the industries where the share of GVA is similar or lower than hours worked.

The services sector made up just over three-quarters (77 per cent) of the total hours worked and generated over three-quarters (78 per cent) of the GVA in the UK (less extra-region) in 2007. In terms of individual industry groups, 'real estate, renting and business activities' was the biggest contributor to UK GVA (25 per cent) and also had the largest share of hours worked (18 per cent). The second biggest contribution to the total GVA came from the manufacturing sector (13 per cent). However in terms of hours worked, 'wholesale and retail trade; repair of motor vehicles, motorcycles and personal and household goods' had the second highest share (15 per cent).

Figure 2 shows the distribution of industries in each region in terms of the hours worked in 2007, compared with the UK distribution. It shows that industry mix in the regions had a broadly similar pattern to the UK. A simple correlation analysis can be used to represent how closely the overall industry structure in a region is related to the national industry structure. A correlation coefficient close to 1 represents very strong similarity between the industry structure in the region and the UK.

Figure 3 shows the correlation coefficients of the industry structure (defined by hours worked) in all the regions compared to the UK, ranked in order from the least to most similar to the UK industry structure. It shows that in

2007 London had the least similar industry structure to the UK, followed by Northern Ireland and Wales. The similarity between the industry structure in other regions and the UK was fairly strong. Finally, **Figure 4** shows the changes in correlation of industry shares (in terms of hours worked) in the regions with those in the UK over the last decade.

Again, with the exception of London, Northern Ireland and Wales, industry structure in most of the regions was similar to the UK. The relationship between the industry shares in the regions with those in the UK also remained fairly stable over the decade except London and Northern Ireland. The figure reveals that London's and Northern Ireland's industry structures were even more different from the UK structure ten years earlier than they are now, and that they have moved towards the UK structure over this period. In particular, as the share of manufacturing industry continued to decline in every region relative to the services sectors, the difference in London's industrial structure compared to the national one has become smaller.

The extent to which differences in industry structure explain productivity differences between regions and the UK can be assessed by comparing the actual output in each region to a hypothetical case in which the regions have the same industry structure as the UK. This is done by keeping the regional productivity levels within each industry constant, but setting the allocation of inputs between industries in terms of hours worked to that of the UK shares. The ratio of actual GVA to hypothetical GVA measures the extent to which GVA would have been different in the region

had its economy had the same industry mix as the UK. If the ratio differs greatly from 1, industry structure is significant in explaining differences in aggregate productivity. If the ratio is below 1, then, with unchanged regional productivity levels, the regional productivity would be higher if it had UK industry shares. This implies that the UK has higher aggregate productivity than the region because it has a larger share of high productivity industries than in the region. The ratio above 1 suggests that with a UK structure the region would have had lower GVA and productivity. Finally, a ratio close to 1 suggests that industry structure has not made any difference to the region's aggregate GVA.

Table 1 suggests that the regional industry structure has made significant difference to GVA (and productivity) in Northern Ireland, Wales, Scotland, South West and London. If, for example, Northern Ireland had the UK industry structure in 2007, its total GVA would have been up to 11 per cent higher. On the other hand, with a UK industry mix, London GVA (and productivity) would have been 9 per cent lower. This analysis also suggests that industry composition does not appear to make a major difference to the productivity gap between the other regions and the UK. For example, GVA per hour worked in the North East was 9 per cent less than national average in 2007 (see Figure 6 in the regional overview section). However, applying UK industry structure to the region would have only increased GVA (and productivity) by 1 per cent. Therefore, it follows that regional productivity differences within industries must be playing a more prominent role in explaining overall regional productivity differences.

Industry productivity in the regions

This section will explore regional industry productivity levels (measured by GVA per hour worked) and growth rates relative to the aggregate regional productivity levels and growth rates to identify whether a specific industry has the same effect on aggregate productivity across all regions. It will then look at productivity differences, both in terms of levels and growth rates within industries to determine which regions were performing higher or lower than UK productivity levels, and catching up to UK productivity levels over the 1996–2007 period. It should be noted that the productivity definition used here relates to labour productivity which is a partial productivity measure. Productivity

Figure 2
Industry shares of total hours worked in the regions, 2007

Percentages

Note:

1 UK less Extra-regio.

Source: Office for National Statistics

Figure 2 continued

Industry shares of total hours worked in the regions, 2007

Percentages

Note:

1 UK less Extra-regio.

Source: Office for National Statistics

Figure 3

Correlation of industry shares of total hours worked in the regions with those in the UK, 2007 **Note:**

1 UK less Extra-region.

Source: Office for National Statistics

is also influenced by a number of other factors such as capital, skills, innovation and competition. The ratio between output and labour input depends to a large degree on the presence of these factors. It also needs to be noted that as regional price deflators are not available, GVA estimates used in productivity figures are nominal, not in real terms.

Table 2 shows the level and growth rates of productivity for individual industries in the regions, relative to the all-industry average within the particular region. The first column in the table represents GVA per hour worked in 10 industry groups indexed to the GVA per hour worked for all industries in the region in 2007. The second column represents the difference, in percentage points, between the average annual productivity growth rate (in nominal terms) of a given industry in the region and the all-industry average annual productivity growth in that region over 1996–2007.

It is evident that the effect on aggregate

productivity of a specific industry varied across regions. ‘Financial intermediation’, ‘real estate, renting and business activities’ and ‘manufacturing’ sectors were the main drivers of regional productivity across the regions as these sectors together accounted for around a third of the regional economies and had productivity levels higher than the all-industries average in every region. However, while the level of productivity in the ‘financial intermediation’ sector was 60 per cent or higher than the regional average productivity in every region, productivity levels in the ‘real estate, renting and business activities’ varied across regions. This ranged from 12 per cent above average in London to 75 per cent above average in Northern Ireland. Productivity growth in the ‘financial intermediation’ sector was also higher than the regional average productivity growth in every region, further widening the differential for this sector.

‘Construction’ and ‘wholesale and retail trade; repair of motor vehicles, motorcycles

Table 1

Ratio of actual Gross Value Added to hypothetical Gross Value Added in the regions, 2007

	Ratio
North East	0.98
North West	0.99
Yorkshire and The Humber	0.98
East Midlands	0.99
West Midlands	0.99
East of England	0.98
London	1.09
South East	1.01
South West	0.97
Wales	0.95
Scotland	0.96
Northern Ireland	0.89

Source: Office for National Statistics

and personal and households goods’ – both with relatively large shares in the economy – were the only sectors in which productivity grew faster than aggregate productivity growth rates in every region, closing the gap with regional average productivity levels.

As can be expected in industries with a high capital-labour ratio, the labour productivity levels were considerably higher than the all-industry productivity levels in ‘electricity, gas and water supply’ in every region. The ‘Mining and quarrying’ sector – another capital intensive industry – also had higher levels of productivity relative to the regional aggregate in every region except in Scotland and London. The sector with the lowest productivity in terms of GVA per hour worked in every region was ‘agriculture, hunting and forestry and fishing’, followed by ‘hotels and restaurants’. Labour productivity growth in the ‘agriculture, hunting and forestry and fishing’ industry group was also significantly below the all-industry

Figure 4

Correlations of industry shares of total hours worked in the regions with those in the UK, 1996–2007 **Note:**

1 UK less Extra-region.

Source: Office for National Statistics

Table 2
Regional Productivity by industry: levels and growth rates

Gross Value Added per hour worked (Regional all-industry Gross Value Added = 100)

a) Northern Way	North East		North West		Yorkshire and The Humber	
	Productivity growth		Productivity growth		Productivity growth	
	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007
Agriculture, hunting and forestry & Fishing	49	–3.0	32	–4.3	46	–5.2
Mining and quarrying	157	–0.3	182	1.8	117	–2.0
Manufacturing	123	0.5	124	–0.2	112	–0.6
Electricity, gas and water supply	329	–0.4	395	–0.1	435	0.9
Construction	80	0.5	82	1.9	76	0.8
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	77	1.2	75	0.3	77	0.9
Hotels and Restaurants	58	–0.1	57	0.3	57	0.6
Transport, Storage and Communication	111	–0.7	102	0.1	103	–0.9
Financial Intermediation	178	1.1	165	1.1	177	1.9
Real Estate, Renting and Business Activities	136	–0.6	135	0.0	141	–0.4
All industries	100	–	100	–	100	–

b) Midlands and South West	East Midlands		West Midlands		South West	
	Productivity growth		Productivity growth		Productivity growth	
	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007
Agriculture, hunting and forestry & Fishing	56	–5.8	75	0.2	58	–0.9
Mining and quarrying	199	3.8	195	1.9	211	1.1
Manufacturing	107	–0.6	104	–0.4	110	–0.6
Electricity, gas and water supply	385	0.5	398	0.1	412	–0.8
Construction	87	3.2	79	1.2	79	1.7
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	81	0.7	78	0.3	73	0.5
Hotels and Restaurants	56	0.1	74	2.6	58	1.9
Transport, Storage and Communication	100	–0.8	94	–1.8	105	–0.8
Financial Intermediation	184	1.4	174	1.2	187	1.5
Real Estate, Renting and Business Activities	138	0.4	133	–0.2	150	–0.6
All industries	100	–	100	–	100	–

c) Greater South East	East of England		London		South East	
	Productivity growth		Productivity growth		Productivity growth	
	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007
Agriculture, hunting and forestry & Fishing	35	–8.1	5	–16.6	33	–7.5
Mining and quarrying	173	–1.1	85	–4.4	208	0.4
Manufacturing	113	–0.1	101	–1.4	113	–0.6
Electricity, gas and water supply	234	–4.0	423	0.8	368	–0.6
Construction	78	0.5	66	0.9	77	1.6
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	79	1.4	75	0.1	83	0.6
Hotels and Restaurants	59	1.2	48	–2.0	58	0.8
Transport, Storage and Communication	111	0.1	101	–0.8	106	–0.5
Financial Intermediation	200	2.2	200	2.4	186	2.1
Real Estate, Renting and Business Activities	141	–0.6	112	–0.0	136	–0.8
All industries	100	–	100	–	100	–

d) Devolved Administrations	Wales		Scotland		Northern Ireland	
	Productivity growth		Productivity growth		Productivity growth	
	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007
Agriculture, hunting and forestry & Fishing	23	–4.8	44	–3.1	31	–7.2
Mining and quarrying	179	1.6	95	–6.0	109	–3.4
Manufacturing	116	–1.0	136	0.6	121	0.2
Electricity, gas and water supply	345	–0.2	309	–3.0	545	3.8
Construction	81	1.9	87	1.7	86	2.8
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	77	2.1	75	0.9	78	0.5
Hotels and Restaurants	59	–0.8	55	–0.7	63	0.3
Transport, Storage and Communication	90	–1.3	102	–0.4	103	–0.3
Financial Intermediation	160	0.4	200	2.1	190	2.2
Real Estate, Renting and Business Activities	162	–0.1	135	0.3	175	–0.9
All industries	100	–	100	–	100	–

Notes:

- 1 Represents the productivity of the given industry indexed such that aggregate productivity of the given region = 100.
- 2 Represents the difference, in percentage points, between the percentage growth of a given industry productivity in the region minus the average productivity growth in the region over the 1996–2007 period.

Source: Office for National Statistics

Table 3
Regional productivity by industry: levels and growth rates

Gross Value Added per hour worked (UK industry Gross Value Added per hour worked = 100)

a) Northern Way	North East		North West		Yorkshire and The Humber	
	Productivity growth		Productivity growth		Productivity growth	
	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007
Agriculture, hunting and forestry & Fishing	114	1.1	77	0.4	105	–0.9
Mining and quarrying	113	1.4	132	4.0	82	–0.1
Manufacturing	103	0.4	105	0.2	92	–0.5
Electricity, gas and water supply	85	–0.3	103	0.5	109	1.2
Construction	95	–1.5	98	0.4	88	–1.1
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	91	–0.0	90	–0.4	90	–0.1
Hotels and Restaurants	93	–1.0	92	–0.0	90	–0.1
Transport, Storage and Communication	97	–0.6	91	0.7	89	–0.6
Financial Intermediation	80	–1.6	75	–1.1	78	–0.6
Real Estate, Renting and Business Activities	91	–1.0	92	0.1	93	–0.7

b) Midlands and South West	East Midlands		West Midlands		South West	
	Productivity growth		Productivity growth		Productivity growth	
	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007
Agriculture, hunting and forestry & Fishing	134	–1.6	173	4.8	142	4.1
Mining and quarrying	144	5.6	137	4.1	157	3.6
Manufacturing	91	–0.6	85	–0.0	95	0.2
Electricity, gas and water supply	100	0.7	101	0.7	110	0.2
Construction	104	1.3	92	–0.3	96	0.6
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	98	–0.4	91	–0.4	90	0.2
Hotels and Restaurants	91	–0.7	116	2.3	96	1.9
Transport, Storage and Communication	89	–0.6	81	–1.2	96	0.2
Financial Intermediation	84	–1.2	77	–1.0	87	–0.2
Real Estate, Renting and Business Activities	93	0.1	87	–0.1	104	–0.2

c) Greater South East	East of England		London		South East	
	Productivity growth		Productivity growth		Productivity growth	
	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007
Agriculture, hunting and forestry & Fishing	91	–3.1	16	–11.6	88	–2.3
Mining and quarrying	137	1.5	87	–1.8	171	3.1
Manufacturing	104	0.7	120	–0.6	108	0.3
Electricity, gas and water supply	67	–3.0	155	1.9	109	0.5
Construction	102	–0.6	112	–0.2	105	0.6
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	104	1.0	127	–0.2	113	0.3
Hotels and Restaurants	105	1.2	110	–2.0	108	1.0
Transport, Storage and Communication	107	1.1	127	0.2	107	0.6
Financial Intermediation	99	0.4	128	0.7	96	0.4
Real Estate, Renting and Business Activities	105	–0.1	107	0.5	105	–0.2

d) Devolved Administrations	Wales		Scotland		Northern Ireland	
	Productivity growth		Productivity growth		Productivity growth	
	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007	Productivity level ¹ in 2007	differential ² , 1996–2007
Agriculture, hunting and forestry & Fishing	51	–1.0	109	1.2	66	–2.7
Mining and quarrying	119	3.0	72	–4.1	72	–1.3
Manufacturing	90	–1.4	118	0.7	93	0.5
Electricity, gas and water supply	82	–0.4	83	–2.7	129	4.4
Construction	89	–0.5	107	–0.1	93	1.2
Wholesale and Retail Trade; Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	85	0.5	94	–0.2	85	–0.3
Hotels and Restaurants	88	–2.0	92	–1.4	93	–0.1
Transport, Storage and Communication	73	–1.5	94	–0.1	84	0.2
Financial Intermediation	67	–2.6	94	–0.3	79	–0.1
Real Estate, Renting and Business Activities	101	–0.9	95	0.1	108	–0.9

Notes:

1 Represents productivity of the given industry such that average productivity of the same industry in the UK = 100.

2 Represents the difference, in percentage points, between the percentage growth of a given industry productivity in the region minus the average productivity growth in the same industry in the UK over the 1996–2007 period.

Source: Office for National Statistics

productivity growth in all regions except the West Midlands, implying that the productivity gap between this industry and the others in the regions have widened over the last decade.

Productivity differences within industries

Table 3 shows productivity levels and growth rates for each industry within regions, relative to the levels and growth rates for the relevant industries in the UK as a whole. For each region, the first column in the table displays GVA per hour worked in each industry indexed to the UK level in that industry in 2007. The second column shows the productivity growth differential of each industry group relative to the average annual productivity growth in that industry in the UK over the period 1996–2007.

Productivity levels varied considerably within industries across the regions. In 2007, regions in the Greater South East were the only regions in the UK where the level of GVA per hour worked in most industries was above the national average in the respective industry. In particular, most industries in London performed significantly better than elsewhere in the UK. For example, in 2007 the level of GVA per hour worked in the ‘electricity, gas and water supply’ and the ‘financial intermediation’ sectors in London were 55 per cent and 28 per cent above the UK GVA per hour worked in these industries respectively. In London, labour productivity also grew faster than elsewhere in most of the industries over the last decade. The only underperforming sectors, both in terms of levels and growth rates, in London were in the primary sectors (‘agriculture, hunting and forestry; fishing’ and ‘mining and quarrying’). Given that these sectors had a very small share in London’s economy, it is clear that the high productivity performance in almost every sector underlies the high aggregate productivity in London. Similarly, above average productivity performance in the South East and East of England in 2007 was driven by both above average productivity level and growth of industries in these regions.

Elsewhere in the UK, below average productivity growth in many industries further widened the productivity gap between these regions and the UK. There were some exceptions to this relatively poor performance. In the northern regions productivity growth in the primary and manufacturing industries, and in the Midlands regions ‘mining and quarrying’,

outperformed the average productivity growth in their respective industries. Productivity in the primary sectors in the South West also grew faster than elsewhere during this period resulting in higher than average productivity levels in these industries in 2007. However, given the relatively small shares of these industries in the regions, their overall positive impact on regional productivity is not significant.

Looking at how the broad industry groups performed in the regions, Table 3 shows that productivity in the primary industries was higher than their respective UK averages in North East, East Midlands, West Midlands and the South West.

The manufacturing group had mixed outcomes. It had higher than UK average productivity in half of the regions, ranging from 20 per cent above average in London to 3 per cent above average in the North East in 2007. The lowest performance for this industry group was recorded in West Midlands. In 2007, the level of GVA per hour worked in the manufacturing sector in West Midlands was 85 per cent of that in the UK manufacturing sector. Growth in productivity, however, did not differ from the UK average. It should be noted that the average performance of the manufacturing sector as a whole may mask significant productivity differences within the sub-sectors of this group. Productivity growth rates in this industry also varied across the regions, widening or closing the gap in levels. Similarly, the productivity levels and growth rates in the ‘electricity, gas and water’ and ‘construction’ sectors varied across the regions of the UK.

Productivity in the services sectors was generally higher than the respective UK averages in the Greater South East regions, while it was below average in other regions. ‘Real estate, renting and business activities’ sector in Northern Ireland, however, performed better than its UK counterparts in 2007. The largest improvements in productivity in the UK occurred in ‘financial intermediation’ (up 6.6 per cent) over 1996–2007. The growth in ‘financial intermediation’ was mainly led by the regions in the Greater South East, particularly London, whereas the growth in construction varied across the regions of the UK.

Concluding remarks

The above analysis has shown that over the last decade, most regions had a very similar industry structure in terms of distribution of labour resources to the industry structure of the UK as a whole. The exception to this

was London, which had become closer to the UK structure over this period. The analysis has also shown that each industry had a different impact on the overall economic performance of a region.

Finally, levels of productivity differed considerably between and within different industries, however, industrial structure only accounted for a limited proportion of the productivity gap between the regions and the UK. It follows that regional differences in productivity within industries seem to be more significant in explaining the productivity gap, implying that labour productivity is influenced by the location of industry. Such differences may be due to variations in other factors affecting labour productivity such as investment, innovation, enterprise, competition and skills, as well as consumer tastes and preferences.

Regional overview

Key figures on a regional basis indicate that:

- in 2007 London was the region with the highest productivity, in terms of GVA per hour worked, at 30 percentage points above the UK average. Northern Ireland had the lowest productivity in 2007, at 16 percentage points below the UK average
- for the UK as a whole the statistical value of goods exports for the 12 months ending June 2009 was £232.4 million, a decrease of 1.4 per cent compared to the 12 months ending June 2008. The total value of goods exports, however, increased in 5 of the 12 regions with Wales and South East delivering the highest growth rate in this period, rising by 8 per cent and 7 per cent respectively. At the other end of the scale, West Midlands saw the largest percentage decline in the value of goods exports (down by 13 per cent)
- the South East had the highest employment rate in the second quarter of 2009, at 77.3 per cent; Northern Ireland had the lowest rate, at 65.6 per cent, compared with the UK employment rate of 72.7 per cent

Headline indicators

In order to gain an overview of the economic performance of UK regions, this article discusses a selection of economic indicators. Currently, the most widely used indicator of regional economic performance is Gross Value Added (GVA) per head. Policymakers frequently use GVA per head as a headline indicator of regional productivity and of regional incomes when

comparing and benchmarking regions that differ in geographical size, economic output and population. However, as Dunnell (2009) has explained, productivity and income are very different concepts.

GVA per head is calculated as the simple ratio of the economic activity in a region divided by the number of people living in a region, while productivity is defined as the ratio of GVA divided by the labour input (jobs or hours worked) used to create it. GVA per head does not take account of:

- people commuting in and out of regions to work
- regional differences in the percentages of residents who are not directly contributing to GVA, such as young people or pensioners, and
- different labour market structures across regions, such as full- and part-time working arrangements

Therefore, GVA per hour worked or GVA per filled job are more appropriate productivity indicators. It needs to be noted that these indicators also depend on pricing thus productivity can fall/rise with decreasing/increasing prices. As regional price deflators do not yet exist, GVA estimates used in productivity figures are in nominal, not real terms, therefore it is not possible to isolate volume changes from price changes.

Similarly, Gross Disposable Household Income (GDHI) per head is a better measure of regional incomes than GVA per head. For example, due to commuting, residents might derive their incomes from economic activity in another region, which is not captured by GVA per head of their region. They may also have sources of income which are unrelated to current work, such as pensions and investment incomes.

Regional performance

GVA is a good measure of the economic output of a region. In December 2008, ONS published GVA estimates for 2007 and revised estimates for previous years. **Table 4** shows the regional economic performance in terms of workplace-based GVA and GVA per head and their respective average annual growth over the period 2000 to 2007. Although GVA per head is not a good indicator of regional productivity or income, it does take account of variations in geographical size among UK regions and therefore allows better comparisons than using GVA in total.

The estimates show that London had the highest GVA (£250 billion) and GVA per head (£33,100) in 2007, followed by the South East (£175 billion and £21,100, respectively). The North West generated the third highest GVA (£121 billion), but was seventh in terms of its GVA per head (£17,600). Northern Ireland and the North East had the lowest GVA in 2007, while Wales and the North East had the lowest GVA per head.

In terms of average annual percentage growth of GVA between 2000 and 2007, the East Midlands, London, Northern Ireland and the East of England had the highest GVA growth, while the West Midlands and Wales had the lowest. Average annual percentage growth of GVA per head was highest in Scotland, London, Northern Ireland and the North East, while the West Midlands, Yorkshire and The Humber and Wales grew slowest.

Labour productivity

To compare regions in terms of productivity, GVA per hour worked is the preferred indicator. At lower levels of geography, 'hours worked' estimates are not yet available and GVA per filled job should be used. These two measures of productivity

divide GVA by the labour input, namely hours worked in all jobs or the number of jobs used to create it.

GVA per hour worked and GVA per filled job take account of commuting effects and different age profiles, and the former also accounts for variations in labour market structures, such as full- and part-time working arrangements and job share availability.

On 11 February 2009, productivity estimates for 2007 and revised estimates for previous years were published. These estimates make use of the GVA figures presented in Table 4, and updated 'filled jobs' and 'hours worked' estimates.

It should be noted that the productivity figures presented here use unsmoothed GVA as their output measure as opposed to headline GVA, which is calculated as a five-year moving average. The unsmoothed measure is used to ensure consistency with the labour input data (Dey-Chowdhury *et al* 2008), but raises some concerns about increased volatility of productivity estimates compared to those based on headline GVA. The question of whether to smooth productivity figures after dividing unsmoothed GVA by labour data, and presenting these as headline estimates, is one which will be addressed by ONS in the coming months.

Figure 5 shows that in 2007 GVA per filled job and GVA per hour worked exhibited smaller differences from the UK average than the catch-all indicator GVA per head. This is mainly due to commuting patterns. London, for example, has a very high GVA per head, mainly due to incoming workers generating a high GVA, which is then divided by a much lower resident population. Productivity indicators, on the other hand, divide regional GVA by the jobs or hours worked used to create it.

Table 4

Workplace-based gross value added and gross value added per head at current basic prices: by NUTS1 region

	UK ¹	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales	Scotland	Northern Ireland
GVA (£ million)													
2000	842,500	28,300	84,700	61,400	52,600	68,400	72,300	169,000	123,300	64,200	31,700	67,200	19,500
2007 ²	1,216,900	40,300	120,500	87,200	78,100	92,200	107,000	250,100	175,300	94,200	44,300	98,900	28,800
Average annual percentage growth 2000–2007 ²	5.4	5.2	5.2	5.1	5.8	4.4	5.8	5.8	5.2	5.6	4.9	5.7	5.7
GVA per head (£)													
2000	14,300	11,100	12,500	12,400	12,600	13,000	13,500	23,400	15,400	13,100	10,900	13,300	11,600
2007 ²	20,000	15,700	17,600	16,900	17,700	17,100	18,900	33,100	21,100	18,200	14,900	19,200	16,400
Average annual percentage growth 2000–2007 ²	4.9	5.1	5.0	4.5	5.0	4.0	4.9	5.1	4.6	4.8	4.6	5.4	5.1

Notes:

- 1 UK less Extra-region and statistical discrepancy.
- 2 Provisional.

Source: Regional Accounts, Office for National Statistics

Figure 6 shows the regional GVA per hour worked productivity index on a time series basis from 2001 to 2007. In 2007, London, the South East and the East of England were the only three regions with a productivity performance above the UK average. The East of England saw the strongest improvement in its relative performance from 2001 to 2007 from below the UK average to above average in 2007. London also improved its relative performance, therefore diverging further from the UK average. Relative productivity in the South East remained roughly constant. Northern Ireland and Wales had the lowest relative productivity in 2007. The strongest divergence from the UK average productivity between 2001 and 2007 was experienced in the North East, Wales and Yorkshire and The Humber. This implies that these regions' productivity grew by less than the UK average, therefore widening the productivity gap between regions.

Income of residents

The previous section discussed the economic activity and productivity in the regions. This section discusses regional incomes, which gives an indication of the welfare of residents living in a region.

Gross disposable household income (GDHI) represents the amount of money available to households after taxes, National Insurance and pension contributions, property costs and other interest payments have been deducted. The estimates of GDHI, however, are at current basic prices and so do not take inflation effects or regional price differences into account.

In order to make reliable comparisons of regional income levels, the analysis needs to take account of relative sizes of regions. Therefore, GDHI per head, which is a residence-based measure, is used as an indicator of the welfare of people living in the region.

The May 2009 edition of this article discussed the latest data on GDHI in detail, therefore this section presents a brief overview of those analysis. Figure 7 presents indices of GDHI per head for 2001, 2003, 2005 and 2007, showing movements in regional household income relative to the UK average over time. It is evident that the GDHI per head is above the UK average only in the regions of the 'Greater South East'. Of these regions, London has consistently had the highest GDHI per head since 2001 and is diverging from the national average. The South East and East of England, on the other hand, are getting closer to the national average as they

Figure 5

Comparison of regional economic indicators: by NUTS1 region, 2007¹

Indices (UK²=100)

Note:

- 1 Provisional.
- 2 UK less Extra-regio statistical discrepancy.

Source: Office for National Statistics

Figure 6

GVA per hour worked: by NUTS1 region

Indices (UK¹=100)

Note:

- 1 UK less Extra-regio statistical discrepancy.
- 2 Provisional.

Source: Office for National Statistics

Figure 7

Headline gross disposable household income per head: by NUTS1 region

Indices (UK¹=100)

Notes:

- 1 UK less Extra-regio.
- 2 Provisional.

Source: Office for National Statistics

experienced the lowest growth in household income compared to other regions between 2001 and 2007. Similarly, improvements against the national average are evident in most regions with lower household income, particularly the North East and the devolved administrations. This implies greater parity across regions in terms of household income.

Comparing these outcomes with the regional productivity performance shown in Figure 6 shows that, unlike income per head, productivity has been diverging from the UK average in most regions. Moreover, some regions have been performing close to the average in terms of productivity, while their income per head shows stronger

divergences from average. The North East, for example, has had a close to average but declining productivity performance since 2001 and at the same time the lowest, but improving, income per head. One reason for this might be the region's low employment and high unemployment rates (see labour market section).

Gross median weekly earnings represent another indicator of regional welfare.

Figure 8 shows the gross median weekly pay for all full-time employees, split into female and male full-time employees, in each region in April 2008.

As in previous years, London was the region with the highest gross median weekly pay, at £612.70, followed by the South East, at £499.80. These were the only regions above the UK average of £478.60. Northern Ireland (£417.60), the North East (£420.60) and Wales (£421.00) recorded the lowest earnings in April 2008.

Females across the UK regions received lower pay than males. In Northern Ireland, the discrepancy was smallest, while it was largest in London and the South East. The weekly pay for male full-time employees was above the UK average for all full-time employees in nine of the 12 NUTS1 regions, while the weekly pay of female full-time employees was only above the UK average in London. However, in terms of annual average percentage growth between 2004 and 2008, pay for females outperformed that for males. The only regions where pay for females did not grow more than male pay over this period were Yorkshire and The Humber, South East and Scotland. The difference in growth rates, however, was marginal. The first two regions had only a 0.1 percentage point difference in growth rates between male and female pay and Scotland had a 0.2 percentage point difference. It is interesting to note that Scotland had the highest annual average growth rate, both for males and females, among the regions over the period considered above.

Drivers of productivity

HM Treasury and Department for Business, Innovation and Skills (BIS) formerly known as Department for Business Enterprise and Regulatory Reform (BERR) have identified five key drivers of productivity – investment, innovation, enterprise, competition and skills – that can help explain differences in productivity across regions.

Alongside these five key drivers, other factors, such as connectivity, industrial structure and region-specific assets can have

Figure 8

Gross median weekly pay of all full-time employees: by NUTS1 region, April 2008

Source: Annual Survey of Hours and Earnings, Office for National Statistics

a strong influence on regional productivity performance.

This article uses expenditure on Research and Development (R&D) by businesses as a measure of innovation; the numbers of business births and deaths and survival rates as an indicator for enterprise; UK regional trade in goods serves as a measure of competition; and the qualifications of the current working-age population and those of young people, who represent the future workforce, to provide an indicator for the skills driver.

Investment

Investment in physical capital, such as machinery, equipment and buildings, enables workers to produce more and higher quality output. Therefore, investment can have a significant positive impact on productivity. Due to quality concerns regarding the regional allocations of investment, which is recorded at the level of the enterprise and not at the local level, this article does not currently include data on investment.

Nevertheless, as Dunnell (2009) has pointed out, inflows of foreign direct investment (FDI) projects and estimated numbers of associated jobs by region can serve as a narrow indicator of investment. However, FDI does not cover all investment in a region and there is no requirement to notify UK Trade & Investment when undertaking FDI.

Innovation

Innovation is a necessary, although not sufficient, condition for economic success and is therefore recognised as an important driver of productivity. Innovation comprises, among others, the development of new technologies that increase efficiency and the introduction of new, more valuable goods and services. It also includes

intangibles such as new methods of working and improvements to services.

R&D represents one of the determinants to the innovation process and is defined by the Organisation for Economic Co-operation and Development (OECD) in its Frascati Manual, which proposes a standard practice for surveys on R&D, as 'creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to create new applications'. The OECD definition of R&D covers the following:

- **basic research:** experimental and theoretical work to obtain new knowledge of the underlying foundation of phenomena and observable facts, without any particular application or use in view
- **applied research:** work undertaken to acquire new knowledge, which is directed primarily towards a specific practical aim, and
- **experimental development:** systematic work, drawing on existing knowledge, which is directed at producing new materials, products or devices, installing new processes, systems and services, or at improving substantially those already produced or installed

The OECD definition excludes education, training and any other related scientific, technological, industrial, administrative or supporting activities. However, innovation depends on a wider set of inputs than R&D, including skills training, design, software and organisational investment by firms. HM Treasury *Economics Working Paper No. 1* quantifies these broader knowledge economy inputs at UK level; more work is needed before these factors can be measured effectively at regional level.

Figure 9 presents statistics on Business Expenditure on Research and Development (BERD), which are consistent with internationally agreed standards. Figures for 2007 published on 30 January 2009 show business expenditure on R&D as a percentage of workplace-based GVA in 2001, 2003, 2005 and 2007. This is a measure commonly used in regional comparisons as it takes account of the size of regional economies. The figure shows that, since 2001, the East of England has been the region with by far the highest percentage of R&D expenditure in terms of GVA, with 4.1 per cent in 2007. The South East had the second highest percentage (2.0 per cent), which has, however, been declining since 2001.

R&D expenditure as a share of regional GVA was 1.8 per cent in the North West and 1.3 per cent in the East Midlands and the South West. London, Yorkshire and The Humber and the three Devolved Administrations of Wales, Scotland and Northern Ireland had the lowest shares in 2007, at around 0.5 per cent each. London's very low share of expenditure on R&D does not necessarily suggest low levels of innovation but may be due to it having a large concentration of service industries, which may be less R&D intensive (within the OECD definition) if, for example, they rely heavily on human capital. It may also reflect the choice businesses make over locating their R&D.

Approximately three-quarters of the R&D expenditure in the UK was made in the manufacturing sector in 2007. **Figure 10** shows that in most regions except in the Greater South East and West Midlands the share of the R&D expenditure on manufacturing was over 80 per cent of their respective expenditure. East of England accounted for 27 per cent of the total R&D expenditure in the UK in 2007 and had the highest level of R&D expenditure on both the manufacturing and services. This may suggest that some London R&D is occurring in the surrounding regions.

Enterprise

Enterprise is another driver of productivity. It is defined as the seizing of new business opportunities by both start-ups and existing firms. New enterprises can bring innovative processes and technologies to the market, forcing existing ones to improve their productivity in order to remain competitive.

The February 2009 edition of this article focused on business demography in UK regions, using the newly published ONS series of enterprise births and deaths, which

Figure 9

Business expenditure on R&D as a percentage of workplace-based GVA: by NUTS1 region

Notes:

- 1 UK less Extra-region and statistical discrepancy.

Source: Regional Accounts and Business Expenditure on Research & Development, Office for National Statistics

Figure 10

Business expenditure on R&D by NUTS1 region: broad industry groups, 2007

Note:

- 1 Other includes agriculture, hunting and forestry, fishing, extractive industries, electricity, gas and water supply and construction. The expenditure on other industries across the UK was less than 2 per cent of the total expenditure.

Source: Office for National Statistics

Figure 11

Enterprise births, deaths¹ and net change as a percentage of enterprise stock: by NUTS1 region, 2007

Note:

- 1 Provisional.

Source: Business Demography, Office for National Statistics

includes enterprises registered for VAT and also those registered for pay-as-you-earn (PAYE). It needs to be noted that enterprise statistics relate to the place of registration of the enterprise, even though the enterprise

may consist of more than one local unit, possibly in different regions.

Figure 11 shows the number of births and deaths of enterprises as a proportion of the active enterprise stock in 2007. The

difference between the two represents the net change, which is calculated as a proportion of total stock. The figure shows that the North East and Scotland had the highest rate of net change, at 4.8 per cent, closely followed by London, at 4.7 per cent. Wales and the South West had the lowest rates, at 1.6 and 2.3 per cent, respectively. These rates were mainly driven by small enterprises with fewer than five employees which is approximately 80 per cent of the total enterprise stock. Among the 5 per cent of the enterprises that have more than 20 employees, however, the net change was negative in every region. In the category of enterprises with employment size 10–19 which comprises 6 per cent of the total stock, the net change was also negative in every region with the exception of Scotland.

In 2007, across regions, the relatively modest net changes were the result of much larger proportions of enterprises joining and leaving the stock. These proportions were largest in London, followed by the North East. A relatively large proportion of enterprises joining and leaving the stock can be seen as desirable, as new enterprises entering the market are considered to bring innovative processes and technologies that drive up productivity and force unproductive enterprises to leave the market.

As well as analysing births and deaths of enterprises, it is useful to look at how long these enterprises survive. The Business Demography series contains data showing the number of years survived by enterprises born in the years 2002 to 2006.

Figure 12 shows the proportion of enterprises born in 2002, 2003 and 2004 that survived for at least three years each. It shows that, overall in the UK, survival rates increased over the period, rising from 63 per cent of enterprises born in 2002 to 65 per cent of those born in 2004.

Patterns were similar across regions, with all but Northern Ireland having higher survival rates for enterprises born in 2004 than in 2002. Northern Ireland saw a fall from 69 to 67 per cent; however this was still higher than the UK average of 65 per cent. Among enterprises born in 2004, those in the South West had the highest three year survival rate, at 69 per cent.

London stands out as the region with the lowest rate, at 60 per cent. Figure 11 has shown that London had the highest percentage of births and deaths of enterprises; therefore it is not surprising that survival rates were relatively low. They could be an indication of London's ability to exploit short-term business opportunities. At the same time, it may suggest that many of the new enterprises born will not provide long-term growth and employment.

Competition

Vigorous competition enhances productivity by creating incentives to innovate and ensure that resources are allocated to the most efficient firms. It also forces existing firms to organise work more effectively through imitations of organisational structures and technology. One indicator of competition is the volume of exports. Even though exports do not represent competition within a region, they still provide an indication of how international regions are in their outlook, and how able they are to face global competition.

HM Revenue & Customs (HMRC) publishes statistics on regional trade in goods to the EU and non-EU destinations by statistical value. Trade in goods by definition excludes trade in intangibles and services. The statistical value of export trade is calculated as the value of the goods plus the cost of movement to the country's border.

Table 5 presents the latest quarterly estimates up to June or Quarter 2 2009.

The total value of UK goods exports to all destinations decreased by approximately 1.4 per cent between June 2008 and June 2009, but there were significant differences among regions. The total value of goods exports increased in 5 of the 12 regions with Wales and South East delivering the highest growth rate in this period, rising by 8 per cent and 7 per cent respectively. At the other end of the scale, West Midlands saw the largest percentage decline in the value of goods exports (down by 13 per cent).

As the European Union (EU) is the main export destination for UK goods, the table separates exports to EU and non-EU destinations. From the UK as a whole, the value of exports to the EU dropped by 7 per cent between June 2008 and June 2009. With the exception of London and South East (both up by 0.4 per cent), all the regions recorded decreases in the value of goods exports to the EU. West Midlands reported the highest drop, by 16 per cent.

The total value of UK exports to the rest of the world grew by 4 per cent from June 2008 to June 2009, with Wales leading the way, up 33 per cent in value. The rise in exports to non-EU countries, however, masks wide regional variation. Almost half of the regions had a fall in the value of goods exports to non-EU countries. The largest fall was recorded in the Yorkshire and The Humber region (down by 12 per cent) during this period.

The figures also show a continuing downward trend in the value of total goods exports beginning in the third quarter of 2008. This may partly reflect the inherent volatility of quarterly trade data, although such declines appear to be consistent with intensifying global financial and economic crises in the second half of 2008. This downward trend is also evident for both the EU and non-EU exports for all the regions. Again, falling export values are most likely to be the product of the ongoing recession. The number of exporters in the UK for June 2009 quarter compared with the same quarter last year, decreased by 1.9 per cent to 50,538. Wales had the largest percentage increase in the number of exporters of 3.3 per cent to 1,389. London had the largest decrease of 6.0 per cent to 8,454¹.

Figure 13 shows the value of exports of goods as a percentage of workplace-based regional GVA in 2000 and 2007, which takes account of the differing sizes of regional economies. In 2007, exports from the North East accounted for the

Figure 12
Percentage of units surviving three years: by year of birth and NUTS1 region

Source: Business Demography, Office for National Statistics

Table 5

UK regional trade in goods – statistical value of exports:¹ by NUTS1 region

£ million													
Exports	United Kingdom	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	Wales	Scotland	Northern Ireland
EU Exports													
2007 Q3	30,663	1,331	2,773	1,649	2,038	2,033	2,914	2,183	4,490	1,633	1,313	1,378	830
2007 Q4	32,952	1,557	2,854	1,725	2,058	2,314	3,196	2,152	4,891	1,725	1,331	1,527	855
2008 Q1	34,980	1,634	3,182	1,744	2,196	2,405	3,314	2,304	4,937	1,817	1,485	1,493	880
2008 Q2	35,742	1,619	3,283	1,913	2,013	2,137	3,222	2,850	5,096	1,707	1,647	1,536	874
Total to June 2008	134,337	6,140	12,092	7,032	8,305	8,889	12,646	9,489	19,414	6,882	5,775	5,934	3,439
2008 Q3	32,677	1,442	2,859	1,826	1,904	1,993	2,895	2,377	5,156	1,562	1,329	1,519	840
2008 Q4	32,677	1,442	2,859	1,826	1,904	1,993	2,895	2,377	5,156	1,562	1,329	1,519	840
2009 Q1 ²	30,971	1,334	3,091	1,608	1,839	1,788	2,815	2,411	4,890	1,651	1,187	1,331	789
2009 Q2 ²	28,841	1,308	2,925	1,453	1,746	1,678	2,875	2,365	4,295	1,537	1,171	1,207	752
Total to June 2009	125,167	5,527	11,734	6,713	7,394	7,453	11,480	9,530	19,497	6,311	5,015	5,575	3,220
Non-EU exports													
2007 Q3	23,008	1,021	2,417	1,402	1,685	1,595	1,843	3,402	3,667	1,100	851	2,012	520
2007 Q4	25,138	1,261	2,462	1,762	1,784	1,801	2,001	3,595	4,125	1,155	912	1,894	578
2008 Q1	23,867	1,164	2,452	1,641	1,743	1,767	2,167	3,195	3,892	1,053	869	1,833	555
2008 Q2	27,803	1,335	2,862	1,712	1,941	1,989	2,509	3,660	4,993	1,178	1,074	2,066	639
Total to June 2008	99,816	4,782	10,193	6,516	7,152	7,152	8,519	13,851	16,677	4,485	3,707	7,806	2,291
2008 Q3	28,265	1,357	2,936	1,707	1,914	2,142	2,267	3,577	5,173	1,373	1,312	2,103	623
2008 Q4	28,181	1,112	2,807	1,522	2,089	1,900	2,252	3,749	5,430	1,306	1,298	2,224	806
2009 Q1 ²	22,913	977	2,766	1,260	1,958	1,209	1,893	2,711	4,093	1,149	1,074	1,978	510
2009 Q2 ²	24,827	921	2,540	1,263	1,995	1,504	2,001	2,932	4,724	1,164	1,241	2,336	606
Total to June 2009	104,186	4,367	11,048	5,752	7,955	6,755	8,414	12,969	19,420	4,993	4,925	8,641	2,545
Total Exports													
2007 Q3	53,671	2,351	5,190	3,051	3,723	3,628	4,757	5,585	8,157	2,734	2,164	3,391	1,350
2007 Q4	58,090	2,819	5,316	3,488	3,842	4,114	5,197	5,747	9,015	2,879	2,242	3,421	1,433
2008 Q1 ²	58,847	2,798	5,634	3,385	3,939	4,171	5,480	5,499	8,829	2,869	2,354	3,327	1,435
2008 Q2 ²	65,054	2,964	6,227	3,596	4,060	4,495	6,104	6,098	10,347	3,114	2,705	3,558	1,609
Total to June 2008	235,662	10,933	22,367	13,520	15,564	16,409	21,538	22,928	36,348	11,597	9,466	13,696	5,826
2008 Q3	64,008	2,976	6,219	3,620	3,927	4,279	5,490	6,426	10,269	3,080	2,959	3,639	1,498
2008 Q4	60,858	2,555	5,666	3,349	3,993	3,893	5,147	6,126	10,586	2,868	2,627	3,742	1,645
2009 Q1 ²	53,884	2,311	5,857	2,867	3,797	2,998	4,708	5,122	8,983	2,800	2,261	3,309	1,299
2009 Q2 ²	53,669	2,229	5,465	2,716	3,741	3,182	4,876	5,297	9,019	2,701	2,412	3,543	1,357
Total to June 2009	232,418	10,070	23,206	12,553	15,458	14,352	20,221	22,972	38,857	11,449	10,258	14,233	5,800

Notes:

- Components may not sum to totals as Regional Trade Statistics includes estimates made for EU trade below the Intrastat threshold which are included in the 'unknown' region and not displayed in this table.
- Provisional

Source: UK Regional Trade in Goods Statistics, HM Revenue & Customs

Figure 13

Value of total export goods as a percentage of workplace-based GVA: by NUTS1 region

Notes:

- Provisional.
- UK less Extra-region and statistical discrepancy.

Source: HM Revenue & Customs, Regional Trade Statistics and Office for National Statistics

highest percentage of GVA (24 per cent), 6 percentage points above the UK average. The region where exports of goods accounted for the smallest percentage of GVA in 2007 was London, at 9 per cent. It needs to be noted that these figures show exports of goods as a percentage of headline GVA which also includes services and therefore is likely to underestimate the performance of those regions which have relatively large shares of services industries such as London.

In terms of this indicator's change over time, in all regions, except Yorkshire and The Humber, exports accounted for a smaller percentage of GVA in 2007 than in 2000. Scotland experienced the most significant drop from 2000 to 2007, with exports in 2007 accounting for 16

percentage points less in terms of GVA than in 2000. Most other regions also experienced a decline from 2000 to 2004, with some recovery in 2005 and 2006. In 2007, most regions saw their exports as a percentage of GVA fall.

Skills

The skills of workers influence productivity as they define the capabilities that the labour force can contribute to the production process. The concept of skills includes attributes of the workforce, such as 'softer' or interpersonal skills, which are difficult to measure or to compare in different situations or over time. Therefore, qualifications are often used as proxy indicators. By examining the qualifications, such as degree or equivalent, of the current workforce as well as those of young people, who represent the future capabilities of the labour market, a view of how skills are changing over time and their potential impact on productivity can be analysed. However, as characteristics of local economies dictate which labour skills are required, comparability between regions might be difficult. An alternative approach is to compare the percentage of the working-age population that has no recognised qualifications.

Figure 14 shows the proportion of the working-age population that has no qualifications in each region, alongside the UK average, for 2008 Q4. Northern Ireland had the highest proportion of the population with no qualifications (10.4 percentage points above the UK average), whereas the South East and the South West had the lowest proportions, 3.4 and 3.2 percentage points below the UK average, respectively.

Above average proportions of working-age people without a qualification do not necessarily mean that regions have the most unqualified workforce. Due to differing regional skill requirements, people with recognised qualifications might migrate into other regions, where demand for their qualifications is high, while those without any recognised qualifications might migrate out of these other regions. Also, if employers have a strong demand for lower skills and a good supply of appropriate workers, a low skill equilibrium is created in a region.

Regional Skills Partnerships (RSPs) are groups brought together by Regional Development Agencies in each region of England in response to the National Skills Strategy. RSPs aim to strengthen regional structures to make skills provision more relevant to the needs of employers and

individuals, covering private, public and voluntary sectors of the economy. They also aim to give regions the flexibility to tackle their own individual challenges and priorities.

Table 6 presents the RSP core indicators, which help to monitor the health of regional and local labour markets and progress towards national skills targets such as those documented in the Leitch Report. These core indicators will be supported by local, more specific, indicators identified by individual RSPs. The choice of '19 to state pension age' for some of the indicators in Table 6 has been influenced by: the increased emphasis on education and training after the age of 16; the plan to raise the standard school leaving age to 18; and alignment with indicators specified in the Local Area Agreements.

In order to assess the future capabilities

of the labour force, the percentage of pupils achieving five or more grades A* to C at GCSE level or equivalent in each English region can be used as an indicator². Recent focus on literacy and numeracy has led to a new measure being published, of five or more GCSEs grade A* to C in subjects including English and Mathematics.

Figure 15 shows the percentage of pupils achieving at least five grades A* to C at GCSE level or equivalent in any subjects, and in subjects including English and Mathematics. In 2008/09, the England average for pupils in all schools achieving five or more grades A* to C in any subjects was 69.7 per cent, while it was down to 49.7 per cent if the subjects included English and Mathematics. These were increases of 4.4 and 2.1 percentage points from 2007/08, respectively. Across all English regions, the percentage of pupils achieving at least five

Figure 14

Working-age population with no qualifications:¹ by NUTS1 region, 2008 Q4

Note:

Source: Labour Force Survey, Office for National Statistics

¹ For summary of qualifications and equivalents see www.statistics.gov.uk/statbase/Product.asp?vlnk=836.

Figure 15

Pupils achieving five or more grades A* to C at GCSE level or equivalent in (i) all subjects and (ii) subjects including English and Mathematics: by NUTS1 region, 2008/09¹

Notes:

Source: Department for Children, Schools and Families

¹ Provisional data, includes attempts and achievements by these pupils in previous academic years.
² The England average includes all schools, not only local authority maintained schools.

Table 6

Regional Skills Partnerships core indicators: by NUTS1 region

		Percentages									
Skills outcome indicators	Time period	North East	North West	Yorkshire and The Humber	East Midlands	West Midlands	East of England	London	South East	South West	England
Percentage of employers with business or training plan, or budget for training	2007	70.6	69.2	69.6	67.9	67.5	67.3	70.0	70.6	68.4	69.1
Percentage of staff with skill gaps	2007	6.3	5.3	4.8	6.8	5.4	7.8	6.7	5.8	6.2	6.1
Skill shortage vacancies (SSVI) as percentage of all vacancies	2007	18.8	17.6	20.1	20.2	15.5	19.6	26.1	22.5	20.9	20.9
Percentage of KS4 pupils achieving 5+ A* to C GCSE (inc Maths and English)	2007/08	44.9	47.4	44.4	47.0	46.1	50.3	50.6	51.7	49.2	47.6
Percentage of 19 year olds qualified to Level 2 or above ¹	2008	75.9	74.3	73.2	73.1	74.9	77.0	77.0	79.6	77.0	76.7
Percentage of 19 year olds qualified to Level 3 or above ¹	2008	43.7	46.1	44.4	46.0	46.9	52.4	51.9	56.9	51.0	49.8
Percentage of 19 to state pension age with Level 2+	2008	69.3	68.1	67.6	67.0	65.8	67.6	71.0	73.1	72.2	69.4
Percentage of 19 to state pension age with Level 3+	2008	46.9	47.1	47.1	46.3	45.2	46.5	55.0	53.7	51.7	49.5
Percentage of 19 to state pension age with Level 4+	2008	25.4	27.4	26.6	27.0	26.2	27.8	40.6	33.6	30.2	25.4
Percentage of 19 to state pension age with no qualifications	2008	13.2	14.4	12.9	12.8	15.6	11.5	11.6	8.5	8.4	11.9
Percentage of working-age population who undertook job-related training in last 13 weeks	2008	20.9	18.9	19.4	20.2	19.4	18.7	18.2	22.2	23.1	20.0
Percentage of 17 year olds in education or work-based learning	end-2007	78.0	77.0	74.0	74.0	78.0	77.0	86.0	77.0	77.0	78.0

Note:

1 Provisional data from DCSF matched datasets.

Source: Office for National Statistics; Labour Force Survey; Department of Business Enterprise and Regulatory Reform; Department for Children, Schools and Families; Department for Innovation Universities and Skills; National Employers Skills Survey 2007

Table 7

Employment¹ rates for persons of working age: by NUTS1 region

													Per cent, seasonally adjusted		
		United Kingdom	North East	Yorkshire				East of England	London	South East	South		Wales	Scotland	Northern Ireland
				North West	and the Humber	Midlands	West Midlands				England	West			
2006	Apr-Jun	74.6	71.6	73.2	74.2	77.0	73.9	77.0	69.7	78.9	78.6	74.9	71.3	74.7	69.9
	Jul-Sep	74.6	71.0	73.6	73.5	77.0	73.9	77.2	69.8	78.8	77.9	74.8	72.0	75.5	69.3
	Oct-Dec	74.5	70.9	72.8	73.7	76.5	73.0	77.0	70.0	78.7	78.2	74.6	71.8	76.2	69.9
2007	Jan-Mar	74.3	71.0	72.5	72.8	75.9	72.5	77.3	70.1	78.2	78.0	74.4	71.7	76.6	70.6
	Apr-Jun	74.5	71.4	72.6	73.3	76.0	72.7	77.4	69.7	78.5	78.1	74.5	72.1	77.0	70.6
	Jul-Sep	74.6	72.1	72.4	73.4	75.7	73.0	77.2	70.7	78.8	78.6	74.7	71.3	76.6	70.1
	Oct-Dec	74.8	71.6	72.8	73.7	75.8	73.3	78.1	70.4	78.9	79.3	75.0	71.6	76.6	69.9
2008	Jan-Mar	74.8	70.2	72.4	74.0	76.2	73.2	77.7	71.1	79.5	79.0	75.0	72.0	76.5	69.7
	Apr-Jun	74.7	70.2	72.2	73.4	75.7	72.5	77.7	71.5	79.4	78.8	74.8	72.6	76.5	70.1
	Jul-Sep	74.4	70.4	71.6	73.2	76.1	71.8	77.4	71.0	79.0	78.7	74.5	70.6	76.3	70.1
	Oct-Dec	74.1	70.1	71.0	72.3	76.2	71.8	77.5	71.6	78.7	78.1	74.3	70.7	75.4	68.8
2009	Jan-Mar	73.6	69.8	71.5	71.7	75.5	70.3	77.7	70.4	78.2	78	73.8	70.4	74.9	66.9
	Apr-Jun	72.7	67.3	71.1	71.2	75.2	70.3	76.9	68.9	77.3	76.7	73.0	69.7	74.0	65.6

Note:

1 Includes employees, self-employed, participants on government-supported training schemes and unpaid family workers.

Source: Labour Force Survey, Office for National Statistics

grades A* to C in subjects including English and Mathematics was substantially lower compared with achieving the same in any subjects. Also, regional differences were more pronounced when subjects included English and Mathematics. In the North East the percentage of pupils achieving five or more grades A* to C in any subjects was 2.6 percentage points above the England average, but the percentage dropped 1.9 points below the average when the subjects

included English and Mathematics. The opposite held for the South West, South East, and the East of England, where the proportion of pupils achieving at least five grades A* to C increased above the England average if the subjects included English and Mathematics while it dropped below national average for achieving five or more grades A* to C in any subject. London was the only region which performed above the national average on both measures.

The labour market

Table 7 shows the seasonally adjusted employment rate, the number of people of working age in employment, expressed as a proportion of the population, from the Labour Force Survey (LFS).

In quarter two (April to June) of 2009, the UK employment rate was 72.7 per cent, down 2.0 percentage points from a year ago and down 0.9 percentage points from quarter one (January to March) of 2009.

Table 8

Unemployment rates for persons aged 16 and over: by NUTS1 region

Per cent, seasonally adjusted

		United Kingdom	North East	North West	Yorkshire and the Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
2006	Apr-Jun	5.5	6.1	5.3	5.8	5.5	5.6	5.0	7.8	4.7	3.8	5.5	5.6	5.5	4.3
	Jul-Sep	5.5	6.7	5.5	6.0	5.3	6.1	4.8	7.8	4.5	3.8	5.6	5.4	5.0	4.7
	Oct-Dec	5.5	6.7	5.4	6.0	5.7	6.7	4.5	7.7	4.3	3.9	5.6	5.3	5.2	4.2
2007	Jan-Mar	5.5	6.8	5.8	6.3	5.5	6.5	4.8	7.1	4.7	4.0	5.6	5.6	4.9	4.1
	Apr-Jun	5.4	6.3	5.8	5.5	5.0	6.7	4.6	7.4	4.3	4.0	5.5	5.5	4.7	3.8
	Jul-Sep	5.3	6.1	6.0	5.4	5.7	6.4	5.1	6.1	4.5	4.0	5.4	5.3	4.8	3.8
	Oct-Dec	5.2	5.8	5.9	5.3	5.2	5.8	4.4	6.6	4.5	3.7	5.2	5.1	4.9	4.2
2008	Jan-Mar	5.2	6.5	6.0	5.0	5.5	6.2	4.5	6.9	3.9	3.7	5.3	5.4	4.6	4.6
	Apr-Jun	5.4	7.5	6.3	6.1	5.7	6.3	4.6	6.9	4.2	3.8	5.6	4.9	4.2	4.2
	Jul-Sep	5.8	8.0	6.8	6.8	5.9	6.5	4.8	7.4	4.6	4.2	6.0	6.7	4.7	4.1
	Oct-Dec	6.3	8.4	7.8	6.6	6.1	7.7	5.5	7.2	4.9	4.7	6.4	7.0	5.1	5.1
2009	Jan-Mar	7.1	8.3	7.9	8	7.1	9.3	5.9	8.2	5.3	5.7	7.2	7.7	5.9	6.1
	Apr-Jun	7.8	9.8	8.5	8.8	7.3	10.6	6.5	8.9	5.9	6.4	7.9	7.6	7.0	6.7

Source: Labour Force Survey

Table 9

Economic inactivity rates for persons of working age: by NUTS1 region

Per cent, seasonally adjusted

		United Kingdom	North East	North West	Yorkshire and the Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
2006	Apr-Jun	21.0	23.6	22.6	21.2	18.4	21.5	18.8	24.3	17.1	18.3	20.6	24.3	20.9	26.9
	Jul-Sep	21.0	23.9	22.0	21.7	18.6	21.2	18.8	24.1	17.5	18.9	20.7	23.8	20.5	27.2
	Oct-Dec	21.1	23.9	22.9	21.5	18.7	21.6	19.1	24.0	17.7	18.5	20.8	24.0	19.6	27.0
2007	Jan-Mar	21.2	23.7	22.9	22.2	19.6	22.3	18.6	24.4	17.9	18.6	21.1	23.9	19.4	26.3
	Apr-Jun	21.2	23.8	22.7	22.3	20.0	21.8	18.8	24.6	17.8	18.5	21.1	23.5	19.1	26.6
	Jul-Sep	21.1	23.1	22.9	22.4	19.6	21.8	18.5	24.6	17.4	18.0	20.9	24.5	19.4	27.0
	Oct-Dec	21.0	23.9	22.5	22.0	19.9	22.1	18.2	24.4	17.2	17.6	20.8	24.5	19.4	27.0
2008	Jan-Mar	20.9	24.8	22.8	22.0	19.2	21.7	18.5	23.5	17.1	17.9	20.7	23.8	19.6	26.9
	Apr-Jun	20.9	24.0	22.7	21.7	19.5	22.4	18.5	23.1	17.1	18.0	20.6	23.5	20.0	26.8
	Jul-Sep	20.9	23.3	23.0	21.2	19.0	23.0	18.6	23.2	17.2	17.7	20.6	24.2	19.8	26.9
	Oct-Dec	20.8	23.3	22.8	22.5	18.7	22.1	17.8	22.7	17.1	17.9	20.4	23.8	20.3	27.4
2009	Jan-Mar	20.7	23.7	22.2	21.9	18.5	22.3	17.3	23.2	17.2	17.2	20.3	23.5	20.2	28.6
	Apr-Jun	21.0	25.1	22.2	21.6	18.7	21.2	17.6	24.2	17.6	17.9	20.5	24.4	20.3	29.5

Source: Labour Force Survey

Table 10

Employee jobs:¹ by NUTS1 region

Thousands, not seasonally adjusted

		United Kingdom	North East	North West	Yorkshire and the Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
Jun-05		26,667	1,037	2,995	2,221	1,815	2,326	2,301	3,972	3,667	2,190	22,455	1,157	2,359	696
Jun 06		26,816	1,049	2,975	2,213	1,837	2,338	2,346	3,993	3,675	2,222	22,554	1,178	2,378	706
Jun 07		26,903	1,037	3,007	2,241	1,867	2,332	2,349	4,046	3,680	2,182	22,617	1,186	2,385	715
Jun 08		27,134	1,029	2,999	2,220	1,894	2,346	2,381	4,095	3,743	2,227	22,848	1,156	2,396	734
Sep 08		27,140	1,030	2,996	2,208	1,883	2,326	2,387	4,074	3,732	2,237	22,873	1,152	2,387	728
Dec-08		27,018	1,036	2,987	2,187	1,876	2,319	2,378	4,063	3,712	2,209	22,767	1,145	2,385	721
Mar 09		26,570	1,018	2,951	2,154	1,830	2,258	2,333	4,013	3,648	2,188	22,385	1,116	2,354	715
Jun 09		26,492	1,011	2,942	2,146	1,824	2,245	2,325	3,988	3,651	2,190	22,322	1,122	2,339	709

Note:

Source: Employer surveys

1 Employee jobs figures are of a measure of jobs rather than people. For example, if a person holds two jobs, each job will be counted in the employee jobs total. Employees jobs figures come from quarterly surveys of employers carried out by ONS and administrative sources.

Regional rates varied from 77.3 per cent in the South East to 65.6 per cent in Northern Ireland.

All UK regions experienced annual falls in the employment rate. The largest fall was in Northern Ireland at 4.5 percentage points while the smallest decrease was in the East Midlands at 0.5 percentage points.

Table 8 shows the unemployment rate (according to the internationally-consistent International Labour Organisation definition) for persons aged 16 and over from the LFS. The UK rate in the second quarter of 2009 was 7.8 per cent, up 2.4 percentage points from a year ago and up 0.7 percentage points on the last quarter. Regionally, the rates ranged from 10.6 per cent in the West Midlands to 5.9 per cent in the South East.

Over the year the unemployment rate rose in all regions. The West Midlands had an increase of 4.3 percentage points while the smallest increase was in the East Midlands at 1.6 percentage points.

Table 9 shows economic inactivity rates for persons of working age from the LFS. The UK rate in the second quarter of 2009 was 21.0 per cent, up 0.3 percentage points from the previous quarter and up 0.1 percentage point on a year earlier. Across the regions, rates varied from 17.6 per cent in both the South East and East of England to 29.5 per cent in Northern Ireland.

Compared with a year earlier, six

regions had a decrease in the inactivity rate, and thus a corresponding increase in the working-age activity rate. The West Midlands had the largest annual fall of 1.2 percentage points. Six regions had an increase in the economic inactivity rate over the year. The largest annual rise was in Northern Ireland with 2.7 percentage points.

Table 10 shows the number of employee jobs, not seasonally adjusted, from the Employers Surveys. The number of UK employee jobs was 26,492,000, a decrease of 642,000 over the year since June 2008. In percentage terms, this was a 2.4 per cent decrease.

There were annual decreases in all twelve regions. The largest percentage decrease was in the West Midlands (down by 4.3 per cent).

Table 11 shows the claimant count rate (referring to people claiming Jobseeker's Allowance benefits as a proportion of the workforce). The UK rate was 5.0 per cent in September 2009, up 0.1 percentage point from August 2009, and up 2.1 percentage points on a year earlier. This national rate masks large variations between regions and component countries of the UK. For September 2009, the North East had the highest claimant count rate in the UK at 7.3 per cent. The North East was followed by the West Midlands (6.7 per cent), and Northern Ireland (6.2 per cent). The lowest

claimant count was measured in the South East and South West (both 3.5 per cent). The claimant count rate was 4.7 per cent in Scotland, 5.0 per cent in England and 5.8 per cent in Wales.

All regions had an increase in the claimant count rate compared with a year ago. The largest increases were in Northern Ireland (2.8 percentage points) and the West Midlands (2.7 percentage points).

Notes

1. UK Regional Trade in Goods Statistics, Quarter 2 2009, HM Revenue and Customs at www.uktradeinfo.com/index.cfm?task=td_regstats_press
2. For a summary of all different levels of qualifications, see 'Notes and definitions' at www.statistics.gov.uk/statbase/product.asp?vlnk=836

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Table 11
Claimant count rates:¹ by NUTS1 region

												Per cent, seasonally adjusted			
		Yorkshire													
		United Kingdom	North East	North West	Yorkshire and the Humber	East Midlands	West Midlands	East of England	London	South East	South West	England	Wales	Scotland	Northern Ireland
2004		2.7	4.0	2.8	2.8	2.5	3.3	2.0	3.5	1.6	1.6	2.6	3.0	3.4	3.6
2005		2.7	3.9	2.9	2.9	2.5	3.4	2.1	3.4	1.6	1.6	2.6	3.0	3.2	3.3
2006		2.9	4.1	3.3	3.3	2.8	3.9	2.3	3.5	1.8	1.8	2.9	3.1	3.2	3.2
2007		2.7	4.0	3.1	3.0	2.6	3.7	2.1	3.0	1.6	1.6	2.7	2.8	2.8	2.8
2008		2.8	4.5	3.4	3.3	2.8	3.8	2.2	2.8	1.7	1.7	2.8	3.2	2.8	3.2
2008	Sep	2.9	4.7	3.6	3.6	2.9	4.0	2.4	2.9	1.8	1.9	2.9	3.4	3.0	3.4
	Oct	3.1	5.0	3.8	3.8	3.1	4.2	2.5	3.0	1.9	2.0	3.1	3.6	3.1	3.6
	Nov	3.4	5.3	4.1	4.1	3.4	4.5	2.7	3.2	2.2	2.3	3.3	4.0	3.3	4.0
	Dec	3.6	5.7	4.3	4.4	3.7	4.9	3.0	3.3	2.4	2.5	3.6	4.3	3.6	4.2
	Jan	3.9	6.0	4.6	4.7	4.0	5.2	3.2	3.5	2.6	2.7	3.8	4.7	3.7	4.5
	Feb	4.3	6.5	5.0	5.2	4.5	5.8	3.7	3.8	3.0	3.1	4.2	5.1	4.1	4.8
	Mar	4.5	6.7	5.2	5.4	4.7	6.0	3.9	4.1	3.1	3.3	4.5	5.3	4.2	5.1
2009	Apr	4.6	6.9	5.4	5.6	4.8	6.2	4.0	4.2	3.3	3.4	4.6	5.5	4.4	5.3
	May	4.7	7.0	5.5	5.7	4.9	6.3	4.1	4.3	3.3	3.4	4.7	5.5	4.5	5.5
	Jun	4.8	7.1	5.6	5.8	5.0	6.4	4.1	4.4	3.4	3.5	4.8	5.6	4.6	5.7
	Jul	4.9	7.2	5.6	5.9	5.0	6.5	4.2	4.5	3.4	3.5	4.8	5.6	4.7	5.9
	Aug	4.9	7.2	5.7	6.0	5.1	6.6	4.2	4.6	3.5	3.5	4.9	5.7	4.7	6.1
	Sep	5.0	7.3	5.8	6.0	5.1	6.7	4.3	4.7	3.5	3.5	5.0	5.8	4.7	6.2

Note:

1 Count of claimants of Jobseeker's Allowance expressed as a percentage of the total workforce - i.e. workforce jobs plus claimants.

Source: Jobcentre Plus administrative system

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