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Risks and opportunities for the low carbon economy

A sub-national and local analysis

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Risk and opportunities for the low carbon economy: a sub-national and local analysis

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1 Introduction

The West Midlands Regional Observatory has been delivering the evidence base for the Low Carbon economy in the West Midlands since 2008. Across our research we defined the Low Carbon economy as one where businesses deliver products and services while reducing their level of carbon emissions.

In early 2010 we published the report 'Low Carbon Economy in the West Midlands'. This report aimed to identify the economic risks and opportunities of growth into the Low Carbon economy. The approach of the research was not limited to the traditional 'green' or 'environmental' industries but across all of the West Midlands economic sectors.

The research identified those sectors that are more vulnerable to changes in carbon legislation and those sectors offering the greatest opportunities across the West Midlands and the 14 strategic local authorities.

The aim of this report is to identify the proportion of businesses and employment across the risk and opportunity sectors for the low carbon economy at a sub-national and local level. We are interested in benchmark the following:

- a. The West Midlands' current position with the rest of the English regions.
- b. The current position of the 14 strategic local authorities in the West Midlands with the rest of the local authorities in England.

The research questions we are aiming to respond are the following:

- What is the proportion of businesses and employment at a sub-national level for the sectors at risk of changes in carbon legislation?
- For the sectors at risk, is the West Midlands at a disadvantage when compared to the other regions?
- What is the proportion of businesses and employment at a local level for the sectors vulnerable to changes in carbon legislation?
- For the sectors at risk, are the local authorities in the West Midlands at a disadvantage when compared to the rest of the local authorities in England?
- What is the proportion of businesses and employment at a sub-national and local level across the opportunity sectors?
- What is the relative position of the West Midlands and its local authorities across the opportunity sectors?

2 Risks

2.1 Introduction

The research 'Low Carbon Economy in the West Midlands'¹ identified the following sectors as the ones to be affected by carbon reduction policies, mainly energy-intensive sectors:

- Health and social work
- Transport and communications
- Education
- Construction
- Food and drink manufacture
- Electricity, gas and water supply
- Mineral products manufacture
- Chemicals manufacture
- Transport equipment manufacture

These sectors were identified from a qualitative assessment conducted by URS². They classified all economic sectors across three levels based on their vulnerability to changes in carbon legislation: high, medium and low.

Our analysis focuses only on those sectors that were classified as having a high level of vulnerability to carbon constraints.

The rest of this section will analyse the proportion of businesses and employment for the four sectors listed above at a sub-national and local level.

2.2 Sub-national benchmarking

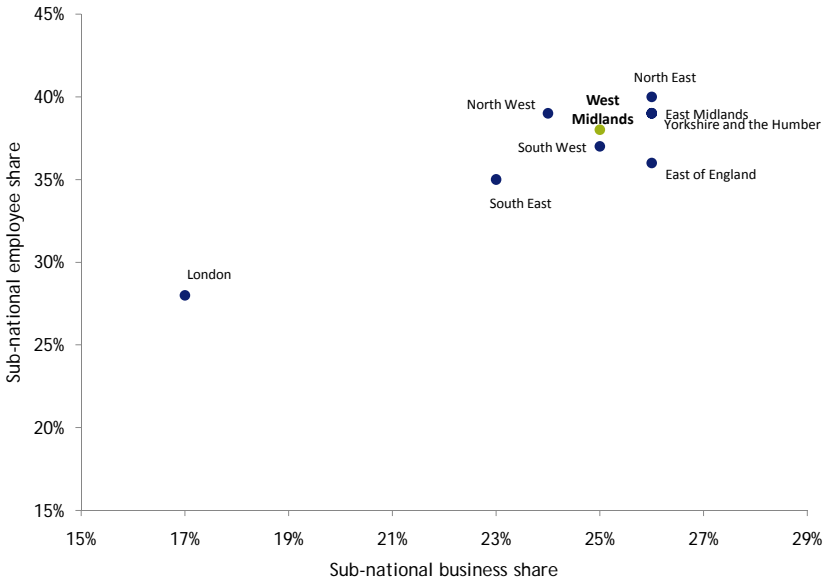
¹ West Midlands Regional Observatory (2010) *Low Carbon Economy in the West Midlands*, WMRO

² Detail of this assessment can be found in URS (2007) '*Low Carbon Evidence Base for the West Midlands Regional Economic Strategy*' section 4, pp.37-39.

Figure 1 shows the relative position of the English regions based on two variables for the sectors at risk of carbon constraints: employment share and business share³. The greater both proportions the more at risk the region will be. This is because it will have a higher level of employment and businesses in sectors more vulnerable to carbon constraints.

For the West Midlands, 25 percent of its businesses and 38 per cent of its employment fall within the sectors identified as vulnerable to carbon constraints.

Figure 1: Vulnerable sectors¹ at sub-national level (2008)



¹ Health and social work, Transport and communications, Education, Construction, Transport equipment manufacture, Food and drink manufacture, Electricity, gas & water supply, Mineral products manufacture and Chemicals manufacture
 Source: Annual Business Inquiry, analysis prepared by WMRO

The West Midlands has a relatively stronger position compared to three regions: North East, East Midlands and Yorkshire and the Humber. However, the difference between eight of the English regions is only 3 percentage points for business units and 5 percentage points for employment.

2.3 Local benchmarking

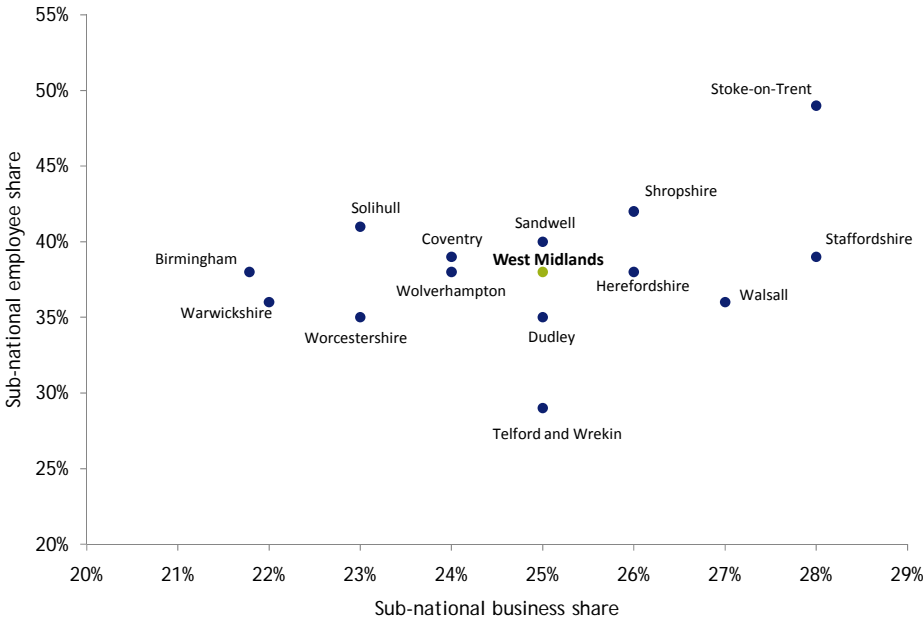
Figure 2 shows the relative position of the local authorities in the West Midlands⁴. The chart highlights the range of dispersion between local authorities. Eight local authorities are in a relative stronger position than the West Midlands (Birmingham, Warwickshire, Worcestershire, Solihull, Coventry, Wolverhampton, Dudley and Telford and Wrekin).

³ For clarity purposes, note that the axis does not cross at the origin.
⁴ For clarity purposes, note that the axis does not cross at the origin.

The local authority most vulnerable is Stoke-on-Trent. It has the highest share of employment and businesses in vulnerable sectors.

This figure is also a good example of why a local analysis is necessary. The difference between Stoke-on-Trent and Telford and Wrekin is three percent points in terms of business share and 20 percent points in terms of employment.

Figure 2: Vulnerable sectors¹ at local authority level for the West Midlands (2008)



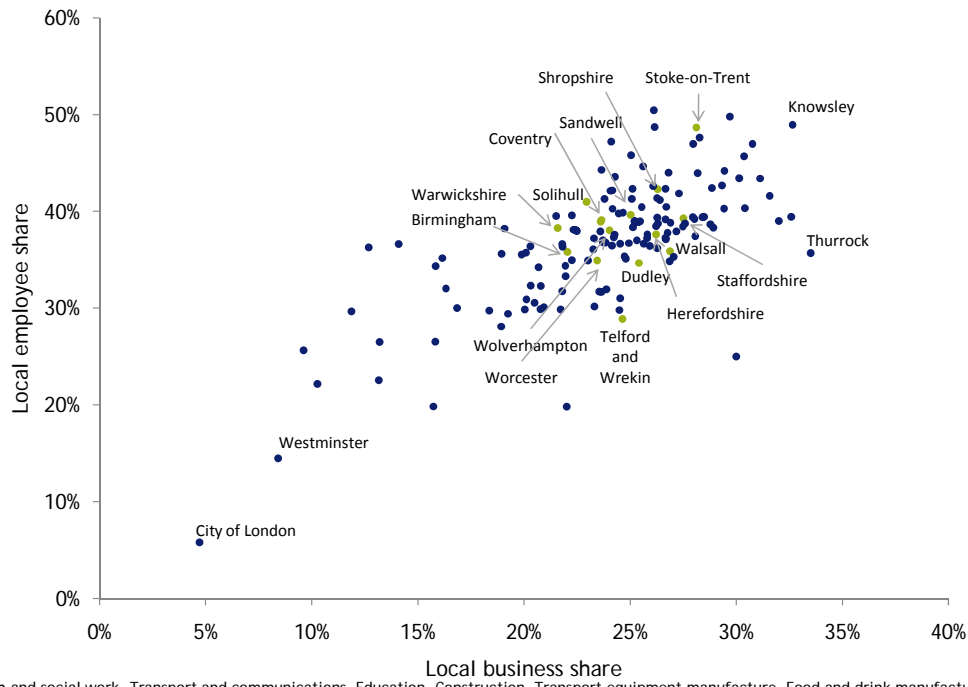
¹ Health and social work, Transport and communications, Education, Construction, Transport equipment manufacture, Food and drink manufacture, Electricity, gas & water supply, Mineral products manufacture and Chemicals manufacture
 Source: Annual Business Inquiry, analysis prepared by WMRO

Finally we also compared the relative position of the West Midlands’ local authorities with the rest of the authorities in England (see figure 3).

To show the relative position of the local authorities in the West Midlands these are highlighted in green and labelled. Stoke-on-Trent is positioned towards to top right corner of the chart (that area contains those local authorities most vulnerable). However, there are other local authorities with greater proportions of businesses and employees in vulnerable sectors, such as Knowsley (North West) and Thurrock (East of England).

City of London and Westminster are the two local authorities with the strongest relative position.

Figure 3: Vulnerable sectors¹ at local authority level in England (2008)



¹ Health and social work, Transport and communications, Education, Construction, Transport equipment manufacture, Food and drink manufacture, Electricity, gas & water supply, Mineral products manufacture and Chemicals manufacture
 Source: Annual Business Inquiry, analysis prepared by WMRO

3 Opportunities

3.1 Introduction

The research 'Low Carbon Economy in the West Midlands'⁵ identified the following 11 sectors as the ones offering the greatest opportunities around the low carbon economy:

- Business services (including finance & insurance)
- Construction
- Environmental goods and services
- Farming, food and drink
- Manufacture of motor vehicles and transport equipment*
- Manufacture of metals, machinery & equipment and electrical equipment
- Manufacture of non-metallic mineral products (glass & ceramics)
- Public sector services (incorporating education, health & social work and public administration & defence)
- Tourism & leisure
- Transport, storage & communications
- Wholesale & retail trade

Even though these sectors were identified for the West Midlands, we believe that comparing with the other regions and local authorities can still be useful to identify the West Midlands' current relative position.

The rest of this section will analyse the proportion of businesses and employment for the 11 sectors listed above at a sub-national and local level.

3.2 Sub-national benchmarking

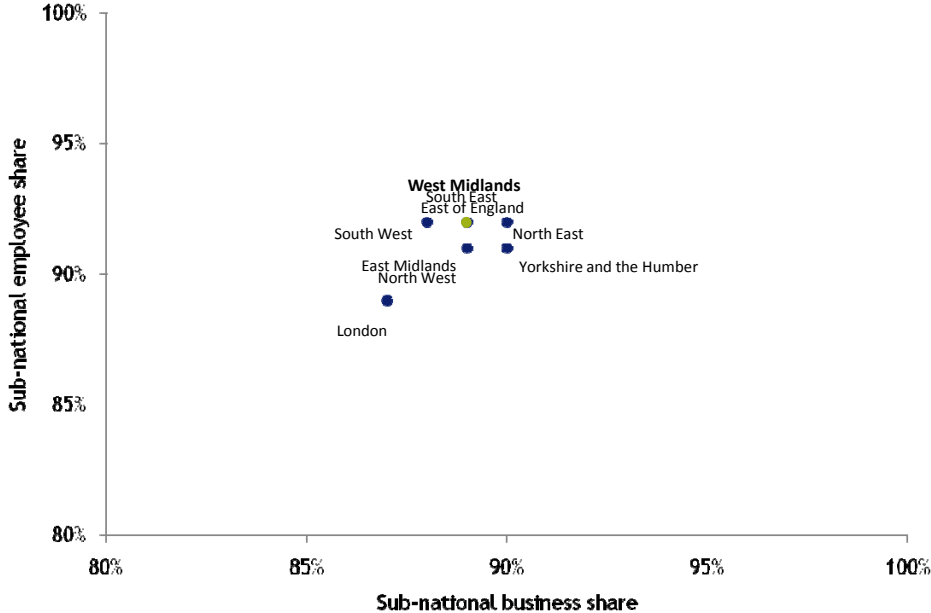
Figure 4 shows the relative position of the English regions based on two variables for the low carbon opportunity sectors: employment share and business share⁶. The greater both proportions the greater the opportunities will be for each region.

⁵ West Midlands Regional Observatory (2010) *Low Carbon Economy in the West Midlands*, WMRO

⁶ For clarity purposes, note that the axis does not cross at the origin.

For the West Midlands, 92 percent of its employees and 89 per cent of its businesses belong to the sectors identified as low carbon opportunities.

Figure 4: Opportunity sectors¹ at sub-national level (2008)



¹ Business services (including finance & insurance), Construction, Environmental goods and services, Farming, food and drink, Manufacture of motor vehicles and transport equipment, Manufacture of metals, machinery & equipment and electrical equipment, Manufacture of non-metallic mineral products, Public sector services, Tourism & leisure, Transport, storage & communications, Wholesale & retail trade
 Source: Annual Business Inquiry, analysis prepared by WMRO

The West Midlands has a relatively stronger position compared to four regions: North West, South West, East Midlands and London. However, the difference between the regions is only 3 percentage points for number of business units and 4 percentage points for employment.

3.3 Local benchmarking

Figure 5 shows the relative position of the local authorities in the West Midlands⁷ for the opportunity sectors. The chart highlights the dispersion range between local authorities. Four local authorities are in a relative stronger position than the West Midlands (Wolverhampton, Solihull, Coventry, and Staffordshire).

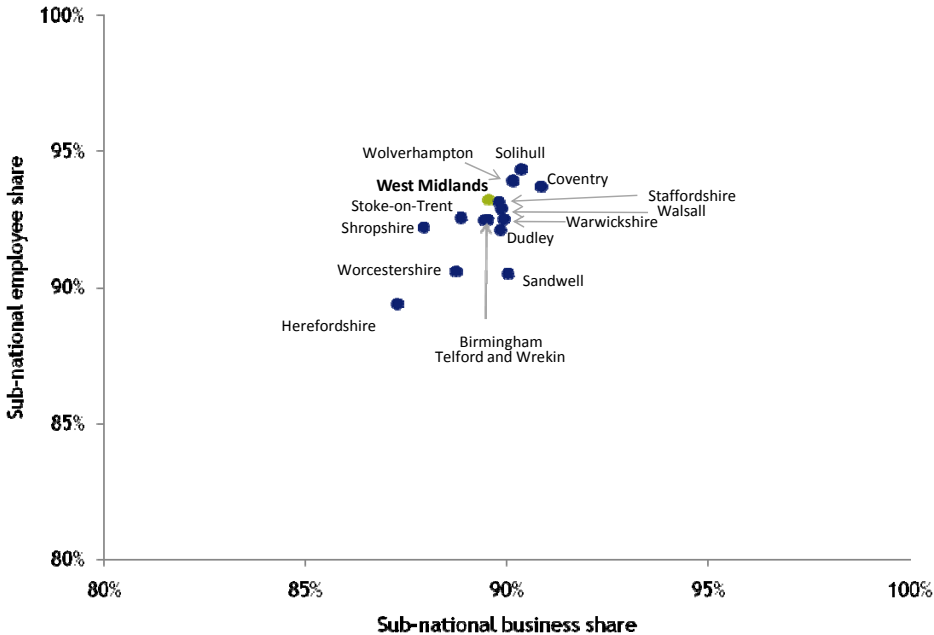
The local authority in the West Midlands with the lowest proportion of employees and business units in opportunity sectors is Herefordshire. However, these proportions are still relatively high (87 percent of businesses and 89 percent of employees).

⁷ For clarity purposes, note that the axis does not cross at the origin.

The local authority with the highest proportion of employees in opportunity sectors is Coventry 91 percent. The local authority with the highest proportion of employees in the low carbon opportunity sectors is Solihull with 94.3 percent.

The difference between local authorities with the greatest opportunities (Coventry and Solihull) and Herefordshire is 4 percentage points for number of business units and 5 percentage points for employment.

Figure 5: Opportunity sectors¹ at local level for the West Midlands (2008)



¹ Business services (including finance & insurance), Construction, Environmental goods and services, Farming, food and drink, Manufacture of motor vehicles and transport equipment, Manufacture of metals, machinery & equipment and electrical equipment, Manufacture of non-metallic mineral products, Public sector services, Tourism & leisure, Transport, storage & communications, Wholesale & retail trade
Source: Annual Business Inquiry, analysis prepared by WMRO

Figure 6 below shows the relative position of the West Midlands’ local authorities with the rest of the authorities in England in relation to the opportunity sectors⁸.

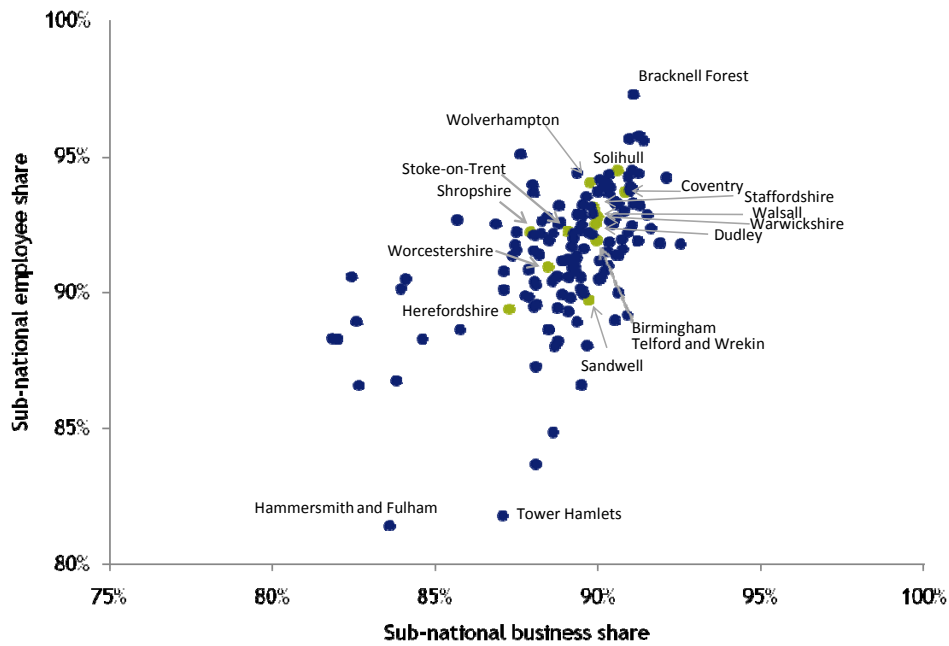
To show the relative position of the local authorities in the West Midlands these are highlighted in green and are labelled. Solihull and Coventry are positioned towards the top right corner of the chart (that area contains those local authorities with the greatest opportunities).

The local authority with the greatest opportunities is Bracknell Forest in the South East. However, Wolverhampton, Solihull and Coventry are not far behind.

Hammersmith and Fulham and Tower Hamlets are the two local authorities with the lowest proportion of employment and businesses in low carbon opportunity sectors. These two local authorities are part of London.

⁸ For clarity purposes, note that the axis does not cross at the origin.

Figure 6: Opportunity sectors¹ at local level in England (2008)



¹ Business services (including finance & insurance), Construction, Environmental goods and services, Farming, food and drink, Manufacture of motor vehicles and transport equipment, Manufacture of metals, machinery & equipment and electrical equipment, Manufacture of non-metallic mineral products, Public sector services, Tourism & leisure, Transport, storage & communications, Wholesale & retail trade
 Source: Annual Business Inquiry, analysis prepared by WMRO

4 Conclusions

The benchmarking analysis highlights the following:

1. The proportion of businesses and employees in opportunities sectors is considerable higher than those in risk sectors. This is true for both levels, sub-national and local.
2. The proportion of employees and businesses in risk sectors in the West Midlands is lower than three other English regions. In terms of the opportunity sectors, the West Midlands' proportions of employees and businesses are greater than four other English regions.
3. At a local level, the dispersion between the West Midlands' local authorities is greater in the risk sectors than in the opportunity ones.
4. Knowsley and Thurrock, the local authorities with the greatest level of risk, don't belong to the West Midlands. In the West Midlands, Stoke-on-Trent is the local authority with the greatest proportion of employees and businesses in risk sectors.
5. The local authority with the greatest opportunities in England, Bracknell Forest belongs to the South East. In the West Midlands, Solihull and Coventry are the local authorities with the greatest proportion of employees and businesses across the opportunities sectors respectively.

The analysis and its findings suggest that the West Midlands has no obvious disadvantage in terms of moving towards the low carbon economy.

Full document information

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