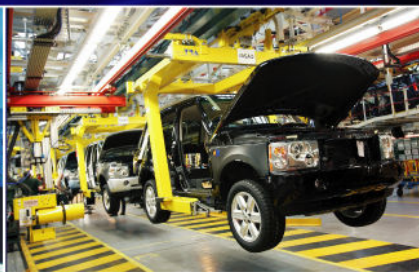
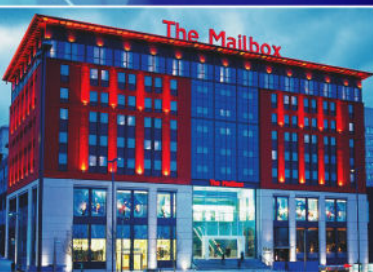




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## **The Functioning Economic Geography of the West Midlands**

## Document Information

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# Foreword

The West Midlands Regional Observatory (WMRO) was appointed by Advantage West Midlands to carry out three pieces of research (which have been called themes) which form a significant part of the evidence base for the review of the West Midlands Economic Strategy (WMES). The work uses existing data sources to analyse three important aspects of the regional economy. The three themes and the aspects they seek to analyse are: **Theme 1: Regional Economic Context** which looks at projections of the future for the region as a whole. **Theme 2: Drivers of Productivity**, which involves requires a detailed analysis of the region's current economic performance, and **Theme 3: Functioning Economic Geography**.

WMRO has chosen to work with academics from the region's universities on each theme in this project. We have done this in part because of their expertise in the fields under investigation and the credibility that they will add, but also because they can take the analysis further than WMRO alone could do under its remit to remain independent and focused solely on data and intelligence.

The brief for Theme 3 asked us to focus on spatial patterns within the regional economy. In particular we were asked to undertake a structured examination of the economic geography of the region, with data collected to:

- Examine the functioning regional geographical context, existing variations and patterns of the manner in which individuals/ groups operate within the West Midlands (with national and wider links).
- Examine the distinctiveness of the different parts of the region (including urban and rural areas) and the links between them;
- Identify and explain the characteristics and causes of these 'functioning geographic economies' and the challenges and opportunities for them.

We have asked the department of Geography, Earth and Environmental Sciences (GEES) at Birmingham University to lead this work for us.

In addition to commissioning the three themes, WMRO have developed a summary of the outcomes, creating an integrated overview of the important issues raised in the evidence base. We have also reflected comments from regional stakeholder gathered during our consultations on this work. Collectively the output from this work forms the evidence base for the next stage of the WMES review, that of formulating and analysing policy options. It is expected that this next stage will involve the commissioning of additional research possibly to further investigate issues raised during our work.

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# Executive Summary

## 1. Introduction

In April 2006 Advantage West Midlands (AWM) appointed the West Midlands Regional Observatory (WMRO) to undertake a review of the functioning economic geography of the West Midlands. The study is intended to contribute to the review of the Regional Economic Strategy (RES) by providing a detailed account of the current and recent functioning of the intra-regional economies of the West Midlands. The study had six aims:

- 1.1. Describe and explain the functioning relationships within the economic geography of the region and the attendant strengths and weaknesses.
- 1.2. Describe and explain the existence and effects of national and international links upon the regional economy.
- 1.3. Describe and explain the distinctiveness of the different parts of the region and the links between them.
- 1.4. Identify and explain the reasons for any patterns and their implications.
- 1.5. Examine the relevance of the competing views that the region is polycentric, that it is a city region; or that it is a blend of both these concepts (e.g. a polycentric city-region).
- 1.6. Identify the challenges that the region's economic geography create for policy formulation.

## 2. Methodology

The project's methodology was designed to support an evidence-based analysis of key dimensions of the regional economy is developed to inform discussion and consultation on the Regional Economic Strategy. The following were used to support the analysis

- 2.1 National and regional datasets were consulted to develop an analytic framework that included the following elements: skill levels, new firm formation and the geography of a range of industrial sectors.
- 2.2 No data was available on intra-regional connections.
- 2.3 Data for England are used in the development of comparator statistics.
- 2.4 The massive detail available from the Standard Industrial Classification (SIC) has necessitated data compression or, in other words, the amalgamation of SIC codes.
- 2.5 Location quotients (LQs) have been used to identify local concentrations of activities. The Location Quotient is a well known and used analytical tool for identifying concentrations of economic activity by sector and place. This LQ compares a local economy to a reference economy and in the process attempts to identify specializations in the local economy

## 3. The Economy of the West Midlands

The West Midlands is a complex economic region which is far wider than the Birmingham economy, though Birmingham is a major player within it. Some of the region's primary characteristics that form the backdrop to the analysis are as follows:

- 3.1 2.6 million are employed within the region.

- 3.2 The employment base continues to be associated with the metal industries, and the main sectors of production are; automotive, plastics and rubber, software, food and drink, electronics and telecommunications, and business services.
- 3.3 Over half of the region's GVA and employment are in three sectors; (1) manufacturing, (2) real estate, renting and business activities, and (3) wholesale and retail.
- 3.4 Manufacturing continues to be under threat as employment and GVA in manufacturing declines. In contrast, employment and GVA in finance and business services are growing. GVA per capita is low in rural areas but Solihull and Birmingham outperform the national average.
- 3.5 There are significant variations within the region in the composition of activities. This compositional issue has important policy consequences. It is important not to let large business closures mask the potentially even greater cumulative job loss from large numbers of SME closures.
- 3.6 There is a skills deficit in the region, especially among sections of the population in the Black Country, Birmingham and Solihull.
- 3.7 Access to finance is a major issue in addressing the region's enterprise deficit. CDFIs have been selected to deliver finance to enterprise in the region. The 9 that currently operate do not give full regional coverage.

#### 4. The E<sup>3</sup>I belt

From the analysis it is readily apparent that the spatial patterning of economic activity in the West Midlands region is shifting away or expanding from Birmingham and the Black country to a belt that encircles the conurbation. This is an important point as it highlights the complexity of the region's functioning economic geography. The belt has the following characteristics:

- 4.1. This belt lies between 20km and 40 km from the conurbation and includes Stratford on Avon, Warwick, Lichfield, Cannock, Bridgnorth, and Bromsgrove.
- 4.2. Within the belt there is an important differentiation of activities from centre to centre. This means that the region has developed an increasingly polycentric structure. This structure is being extended by innovative activity that is occurring in centres beyond the belt including Newcastle under Lyme, Stafford, Telford, Malvern, and Worcester.
- 4.3. The emergence of the belt reflects a combination of factors including lifestyle, accessibility, quality of environment, as well as the existence and development of a range of innovative manufacturing and business and professional service activities. That environment is more than the physical environment it is also the commercial environment of those places.
- 4.4. The belt combines 'economic', 'entrepreneurial', 'environmental' and 'innovation' factors and is more conveniently labelled the **E<sup>3</sup>I belt**.
- 4.5. The West Midlands is underperforming in terms of new firm formation. Rates are lowest in the conurbations and highest in the south east of the region and in significant sections of the **E<sup>3</sup>I belt**.
- 4.6. Location quotients show concentrations of people with higher qualifications in sections of the **E<sup>3</sup>I belt**.
- 4.7. The identification of the **E<sup>3</sup>I belt** raises a number of important questions:
  - a) Is the belt's formation related to a set of distinctive economic and social drivers that have encouraged economic activity in this area?

- b) What has been the role of former and current economic and planning policies in the formation of the belt?
- c) What are the enablers and barriers driving concentrations of skills and high new firm formation rates in the belt?
- d) Is it possible to replicate the drivers that exist in the belt elsewhere in the region?
- e) In what ways should policy enable or constrain the development of the belt?
- f) What is the relationship between the belt and existing economic spatial strategies, for example the corridor and cluster policies?
- g) What does the existence of the belt mean for the on-going development of the Regional Spatial Strategy (RSS) and for the Regional Economic Strategy (RES)?
- h) In what ways is the **E<sup>3</sup>I belt** facilitated by the RSS and RES?
- i) In what ways does the RSS and the RES facilitate and enable the developing regional polycentric structure?

## **5. Agriculture and Agri-business**

Agriculture and Agribusiness are important sectors of the West Midlands economy that comprise a diverse agriculture sector and a significant number of food and drink businesses. A number of issues are highlighted in the report including:

- 5.1. Variable land quality and the concentration of the highest quality land in Herefordshire and Worcestershire. The a high proportion of the region's soil have the potential to suffer from soil erosion.
- 5.2. The region's agriculture base must respond to any alterations to the Common Agricultural Policy (CAP).
- 5.3. The majority of farms in the regions are experiencing financial problems.
- 5.4. An important factor in the agricultural economy concerns the monopoly position of supermarkets and large companies in buyer driven supply chain.
- 5.5. Some agri-business in the region benefits from having a global reputation as well as global reach, but the growing concentration of ownership in the industry is a potential threat as is the danger that firms orientate their activities away from the regional economy.
- 5.6. Agriculture in the region has a locational advantage related to the role the region plays as the logistics hub for the UK.

## **6. Manufacturing and Production**

The West Midlands region is the UK's industrial heartland, where manufacturing is more important within the economic structure than in any other region in the country. The following are some of the important characteristics of the region's manufacturing base that explored in the report:

- 6.1. As a whole, the region's production sectors have been in significant decline in terms of employment and GVA since the late 1990s.
- 6.2. In the past the region has been seen as a metal manufacturing complex of linked industries along a production chain from metals production to finished goods. An important question is whether this complex is built on external economies of scale and efficiency, or on a behavioural relationships involving imitation that is 'easier' rather than more efficient.

- 6.3. In the face of globalization the region faces an enterprise deficit and a skills deficit, especially in the conurbations.
- 6.4. There is evidence to suggest that there IS NOT an innovation deficit in the region as a whole.
- 6.5. Recent research suggests high-end manufacturing may be the source of future growth. Some corporate organisations are shedding jobs but keeping skill-based activities and research and design in the region. Equally SMEs in niche metal manufacturing are building business on quality service, technology and speed. A threat to this growth is from the ageing and future retirement of the skilled labour force.
- 6.6. A distinctive spatial patterning has accompanied the restructuring and change of manufacturing and production in the region. While metals and the lower levels of the production system remain in the conurbation (essentially the Black Country), higher levels are moving to the **E<sup>3</sup>I belt**
- 6.7. Sectors demonstrating the regions' innovative capacity are also concentrated in the **E<sup>3</sup>I belt**, especially Solihull, Warwick, Lichfield, Bridgnorth, Cannock, Bromsgrove. These activities are also found in significant pockets beyond the belt including Malvern, Telford, Stafford and Newcastle-under-Lyme.

## 7. Business and Professional Services

During the 20<sup>th</sup> century the employment structure of the developed market economies shifted from manufacturing to service employment. This shift has been a feature of the West Midlands economy since the 1940s, but the region is yet to match the shift experienced at the national level. The West Midlands has a major concentration of BPS firms located in central Birmingham, complemented by a secondary grouping located in the **E<sup>3</sup>I belt**. The following issues are explored in the report:

- 7.1. There is significant dispersal of BPS that also incorporates an east-west distinction between a well-served east and a less diverse and probably under-provided western half of the region.
- 7.2. The identification of a partial **E<sup>3</sup>I belt** of BPS activity surrounding the conurbation and the development of the BPS corridor towards the South East of the region. This pattern of economic geography reflects the continued development of BPS activity beyond the confines of the conurbation.
- 7.3. The development and identification of a segmentation approach to understanding the geography of BPS in the West Midlands. This draws attention to difference between the business models of individual firms and their resultant geographies.
- 7.4. The three market segments are:
  - a) *Heavily localised small firms* service a local need by providing generic or general expertise, for example small local accountancy firms, predominately targeted at individuals as well as small and medium-sized enterprises (SMEs).
  - b) *Cross-region (or regionalised) firms* operating from more than one site within the West Midlands.
  - c) *National/international firms* provide services from the West Midlands to regional, national and international markets. A significant proportion of these organizations are branch offices which exposes the region to risk related to external control.
- 7.6. Segmentation also occurs by business model rather than geography:



- a) Firms *that think and act locally*;
- b) A select and small number of BPS firms in the region are servicing local demand whilst simultaneously, and increasingly, *proactively* developing strategies to attract national and international clients.
- c) There are a small number of BPS firms that *react* to the activities of key clients. These firms are in effect forced to provide services to existing clients that have expanded beyond the West Midlands.

## 8. Logistics

The developing economic geography of the West Midlands has been facilitated by the existence of a good strategic transport network that is based upon the motorways. The motorway network is central to understanding the functioning economic geography identified in this report. The road network to the south of the region has played a critical role in attracting economic activity to this area. It is important to note that the good strategic transport infrastructure network is partially undermined by a poor local transport network. Logistics forms an important element of the regional economy:

- 8.1. Logistics employs 185,000 in the region, and this number is set to expand with the expansion of the M6 corridor and the addition of a second runway at Birmingham International Airport which will boost employment by at least 17,000 by 2030.
- 8.2. The sector suffers a skills shortage in terms of (a) drivers, (b) administrators and (c) unskilled operators who are insufficiently literate or numerate.
- 8.3. New logistics operations are currently being attracted to the M6 corridor.
- 8.4. The sector is significantly boosting the economic strength of sections of the **E<sup>3</sup>I belt** and centres along the M6 corridor, including Newcastle under Lyme.

## 9. Conclusion

Our research has identified that the West Midlands is developing a polycentric economy which has a distinctive economic geography related to local specialisms. The region is more than just the Conurbation (Birmingham, Black Country and Solihull) and perhaps the correct regional descriptor is a region that contains a major Conurbation, a second conurbation (North Staffordshire), and the City of Coventry each with its own economic linkages and dependant commuters, and other significant though smaller centres of economic activity (for example, Shrewsbury and Telford, Hereford, Rugby, Worcester and Bromsgrove) and adjacent and related areas. The West Midlands is a polycentric region with the largest centre being Birmingham. This presents a challenge for the way in which the Our City Region<sup>1</sup> idea is developing. It is important to note that the area included within the Our City Region has a polycentric economy and that this economic structure needs to be supported by a flexible policy framework. Part of the challenge is to ensure that joined-up policy development occurs that spans intraregional administrative boundaries.

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<sup>1</sup> 'Our City Region' is a proposal for the creation of a City Region that would consist of Birmingham, the Black Country, Solihull, Coventry and Telford.

The following are important key findings of our analysis:

- 9.1. There is a continuous and continuing process of restructuring throughout the West Midlands region and within key industrial sectors.
- 9.2. There is a new spatial patterning of production developing within the region with a number of important elements:
  - a) Decline of the Black Country manufacturing sectors
  - b) The continued contraction of the automotive complex in Coventry and the south east of the region.
  - c) Extension of manufacturing from the conurbation into a surrounding 20km to 40km **E<sup>3</sup>I belt**.
  - d) Development of BPS within Birmingham City Centre as well as in the **E<sup>3</sup>I belt** surrounding the conurbation.
  - e) R&D capacity is concentrated in sections of the **E<sup>3</sup>I belt**, especially in and around Warwick, Stratford, and the Malvern Hills.
  - f) Within the **E<sup>3</sup>I belt** activities are differentiated from centre to centre, generating and enhancing polycentricity.
  - g) EU agricultural reform and buyer-drive supply chains continue to threaten production in the primary agricultural sub-regions (Herefordshire, Shropshire and Worcestershire).
  - h) As in the past, the future competitiveness of the West Midlands will be partly based on sets of new and emergent industries, established industries, and an increasingly complex division of labour. These processes have already led to the rise of business and professional services since the late 1970s. Some the new and emergent industries are obscured by the Standard Industrial Classification and appear as 'Miscellaneous Manufacturing n.e.c'. The growth of this sector in sections of the **E<sup>3</sup>I belt** and the South West quadrant are very clear in the analysis. It is important that further detailed research is undertaken to explore the dynamics of this complex sector and this research should begin to unravel the dynamics of enterprise in this quadrant.
- 9.3. Not all metal manufacturing is in decline. On-going research being undertaken at GEES suggests that niche metal manufacturers are disengaging from the automotive supply chain and entering new markets with high quality and design-rich products, but they are experiencing major skill shortages. These facets of the region's enterprise seedbed should not be confused with declining, low-tech and unprogressive businesses. They need to be identified and fostered by policy.
- 9.4. What is evident from the spatial patterning is a emergent economic geography of R&D to the southeast and west conurbation, facilitated by the motorway network, specifically the M50, M5 and the M40. This is a major threat as well as opportunity.
- 9.5. In an increasingly knowledge- or expertise-driven economy, the long-term competitiveness of the region will be undermined by widely recognised skills shortages (Bryson, et al, 2004; Daniels and Bryson 2006). These impact on all sectors of the economy. Across all the metal industries and in logistics there is a shortage of skilled labour that is able to support high-value added niche manufacturing. Within BPS key skills shortages have been identified by Daniels and Bryson (2006) especially in relation to soft skills that support the commercial exploitation of technical expertise. There is a need for the LSC and the FE and HE sectors to produce more

people with the requisite skills to add value with a knowledge- and skill-driven/demanding economy. This issue should be at the core of any regional policy framework.

- 9.6. The skills deficit needs tackling in collaboration with employers, and courses need to respond to the changing skill demands. In this context the qualification is less important than the attainment of commercially viable skill sets.
- 9.7. The emergence of service offshoring is a serious threat to the future growth of business and professional services in the region.

# 1. Introduction

In April 2006 Advantage West Midlands (AWM) appointed the West Midlands Regional Observatory (WMRO) to undertake a review of the functioning economic geography of the West Midlands. To undertake this analysis WMRO entered into a partnership with the Services and Enterprise Research Unit (SERU) of the School of Geography, Earth and Environmental Sciences, The University of Birmingham. The study is intended to contribute to the review of the Regional Economic Strategy (RES) by providing a detailed account of the current and recent functioning of the intra-regional economies of the West Midlands.

The study had six aims:

1. Describe and explain the functioning relationships within the economic geography of the region and the attendant strengths and weaknesses.
2. Describe and explain the existence and effects of national and international links upon the regional economy.
3. Describe and explain the distinctiveness of the different parts of the region and the links between them.
4. Identify and explain the reasons for any patterns and their implications.
5. Examine the relevance of the competing views that the region is polycentric, that it is a city region; or that it is a blend of both these concepts (e.g. a polycentric city-region).
6. Identify the challenges that the region's economic geography create for policy formulation.

The context of the study was the desire by AWM to produce an evidence-based analysis of key dimensions of the regional economy that could inform discussion and consultation throughout the region regarding the review of the RES. On the one hand, SERU were requested to explore competing ways of conceptualising regional economies – polycentric and city-region approaches. On the other hand, the analysis had to provide an evidence-based analysis of the economic geography of the region. The SERU approach has been to explore the evidence-base without taking into consideration either of these approaches and perhaps more importantly ignoring in the initial stages of the project some of the primary pillars of the RES. This approach ensures that the analysis in this report has been driven by a concern with understanding the workings of the economy without trying to test the effectiveness of the current regional policy framework. *Thus, the report is not an evaluation of regional policy, but rather provides an evidence-base that can be used to modify existing policies or develop new policies.*

We appreciate that it is impossible to meet these aims and objectives in full as to do this would involve the production of a full working model of the regional economy which is of course impossible. Neither are we able to distil encyclopaedic detail on every place or industrial activity. What we are attempting to achieve is to paint a picture of the complexity of the processes and dynamics acting across and linking the very different places that comprise the regional economy. We necessarily have to paint with a broad brush.

A key feature of this report is the emphasis that is placed on understanding the relationships or interdependencies that exist between different elements of a regional economic system. This is not to imply that all economic activities located in the West Midlands are directly or completely integrated into the regional production system; some firms may be located in the Midlands with the majority of their business activities being based outside the regional economy. This provides a basic division within a regional economy between firms targeting local demand and those that are trying to disengage or break-out from the constraints as well as risks associated with being overtly dependent on one region.

The remainder of the report is structured into nine sections:

The second section provides an overview of the West Midlands region. This is followed by an account of the methodology implemented to provide an evidence base to support the argument that is developed in this report. Section four explores key dimensions of the regional economy including the shift towards service employment, new firm formation, the regional skills gap and access to finance. Section five provides a short introduction to the geography of economic activity. This is followed by four sections (6-9) that each provides a detailed analysis of a sub-sector of the regional economy: agriculture and agribusiness, manufacturing, business and professional services and transport and logistics. Section ten draws together the key findings of this research and identifies the challenges and opportunities that result from the analysis.

## 2. Introduction to the Region

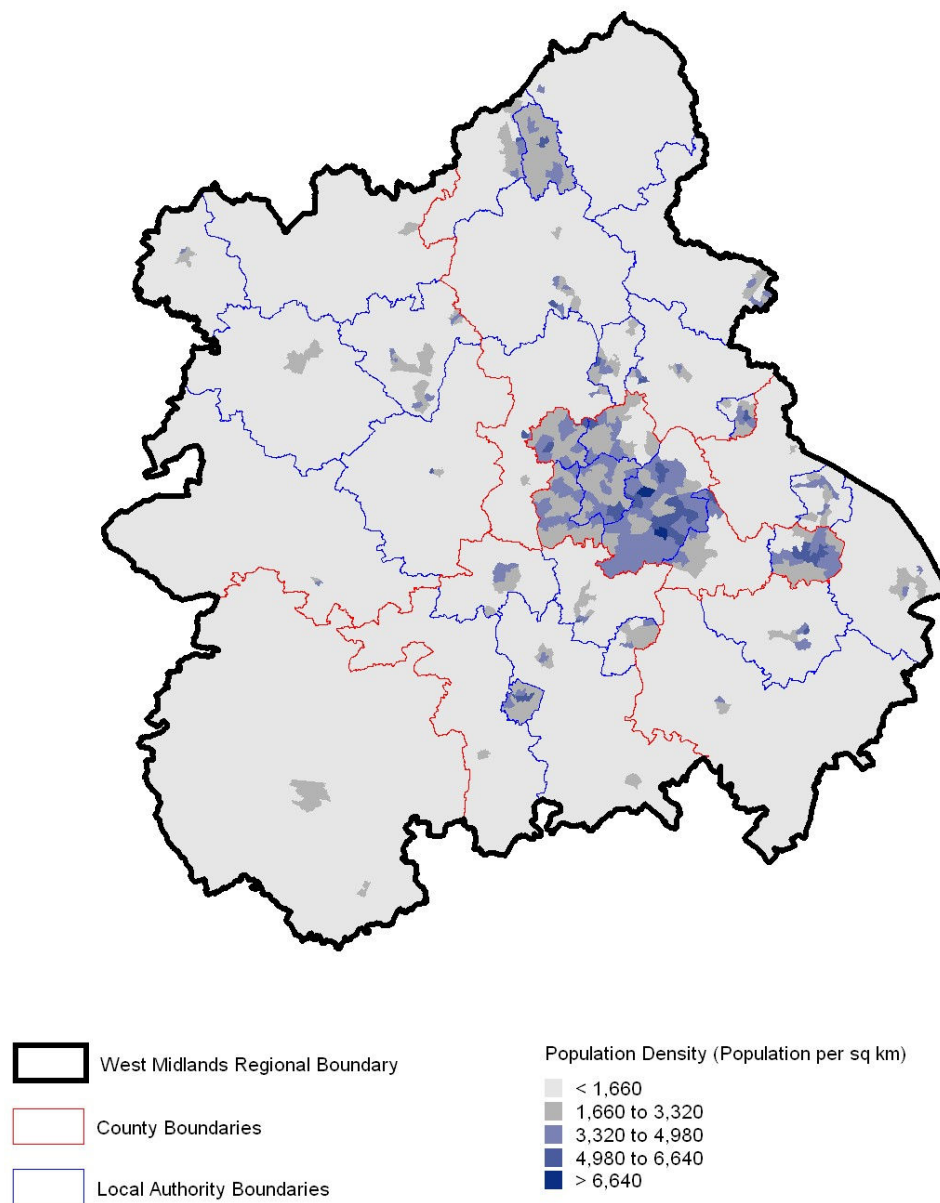
Geographically, the West Midlands is situated at the heart of England. The region has played and continues to play an important role in both the culture and economy of the United Kingdom. The area is steeped in cultural and industrial heritage that provides the region with advantages and disadvantages. It is advantageous as highly-trained professionals are attracted to live and work in the area, as leisure and business tourists are also attracted. Some of the disadvantages are related to lingering external perceptions of parts of the region that do not reflect current conditions. A number of regional and sub-regional external perceptions of the region still exist, for example as 'the cradle of the industrial revolution', 'the workshop of the world' or the industrial and agricultural heartland of the United Kingdom.

Administratively, the West Midlands region comprises the counties of Shropshire, Staffordshire, Warwickshire and Worcestershire, together with the unitary authorities of Herefordshire, Stoke-on-Trent and Telford and Wrekin and the seven metropolitan districts of Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall and Wolverhampton. The West Midlands extends from the East Midlands in the west to the Welsh Marches in the east and from the Peak Park in the North to the Northern Cotswolds and the Malvern Hills in the south. It has a population of 5.3 million which makes it larger than some European countries (Denmark, Finland and Ireland). There are significant variations in population density across the region (Figure 2.1). This ranges from a high of 3,647 people per sq km in Birmingham to a low of 39 in South Shropshire (Table 2.1). In relative terms, the regional population is stable with limited population growth or decline (Figure 2.2). Some rural districts are experiencing a slow rise in population; the main drivers are an increase in the retired and older age groups moving out of the towns, counteracted by an out-migration of the young seeking education and employment elsewhere. This is borne out by higher concentrations of older people, particularly in the rural areas in the west of the region.

The West Midlands contains 12,998 sq km of which only 10.8% is built up while just over 77% of the total land area is accounted for by arable, horticulture and improved grassland; the remainder is not under cultivation. The agriculture of the region is varied and includes dairy farming, stock rearing, mixed farming, intensive market gardening, fruit growing, horticulture as well as agricultural related and unrelated farm diversification, for example, farm-based tourism, farm shops and farmers markets, farm-based added value food processing and farm-based retailing unrelated to agriculture (pianos to children's equipment/clothing).

Figure 2.1

## 2001 Population Density

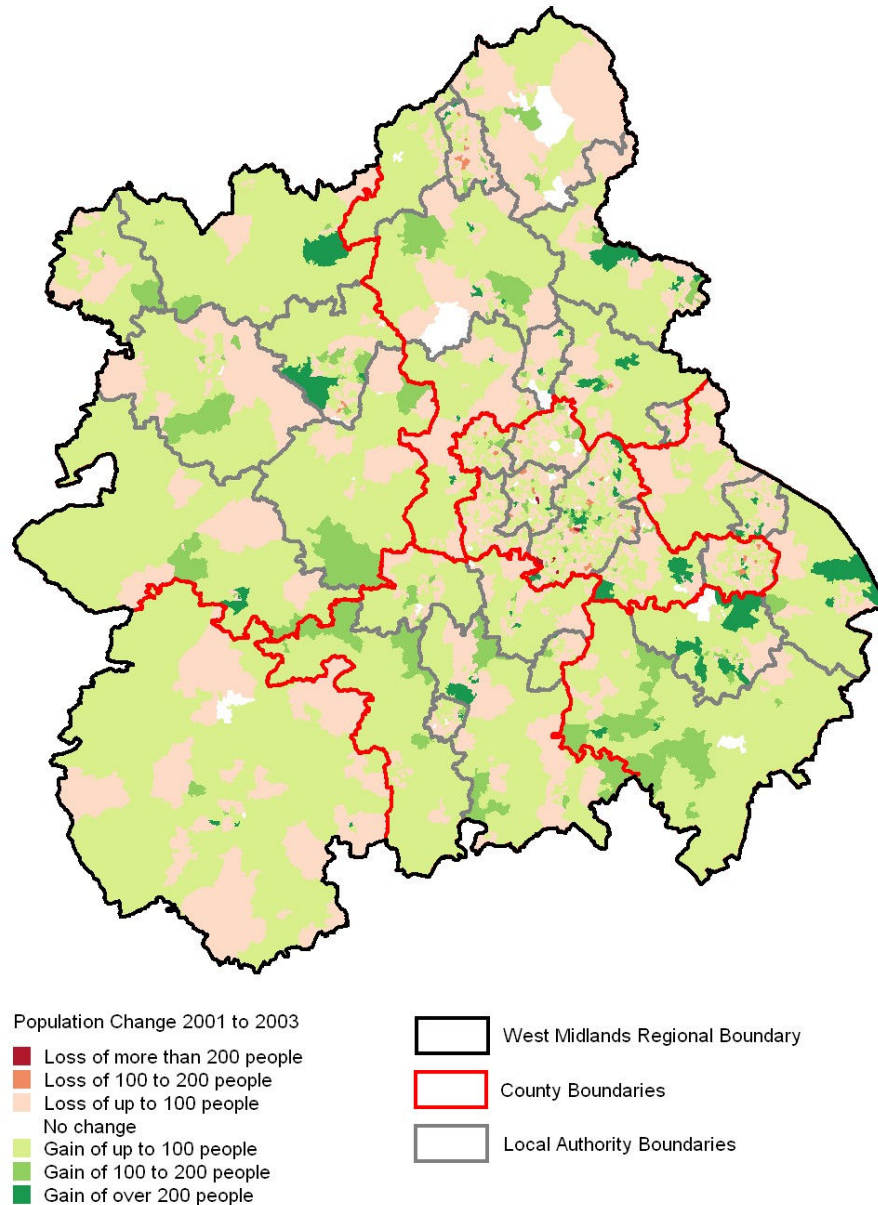


Source: 2001 Census

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Figure 2.2

**Estimated Population Change between 2001 and 2003  
at Lower Layer Super Output Area Level**



Source: Super Output Area population estimates  
for England and Wales, mid-2001 and mid-2003  
(experimental statistics)

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There are interesting intra-regional variations in earnings by residence across the region (Table 2.1). These partly reflect the structure of local economies, but these figures, however, can be misleading as they do not taken into consideration intra-regional commuting patterns.



**Table 2.1: Primary Characteristics of the West Midlands**

	Population <sup>1</sup>	People per (sq km) <sup>2</sup>	Economically Active <sup>3</sup>		Earnings by residence, £ <sup>4</sup>	Job Density <sup>5</sup>
			Male	Female		
Birmingham	992,400	3647	243,800	193,700	400.8	0.9
Herefordshire	177,800	80	47,100	39,400	371.20	0.9
Shropshire	287,900	89	74,900	61,400	407.10	0.8
Staffordshire	812,600	308	220,200	179,900	421.60	0.8
Warwickshire	525,500	256	138,200	115,300	461.90	0.8
Worcestershire	552,000	312	144,800	119,900	421.10	0.8
West Midlands (Met. County)	2,579,200	2833	645,500	512,500	395.60	

Notes: 1) Midyear population estimates, 2004

2) 2001, Regional Trends, ONS.

3) Annual Population Survey (Apr 2004-Mar 2005).

4) Full-time gross weekly pay. Annual survey of hours and earnings, resident analysis (2005)

5) Jobs density, 2004, ratio of total jobs to working-age population, 1 implies that a job exists for everyone of working age.

The region includes two conurbations: the Birmingham/Black Country and Solihull conurbation in the central area henceforth known as the Conurbation and the North Staffordshire conurbation. The West Midlands consists of a series of uplands and lowlands. Birmingham is situated on a plateau and is surrounded in a ‘distinctive circular pattern’ (Kinvig, 1950:xviii): by smaller urban centres such as Nuneaton, Warwick, Leamington, Stratford, Worcester, Kidderminster, Stafford and Lichfield. Each of these centres of various sizes play important roles in their local as well as regional economy, whether as administrative, cultural, industrial (manufacturing, related business and professional services and wholesale and/or logistics) or service (public sector, retail, personnel services) centres or as part of the region’s agricultural economy. This ‘distinctive circular pattern’ of urban settlements is beginning to play an important role in the developing economic geography of the West Midlands.

**Table 2.2 The Ten Business Clusters identified by Advantage West Midlands**

Status	Cluster
Established	Transport Technologies Building Technologies Food and Drink Tourism and Leisure High value-added Consumer Products
Growing	Specialist Business and Professional Services Information and Communication Technologies Environmental Technologies
Embryonic	Screen and New Media for Education and Entertainment Medical Technologies

Like all regions, the West Midlands faces a number of major challenges related to industrial restructuring, the development of knowledge-based competitive advantage and enhanced global competition. To address these issues, Advantage West Midlands, the regional development agency, decided to target its resources on three Key Delivery Mechanisms: Regeneration Zones, Business Clusters and High Technology Corridors (AWM, 2004: 40). Ten business clusters were identified that could benefit from cluster development policies. It is worth noting that the clusters do not necessarily operate in tightly defined geographical areas. The geography of the clusters can be region-wide or even cross regional and national boundaries. Three types of clusters were identified: established, growing and embryonic or aspirational (Table 2.2). The SIC codes that

define these cluster groupings were obtained from AWM and the clusters were mapped using the format and methodology developed in this report. Two of these maps (business and professional services; food and drink) are incorporated into the main report whilst all ten maps are presented in a separate annex.

## **2.1 Summary**

- There are significant variations in population density across the region.
- In relative terms, the regional population is stable with limited population growth or decline
- Only 10.8% of the region's land area is built up while just over 77% of the total land area is accounted for by agricultural activity.
- There are interesting intra-regional variations in earnings by residence across the region which partly reflect the structure of local economies.
- The West Midlands consists of a series of uplands and lowlands. Birmingham is situated on a plateau and is surrounded in a 'distinctive circular pattern'. This distinctive pattern of urban settlements is beginning to play an important part in the economic geography of the region.

### 3. Methodology

The report is based around a primary dataset that has been compiled using data drawn from the Annual Business Inquiry (ABI) survey. This dataset is supplemented by drawing upon the 2001 census, VAT returns, Labour Force Survey, research undertaken by the Learning and Skills Councils and Patent Office data. The analysis is also informed by quantitative and qualitative research that has been undertaken by the Service and Enterprise Research Unit, The University of Birmingham, over the last five years. In general, sufficient data sources could be identified to enable the identification and analysis of the functioning economic geography of the region. However, some parts of the analysis had to be curtailed due to the availability of data at the intra-regional level. One of the most difficult areas is identifying data that would inform the analysis of intra- connections (trade flows). Data for the whole of the West Midlands exists, and evidence from some sector-based surveys exists, but no comprehensive dataset is available. This problem was also identified in the ECOTEC report on polycentricity (2000: 11).

Data assembly was also restricted to available national and regional data sets with only limited use being made of local authority held data. This restriction is explained by the short duration of this study and comparability problems between diverse data sets. The incorporation of local authority data into the analysis might enrich the analysis by highlighting very localised processes and issues that are beyond the scope of this analysis

**Table 3.1: SIC Industrial Grouping deployed as the primary analytical framework**

SIC Code	Industrial Grouping
010-050	Agric, forestry and fishing
100-145	Mining and quarrying
151-160	Food manufacturing and processing
171-183	Textiles and clothing
191-193	Leather and leather products
201-223	Timber, paper, printing and publishing
231-247	Fuel, chemicals & chemical products
251-252	Rubber and plastics
261-268	Glass, ceramics & building materials
271-297	Metal, engineering and machinery
300-335	Electrical, medical and domestic equipment
341-355	Automotive and transport (train, aerospace)
361-366	Furniture, jewellery, sports and toys
371-455	Gas, water, construction and recycling
501-555	Wholesale/retail sales, hotels and restaurants
601-634	Transport/logistics
641-642	Post and telecommunications
651-703	Finance, Insurance, Real Estate (FIRE)
722-725-726-731	R&D, office equip., computing
741-745,748	Business services

The analysis has been informed by an appreciation of the complexity of regional economies and more importantly an understanding of the relationships that exist between economic sectors. The base analysis consists of a detailed analysis of the ABI dataset. This dataset has been explored for the West Midlands using England as the

comparator unit of analysis. The complexity of the standard industrial classification (SIC) has meant that the SIC codes had to be grouped in order to produce a manageable dataset. Three principles guided this grouping process. First, the removal from the analysis of retail and public sector services as the primary focus of this analysis is on the productive part of the economy. Second, an initial grouping exercise was undertaken to produce 54 functionally related categories. Detailed analysis was undertaken into these categories. Third, on the basis of the analysis of the 54 categories 20 working groupings were constructed. The analysis of the groupings provides the main part of this report, but it should be noted that the analysis is also informed by the more detailed framework that was developed during the second phase (Table 3.1)

The focus of the primary analysis is to explore the intra-regional geography of the West Midlands. This is achieved by using Location Quotients (LQ). The Location Quotient is a well known and used analytical tool for identifying concentrations of economic activity by sector and place. This LQ compares a local economy to a reference economy and in the process attempts to identify specializations in the local economy. The location quotient technique is based upon a calculated ratio between the local economy and that of the reference unit. LQs are generated by calculating the percentage of the national total (employment, R&D expenditure etc) of a particular group of workers or firms found in a given area, and the percentage of the national total for all workers or firms found there. The former is then divided by the latter<sup>2</sup>. A quotient greater than 1.00 means that the area's labour force is more biased towards that particular group while a quotient of 2.0 means that the area has twice as many people as expected and a quotient of 0.5 means half as many. LQ scores provide one indicator of the degree of localisation or otherwise of a particular activity in a given area. The analysis in this report compares the West Midlands with England and the results demonstrate that relative to the England as a whole that a particular part of the West Midlands specialises in an activity that can be described as being localised to a precise degree. The analysis is based around the following classification of LQ scores:

<1	No localisation (underrepresented compared with England)
1-<1.5	Weak localisation
1.5-<3.0	Strong localisation
3.0-<6.0	Very strong localisation
6.0+	Extreme localisation

The account of the functioning economic geography of the West Midlands has been developed by exploring sectors and areas that have LQ scores of over 1.5. It is perhaps worth noting that many of the scores are much greater than this with some being over 40. White areas in the maps used to illustrate this report represent areas that have LQ scores of zero or in other words no activity in the area. In general terms, some economic activities are heavily localised as their production systems by definition must be rooted in a particular place, for example, agriculture, mining and quarrying. Other activities, for example, many generic or standardized services are relatively evenly distributed over the population in different areas and only in exceptional circumstances will they be heavily localised. In many cases, and for some business and professional services,

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2

$$\text{Location Quotient} = \frac{\frac{\text{Regional Employment in Industry A in Year T}}{\text{Total Regional Employment in Year T}}}{\frac{\text{National Employment in Industry A in Year T}}{\text{Total National Employment in Year T}}}$$

localisation may be more related to concentrations of clients rather than the existence of a set of social and cultural drivers that encourage firms to cluster together. The primary industries (agriculture, mining etc), as well as some services, have characteristic patterns of localisation. Manufacturing is more complex as some is relatively dispersed and some heavily localised. Heavily localised manufacturing is often associated with specialised inputs that come from a particular area or, like services, with the existence of a concentration of expertise. Traditionally, concentrations of some manufacturing processing were related to the requirement to be close to raw materials and for the reduction of transportation costs. Dispersed manufacturing is perhaps driven more by relatively evenly distributed consumers. Geographical inertia may play an important role in the economic geography of a region. Former decisions or sunk costs may produce a form of path dependency that discourages a firm or even group of independent firms from altering the geography of their activities. This process plays an important role in the established economic geography of the West Midlands regions. Previous investment decisions provide the backdrop to understanding the location of established economic activity in the primary, secondary and tertiary sectors of the economy.

### **3.1 Summary**

- Use has been made of available national and regional datasets
- No data are available on intra-regional connections
- Data for England are used in the development of comparator statistics
- The massive detail available from the SIC has necessitated data compression
- Location quotients (LQs) have been used to identify local concentrations of activities.

## 4. The Economy of the West Midlands

The West Midlands is an extremely complex region that is characterized by immense variety. The region includes large cities, sparsely populated rural areas, affluent small market towns and villages as well as communities which experience extreme disadvantage and deprivation. It is important not to confuse the Conurbation's (Birmingham, Black Country, Solihull) economy with that of the wider region of which it is just a part. The Conurbation plays a major role in the regional as well as national economy, but the region also includes important concentrations of economic activity that are located elsewhere and that are not part of the Conurbation economy. It is important to remember that many companies and even individuals located near or on the margins of the region's administrative boundaries may have greater affinities with adjacent administrative areas, for example the relationship that exists between Stoke on Trent and the Manchester conurbation. This suggests that at one level the West Midlands should be conceptualised as a region that consists of a complex mosaic of sub-regions as well as economic activities. Some of the sub-regions and activities are completely integrated into the regional economy; some firms may only consider the region as a location and the majority, in some cases all, of these activities may be with companies and customers located beyond the West Midlands.

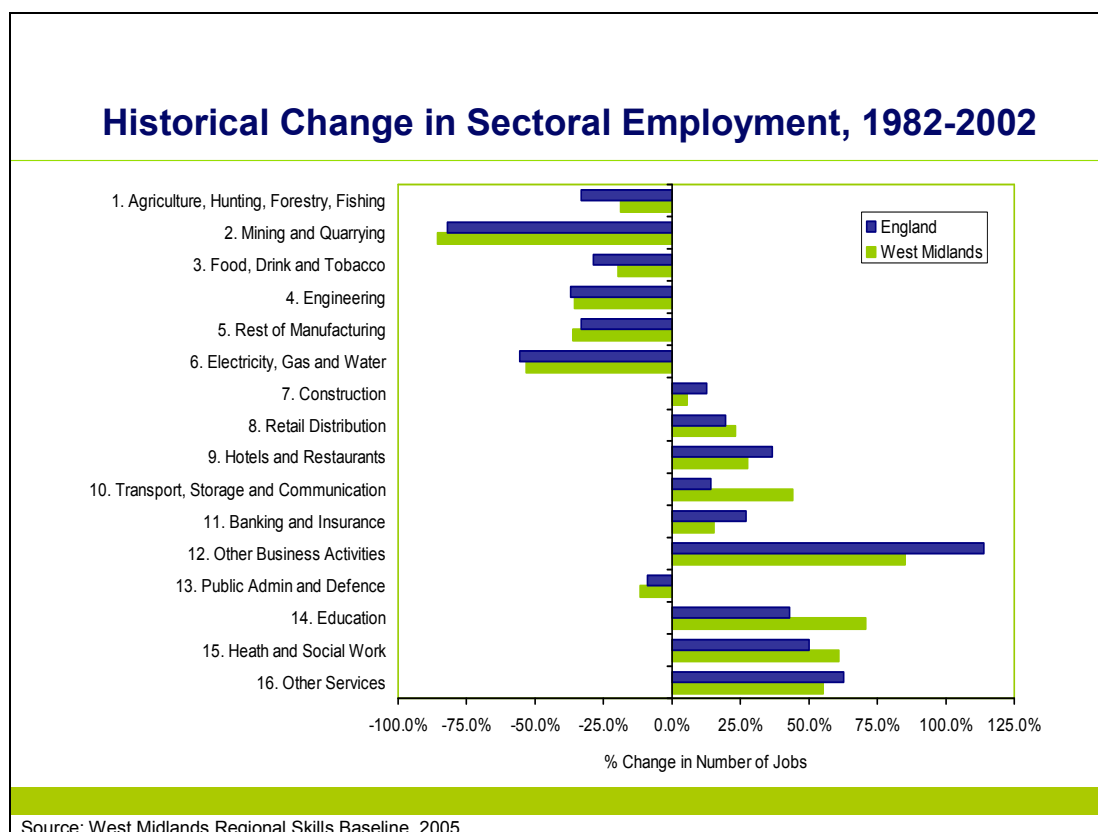
### 4.1 The Regional Economy

The West Midlands workforce of almost 2.6 million is employed across a very wide range of activities. Traditionally, the region's economy is associated with metal-based industries as well as high-profile food-manufacturing. The main sectors are automotive; plastics and rubber, software, food and drink, electronics and telecommunications; and business services. The economy includes traditional manufacturing, hi-tech industries and increasingly a diverse range of business and professional services.

The region's economic structure is still dominated by manufacturing, but this is under threat as the competitiveness of low-value added or labour-intensive manufacturing is undermined or value-added creation in other economic sectors outstrips that of manufacturing. As a consequence, over the last thirty years the region has been experiencing considerable economic restructuring. This restructuring has caused considerable turbulence related to the rise of unemployment linked to the closure, relocation or downsizing of manufacturing facilities. Manufacturing still has an important role to play in the regional economy, but increasingly it must be based around the production of high-added value products rather than price-based competitiveness. Alternative employment opportunities have arisen as the service-side of the economy has grown, for example in retail distribution, education, business and professional services and the public sector (Figure 4.1).

Motor vehicles and other transport equipment comprise some 1 in 7 of the region's manufacturing employment, but this ratio continues to decline. In 2002, 19.2% of total employment (2002) in the West Midlands was in manufacturing compared to a national average for Great Britain of 13.4%. The region's over-representation in manufacturing employment is based on male rather than female employment. Just under 30% of male employees worked in manufacturing (Great Britain 19.3%) compared with only 9.7% for female workers (Great Britain 7.2%).

**Figure 4.1**



**Table 4.1: Gross Value Added per Head of Resident Population (2002 & 2001)**

2002 (2004 release)	GVA per Head (£)	Index (UK= 100)	2001 (2003 release)	GVA per Head (£)	Index (UK= 100)
UK*	15,273	100	UK*	14,418	100
West Midlands Region	13,803	90	West Midlands Region	13,031	90
Solihull	17,291	113	Coventry	15,979	111
Birmingham	16,466	108	Birmingham	15,344	106
Warwickshire	15,886	104	Solihull	14,951	104
Coventry	15,606	102	Warwickshire	14,708	102
Telford & Wrekin	14,340	94	Telford & Wrekin	14,095	98
Walsall & Wolverhampton	13,025	85	Walsall & Wolverhampton	13,476	93
Dudley & Sandwell	12,754	84	Worcestershire	12,239	85
Worcestershire	12,424	81	Dudley & Sandwell	11,988	83
Stoke-on-Trent	12,180	80	Stoke-on-Trent	11,684	81
Herefordshire	11,875	78	Herefordshire	10,872	75
Staffordshire	11,513	75	Staffordshire	10,829	75
Shropshire	11,343	74	Shropshire	10,392	72

Note: \*Excluding 'Extra-Regional' GVA

Source: Worcestershire County Council (2005: 44)

The second most important sector in employment terms is financial and business services. In fact, the region has the largest financial and business services centre outside London and this is driving service output growth in the region. By 2002, this sector accounted for 16.7% of all employees compared with a British average of 19.6%. Employment figures are a relatively poor indicator of the contribution an economic sector makes to a regional or national economy. A far better measure is gross value added (GVA) which measures the contribution to the economy of each individual producer, industry or sector. On a regional basis GVA needs to be used with care as the figure is calculated using workplace rather than place of residence data. This means that GVA does not take into consideration GVA that is created by individuals living in an area but who work in adjacent regions. Manufacturing's contribution to the region's GVA has been declining relatively rapidly in recent years. Between 1997 and 2002 manufacturing GVA fell from 29.3% to 21.0% while that of real estate, renting and business activities increased from 17.2% to 20.8%.

The region is still the most industrialised region in the UK with significant manufacturing activity in car and automotive components, engineering, metal processing and manufacture, ceramics, brewing and carpets as well as becoming increasingly well-known for specialist niche manufacturing. Across the region there is significant variation in GVA per head (Table 4.1). This ranges from a high of £17,291 in Solihull to a low of £11,343 in Shropshire. It is worth noting that the counties that contain significant concentrations of agricultural activities have the lowest GVA/Head and areas that have significant concentrations of knowledge workers have high added value and consequently higher levels of GVA per head. Of especial importance are Solihull and Birmingham as both places are outperforming the UK average.

Substantial intra-regional variation exists in the economy of the West Midlands. Such variations are explained by the historic as well as current availability of resources (people, expertise, infrastructure, access to finance, local economic structure, established companies and brands), the size of local markets and established connections between places. These variations exist in economic structure with some regions retaining an important agricultural economy (Herefordshire and Shropshire) while others retain significant concentrations of manufacturing. The precise combination of economic activities at a subregional level has important policy consequences. For example, there are important differences in the mean size of employers by industrial sector in the West Midlands (Figure 4.2). These differences are related to the dynamics of each industry and are also associated with important intra- and inter-sectoral differences in new firm formation, the management of each firm's skill base and vulnerability. Service firms tend to be smaller than manufacturing companies (mean of 6.7 for business services compared with 17.2 for metal engineering and machinery). It is also worth noting that job losses due to closure or relocation tends to be most visible in sectors that have high average firm based employment, for example MGRover and the proposed relocation of HP sauce to the Netherlands. Nevertheless, over time incremental closure or restructuring of small firms may be as important in reducing the region's economic capacity.



Figure 4.2

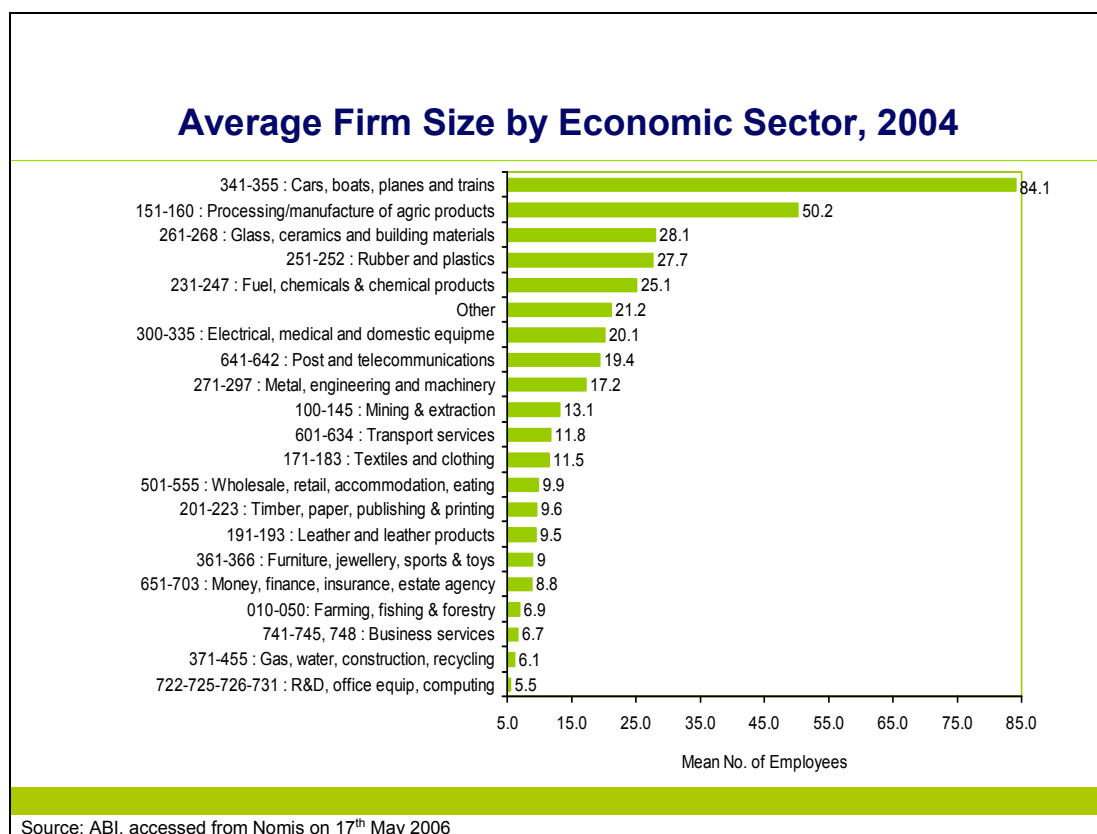
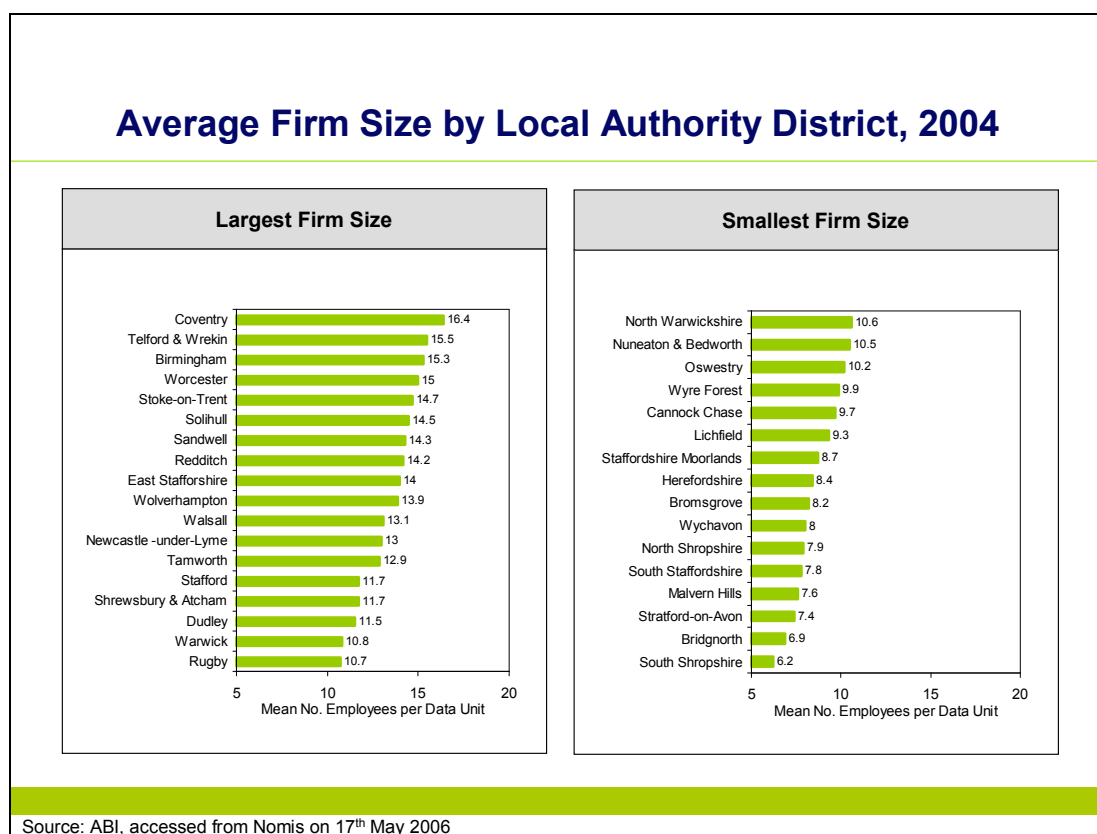


Figure 4.3



There are also important subregional differences in the average size of firms (Figure 4.3). These differences are partly explained by differences in the structural composition of regional economies. It is worth noting that urban areas (Birmingham, Coventry, Stoke on Trent) tend to have larger average firm sizes compared to more rural areas (Shropshire, Herefordshire). This partly reflects the concentration of manufacturing activity as well as major service firms in key urban areas and is partially explained by access to potential markets, suppliers, expertise and infrastructure.

## **4.2 Employment multipliers**

All jobs are not the same in terms of their wider effects on an economy. Different sectors of the economy have different employment multipliers. This means that job losses or gains have different levels of significance depending on the primary characteristics of each industrial sector. In simple terms, every job creates three associated multiplier effects:

- Supplier effects – impacts jobs have on the activities of suppliers, for example the closure of MGRover impacted on employment in the firm's supplier base in the West Midlands and elsewhere.
- Responding effects – impacts of job loss or gain on sectors that are recipients of employees' expenditure (retail expenditure etc).
- Government Employment effects – taxes that support local and national government employment.

Combined these effects produce a sector's total indirect employment effect or employment multiplier. Recent American research has identified significant sector-based differences between employment multipliers (Bivens, 2003). Employment multipliers are much higher in manufacturing than in the rest of the economy. Every 100 manufacturing jobs supports 290 jobs elsewhere in the economy, compared with 154 for business services and 88 for retail (Bivens, 2003: 2 (Table 1)). Perhaps more importantly in the West Midlands context is the finding that some of the largest employment multipliers are found in automotive, aerospace and primary metals and that 'computer equipment and office machinery' has the highest employment multiplier in the entire manufacturing sector (905 indirect jobs supported by every 100 jobs in the sector) (Bivans, 2003: 5). The analysis of employment multipliers implies that the shift from manufacturing employment towards services has important consequences for regional economic restructuring and especially in terms of reducing the value of indirect multiplier effects. Employment multiplier differentials need to be calculated for the West Midlands economy, and importantly should be taken into consideration in any revision to the RES and also in policies designed to attract foreign direct investment. This is an area that requires further detailed research, but it is worth remembering that the available evidence suggests that manufacturing multipliers are much greater than those achieved by service activities.

## **4.3 New Firm Formation**

Regional comparisons of economic indicators are often problematic given differences in economic structure, the total population of firms and population size. New firm formation is difficult to measure as there are difficulties with available datasets. One of the best measure comes from Value Added Tax (VAT) statistics that provide information regarding the total number of VAT registered firms in a region as well as

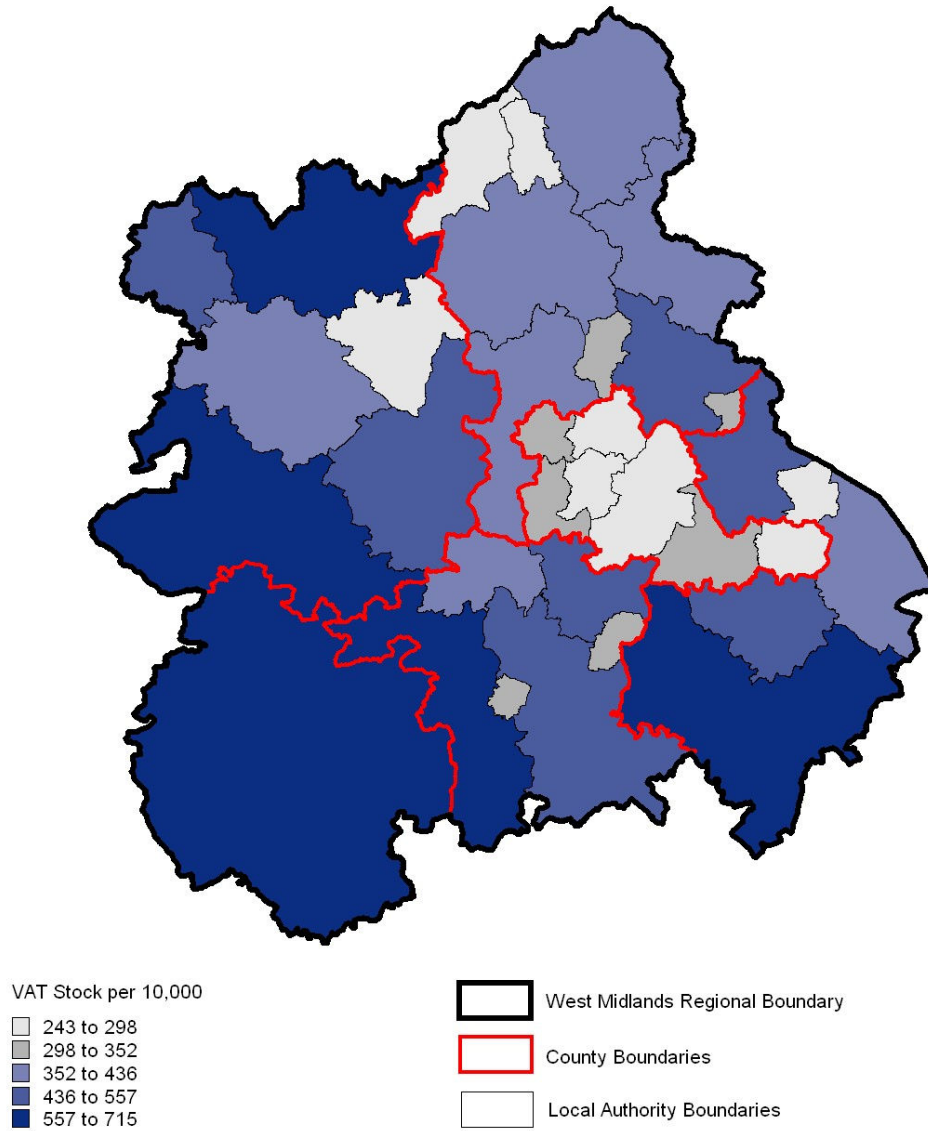
new registrations and deregistrations. It is worth noting that a deregistration may not represent a failing business but one that is restructuring, for example by the dissolving of a partnership and the creation of two new firms and potentially new VAT registrations. An added complication with VAT data is that the VAT threshold is not fixed and this makes time series of longitudinal analysis difficult.

To undertake a comparative analysis of new firm formation using VAT registrations it is essential to weight the data. This is achieved by calculating registrations as well as the stock of business on a per capita basis, for example by the number of registrations per 10,000 people in a region. This analysis reveals that the West Midlands is underperforming compared to the UK average. In the West Midlands, there were 35 new registrations per 10,000 population in 2004, compared to a UK average of 39. It is worth noting that the comparable figure for deregistrations was 35 for the West Midlands and 39 for the UK. This is a complex issue as, on the one hand, it possible to argue that the West Midlands has relatively low entrepreneurial development compared to other regions and, on the other hand, that there is greater apparent stability in survival rates. Overtime, there has been a gradual rise in the total stock of firms in the West Midlands. In 2002 there were 150,500 firms in the region and by 2004 this had increased to 152,280.

In the West Midlands there are important intra-regional differences in the stock of firms as well as in new firm formation rates. In 2004, the primary business centre in the region by stock for VAT registered firms was Birmingham (22500) followed by the County of Herefordshire (8305) and Dudley (7845). Unweighted stock figures are not very revealing. Birmingham has the largest stock of firms, but it also has one of the lowest number of firms per 10000 population (277 and in the bottom quartile). This reflects the fact that the urban areas tend to have larger firms. The rural areas tend to have the largest stock of firms per 10000 population with South Shropshire being in first place (714) followed by Stratford-on-Avon (661) (Figure 4.4).

Figure 4.4

VAT Registered Stock per 10,000 population (2004)

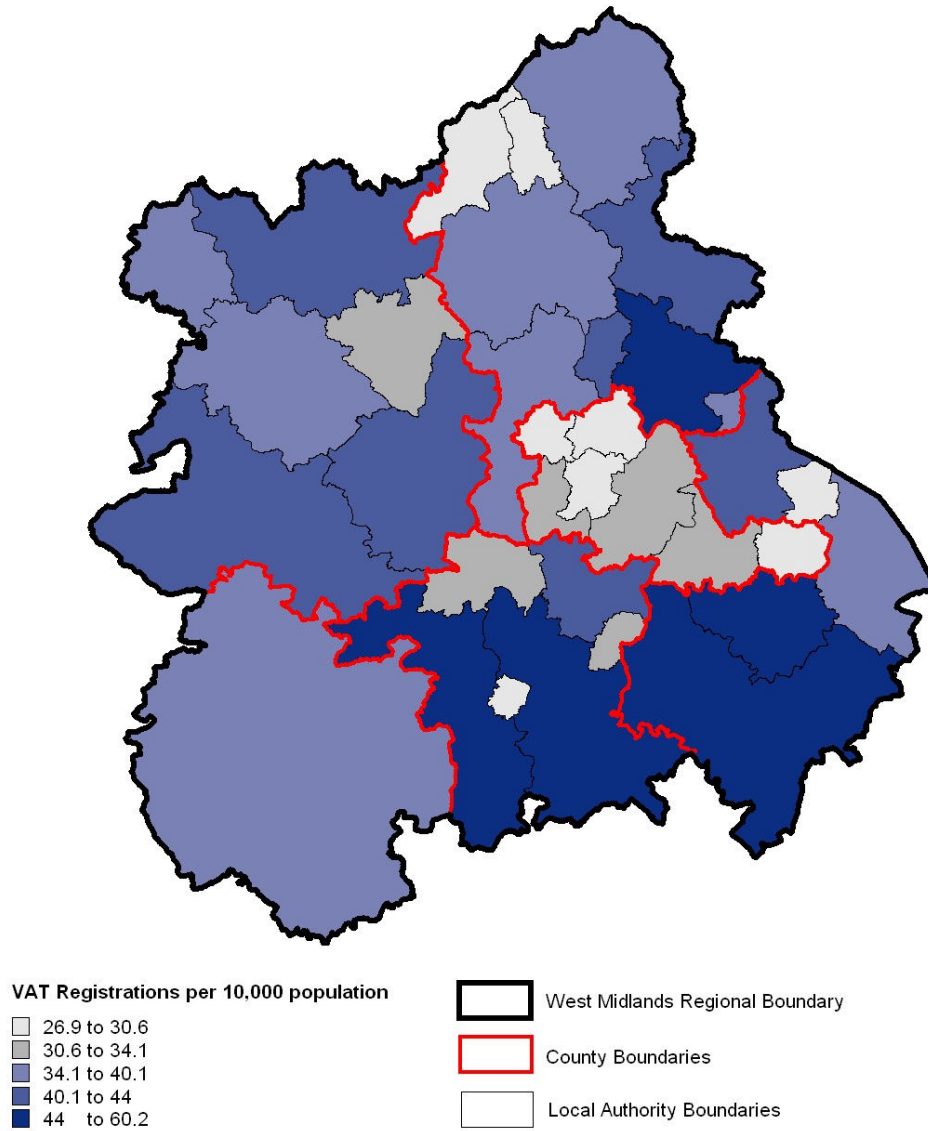


Source: DTI (2004)

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Advantage West Midlands, 100030383 (May 2006)

Figure 4.5

VAT Registrations per 10,000 population (2004)



Source: DTI (2004)

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**Table: 4.2: New Firm Formation within the West Midlands (2004)**  
(Ranked by rate)

<b>High Firm Formation, 40+ registrations /10,000 (Above English rate)</b>	<b>Middle Firm Formation, 35-39 registrations /10,000 (Above West Midlands rate)</b>	<b>Low Firm Formation, less than 34 registrations /10,000 (Below West Midlands rate)</b>
Stratford-on-Avon (60)	Tamworth (37)	Staffordshire Moorlands (34)
Malvern Hills (51)	Shrewsbury and Atcham (37)	Solihull (34)
Wychavon (49)	Stafford (36)	Dudley (32)
Warwick (47)	Oswestry (35)	Telford and Wrekin (32)
Lichfield (45)	Rugby (35)	Wyre Forest (32)
Cannock Chase (44)	South Staffordshire (35)	Redditch (32)
North Warwickshire (44)		Birmingham (31)
South Shropshire (43)		Worcester (31)
Bromsgrove (42)		Walsall (30)
East Staffordshire (42)		Sandwell (30)
Bridgnorth (42)		Nuneaton and Bedworth (30)
North Shropshire (41)		Newcastle-under-Lyme (30)
Herefordshire, County of (40)		Wolverhampton (29)
		Stoke on Trent (28)
		Coventry (27)

Source: ONS, Nomis, accessed 11 May 2006

Note: English Rate = 39/10,000; West Midlands = 35/10,000

Intra-regional differentials in firm stock are less important than new firm formation rates. Broadly, the West Midlands can be divided into three groups (Table 4.2 and Figure 4.5). The South East of the region has the highest levels of firm formation, followed by some of the more rural areas. The key urban areas tend to have lower levels of firm formation. It is worth noting that by sector, real estate, renting and business activities is by far the most important sector for new firm formation. A proportion of these businesses will be home-based and distributed in areas around the core urban concentrations, for example, in parts of Warwickshire. There is a mismatch at a sub-regional level between the total stock of firms and new VAT registrations. Thus, Birmingham should have high firm formation rates as it contains 14.8% of the regional stock of firms while Stratford-on-Avon should have a relatively low rate as it contains only 4.1% of the regional stock. Conventionally, there is usually a linear relationship between new firm formation and the existing stock of firms. This relationship is not clear-cut in the West Midlands, but the relationship may be confused by employees leaving urban employment to establish firms in or close to their place of residence. It is worth noting that high-firm formation rates are related to the growth areas in the region that are identified later in this report as well as to the geography of highly skilled labour.

## 4.4 Skills

The West Midlands workforce of almost 2.6 million is employed across a very wide range of activities. The West Midlands has a higher percentage of establishments reporting hard to fill vacancies (HtFVs) and skill shortage vacancies (SSVs) than the national average. This is especially the case for Shropshire, and Herefordshire and Worcestershire (Table 4.3)

**Table 4.3: Indicators of skills deficiencies and recruitment difficulties**

Region	Rank	% of Establishments with vacancies	Rank	% of establishments with HtFVs	Rank	% of establishments with any SSVs
West Midlands		20.8		10.5		7.4
Shropshire	24	19.0	41	10.2	45	8.4
Staffordshire	27	19.1	43	10.6	40	7.1
Black Country	30	19.5	13	7.3	25	5.6
Birmingham and Solihull	46	23.6	30	8.8	28	6.1
Herefordshire and Worcestershire	34	20.3	46	12.0	43	7.9
Coventry and Warwickshire	42	21.9	42	9.6	37	6.8
National		18.2		8.2		5.7

Source: After NESS 2003, in LSC (2005) Table A.3, 82-83

Notes: Rank 1 is highest concentration of qualifications and 47 lowest

The West Midlands has a major problem with skill deficiencies in the working age population. The data to support this analysis comes from the national skills survey funded by the Learning and Skills Council (LSC) (LSC, 2005) (Table 4.4). This data is only available by LSC regional areas. The regional skill deficit is most pronounced in the Black Country and Birmingham and Solihull which rank second and third respectively in England for the proportion of the working population that have no qualifications; first place is held by Greater Merseyside. It is worth noting that the LSC dataset only identifies skills that have been formally accredited or assessed. There are many skilled people in the Black Country, but their expertise has been acquired in the workplace and has not been formally accredited. Nevertheless, the formal skill deficiency in the West Midlands is of concern, because the 'new' service or knowledge-driven economy is increasingly founded upon formal rather than informal qualifications. The Black Country also has the smallest percentage of its working age population with qualifications at NVQ Level 4 or above, ranking last in England. Birmingham, Solihull and Staffordshire also rank poorly on this measure at 36<sup>th</sup> and 37<sup>th</sup> respectively. The best qualified populations in the region are in Shropshire, Herefordshire and Worcestershire and Coventry and Warwickshire, ranking 16<sup>th</sup> and 19<sup>th</sup> for the proportion of working age population with NVQ4 or above. Herefordshire and Worcestershire are also in the top 10 for qualifications at NVQ Level 3. The geography of skills across the region is partially explained by factors related to quality of life. Counties like Herefordshire and Worcestershire will attract those elements of the creative class (Florida, 2004) searching for larger houses situated in a rural, semi-rural or small town environment

A slightly different analysis using Location Quotients reveals the micro-geography of skills across the region. (Table 4.5). This supports the LSC findings regarding the under-representation of higher level skills sets across the region, but there are important areas of concentration, albeit relatively weak localisations. Areas that stand out compared to England as having some concentrations of relatively highly skilled people are Warwick and Bromsgrove, with the latter being an important commuter location for the Conurbation (Birmingham etc). This supports the findings regarding new firm formation and also the identification, for the first time, of an 'economic, entrepreneurial, environmental and innovation' belt of economic activity that surrounds the conurbation, hereafter known as the **E<sup>3</sup>I belt**.

**Table: 4.4: Ranking of qualification structures of the working age population by local LSC**

Region	Proportion of working age with qualification level (%)						Ranking of None by LSC region
	NVQ4+	NVQ3	NVQ2	NVQ1	Other	None	Rank
Herefordshire and Worcestershire	25.1	15.6	16.3	14.3	6.2	14.9	22
Shropshire	25.8	14.4	16.2	13.2	10.2	13.8	28
Staffordshire	19.4	14.5	15.9	16.9	7.8	17.6	15
Coventry and Warwickshire	24.2	14.8	15.6	14	8.2	16.4	20
The Black Country	16.8	12.8	15.4	15.9	10.4	22.1	2
Birmingham and Solihull	19.3	14.3	14.9	14.9	10.2	22	3

Sources: Edited version of a table LSC areas ranked by qualification. The complete table ranks 47 LSC areas. LSC, 2005: 80-81, data from NOMIS.

Notes: Rank 1 is highest concentration of qualification and 47 lowest.

**Table 4.5: Work-age People in Employment with NVQ3+ and 4+ (Dec.2003-Nov.2004)**

	Work-age people in employment with NVQ 3+ as % of all working age in employment.			Work-age people in employment with NVQ 4+ as % of all working age in employment.		
	Number	%	LQ England Base	Number	%	LQ England Base
Birmingham	190,000	48.9	0.99	120,000	30.9	1.04
Bridgnorth	12,000	52.0	1.05	7,000	29.6	0.99
Bromsgrove	24,000	55.2	1.12	17,000	39.7	1.33
Malvern Hills	16,000	52.4	1.06	9,000	29.0	0.97
Newcastle-under-Lyme	26,000	46.5	0.94	17,000	30.1	1.01
Oswestry	9,000	53.8	1.09	No data	No data	
Solihull	57,000	56.8	1.15	34,000	33.9	1.14
Stafford	32,000	51.8	1.05	19,000	30.2	1.01
Stratford-on-Avon	28,000	51.9	1.05	16,000	30.0	1.01
Warwick	37,000	65.1	1.32	24,000	42.9	1.44
Worcester	23,000	49.2	0.99	14,000	30.8	1.03
Total	<b>1,101,000</b>	<b>46.4</b>		<b>630,000</b>	<b>26.5</b>	
England	11,297,000	49.5		6,794,000	29.8	

Notes: LQ Score of 1-<1.5 = weak localisation; only areas with LQ scores of above 1 are shown.

Source: ONS, Labour Force Survey, quarterly: four quarter averages

At both the regional and intra-regional levels it is very apparent that the West Midlands economy has a serious skills deficit. This is partly a product of the dominance of manufacturing, for example there appears to be a relationship between the dominance of manufacturing in the Black Country and skill levels. Obviously, the skills deficit needs to be addressed as a matter of urgency. It is important to remember that poor skills are



partly a product of problems with overall school performance (LSC, 2005: 40) as well as graduate retention.

Research undertaken for the LSC by Labour Market Solutions (2003) shows that 38% of graduates normally domiciled in the West Midlands did not return to the regional labour market on graduation. London, the South East and the East Midlands were the major beneficiaries of the regional outflow, with 14% of students moving to these areas on graduation. For Birmingham and Solihull the analysis reveals greater graduate retention in the local labour market. Thus, 64% of domiciled graduates returned to work within the West Midlands County area and just under 30% of graduates did not return to the regional labour market on graduation. During 2001/2002, in absolute terms there was a net outflow of graduates from the West Midlands region. This outflow was most significant in a range of business activities (239 graduates), retail trades (160 graduates), public administration (147 graduates) and financial activities (excluding insurance and pension funding) (133 graduates) while net graduate inflows were greatest in automotive manufacturing and utilities (between 40 and 60 students in each case) (Labour Market Solutions, 2003: 5). The numbers are small (239 net graduate outflow in other business activities (SIC 74)), but it is important to note that the West Midlands has a graduate retention problem and this would appear to be at its most extreme in one of the most dynamic sectors (Business and Professional Services) of the economy.

## **4.5 Access to finance**

Access to finance for SMEs is key to stimulating competition and economic growth. SMEs provide 58% of private sector employment and 52% of private-sector turnover in the UK (SBS, 2003). As such, SMEs play a significant role in the UK economy, but they often experience barriers to accessing capital (Deloitte & Touche, 2002). Mainstream banks are reluctant to sanction loans to businesses that do not have collateral, a track record, a viable business proposal or operate in high risk sectors such as retail or catering and are not investment ready.

The West Midlands has an enterprise deficit in relation to other regions of the UK (Deloitte & Touche, 2002: AWM, 2004). The birth rate and growth of SMEs within the West Midlands is relatively poor (Deloitte & Touche, 2002). In the West Midlands there are:

- 290,000 registered SMEs
- Turnover £167,547 million in GDP each year
- Provide 54% of employment (compared to the national average of 58%) (NEF & Nicholson, 2003:15).

Finance for SMEs is a major issue in stimulating SME growth and generating and sustaining employment in the region. In 1997 Deloitte and Touche suggested that the supply of finance needed to be improved to reduce the gap in accessing finance and business advice to SMEs in the West Midlands. Deloitte and Touche found that the West Midlands remained below average in the rate of business start-ups compared to other regions of the UK (2002). The West Midlands also ranked 6<sup>th</sup> out of the 9 UK regions and has slower rates of growth compared to other regions. AWM has attempted to 'improve the performance of existing financial instruments and resources' by identifying and bridging the finance gaps for SMEs by coordinating financial resources in the West Midlands (AWM, 2004:125).

**Table 4.6: Key Providers of Firm-based Finance within the West Midlands**

Provider/Scheme	Finance Available	Eligibility
AWM Advantage Small Loan Programme	Up to £50,000	Community Development Finance Institutions (CDFI) can access a grant to on-lend to enterprise in the region
AWM Advantage Business Angels	Between £25,000- £3 million	Revenue for the Business Angel network
AWM Advantage Community Loan Fund	Between £250,000- £1 million	Loans funds for Social Enterprises
AWM Advantage Creative Fund	Up to £250,000	Equity Fund
AWM Advantage Early Growth Fund	Between £10,000- £100,000	Small levels of investment in early stage SMEs
AWM Advantage Enterprise and Innovation Fund	£250,000-£1,000,000	Equity investments
AWM Advantage Growth Fund	Up to £250,000	Regional Venture Capital fund
AWM Local Business Exchange	£500,000- £5 million	Retail investors
Mainstream Banks	£5,000-£250,000	Small Firm Loan Guarantee Scheme (SFLGS); <a href="http://www.dti.gov.uk/about/evaluation/sflgs.pdf">www.dti.gov.uk/about/evaluation/sflgs.pdf</a>
The Mercia Technology Fund	Up to £250,000	Technology spin-outs (sponsored by the Universities of Birmingham and Warwick)
CDFIs	£500-£50,000	Loan Funds for micro enterprises/SMEs/social enterprises

Source: AWM, 2004; AWM, 2005

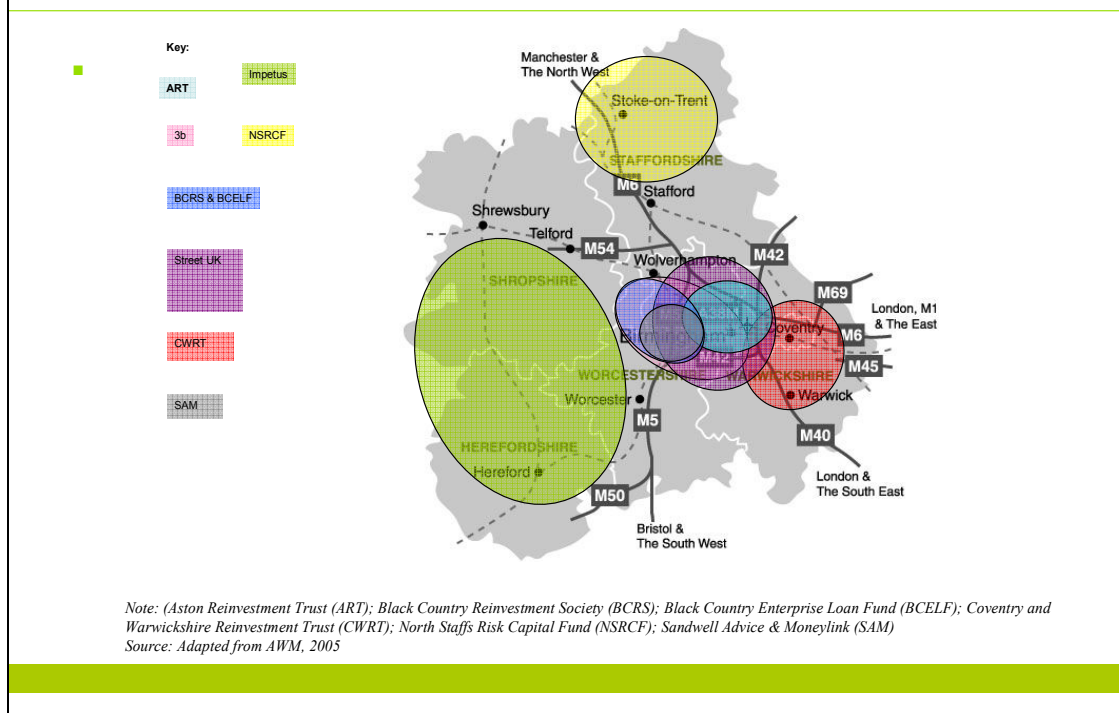
It has been identified that SMEs located in the West Midlands experience great difficulties in accessing loan finance below £50,000. This makes it difficult for new firms to acquire start-up finance. Established firms also experience difficulties especially those that do not have access to the right levels of security. There are a diverse range of financial providers in the West Midlands catering for the different requirements of each business sector and stage of business cycle (Table 4.6). The research team was unable to identify any dataset that provided a detailed intra-regional analysis of access to finance within the region. However, intra-regional research is available for Community Development Loan Institutions (CDFIs).

CDFIs have been identified as an effective tool to deliver finance to enterprise within the region (NEF & Nicholson, 2003). CDFIs are independent finance institutions that provide capital and support to enterprises located in disadvantaged areas. CDFIs provide loans from £1000 to £50,000 to SMEs and social enterprises. CDFIs aim to reach those who are excluded and/or rejected by mainstream banks for finance, for example, unemployed, ethnic minorities and women. They act as a bridge for SMEs to access finance from mainstream financial institutions in the future. As such, CDFIs aim to fulfil social and financial objectives. CDFIs are lenders of last resort with the aim of bridging the funding gap being experienced by SMEs in areas of high deprivation as 2% of enterprises are located in disadvantaged areas of the West Midlands (NEF & Nicholson, 2003). Areas of multiple deprivation in the West Midlands have an average density of 30 SMEs per 1000 adults compared to an average of 50 per 1000 (NEF & Nicholson, 2003:17); there are areas of the West Midlands which have an average of 20 SMEs per 1000 adults:

- Birmingham
- Coventry
- Nuneaton and Bedworth
- Stoke on Trent
- Telford and Wrekin
- Wolverhampton

By stimulating enterprise in deprived areas, jobs, services and wealth can be created which regenerates the area. There is only partial CDFI coverage across the West Midlands. There are currently nine CDFIs in the West Midlands operating in a variety of markets and serving both urban and rural populations. CDFIs provide an important mechanism for supporting local economies and their activities play an interesting role in encouraging new firm formation as well as expansion. Compared to other UK regions, CDFI coverage in the West Midlands is relatively widespread (Figure 5.1). AWM has been extremely supportive of CDFIs. Nevertheless, full regional coverage has yet to be achieved and this would be desirable as ideally all firms should have equal access to this financial instrument.

**Figure 4.6: The Geography of CDFI Loan Provision within the West Midlands, UK**



## 4.6 Summary

- The West Midlands is a complex economic region which is far wider than the Birmingham economy, though Birmingham is a major player within it.
- 2.6 million are employed within it.
- The employment base continues to be associated with the metal industries, and the main sectors of production are; automotive, plastics and rubber, software, food and drink, electronics and telecommunications, and business services.

- Over half of the region's GVA and employment are in three sectors; (1) manufacturing, (2) real estate, renting and business activities, and (3) wholesale and retail.
- Manufacturing is under threat. Employment and GVA in manufacturing are falling.
- In contrast, employment and GVA in finance and business services are growing.
- GVA per capita is low in rural areas but Solihull and Birmingham outperform the national average.
- There are significant variations within the region in the composition of activities. This compositional issue has important policy consequences. It is important not to let large business closures mask the potentially even greater cumulative job loss from large numbers of SME closures.
- Employment multipliers in manufacturing are higher than in other sectors (almost x2 those in business services and x3 those in retail)
- The region is underperforming in terms of new firm formation. Rates are lowest in the conurbations and highest in the south east of the region and in significant sections of the **E<sup>3</sup>I belt**.
- There is a skills deficit in the region, especially among sections of the population in the Black Country, Birmingham and Solihull.
- Location quotients show concentrations of people with higher qualifications in sections of the **E<sup>3</sup>I belt**.
- Graduate retention is strongest in Birmingham and Solihull.
- Access to finance is a major issue in addressing the region's enterprise deficit. CDFIs have been selected to deliver finance to enterprise in the region. The 9 that currently operate do not give full regional coverage.

# 5 Agriculture and Agribusiness in the West Midlands

Agriculture and Agribusiness are important sectors of the West Midlands economy that comprise a diverse agriculture sector and a significant number of food and drink businesses.

AWM (2002, 2006) is striving to create a cluster (since 2000) that welds these sectors together, specialist producers in meat, vegetables, milk, cheese and yoghurt, 'from plough to plate'. However, the available evidence would suggest that AWM's Food and Drinks Cluster comprises quite distinctive and independent (rather than interdependent) sets of businesses pursuing quite separate strategies. In addition to these problems, the region's agriculture is affected by problems of a skills shortage, fiscal policy, the shifting provisions of the Common Agricultural Policy (CAP), and the attitudes of operators (Oreszczyn and Lane, 2000; Carr, and Tait, 1991; Beedell and Rehman, 1996).

Combining the analyses of AWM and Farming and Food, three sets of businesses populate this section of the West Midlands economy:

1. Large farming operations in cropping and horticulture. These are classic 'captured capitalists' (Lawrence, 1987), tied into the supply chains of food processing corporations. Notable in this context in the West Midlands are sugar beet producers and processors who are currently threatened by changes in the CAP and the shift by Cadbury, for example, to buy sugar from France, and this could threaten 1500 jobs in the more rural areas of the west of the region. Similarly, Hereford soft fruit producers are tied into supermarket supply chains, and this sector of production has currently brought 30,000 fruit pickers to the region, principally from Poland.
2. Large food and drink corporations. These are powerful, brand-driven mass producers and mass distributors who are globally rather than locally orientated. Their allegiances and responsibilities through ownership often lie outside the region. The corporate players are major employers and produce a disproportionate share of output. They are concerned with low prices, long shelf lives and global sourcing.
3. Small farmers and land-based businesses, food and drink businesses based on lower volumes and differentiated products and services that can command higher prices. These are rural-based small businesses seeking local markets and specialist markets in for example organic food (Ibery et al, 2006), cheese etc.

## 5.1 Agriculture – sub-regional analysis

Farm production in the West Midlands is affected by land quality and climate. The best land is found in Herefordshire and Worcestershire, while agricultural employment is concentrated in Herefordshire and Shropshire. The region has a significant proportion of the UK's potentially erodable soils caused by farming practices principally in south Herefordshire, north Worcestershire, east Shropshire and southeast Staffordshire. Cereals, principally winter wheat, dominate cropping. Barley and oil seed rape are also important, as are sugar beet and potatoes around fifteen to twenty thousand hectares

each. In recent years, there has been a doubling of the area under maize, linked to the dairy sector. This increase means that maize now covers the same area as sugar beet in the region.

The geography of food production and manufacturing is closely related to the distribution of high grade agricultural land in the region. AWM's food and drinks cluster has a distinctive western geography, but with some limited concentrations in other parts of the region (Figure 5.1) Key elements of this geography include:

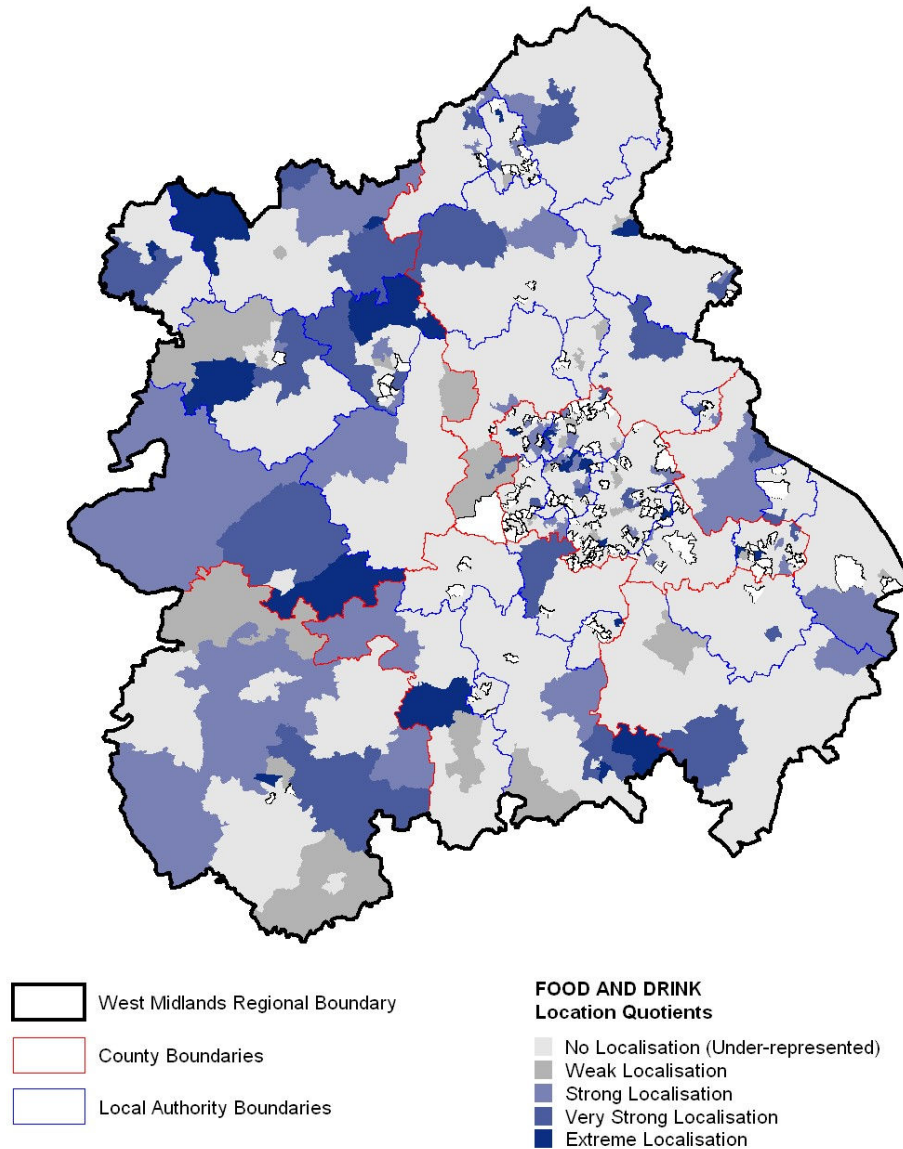
- **Staffordshire:** Total agricultural output is put at £259m. Agricultural employment at 1.7% of the total working population mirrors the regional average.
- **Shropshire:** Agricultural employment is 5.5% of the total working population compared with 1.7% for the region, and the percentage of the working population employed in agriculture, food and tourism is 14.6%. Total agricultural output from Shropshire is £356m.
- **Worcestershire:** this is a county with very mixed agricultural production including a significant horticultural industry. The latest population census puts employment in agriculture, food and tourism at 10.4% of the total working population. The 3067 farm businesses have an agricultural output of £269m.
- **Herefordshire:** the most rural county in the West Midland region, there is a working population of fewer than 80,000 of which 8.4% are employed in agriculture, forestry and fishing, and 21.3% employed in agriculture, food and tourism. The county grows every crop capable of production in the UK, with cereals, potatoes and horticulture, and also beef, sheep and poultry being the most important sectors. The total value of the economic output of agriculture in Herefordshire is estimated at just over £200m (Herefordshire Economic Assessment, 2000-2002). Combinable crops, such as grain, pulses and oilseed rape, and horticulture are the largest single components of this. The weakness of agricultural incomes has affected employment in agriculture within the county, with less than half of all holdings now employing any non-family labour. This is a contribution to the general level of unemployment and under-employment in the county.
- **Warwickshire** is a county with significantly higher proportions of larger farms than other parts of the region. Of the 2442 farm businesses nearly 35% are over 100 ha in size. Cereal cropping is the most important arable contribution, together with oil seed rape and field beans and peas. Employment in agriculture, forestry and fishing is put at 2.0% of the total working population (DEFRA, 2006).

## 5.2 Agribusiness in the West Midlands

The rural economy of the region has a very limited manufacturing base and a large service sector which focuses on food and tourism. While a large urban market and a large food processing sector exist, it appears that there has been only a limited attempt to improve the marketing of foods products by adding value and responding to trends (Ministry of Agriculture, Fisheries and Food, 2000). In 2000, it was reported that the region had 38 co-operatives and farm controlled businesses within the 19,000 farm

Figure 5.1

### Localised Concentrations of Food and Drink Cluster



Source: ABI

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holdings within the region, suggesting that marketing and diversification opportunities are not being pursued.

The West Midlands food and drink industry accounts for 7% (170,000 jobs) of the regional economy (AWM, 2006) and embraces a wide range of diverse farming, food and drink processing, manufacturing and food services activities. The need for

proximity, caused by the location of agricultural food supply chains in local and rural areas, has resulted in a clustering of food supply chain businesses in the region.

The Midlands has an important share of the food and drink business and it has a worldwide reputation in the field of food and drink research. The world's largest team of horticultural research and development scientists is based in the region (Horticultural Research International). In addition, the region has ideal conditions for food and drink manufacturers to thrive, which is why so many international companies have chosen to site their businesses in the region.

Advantage West Midlands (AWM, 2000) identified 1,665 food and drink companies in the region. The top 5 manufacturing business types in the region, in terms of number of enterprises, are food manufacturers and processors, meat and poultry suppliers, dairies, cake and decorations manufacturers, and frozen food manufacturers.

The industry includes large multinational enterprises such as Cadbury, HP Foods, Heinz, Bass and the Müller Group. The logistics of the industry are facilitated by the region lying at the hub of the UK motorway network, and this is a major benefit to these companies.

The characteristics of the food and drink industry are profoundly affected by domestic government policy. The food and drink industry is also subject to the growing influence of binding international political agreements. Moreover, the World Trade Organisation is likely to have an increasing influence on the sector as cross-border barriers to trade are removed and the international market becomes ever more openly competitive.

### **5.3 Strengths and Weaknesses**

The strength of the region's agricultural economy is related to the potential to produce a wide variety of food crops to cater for the demands of the urban population. However, structural problems facing agriculture in the region include: the small size of farms in some counties (most of which are family operated); the reliance in the region on livestock production; the ageing agricultural workforce; the financial difficulties facing the agricultural sector resulting from undercapitalisation and downward pressure on farming incomes as the subsidy regime changes; and the need for both on and off farm diversification.

Research carried out by AWM (2005) indicates that the main barriers to business development for the food supply chain in the West Midlands Region were considered by companies to be as follows:

- Government and EU restrictions,
- Monopoly position of supermarkets and large companies,
- Economic uncertainty in UK and Europe, bad debts,
- Adverse image/publicity for the food production industry, and
- Lack of government grants / raising finance / land costs.

The first three factors are of particular concern to the agricultural businesses in the West Midlands Region and they have put considerable pressure on farm incomes. The monopoly position of the multiples and super-markets have the most impact on manufacturers and smaller specialist retailers. According to Kneafsey et al (2003), 56% of companies they interviewed would like to see an initiative for the food supply chain



introduced in the West Midlands Region. However, the real challenge for food and drink firms remains the identification of key market segments which provide potential for sustained growth and where product specialization and service can be enhanced to create long-term competitive advantage.

Technological change in the sector poses many threats and also opportunities, but only where:

- technology is used to add value at the production or processing stage, or in order to differentiate service delivery, with attendant price and quality advantages, and
- technology is deployed in order to improve inter-firm network links with suppliers and customers such that value is added to the product, and the service to the customer is correspondingly enhanced.

The most vulnerable firms in the sector are those who remain undercapitalized, who do not innovate, who fail to upgrade the skills of their workforce and consequently continue to exist on unsustainable margins in a sector where competition from the major players is continuing to destroy inefficient firms. In recent years, the structure of the UK food and drink industry has been changing. Large, often multinational, companies have increasingly come to dominate particular product sectors. Concentration within the industry has been evident for many years, but increasingly this is accompanied by a significant degree of consolidation. Large manufacturers tend to specialize in those product areas identified as representing 'core' activities while withdrawing from other areas. Despite the increased concentration of some large food and drink manufacturers on the international market, there are still in the West Midlands region many small companies and microbusinesses serving local or specialist needs. Many of these businesses, locally and nationally, have demonstrated an ability to succeed in their particular markets, for example the growth of ethnic foods.

## 5.4 Summary

*Issue in the region's agriculture:*

- Land quality and erodability of soils,
- Changes to the CAP,
- Financial problems on farms,
- Monopoly position of supermarkets and large companies in buyer driven supply chain.

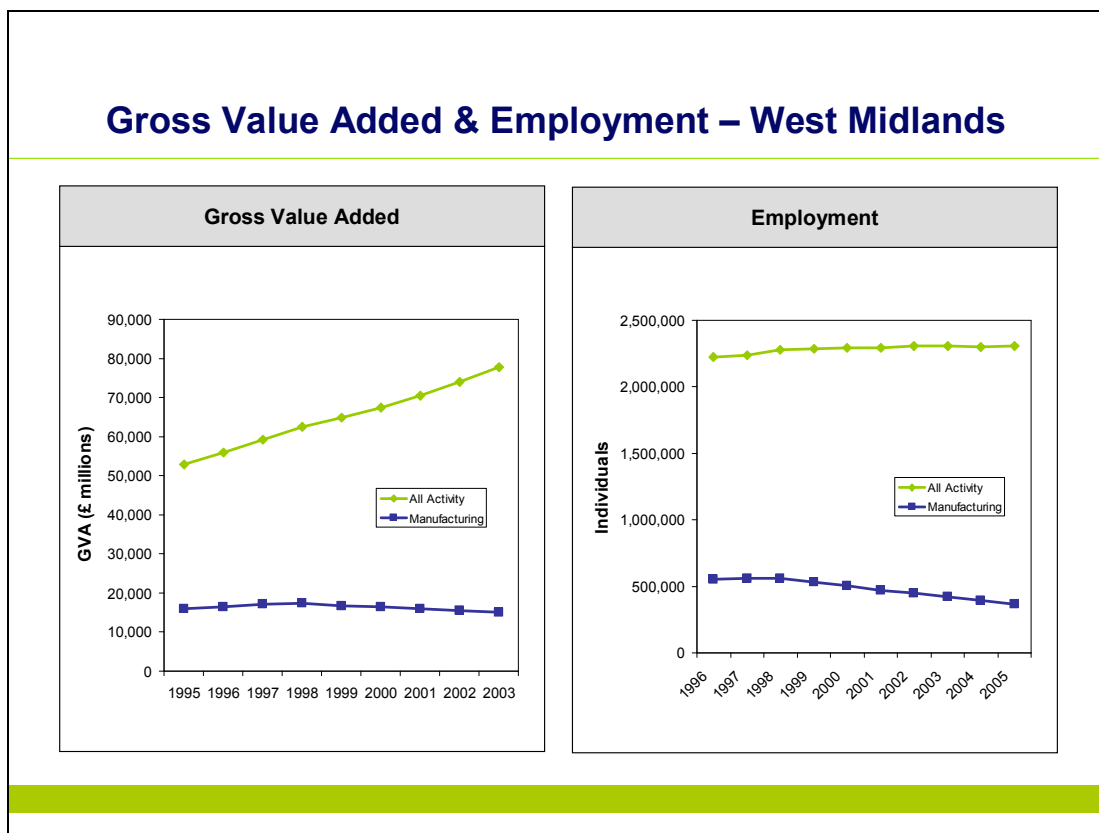
*Food and drinks industry:*

- Global reputation and global reach,
- Threat of growing ownership concentration in the industry,
- Commercial orientation away from the region,
- Locational advantage at the UK logistics hub,
- Adverse image of the food production industry.

## 6. Manufacturing and Production

The West Midlands region is the UK's industrial heartland, where manufacturing is more important within the economic structure than in any other region in the country. It has long been recognised as having a distinctive structure of production based on the local linkage of essentially small firms – a 'locational integration' that has much in common with the current policy and academic debate regarding the clustering of economic activity. In recent years, however, the role of manufacturing, regionally as nationally, has been in decline in terms of both employment and gross value added, as production has moved to low-wage countries and UK companies have moved off-shore.

**Figure 6.1: Gross Value Added and Employment in Manufacturing and All Sectors in the West Midlands, 1995-2005**



The shifts are shown in Figure 6.1. In terms of gross value added, while the regional economy as a whole has continued to grow year on year, in manufacturing there has been significant decline since 1999. Growth in the region's employment continued until 2003, when it began to decline, picking up again in 2005. In manufacturing in the region the picture is very much worse, employment has fallen rapidly since 1999, and that fall appears to be accelerating.

This restructuring has, to a significant extent, affected the local system of production, to the extent that some have argued that the region now has an enterprise deficit and a closely related skills deficit.

## 6.1 Change and the Pressures of Restructuring

To plan for a region it is important to understand how its economy works now and in the past. The metal working and engineering industries of the West Midlands are an internationally recognised type-example of a linked enterprise structure (Florence, 1948, 1961; West Midlands Group, 1948) in which the output of firms in metals production feed into those specialised in metal forming, those producing components and sub-assemblies, and finally into firms producing finished and consumer products (especially vehicles, and other regionally distinctive products) (also see Berkeley et al, 2005). The close linkage of firms within this system has been argued to generate *external economies of scale*, making the region's industry more *efficient and competitive*. This interpretation sits easily with the current ideas on '*clusters*'. However, other research on the region's economy in the 1970s and 1980s, could not identify these cost efficiencies and argued instead that the region's locally linked enterprise structure owed more to behavioural processes making business '*easier*' rather than more '*cost effective*' and '*cheaper*' (Taylor, 1973; 1975; 1978; Taylor and Thrift, 1982a, Taylor and Wood, 1973; OECD 2004). This latter interpretation fits well that the socially constructed relationships between firms in the 'group contracting' system on which the region's manufacturing was founded, and within which the principal 'market-makers' were 'factors' and agents.

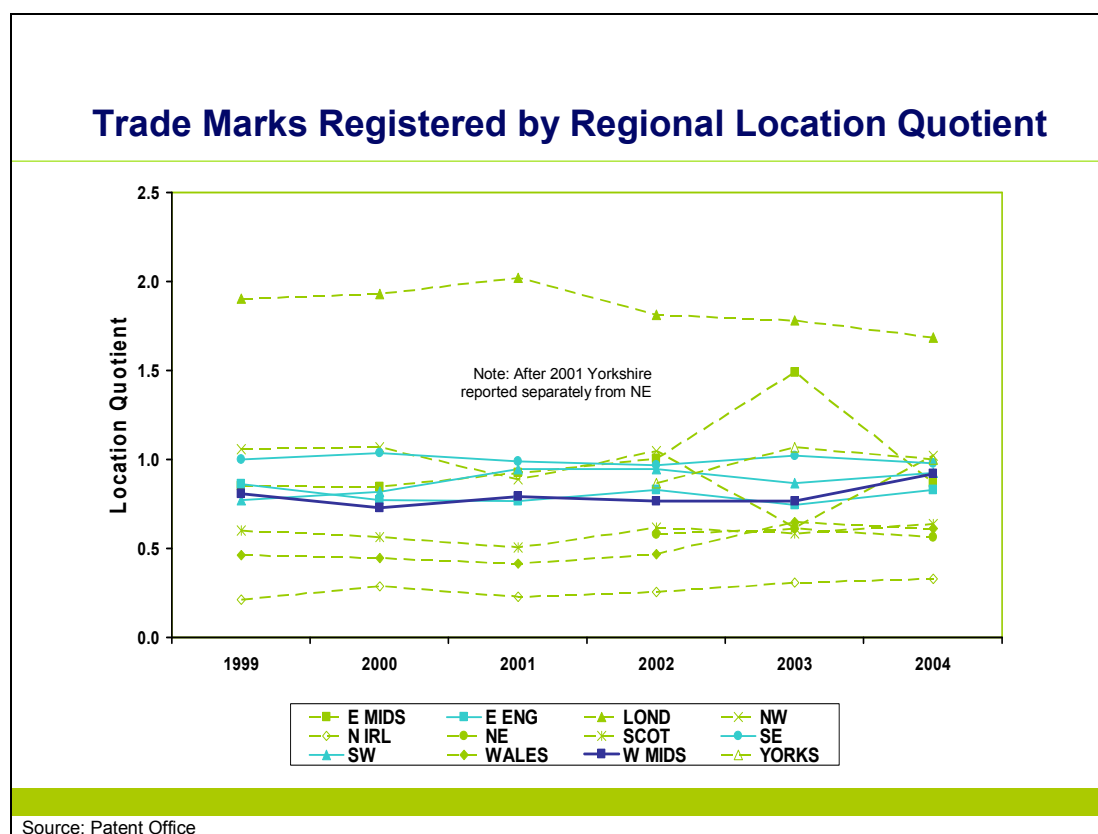
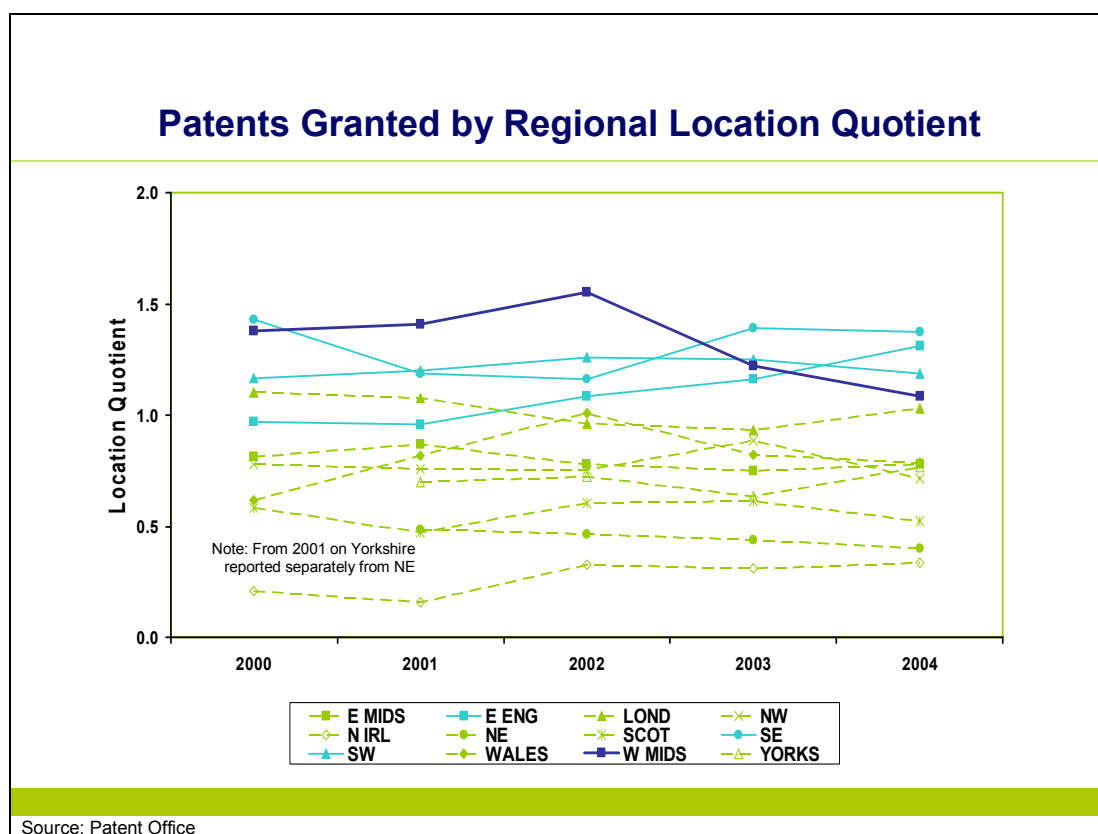
However, though the linked enterprise system of the West Midlands might show signs of continuation to the present, the system has also undergone radical restructuring at various times, and especially so in the last three decades.

From the 1920s on, Fordism and mass production brought major changes to the West Midlands regional economy: the limited company replaced the family firm and the entrepreneur; mergers brought a loss of local control and corporate concentration; the scale of production increased as did the extent of vertical integration. Fordist mass production created boom conditions in the West Midlands through the 1950s and 1960s, but left the region's economy with significant vulnerabilities. The number of 'market makers' within the region was radically reduced, as indicated by the fact that 48% of its manufacturing employment was in just 25 companies in 1977 (Spencer et al 1986). That concentration, especially in the car industry, had significant implications. Many small, independent engineering firms were transformed into subcontractors, and the large employers became powerful and vulnerable – powerful enough to elicit government assistance, while vulnerable to union pressure. The region's metal and engineering industries lost their resilience (Bryson et al, 1996).

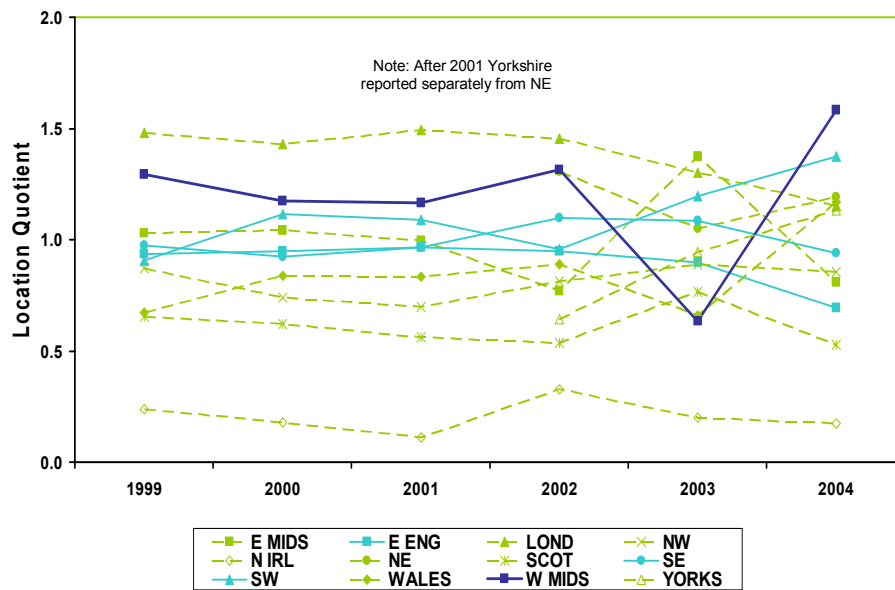
Restructuring after 1970, in an era of mass customisation rather than mass production, has left the West Midlands striving to cope with change: a weak player in the service economy; labelled as having non-innovative small firms in the 1990s; and having serious skills gaps (OECD, 2004).

What has been distinctive about the West Midlands post-Fordist restructuring has been the growth of firm registrations in the finance and business services sectors, especially; (1) services, (2) wholesaling, retail and repair, (3) hotels and restaurants, and (4) construction. However, the "new firm formation rate in the manufacturing sector was a little higher than in the UK but much lower than the employment the sector accounted for in the region" (p.39). The ethnic communities of the West Midlands (the largest concentration outside London and the Southeast) have not, however, contributed proportionally to the new firm formation rate in manufacturing.

**Figure 6.2: Patents, Registered Trade Marks and Registered Designs  
Regional Location Quotients, 1999 to 2004**



## Designs Registered by Regional Location Quotient



Source: Patent Office

The data on this issue provide only a very partial picture, but it would appear that the ethnic communities of the West Midlands have created new enterprises predominantly in health care activities and retailing (OECD, 2004), and also in clothing manufacture (though this sector has declined sharply in the early years of the present century (Berkeley et al 2005).

Although the most recent restructuring of production in the region might point to a possible enterprise deficit, there would appear to be no parallel innovation deficit. The OECD report of 2004 considered, on the information that was assembled, that in terms of innovation performance, the region had “not fared badly”. More recent time series data on regional variations in the granting of patents, registered trade marks and registered designs (Figure 6.2) suggest that, relative to gross value added, *the West Midlands is one of the more innovative regions in the country* behind the East of England (Cambridge’s ‘Silicon Fen’), the South East (the M4 corridor), and the South West. This is a point that is too easily overlooked. It is a potential driver of regional economic growth, with the capacity to stimulate enterprise, entrepreneurship and new firm formation

The patents, trade mark and design data, as with the data used by the OECD, are far from ideal as measures of innovative capacity, but they do paint a consistent picture. The suggestion is, therefore, that the innovative capacity that has typified the West Midland manufacturing sectors for more than a century and a half have not been altogether eradicated by the massive restructuring that has occurred in the past 25 years. Nevertheless, the data do sound a note of caution, because the level of patenting activity in the West Midlands has fallen consistently in the last five years<sup>3</sup>. The decrease might suggest that regional innovative capacity is reducing or it might reflect a shift in the geography of patents; innovations developed in the West Midlands might be

<sup>3</sup> 419 patents were granted in the West Midlands in 2002, 360 in 2003 and 332 in 2004.

increasingly patented via a firm's headquarters rather than at regional or branch plant level.

Interview evidence (2006) from firms in niche metal manufacturing (forging, pressing rolling and shaping) and lock making in the West Midlands suggests very specific processes of change are occurring. Large companies in lock manufacturing, for example, are disengaging from the local production system to shift high volume, low value production overseas. At the same time, however, they are maintaining skills-based specialist production in the region, and also research and design. SMEs in niche metal manufacturing are focusing on quality and good customer service, using CAD CAM to produce small batches with a rapid turnaround. These firms also have wider markets than lock firms, for example, reducing their vulnerability. Many pride themselves in having the most advanced production facilities in Europe. The corporate disengagement and overseas competition experienced by the lock industry compared with the buoyancy of the niche metal manufacturers suggest that great care needs to be taken in assuming a uniformly declining metals manufacturing sector in the West Midlands. These high-end niche metal manufacturers have the potential to be the 'seedbed' from which to grow a very different metal manufacturing sector in the region. A subtlety of policy support is needed to maintain a base of metal manufacturing more suited to the 21<sup>st</sup> century.

## **6.2 The Spatial Pattern of Production: Localisation and Polycentricity**

The metals and metal manufacturing sectors that have been the traditional heart of West Midlands manufacturing are strongly localised in the districts of Birmingham and the Black Country, and significant nodes of these activities have developed elsewhere in the region. These spatial changes are illustrated in Figure 6.3, in which are mapped location quotients for Basic Metals Production. Production in this sector is extremely highly localised in the four authorities of Wolverhampton, Walsall, Dudley and Sandwell that comprise the Black Country. Birmingham, too, demonstrates strong localisation. Elsewhere, there are notably strong concentrations of Basic Metals Production in the contiguous districts of Nuneaton and Bedworth, Rugby and Warwick. A somewhat stronger localisation is evident in the contiguous districts of Worcester, Wychavon, Redditch and Hereford. Also notable in this context are the localisation in Bridgnorth and the districts of north Staffordshire.

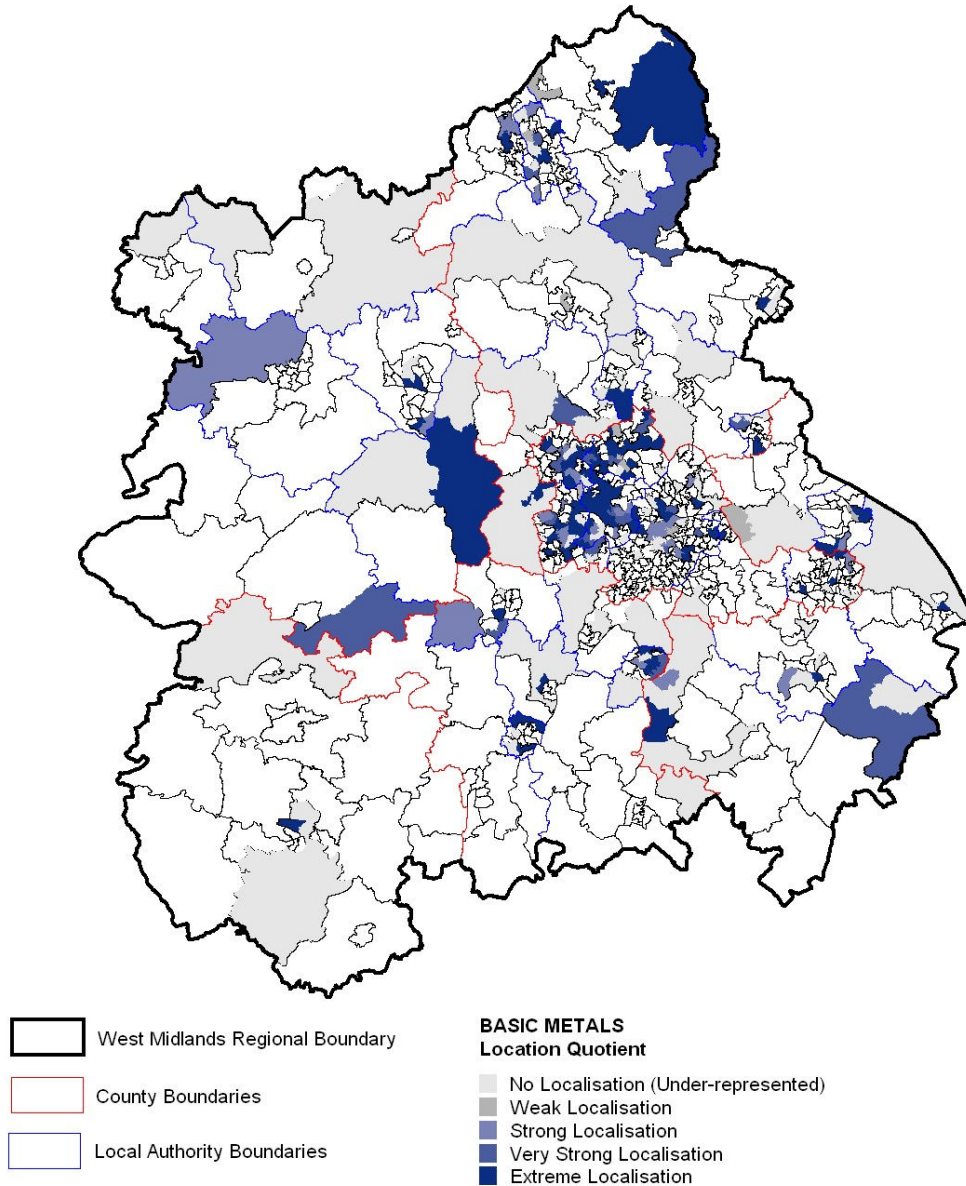
Metal Manufacturing is again strongly centred especially strongly in Birmingham and the Black Country, and to a lesser extent in Coventry. This pattern is illustrated in Figure 6.4 which maps the location quotients for the Forgings and Pressing sector. Outside this core of metal manufacturing, Figure 6.4 shows that the sector has extended into:

- Districts on the southern periphery of the conurbation (Wyre Forest, Bromsgrove, Redditch and Stratford on Avon);
- Districts on the northern periphery of the conurbation (Cannock Chase, Lichfield and North Warwickshire); and
- Two separate nodes in Stoke on Trent and the strongly emergent node of Telford.

Moving upwards in the metals and engineering sequence, the map of location quotients for employment in Machine Tools Manufacturing (Figure 6.5) shows significant

Figure 6.3

### Localised Concentrations of Basic Metals industries

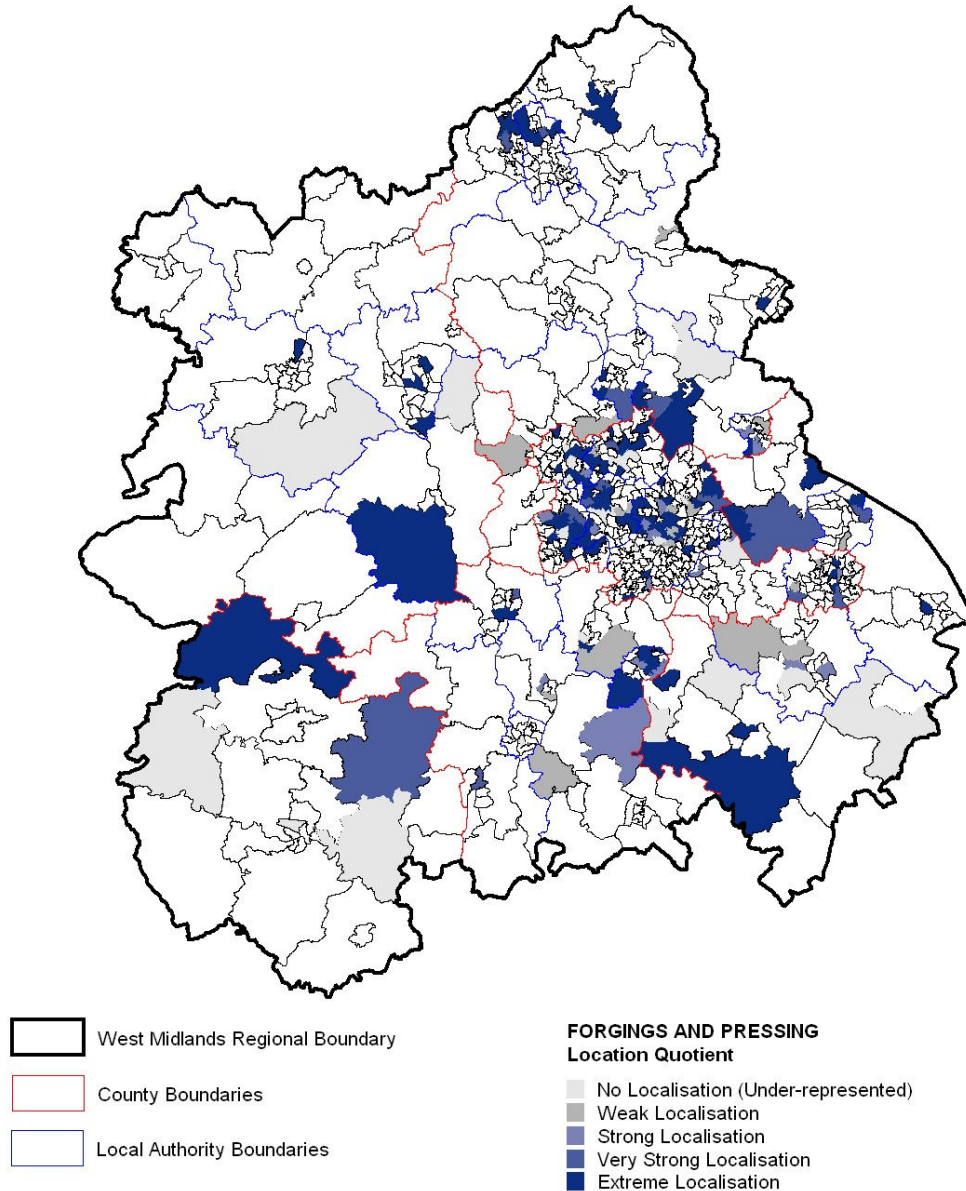


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Figure 6.4

### Localised Concentrations of Forgings and Pressing industries



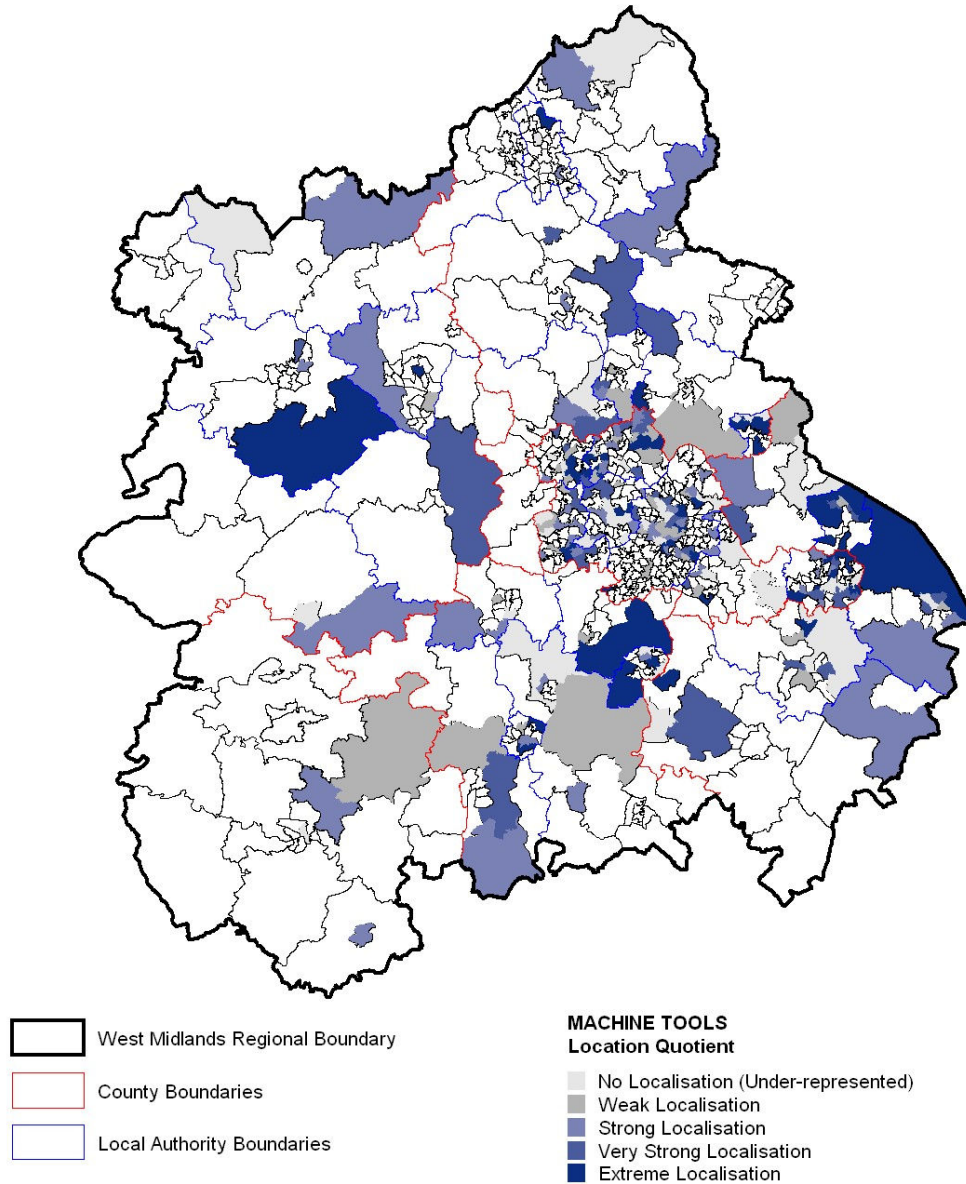
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Figure 6.5

## Localised Concentrations of Machine Tools industries

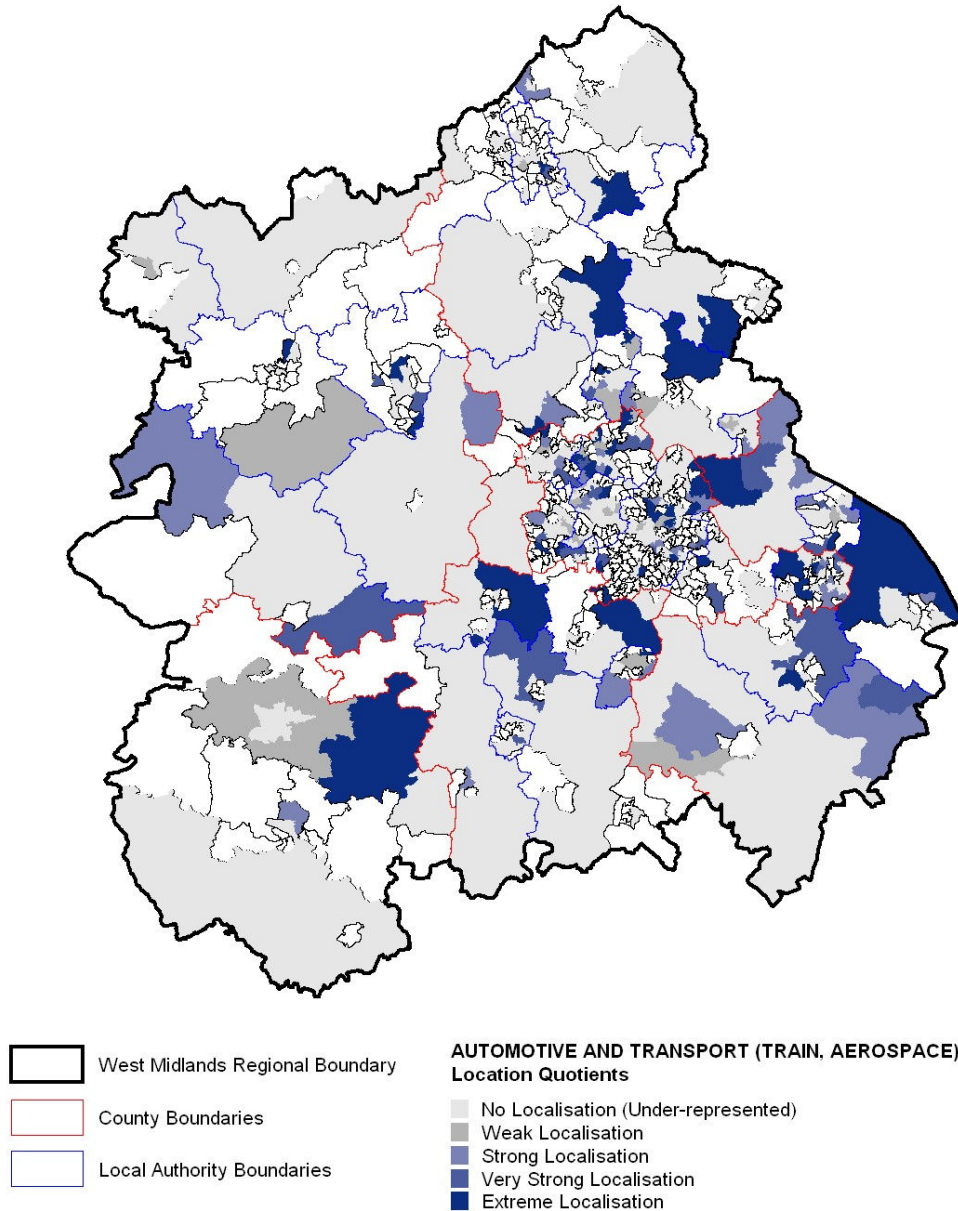


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Figure 6.6

### Localised Concentrations of Automotive and transport (train, aerospace) industries

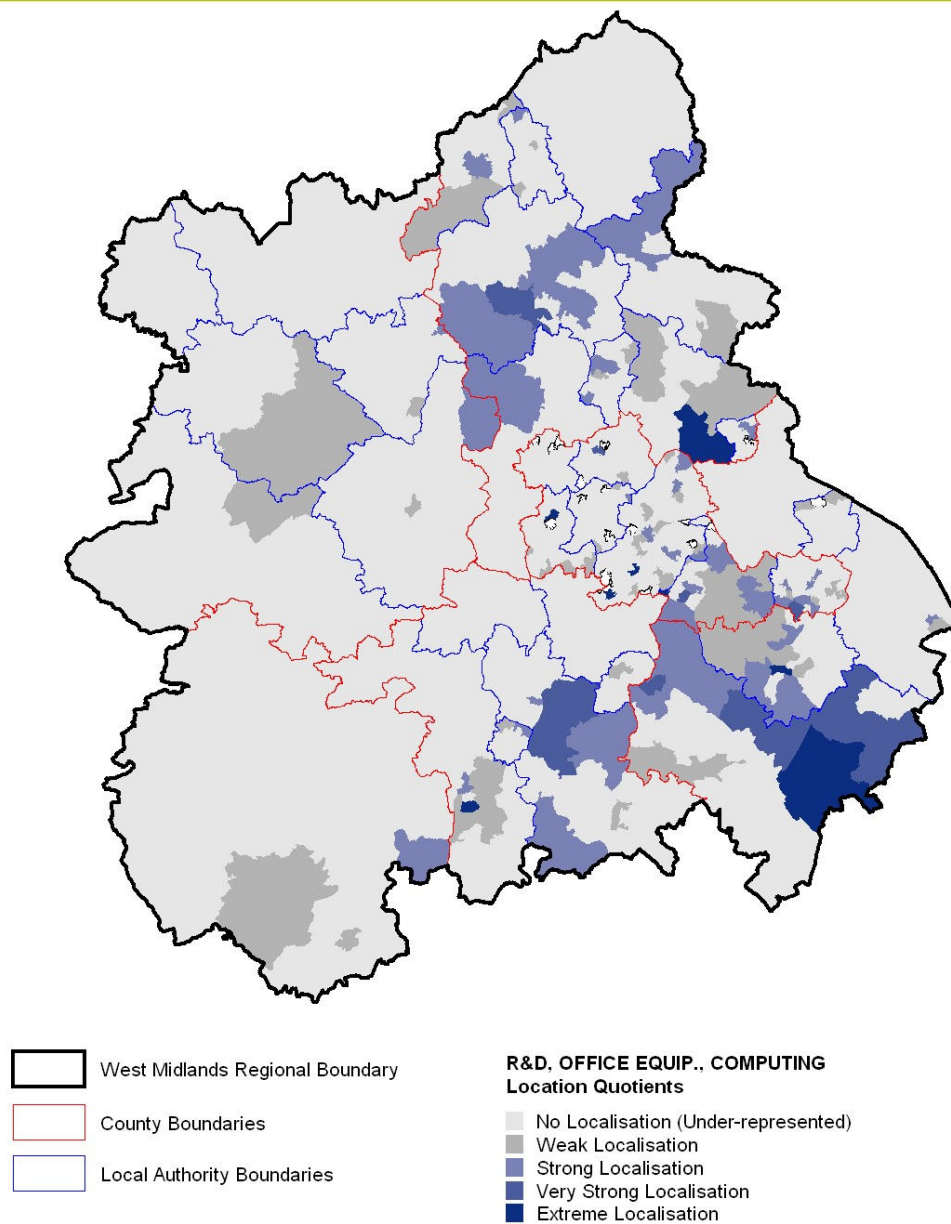


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Figure 6.7

### Localised Concentrations of R&D, Office equipment and computing industries

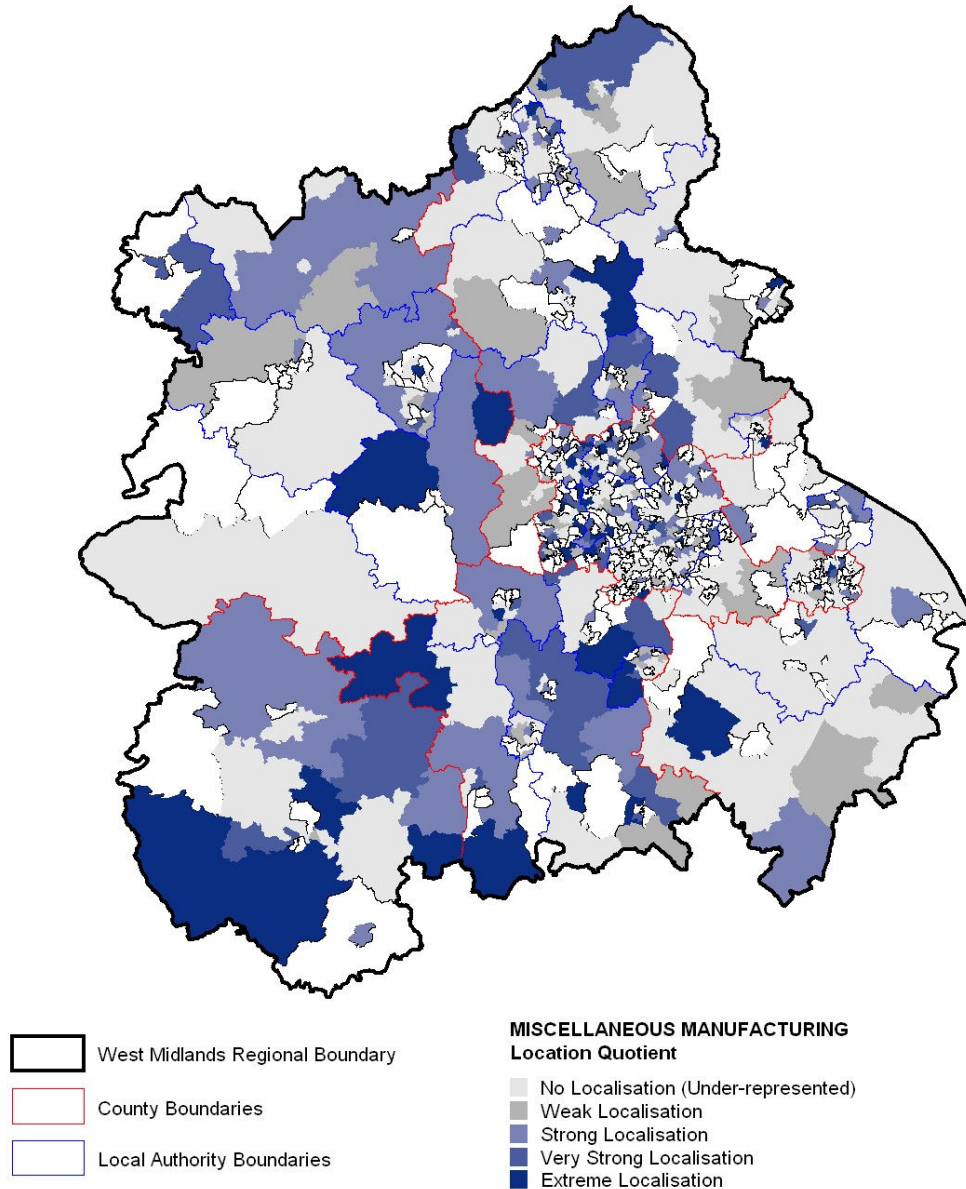


Source: ABI

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Advantage West Midlands, 100030383 (May 2006)

Figure 6.8

### Localised Concentrations of Miscellaneous Manufacturing industries



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polycentric development in the region. Machine tools manufacture has extended from the conurbation and Coventry core to: (1) Telford and Cannock; (2) Tamworth, Nuneaton and Bedworth, and Rugby; and (3) Bromsgrove, Redditch and Worcester.

The peak of the West Midlands production system is dominated by vehicle production, and Figure 6.6 demonstrates the current localisation of activities associated with this production. The Manufacture of Motor Vehicles and Parts is strongly concentrated in a set of districts in the eastern half of the Conurbation and the region including; Walsall, Birmingham, Bromsgrove, Solihull, North Warwickshire, Coventry, Nuneaton and Bedworth, and Rugby. Lesser concentrations of these activities are found in Redditch, Wyre Forest, Dudley and Lichfield. However, notable strong concentrations are now found in Telford and Cannock Chase. This pattern suggests that the peak of the West Midlands production system has spread from its origins in the Conurbation (Birmingham, Black County and Solihull) and Coventry to embrace the whole of the eastern part of the region.

It is particularly notable that Wolverhampton no longer figures in this aspect of West Midlands production. In the interwar years of the 20<sup>th</sup> century, Wolverhampton was a significant centre of innovation in the vehicle industry – a centre of technological leadership according to Beesley (1957). Beesley has suggested, however, that the innovative companies of Wolverhampton failed to capitalise and convert their innovations into mass production – a process that occurred elsewhere, in Birmingham, Coventry, Oxford, Luton and Dagenham, for example. And, this is an issue that finds current resonance in Silicon Valley (Taylor and Plummer, 2003). In the current analysis it demonstrates the dynamic of change that still runs through West Midlands metals and metal working production.

Extending this issue of the spatiality of innovation, a strong regional pattern is evident in the location of production that can be considered likely to underpin and guide the future of West Midlands metals and metal manufacturing. In this context, two sectors of current production can be used as indicators. The first is R&D activity and the second is 'Miscellaneous Manufacturing n.e.c.'. The 'not elsewhere classified' elements of a sectoral economic classification were considered by Florence (1961) in the context of the West Midlands to contain those elements of a production system that are emergent and do not fit readily with static classificatory systems. It is this interpretation that is applied here. What is clear from Figures 6.7 and 6.8 and is that these two sectors of activity have distinctive patterns intra-regional distribution within the West Midlands, as measured by location quotients. R&D activity (Figure 6.7) is very strongly localised in Solihull, Warwick and Malvern, is strongly localised in the adjacent Stratford upon Avon district, and has an above average representation in Lichfield. These are all affluent, desirable places to live that are strategically close to the main centres of production and equally strategically placed on main motorway connections affording ready national access. The geography of R&D is being facilitated by the motorway network, specifically the M50, M5 and the M40. This is a major threat as well as opportunity. A threat as the innovation can support activities located adjacent to the region and an opportunity as this infrastructure facilitates access to key markets (London and the South East) as well as centres of corporate control. The Manufacture of Office Machinery and Computers (Figure 6.7) shows equally strong localisation in Newcastle Under Lyme, and a trigger for growth in the Stoke on Trent conurbation, Stafford and Telford, and Wychavon in the south of the region (Evesham and Pershore). Miscellaneous Manufacturing n.e.c. (Figure 6.8) shows a different pattern of localisation, more strongly linked to parts of the Black Country but extending beyond. Essentially, it is the districts of the south west of the West Midlands region that



specialise in these activities, and outside Dudley in the conurbation, there are notably strong localisations in Bridgnorth, Bromsgrove and Malvern Hills.

Outside the metals and metal working sectors a separate set of high value added consumer products are highly localised in a number of districts in the West Midlands regions. These products include carpets, textiles and clothing, glass, ceramics, furniture, jewellery and leather. The dynamics of employment in these activities since the beginning of the 1990s are outlined in Table 6.1, derived from Donnelly *et al* (2005). All are highly localised within the conurbation, except for ceramics production which is dominated by Stoke on Trent and a number of contiguous north Staffordshire districts that make up The Potteries. Some of these specialist areas of production – that AWM (2001) has labelled as design-driven, market-led, and customer-facing – have very long histories, especially the production of jewellery in Birmingham, leather in Walsall, carpets in Kidderminster and ceramics in the Potteries. Furniture and textiles and clothing are more recent lines of production associated with Asian immigration. However, all these areas of production, with the exception of furniture making are experiencing rapid employment decline in the region though their share of national employment in these activities remains high. These are areas of West Midland's production that face strong international competition from low wage countries. The future for these sectors appears to lie in moving away from price competition and high volume production to design-led, high quality production. That future is demonstrated in the enterprise in high-end, cutting edge technology in ceramics that has been recently established in Rugby (BBC, 2006). This is not something new in, for example, jewellery production in Birmingham which through the 19<sup>th</sup> century was a centre of jewellery design much copied throughout Europe. It is, perhaps, to that mindset that producers need to return, moving away from a mass production mindset.

**Table 6.1: Employment change, 1991-2003, and Localisations of High Value Added Consumer Products**

	EMP 1991	EMP 1998	EMP 2003	% Change 1991-2003	Locations
<b>Carpets</b>	6026	5495	1843	-69.4	Kidderminster
<b>Txtls &amp; Clth</b>	19743	18801	7537	-61.8	Bham, Cov, Dud, Sandw, Wals, W'ton
<b>Glass</b>	5563	5065	3219	-42.1	Bham, Sandw, Dud, Stoke, Cov
<b>Ceramics</b>	29482	22510	14077	-52.3	Stoke, Dudley, Bham, Newcastle-u-L
<b>Furniture</b>	10054	13430	12213	21.5	Bham, Dudley, Sandwell, W'ton
<b>Jewellery</b>	5455	3856	2784	-48.9	Bham, Sandwell, Walsall
<b>Leather</b>	3411	2363	1275	-62.6	Wals, Bham, Dud, Strat, Cov, Can, Malv

Source: Berkeley *et al* 2005

From this analysis it is readily apparent that the spatial patterning of economic activity within the region is shifting away from Birmingham and the Black Country to a belt that encircles the Conurbation. This belt lies between around 20km to 40km from the conurbation and includes Stratford, Warwick, Lichfield, Cannock and Bridgnorth. Within the belt there is an important differentiation of activities from centre to centre. This means that the region has developed an increasingly polycentric structure. This structure is being extended by innovative activity (the Central technology corridor (A38); QuintiQ, Malvern) that is occurring in centres beyond the belt including Newcastle under Lyme, Stafford, Telford, Malvern, and Worcester.

The emergence of the belt reflects a combination of factors including lifestyle, accessibility, quality of environment, as well as the existence and development of a

range of innovative manufacturing and business and professional service activities. More research needs to be undertaken to explore the causal factors and feedback effects that operate in the belt. The belt would appear to be the result of a combination of processes that are related to the physical as well as commercial environment of places within the belt. The belt combines 'economic', 'entrepreneurial', 'environmental' and 'innovation' factors and is more conveniently labelled the **E<sup>3</sup>I belt**. The three 'es' reflect a distinctive economy (economic), high rates of new firm formation (entrepreneurial), quality of the environment and lifestyle (environmental) and the presence of knowledge-intensive firms as well as innovative manufacturing (innovation). The drivers behind the formation of the belt are complex and varied. In part, a key driver is access to the national transportation network, and this is especially important for the logistics sector and for some manufacturing activities. Other drivers are related to the attraction of places in the belt as high quality residential environments. Quality of life factors attract commuters working in the service sector to the belt who may eventually establish a firm in the locality.

At this stage it is worth noting that the notion of polycentric development lies at the heart of a new concept for the development of the European Union. The concept is designed to replace the simplistic bi-polar division of regions into cores and peripheries with a much more sophisticated appreciation of the relationship between places. Polycentricism, basically denotes the existence of multiple centres in one area. Our research suggests that the West Midlands economy has a complex economic geography that consists of a series of different spatial structures that include the Conurbation (Birmingham, Black Country, and Solihull), Coventry, the North Staffordshire conurbation, the **E<sup>3</sup>I belt**, the market towns and rural areas. Each of these areas has its own distinctive economic structure or in other words assemblage of economic activities, skills and economic drivers that have developed over time. Fundamental to this pattern are three important drivers: the availability of skilled labour, mechanisms that encourage new firm formation and an industrial structure that facilitates the formation of new firms. Our analysis suggests that there are important linkages between these three factors. Areas that have high concentrations of skilled workers also have high new firm formation rates and are also the location for some of the emergent industries as well as business and professional services. The relationship between the availability of skilled labour, high new firm formation rates and the presence of innovative industrial activities is not evenly spread throughout the **E<sup>3</sup>I belt** or the region. The area north of Bridgnorth, south of Newcastle under-Lyme and West of Stafford has a relatively highly skilled population, innovative manufacturing, but below average rates of new firm formation. Further research is required to explore the dynamics of this area. Perhaps below average rates of new firm formation in this area is related to an under-representation of business and professional service firms.

The **E<sup>3</sup>I belt** is a complex differentiated structure that requires further detailed theoretically driven empirical research. Part of this belt was identified by Daniels and Bryson (2002) when they highlighted the existence of a business and professional service arc to the south east of Birmingham (see 7.2 below). This arc forms one part of the **E<sup>3</sup>I belt** with other segments of the belt containing innovative manufacturing or logistics. The **E<sup>3</sup>I belt** contains concentrations of expertise that could be capitalised on by developing policies that would encourage the belt's drivers to spillover into adjacent areas, for example towards the Conurbation or into the north and west of the region. The **E<sup>3</sup>I belt** is perhaps partially driven by the Conurbation, but equally its drivers are elsewhere in the regional economy. The drivers are related to the available infrastructure and quality of life. Some of the drivers are outside the West Midlands and perhaps reflect the on-going incorporation of the West Midlands into the economy of

London and the South East. For example, some London commuters living in the south east of the region eventually establish local firms. These firms form around or even in homes and would not be established in the Conurbation. The identification of the **E<sup>3</sup>I belt** raises a number of important questions:

- Is the belt's formation related to a set of distinctive economic and social drivers that have encouraged economic activity in this area?
- What has been the role of former and current economic and planning policies in the formation of the belt?
- What are the enablers and barriers driving concentrations of skills and high new firm formation rates in the belt?
- Is it possible to replicate the drivers that exist in the belt elsewhere in the region?
- In what ways should policy enable or constrain the development of the belt?
- What is the relationship between the belt and existing economic spatial strategies, for example the corridor and cluster policies?
- What does the existence of the belt mean for the on-going development of the Regional Spatial Strategy (RSS) and for the Regional Economic Strategy (RES)?
- In what ways is the **E<sup>3</sup>I belt** facilitated by the RSS and RES?
- In what ways does the RSS and the RES facilitate and enable the developing regional polycentric structure?
- In what ways can the region's skill base be enhanced?

Differences within the **E<sup>3</sup>I belt** suggest that it is a polycentric structure with different drivers coming together to produce distinctive and in some cases localised economies. The existence and complexity of the belt as well as the existence of the other economies in the region (e.g. North Staffordshire Conurbation, Herefordshire and Shropshire) suggests that the West Midlands has a polycentric economic geography. This supports but also develops the analysis presented in the ECOTECH report that identified a polycentric framework for the West Midlands (2000).

Nevertheless, a major threat to the continued if slow recovery of manufacturing in the West Midlands (OECD, 2004) as well as the developing service economy is increasingly recognised as a major skills shortage. In the automotive industry there are major difficulties recruiting technical, skilled and semi-operative occupations (Donnelly et al, 2005). These shortages are mirrored in other engineering and metalworking sectors, for example lock making (Cooper 2004). The metals and engineering industries offer an unattractive work environment to the younger workforce raised on the publicity of an information/services economy within which a university education is the route to above-average earnings.

### **6.3 Planning, Polycentricity and the E<sup>3</sup>I belt.**

Further detailed research is required into the drivers behind the development of the **E<sup>3</sup>I belt**. Many of these drivers have already been identified in this report: for example high skills and education levels, high representation of business and professional services, high representation of innovative manufacturing, high rates of new firm formation and environmental quality. It could be argued that the formation of the belt has been influenced by planning and economic policies that were developed since World War II. The new and expanded town policy, for example, was a deliberate attempt to foster the growth of populations beyond the green belts. This was a policy of urban overspill. In the West Midlands Redditch was designated as a new town in 1964 and Telford in 1968.



Many of these designated overspill areas are within the **E<sup>3</sup>I belt**. Nevertheless, the primary economic hotspots within the belt have developed without the benefit of the early overspill policies, for example, Bridgnorth, North Shropshire, Wychavon, Stratford-on-Avon and Malvern Hills. This is not the place to undertake a detailed analysis of the relationship between planning and policy and the formation of the **E<sup>3</sup>I belt**; we acknowledge that some relationship exists between earlier policies and the current functioning economic geography of the region, but it would be difficult, if not impossible, to determine the significance of the relationship.

The Ecotech study (2000) identified a polycentric structure in the West Midlands that was used to inform the development of the Regional Spatial Strategy (RSS). Specifically the Ecotech report identified the following three patterns:

1. The concentration of industrial activity mirrors the areas which are losing population.
2. The new service economy is reinforcing old patterns and creating new patterns. Birmingham and Stoke on Trent are identified as being two of the three knowledge 'hearts' with the third being the southern periphery of Coventry. The new pattern is 'a large sweep around the south of the region'.
3. Areas of increasingly residential attractiveness specifically a northern band stretching from the periphery of Stoke on Trent through to Shrewsbury, and a broken southern sweep from southern Coventry through to Hereford. These areas of increasingly residential attractiveness do not 'coincide with centres of economic activity to any significant extent' (Ecotech, 2000, 19).

The Ecotech analysis of regional economic structure highlighted the existing industrial structure in the West Midlands. Key to this pattern is the assumption that areas of increasingly residential attractiveness surround the Conurbation and appear to function as a commuter belt.

The RSS identified areas of growing residential attractiveness and the developing geography of knowledge based activity (Birmingham, Coventry, Stoke on Trent) as well as the broad sweep around the south of the region (Section 1.14 of the RSS). The RSS notes that further research is required to explore the relationship between growing residential areas and economic activity and that the polycentric approach needs further development and refinement. Our research makes an important evidence-based contribution to understanding the functional inter-relationships between places and perhaps more importantly between key drivers of economic activity in an increasingly knowledge-driven economy – skills, innovative manufacturing, business and professional services, logistics and new firm formation. Revisions to the RSS and to the RES must take into consideration the much more complex polycentric regional structure that has been identified in this report and especially take into consideration the implications for policy development of the identification of the **E<sup>3</sup>I belt** and the differentiation that exists within it.

The timing of our research has enabled the identification of the complex functioning belt that surrounds the Conurbation. Earlier research identified elements of the belt, for example, the Ecotech report's 'southern sweep' and the Bryson and Daniels (2002) business and professional services arc. Elements of the belt were also identified in much earlier work undertaken in the 1970s. The belt has been emerging or latent for a substantial period of time, and it is only now that its complexity and significance have been revealed.

## 6.4 Summary

- As a whole, the region's production sectors have been in significant decline in terms of employment and GVA since the late 1990s.
- In the past the region has been seen as a metal manufacturing complex of linked industries along a production chain from metals production to finished goods.
- An important question is whether this complex is built on external economies of scale and efficiency, or on a behavioural relationships involving imitation that is 'easier' rather than more efficient.
- In the face of globalization the region faces an enterprise deficit and a skills deficit, especially in the conurbations.
- There is evidence to suggest that there IS NOT an innovation deficit in the region as a whole.
- Recent research suggests high-end manufacturing may be the source of future growth. Some corporate organisations are shedding jobs but keeping skill-based activities and research and design in the region. Equally SMEs in niche metal manufacturing are building business on quality service, technology and speed.
- A threat to this growth is from the ageing and future retirement of the skilled labour force.
- A distinctive spatial patterning has accompanied the restructuring and change of manufacturing and production in the region. While metals and the lower levels of the production system remain in the conurbation (essentially the Black Country), higher levels are moving to the **E<sup>3</sup>I belt**
- Sectors demonstrating the regions' innovative capacity are also concentrated in the **E<sup>3</sup>I belt**, especially Solihull, Warwick, Lichfield, Bridgnorth, Cannock, Bromsgrove. These activities are also found in significant pockets beyond the belt including Malvern, Telford, Stafford and Newcastle-under-Lyme.
- The belt combines 'economic, 'entrepreneurial, environmental and innovation' factors and this implies that it is more conveniently labelled the **E<sup>3</sup>I belt**.

## 7. Business and Professional Services in the West Midlands

During the 20<sup>th</sup> century the employment structure of the developed market economies shifted from manufacturing to service employment. This shift has been a feature of the West Midlands economy since the 1940s, but the region is yet to match the shift experienced at the national level. Table 7.1 shows the region as a whole and every county within the region has a smaller share of total service employment than the national average (84.4%). Indeed, every county shows a (-) sign, although relative to the West Midlands average, West Midlands County, Worcester, and Warwickshire have positive (+) shares of employees jobs in business and professional services (BPS).

**Table 7.1: West Midlands Counties: Employee jobs (%) in service industries, 2003**

	West Mids. County	Worcester	Hereford	Shropshire	Staffordshire	Warwickshire	West Midlands Region	GB
Services: employee jobs	914,303	173,001	48,120	84,207	246,185	174,871	1,640,867	
Distribution, hotels and restaurants	21.9 (--)	25.5 (++)	26.9 (++)	26.4 (++)	25.8 (++)	27.4 (++)	23.8 (-)	24.7
Transport & Communicati ons	5.6 (=)	3.9 (--)	3.5 (--)	5.6 (=)	6.4 (++)	7.6 (++)	5.6 (-)	6.0
Finance, IT, other business activities	18.3 (+-)	17.0 (+-)	11.1 (--)	9.1 (--)	14.0 (--)	18.0 (+-)	16.5 (-)	19.8
Public admin. Education & health	26.6 (++)	23.3 (--)	24.4 (--)	32.6 (++)	25.9 (++)	19.0 (--)	25.6 (-)	25.8
Other services	4.6 (--)	5.6 (++)	4.8 (+-)	4.9 (+-)	4.5 (--)	5.4 (++)	4.8 (-)	5.2
<b>Services</b>	<b>77.0</b>	<b>75.2</b>	<b>70.8</b>	<b>78.5</b>	<b>76.5</b>	<b>77.4</b>	<b>76.2</b>	<b>81.4</b>

Notes: Signs in brackets (+/-/= above, below, equal to West Midlands %, GB %)

Source: Annual Business Inquiry Employees Analysis (2003), Extracted from NOMIS, accessed 12 October, 2005, from Daniels and Bryson, 2006: 32

The West Midlands region is the largest financial and business services centre outside London. In 2003, the majority of the 1.7 million jobs in services were located in the former West Midlands county (0.9 million) and a significant share of these were concentrated in and around Birmingham. In 2004, for every one job in professional service in the West Midlands there were 1.6 jobs in manufacturing, although in common with the rest of the UK overall employment in service industries exceeds that in manufacturing. Using this indicator, Solihull's economy is more service orientated than Birmingham's while Stoke on Trent is dominated by manufacturing (Table 7.2). Solihull is the only part of the region where the BPS share of all employment (17.6%) is greater than that of manufacturing (11.7%) and more importantly is greater than the English average (16.1%). Throughout the region manufacturing employment is high by

national standards; all local authorities with the exception of Solihull have an above average share of manufacturing in total employment. The dominance of manufacturing employment in the West Midlands may be partially illusory as many jobs classified as manufacturing are in fact services. It is estimated that 10% to 20% of the value of manufacturing goods comes from some type of service function. This is an important point in that it means that policies developed to support manufacturing must also take into consideration the complex employment structure that exists within this sector. A good indication of the overall importance of service work to the West Midlands economy comes from an analysis of the employment structure by occupation (Table 7.3). This shows that only

**Table 7.2: All Employed in Manufacturing and Banking and Finance, 2004**

Area	All employed in manufacturing		All employed in banking, finance (sec J,K)		Ratio: Manufacturing to Service jobs
	number	% of all employment	number	% of all employment	
Birmingham	67,000	16.8	63,000	15.9	1.1
Coventry	28,000	20.7	16,000	11.5	1.8
Dudley	26,000	18.9	18,000	13.1	1.4
Herefordshire	15,000	17.5	9,000	9.9	1.7
Sandwell	24,000	21.2	15,000	12.9	1.6
Shropshire	22,000	16.0	12,000	9.0	1.8
Solihull	12,000	11.7	18,000	17.6	0.7
Staffordshire	84,000	21.2	47,000	11.9	1.8
Stoke on Trent	27,000	25.8	7,000	6.8	3.9
Telford and Wrekin	19,000	23.1	12,000	14.5	1.6
Walsall	25,000	22.1	10,000	9.3	2.5
Warwickshire	46,000	18.3	31,000	12.3	1.5
Wolverhampton	23,000	22.5	10,000	9.8	2.3
Worcestershire	56,000	21.0	28,000	10.6	2.0
Total	<b>474,000</b>	<b>19.5</b>	<b>296,000</b>	<b>12.2</b>	1.6
England	3,282,000	13.9	3,804,000	16.1	.86

*Source: Labour Force Survey - four quarter averages (Sept. 2003-Aug 2004), accessed Nomis, 15 May 2006*

9.8% of employment is in occupations that involve process plant and machinery operation and another 12.6% being elementary occupations. This table while highlighting the importance of service jobs within manufacturing also reveals that especially in BPS-related occupations (such as professional occupations or associate professionals and technical occupations) that the region overall and individual counties compare less favourably with the national situation.

The concentration of business and professional firms (BPS) in the West Midlands supports the activities of local firms as well as exporting expertise beyond the region. BPS firms provide intermediate inputs into the productive activities of their client companies. Riddle argues that ‘the service sector is the facilitative milieu in which other productive activities become possible’, (1986: 26). The implications of this statement is

that key ‘productive’ or intermediate service activities should be conceptualised as being a part of the productive side of an economy. Some knowledge-intensive services have become important strategic suppliers of information and knowledge, including technical expertise, to other sectors of the economy (manufacturing, services, public services, not-for-profit, etc).

**Table 7.3: West Midlands Counties Employment Structure by Occupation, 2004, (%)**

SOC 2000Group	West Midlands County	Worcester	Hereford	Shropshire	Staffordshire	Warwickshire	West Midlands Region	GB
1 Managers and senior professionals	12.7	16.2	15.1	12.8	13.8	14.2	13.4	14.9
2 Professional occupations	12.3	12.4	10.2	13.2	10.8	11.4	11.6	12.4
3 Associate professional and technical	11.8	13.5	11.4	13.4	13.3	11.8	12.3	13.9
4 Admin. and secretarial	13.3	10.9	10.9	10.6	12.4	12.5	12.4	12.7
5 Skilled trade occupations	11.7	10.7	17.3	11.5	13.6	12.0	12.4	11.3
6 Personal service	7.3	7.9	8.4	8.2	7.0	7.3	7.4	7.7
7 Sales and customer service	8.1	8.4	6.4	6.7	8.0	7.4	7.9	7.8
8 Process plant & machine operatives	10.1	9.4	8.3	9.5	9.7	8.8	9.8	7.5
9 Elementary occupations	12.3	10.4	11.9	14.3	11.4	14.8	12.6	11.6
<b>Persons in employment (000s)</b>	1,066.1	256.6	83.5	131.1	386.6	245.1	2,169.3	

Source: Annual Population Survey (Jan-Dec 2004), extracted from NOMIS, accessed 12 October, 2005, from Daniels and Bryson, 2006: 33

The production of goods can be divided into five parts with each part requiring a different form of BPS knowledge and expertise input:

1. *Pre-manufacturing* – product development, research & development design, product testing, market research, finance
2. *During Manufacturing* – finance, quality control, stock control, purchasing, safety, management, continuity/contingency planning etc
3. *Selling* – logistics, distribution networks, marketing, finance
4. *During product and system utilisation* – maintenance, leasing, finance etc
5. *After product and system utilisation* – waste management, recycling etc.

BPS firms are incorporated into all parts of the production process and their inputs can either be supplied in-house or purchased from independent suppliers.

## 7.1 Service Geographies

The West Midlands has a major cluster of BPS in central Birmingham, complemented by a secondary cluster located to the south and east of the city (Figure 7.1), there is significant dispersal that also incorporates an east-west distinction between a well-served east and a less diverse and probably under-provided western half of the region.

The Daniels and Bryson (2002) survey of BPS identified the existence of a professional services corridor and an extensive outer arc on the eastern and southern side of Birmingham which also intersects the corridor in the Warwick-Coventry area. The BPS arc is another part of the **E<sup>3</sup>I belt** surrounding the conurbation.

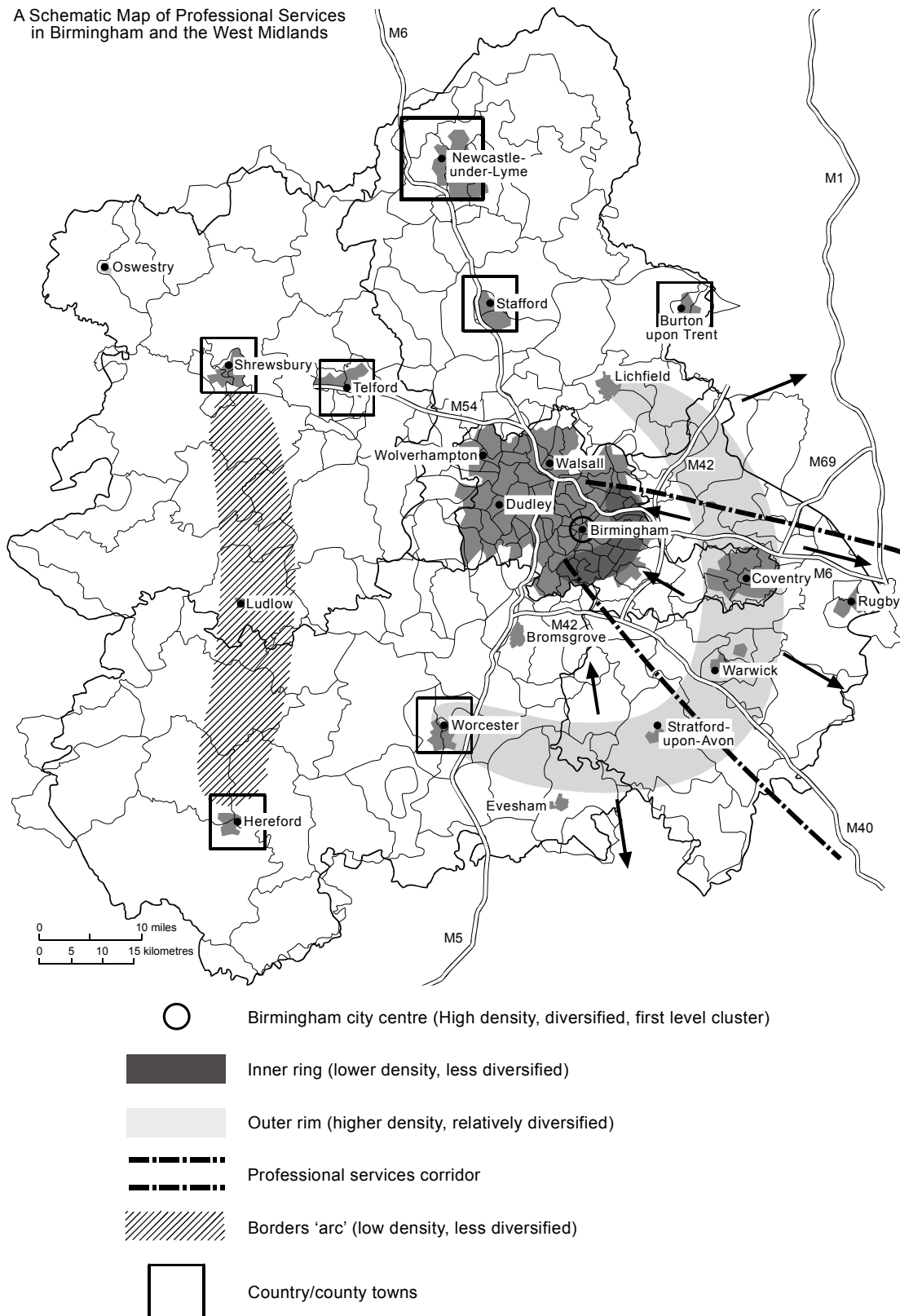
Birmingham city centre contains more than 600 BPS establishments, making it the largest and most diversified professional services cluster in the region. Across the region just 20 postcode areas are the location for 30 per cent of professional service establishments with a significant share concentrated in second tier clusters such as Coventry, Newcastle-under-Lyme or Worcester. Some activities such as insurance and pension services, legal services or employment consultants are more concentrated in the top 20 postcode areas than computer or design-related services.

The Daniels and Bryson report (2002) identified six features of the distribution of professional services within the region, some of which they identified for the first time (Figure 7.1):

- A **high density concentration** of professional services in Birmingham city centre. This is a first-level cluster within the region.
- A lower density **inner ring** of professional services, especially to the south, west and north of the city centre (but not including Wolverhampton and Walsall).
- A higher density **outer arc** of professional services to the east and south of Birmingham incorporating Lichfield, Coventry, Leamington Spa, Warwick, Stratford-upon-Avon, Evesham, Worcester and Bromsgrove. This a major, new, second-tier cluster within the region. It is probably no coincidence that high technology firms are co-located with professional services in this outer arc. It is also well placed for firms looking to develop links southward along the M1 and M40 into the South East and towards London. The Daniels and Bryson (2002) outer arc is in fact part of the **E<sup>3</sup>I belt** that lies between around 20km to 40km from the conurbation.

**Figure 7.1: Schematic Map of Professional Services in Birmingham and the West Midlands**

A Schematic Map of Professional Services in Birmingham and the West Midlands



Source: Daniels and Bryson, 2002

- A **professional services 'corridor'** linking the first-tier cluster in central Birmingham with parts of the second-tier outer arc extending south east from

Birmingham city centre, via Solihull and the Coventry-Warwick area to Rugby. It also extends but as a weaker feature north west of the city centre cluster towards Wolverhampton. This is another new feature of professional services landscape of the region.

- Local clusters of professional service firms in the region's **county/country towns** with mainly rural market areas. The main exception is the Newcastle-under-Lyme/Stoke-on-Trent area where there is a significant ceramics cluster and economic linkages extending into Cheshire along the M6 corridor.
- Weakly developed local clusters of BPS firms to the west of the region extending from Bridgnorth via Hereford to Ross-on-Wye (HR9). The firms in this area tend to be highly localised and are interspersed with small numbers of firms spread across largely rural areas.

The geographical unit of analysis for this analysis has been the West Midlands region. However, for the purposes of regionalised (or cross-region) professional service firms this geographical area is meaningless. The Daniels and Bryson (2002) report identified two important related trends:

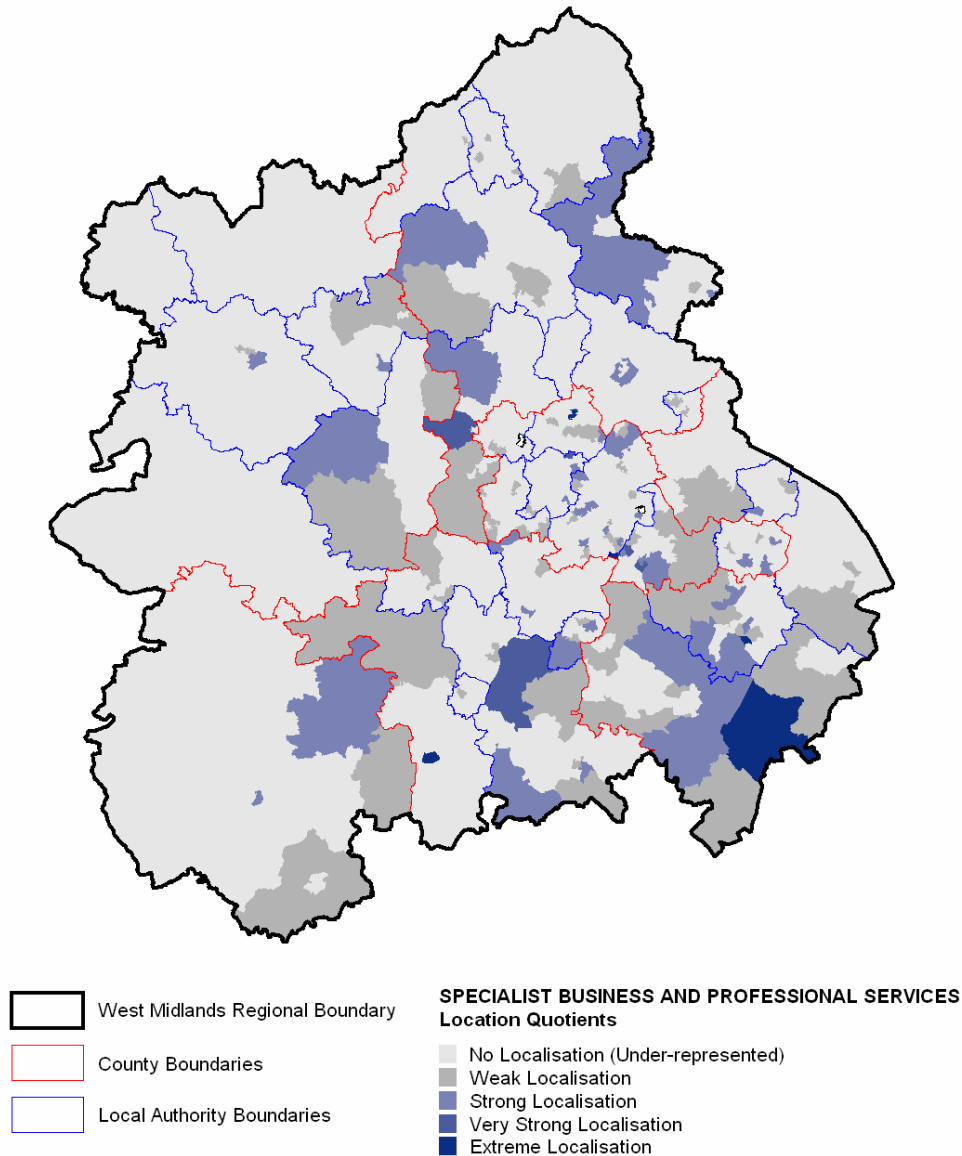
- For the majority of large regionalised and branch office establishments based in Birmingham their zone of operation covers the whole of the Midlands area – from mid-Wales to East Anglia and from Oxford up to Manchester and in some cases including Manchester, especially when the firm's Northern office is located in Leeds.
- There is evidence of a retreat of selected professional services from Nottingham and Leicester with these cities increasingly being serviced from Birmingham due to cost advantages and the ability to provide a range of expertise that cannot be supported by offices in smaller regional centres (Bryson and Daniels, 2002).

The analysis of Location Quotients of the SIC codes for AWM's specialist business and professional services cluster reveals a slightly different pattern (Figure 7.2). The key difference is the absence of the 'Borders' arc; this is not surprising as this predominantly supports local demand and could not be expected to be over-representative nationally. Perhaps more importantly is the identification of a partial **E<sup>3</sup>I belt** of BPS activity surrounding the conurbation and the development of the BPS corridor towards the South East of the region. This pattern of economic geography reflects the continued development of BPS activity beyond the confines of the conurbation. Some of this activity is closely integrated into the economy of Birmingham, but some supports the developing economy within the **E<sup>3</sup>I belt** and the south east corridor. It is worth noting that some of these firms are disengaging from the regional economy to develop a national or even international portfolio of clients.



Figure 7.2

### Localised Concentrations of Specialist Business and Professional Services Cluster



Source: ABI

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Advantage West Midlands, 100030383 (May 2006)

Lifestyle factors play an important role in the establishment of BPS firms and that many of the firms located in the BPS partial **E<sup>3</sup>I belt** may have been established close to or even in their founder's home. Both the Daniels and Bryson reports on BPS firms in the West Midlands (2002, 2006) highlight the importance of quality of environment in the attraction and retention of professional staff. The 2002 report highlighted attraction problems in relation to Stoke on Trent, while the 2006 report revisited and confirmed the Stoke on Trent problem, but also identified a similar problem in Telford and

Coventry. This problem is partly related to perceptions regarding career progression and job satisfaction in cities like Birmingham.

## **7.2 A Segmentation Approach to Business and Professional Services in the West Midlands**

The activities that comprise the BPS sector of the economy are both diverse and complex. They include several distinctive sectors (law, accountancy, market research, technical consultancy, etc) as well as a very broad size-range of firms. The latter is extremely significant in that it makes comparatively little sense to compare the activities of a micro firm with those of a large company employing several thousand staff. During the late 1970s segmentation theory developed in economics and sociology as a conceptual framework for exploring the complexity of economic activity. This approach begins by postulating the existence of two or more basic segments (sectors or markets) that reflect different modes of organising production and work. Central to Taylor and Thrift's analysis is an appreciation that small firms act in different ways to large firms. Small firms can be classified as 'leaders' (innovators), 'niche players', 'satellites' and 'the satisfied' while large firms are 'leaders', 'intermediates', 'laggards' and 'supports' (providing specialised service inputs) (Taylor, 2000: 216). For BPS firms' initial allocation to segments is based on size and subsequently by orientation within the marketplace (local, regional etc). For smaller firms the reputation of individual professionals is a key driver behind the localisation of a BPS firm's activities; the client network is forged on the back of individual reputations. Larger firms have developed reputations based around the construction and articulation of identifiable brands. This means that their geographical reach, facilitated by ICT and a branch network, can be much more extensive than small firms.

Within the West Midlands BPS firms are extremely dependent on close proximity to clients; just under one-third (32.8 per cent) were located within 10 miles of the BPS provider<sup>4</sup>. A further 27 per cent of clients were located elsewhere in the West Midlands, 33.8 per cent in other regions of the UK, and 5.3 per cent were overseas. It is also not necessarily the case that smaller firms rely more on local markets (within 10 miles) than

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<sup>4</sup> The data in these paragraphs comes from a reworking of the datasets collected to construct the Daniels and Bryson report on BPS in the West Midlands (2002).

**Table 7.4 The location of the clients of BPS firms based in the West Midlands by share (per cent) of sales/fees, size of firm and sector**

**a) Size**

Location of client	Size of firm (no. of employees)							Total
	1	2-6	7-12	13-50	51-100	102-499	>500	
Local (within 10 miles)	29.8	32.9	38.2	27.8	38.1	33.2	24.0	32.8
Rest of West Midlands	44.8	29.4	14.7	23.9	27.7	20.0	27.0	27.0
London & the South East	4.6	9.7	17.2	13.9	12.7	14.0	10.0	11.3
Rest of UK	16.1	21.2	21.1	29.1	21.7	18.0	39.0	22.5
EU	0.5	1.5	5.0	2.8	1.2	5.8	0.0	2.3
Rest of World	0.0	4.3	2.6	2.2	0.5	7.3	0.0	3.0

**b) Sector**

Location of client	Banking and Insurance	Consultancy and Accountancy	Computer, Marketing and Design	Legal and Property Services	Total
Local (within 10 miles)	34.9	35.7	18.7	38.3	32.8
Rest of West Midlands	27.8	26.7	25.7	27.7	27.0
London and the South East	4.0	17.0	14.4	7.7	11.3
Rest UK	29.8	15.0	30.7	20.1	22.5
EU	0.9	2.1	3.9	2.2	2.3
<b>Rest World</b>	2.8	2.1	6.3	1.7	3.0

*Source: Daniels and Bryson, 2002*

larger firms, although micro-businesses (one person firms) do have 75 per cent of their clients within the West Midlands (Table 7.4). A total of 43 firms identified at least one important overseas market and 25 firms listed up to three in order of importance. The proportion of sales/fee income attributed to their most important overseas market (29 firms) typically did not exceed 10 per cent but for a very small number of firms (4) the proportion exceeded 60 per cent. The average is highest (8.3 per cent) amongst computer, marketing and design service firms.

A key justification for agglomerations of BPS in urban areas is the opportunities they provide for collaboration and co-production of expertise. In their efforts to retain market share or the loyalty of clients, BPS often must collaborate with other firms to co-produce a service. The increasing complexity of service 'products' that incorporate complex specialised knowledge or expertise also requires firms to seek partners in order that they can deliver the quality or kind of service expected by large clients who are themselves more discriminating about what to expect from their service providers. Collaboration is also encouraged as individual firms become more specialised in response to tighter regulation, as in financial services, or in response to client demand and expectations.

**Table 7.5: The location of the three most important collaborating firms used by BPS firms located in the West Midlands**

Sector	Collaborating firms					Total
	Birmingham	Rest of West Midlands	London/South East	Other UK	Overseas	
Banking & Insurance	5	3	4	3	2	17
Consultancy & Accountancy	4	10	6	9	3	28
Computer, Marketing & Design	2	5	2	3	3	15
Legal & Property Services	11	9	5	6	4	35
<i>Total</i>	22	27	13	21	12	95

*Source: Daniels and Bryson, 2002*

It is assumed that this type of collaborative relationship between BPS providers must be founded upon close proximity. The evidence from BPS firms based in the West Midlands suggests that close proximity between collaborators is not always required. Larger firms can increase their scope by recruiting and retaining appropriate expertise in-house but for smaller firms collaboration is the principal option. Larger firms, however, need to collaborate with BPS providers located beyond their area of direct operation. In the West Midlands one in three BPS firms had collaborated with a non-affiliated establishment in the form of a joint venture, co-licensing agreement, team project or some other formal or informal association during the last year. More than half of legal and property services had engaged in some form of collaboration and slightly less than half of consultancy and accountancy firms. It is important to note that the location of collaborators was not confined to the region (Table 7.5). Just under half of the partner firms were located outside the region while 13 per cent were based overseas. ICT, for example, now enables collaboration with overseas partners and is just as likely to involve firms elsewhere in the UK as in London and the South East. Collaboration with overseas partners is often driven by, or follows from, the needs of local clients with overseas interests. The national and international affiliates of BPS firms located in West Midlands, in activities such as management consulting, corporate accounting, law or banking, will refer business to their partners and this fosters further collaborative activity. This suggests that the geography of joint production by BPS is much more complex than has previously been assumed. This is a topic that requires further detailed research.

### *7.2.1 Segmentation by market*

Within the West Midlands three basic segments or units of analysis for BPS can be identified using the data from the 2002 survey. These segments reflect different business models, especially ‘satisfier’ smaller firms and ‘leaders’. First, *heavily localised small firms* (59.8 per cent of responses) service a local need by providing generic or general expertise, for example small local accountancy firms, predominately targeted at individuals as well as small and medium-sized enterprises (SMEs). Such firms have no intention of growing or establishing an export base outside their area of operation. The main reasons for their localisation rests on the importance attached to face-to-face interaction for service delivery and owners’ limited aspirations to expand the firm. These firms fulfil local demand and are an essential underpinning for the production system as a whole in the West Midlands. Their business and employment

growth prospects are very much linked to the performance of their local client companies.

Second, there are *cross-region (or regionalised) firms* operating from more than one site within the region. These firms have evolved from heavily localised firms and have grown organically or by merger and acquisition. Some are starting to provide services to clients that are located outside the West Midlands, usually in contiguous regions or in London.

Third, *national/international firms* provide services from the West Midlands to regional, national and international markets. A significant proportion of these organizations are branch offices (19.6 per cent of responses). This exposes the region to many of the problems usually associated with manufacturing branch plants: the centres of control, strategy and innovation are located elsewhere. Nevertheless, a small number of BPS firms in the West Midlands are developing a national, and increasingly an international, reputation for the supply of advanced business or professional services. Of particular importance is a group of marketing, legal and environment service suppliers that have successfully developed export revenues and fees built on the quality of their expertise, local reputation, and strategic development and management of their national and international client base. These are the firms that are competing, innovating and, in many instances, out-competing their global city, London-based rivals by providing advanced rather than routine services. Some of these companies are growing extremely rapidly.

#### 7.2.2 Segmentation by motivation and business model

Local, regional and national/international BPS firms have different geographies, clients, recruitment practices and impacts on the regional economy. This research identified three additional motivational or business model driven sub-segments in the BPS economy of West Midlands: local, proactive and reactive. First, there are firms *that think and act locally*; they have no desire or motivation to develop a client base beyond the region. These *locally engaged and embedded firms* perform an important role, providing expertise to local companies, some of which will be involved in the export of services and products. In this way *localized firms* make an indirect contribution to the export base of a region (Daniels, 2000).

Second, a select and small number of BPS firms in the region are servicing local demand whilst simultaneously, and increasingly, *proactively* developing strategies to attract national and international clients. These firms are trying *to think and act regionally, nationally and internationally* whilst still maintaining a strong local client base. They are companies that are therefore trying to *disengage* from the regional economy to become national and international providers of BPS expertise (Bryson and Daniels, 2002).

Third, there are a small number of BPS firms that *react* to the activities of key clients. These firms are in effect forced to provide services to existing clients that have expanded beyond the West Midlands. For example, an existing local client may encourage a local BPS firm to develop strategic relationships with BPS firms located outside the region and, in exceptional cases, might make the firm open an office in another locality (in order to maintain the business relationship). The important point is that such firms are reacting to the demands of clients rather than acting proactively.

There is development progression experienced by newly established BPS firms from being dependent on local clients to establishing a wider client base. In policy terms it might be possible to develop mechanisms that would encourage BPS firms to adopt a proactive approach to business development. The strategy of proactive BPS firms is based on targeted client identification and development; such techniques could usefully be introduced to other firms in the region. An important caveat, however, is that it will still be important to recognise that the majority of BPS firms in the West Midlands will always primarily, if not exclusively, service local demand. It is the activities of the proactive firms that will play the most important role in structuring the dynamic relationship between second city and global city BPS. It is a necessary step towards a more holistic approach to understanding their contribution to contemporary economic development.

### ***7.3 Offshoring or the Development of the Second Global Shift***

Until recently it was assumed that the majority of BPS activity was geographically relatively sticky or in other words the majority of firms served local demand. Recently this assumption has been undermined by the interrelationship between BPS, information and communication technologies (ICT) and new forms of organising production. This has resulted in pressures to introduce economies into the service production process by developing a service based international division of labour, or a new form of 'global shift' that is sending service jobs offshore. Offshoring is conditional on wage differentials and skill shortages as well as the potential to deliver a service at a distance. The rise of service offshoring is a threat to the West Midlands as it has the potential to undermine or reduce this sector's overall contribution to local economic development. Service offshoring is driven not just by cost but also by local skill shortages and it is worth noting that the skills involved include high-added value knowledge-intensive service occupations, for example accountants, lawyers, designers etc. Offshoring is also driven by simple operational requirements to provide services 24/7 and one way of implementing this business model is to develop a follow-the-sun strategy.

Not all services can be traded at a distance. The OECD estimates that 19.2% of service occupations in the EU 15 could potentially be affected by offshoring (OECD, 2005: 13). These occupations include a wide range of well-paid as well as less well-paid occupations including legal services as well as key-board-operating clerks. The OECD's estimate is based upon the identification of occupations that meet four criteria:

- Jobs that make intensive use of ICT to produce their output.
- Output that can be traded or transmitted by ICT.
- Work that can be codified or scripted and that contains little if any tacit knowledge.
- Work that does not require face-to-face contact. (OECD, 2005: 12).

Not all service sectors are exposed to the same degree of offshoring. The most exposed are financial and insurance services as well as computer and information services. In Europe, the intensity of these processes is increasing with the shift towards service employment. The offshoring of service functions may reduce employment opportunities in a range of exposed occupations in the developed-market economies. However, it might also enhance organizational competitiveness and stimulate growth that might create high added value employment in developed-market economies.

The threat of offshoring needs to be taken seriously by the West Midlands. Skill deficiencies in the local labour force may eventually force local firms to adopt ICT to replace people or increasingly to develop blended service delivery systems that combine expertise based in the West Midlands with that available offshore. It is possible that the West Midlands may become a recipient of offshoring as foreign providers of services establish UK facilities to provide 24/7 services or to maintain competitiveness by being able to offer services provided by native English language speakers.

#### 7.4 Summary

- The West Midlands has a major concentration of BPS firms located in central Birmingham (Figure 7.1), complemented by a secondary grouping located in the **E<sup>3</sup>I belt**.
- There is significant dispersal that also incorporates an east-west distinction between a well-served east and a less diverse and probably under-provided western half of the region.
- The identification of a partial **E<sup>3</sup>I belt** of BPS activity surrounding the conurbation and the development of the BPS corridor towards the South East of the region. This pattern of economic geography reflects the continued development of BPS activity beyond the confines of the conurbation.
- The development and identification of a segmentation approach to understanding the geography of BPS in the West Midlands. This draws attention to difference between the business models of individual firms and their resultant geographies.
- The three market segments are:
  - a) *Heavily localised small firms* service a local need by providing generic or general expertise, for example small local accountancy firms, predominately targeted at individuals as well as small and medium-sized enterprises (SMEs).
  - b) *Cross-region (or regionalised) firms* operating from more than one site within the West Midlands.
  - c) *National/international firms* provide services from the West Midlands to regional, national and international markets. A significant proportion of these organizations are branch offices which exposes the region to risk related to external control.
- Segmentation also occurs by business model rather than geography:
  - a) *Firms that think and act locally*;
  - b) A select and small number of BPS firms in the region are servicing local demand whilst simultaneously, and increasingly, *proactively* developing strategies to attract national and international clients.
  - c) There are a small number of BPS firms that *react* to the activities of key clients. These firms are in effect forced to provide services to existing clients that have expanded beyond the West Midlands.

## 8. The West Midland Logistics Sector

The developing economic geography of the West Midlands has been facilitated by the existence of a good strategic transport network that is based upon the motorways. The motorway network is central to understanding the functioning economic geography identified in this report. The road network to the south of the region has played a critical role in attracting economic activity to this area. It is important to note that the good strategic transport infrastructure network is partially undermined by a poor local transport network. The latter can make travel within the region difficult and time consuming.

The logistics industry is the 5<sup>th</sup> largest sector of the UK economy, employing 1.75million people in road freight transport, air transport, cargo-handling, storage and warehousing, transport agencies, national post activities, courier services and the activities that comprise SIC sector 92.

In the West Midlands 108,200 people are currently employed directly in these sectors and another 77,000 are employed in the same logistics roles in other sectors (drivers, handling and storage, storage and warehouse management, transport and distribution management and administration) (Table 8.1). The number of people employed in the region will increase with the expansion of the M6 corridor and the addition of a second runway at Birmingham International Airport. Road freight transport, national post activities and courier activities make up two thirds of the region's logistics workplaces and provide almost the same proportion of jobs. The remainder are supplied principally in storage and warehousing operations and other transport agencies.

The sector has grown rapidly since the mid 1980s as traditional manufacturing has declined and been replaced by service industries. The growth of distribution management

**Table 8.1 Employment and Workplaces in the West Midlands Logistics Sector, 2004**

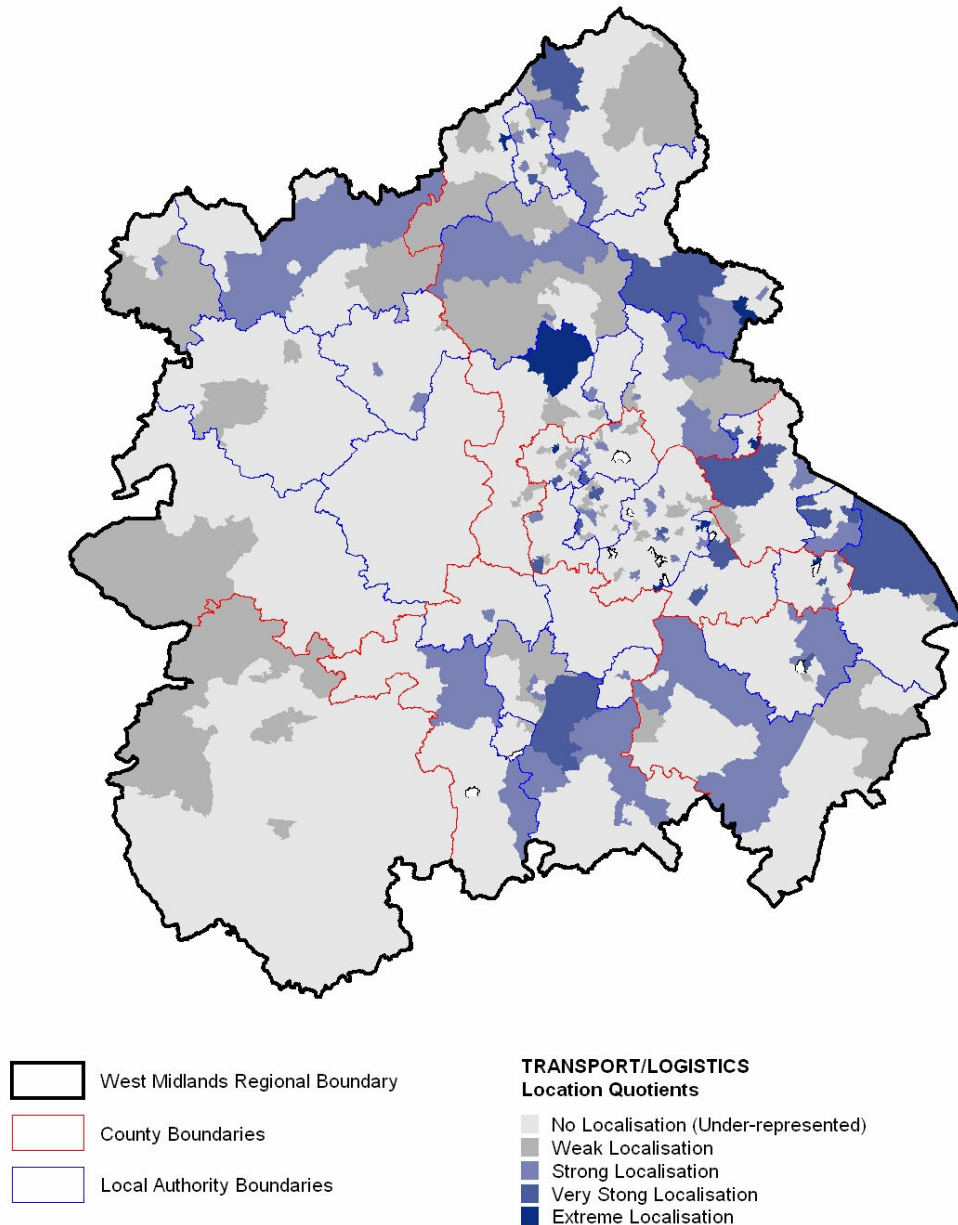
SIC 92	Definition	No. WM Wkplaces	WM Empl.	% WM Empl.	Logistics empl. in other sectors
6024	Freight Transport by Road	3,880	28,000	26	
6312	Storage & warehousing	480	25,100	23	
6411	National post activities	435	20,900	19	
6412	Courier activities	1,215	18,100	17	
6340	Other transport agencies	425	10,300	10	
6323	Other supporting air trpt activs	55	4,600	4	
6311	Cargo handling agencies	10	600	1	
6220	Non-scheduled air transport	30	400	-	
6412	Scheduled air transport	35	300	-	
	<b>Total</b>	6,565	108,200		77,000
	<b>Grand Total Logistics Empl.</b>				185,200

Source: Grey, 2006



Figure 8.1

### Localised Concentrations of Transport/logistics industries



Source: ABI

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Advantage West Midlands, 100030383 (May 2006)

systems since that time has led to an increase in goods traffic and enhanced demand for warehousing, storage and distribution facilities. This demand has been particularly strong in the West Midlands not only because the North Staffordshire Conurbation, Birmingham and Coventry are major centres of population in their own right, but also because the region is at the hub of the country's motorway system. The logistics operations of the M6 corridor are, therefore, of national as well as regional economic

significance. A distinctive geography has emerged in this industry. It is strung along the M6 corridor – running from Newcastle under Lyme through South Staffordshire and the northern districts of the Conurbation (Wolverhampton, Walsall and also Sandwell on the M5), the north eastern elements of the **E3i** belt (Tamworth, North Warwickshire and Nuneaton and Bedworth), the M5 (Evesham) as well as northern Shropshire. With companies like TNT establishing large hub operations in the vicinity of the conurbation because of access to the M6 and the motorway network (Locate Birmingham, 2006).

It is expected that employment in the sector will grow by an estimated 2000 jobs between 2004 and 2014, though replacement through, for example, retirement means that 25,000 new workers will be needed in this period. However, Grey (2006) suggests that this may well be an underestimate of job growth in the sector as demand grows with the expansion of freight services through Birmingham International Airport, as further developments occur in the M6 corridor, and as economic growth more generally increases the demand for distribution management systems and logistics.

Notwithstanding the buoyancy of the logistics sector, it is also experiencing significant skills shortages that are also being felt nationally. As the industry evolves there is a requirement to improve the generic skills of the workforce in areas such as communications, customer handling, team working and problem solving. The industry also suffers from limited investment in training and up-skilling. This partly reflects price sensitivity and low profit margins which limit investment. High staff turnover leads to employees often lacking interest or commitment to invest in their own skills, while employers may consider that they are unlikely to recoup the cost of any investment

There is, in particular, a shortage of HGV drivers which is being worsened by the aging of the current cohort of drivers. Also, there is a shortage of managers and administrators in the region. The shortage of workers in the elementary occupations in the logistics sector is exacerbated by low levels of literacy and numeracy in the available workforce. These shortages are set to become more problematic as predicted future employment will require increasing numbers of managers and administrators while numbers of transport and machine operatives and those in elementary occupations are set to fall. Recruitment and retention problems in both logistics and passenger transport reflect this industry's poor image as a career choice; this is especially the case of HGV drivers who have low pay and unsociable hours.

### **8.1 Summary**

- Logistics employs 185,000 in the region, and this number is set to expand with the expansion of the M6 corridor and the addition of a second runway at Birmingham International Airport which will boost employment by at least 17,000 by 2030.
- The sector suffers a skills shortage in terms of (a) drivers, (b) administrators and (c) unskilled operators who are insufficiently literate or numerate.
- New logistics operations are currently being attracted to the M6 corridor.
- The sector is significantly boosting the economic strength of sections of the **E<sup>3</sup>I belt** and centres along the M6 corridor, including Newcastle under Lyme.

## 9 Conclusions: The Spatial Patterning of Production Within the West Midlands

The following are important key findings that draw together and integrate the analyses reported in the section of the report:

Our research has identified that the West Midlands is developing a polycentric economy which has a distinctive economic geography related to local specialisms. The region is more than just the Conurbation (Birmingham, Black Country and Solihull) and perhaps the correct regional descriptor is a region that contains a major Conurbation, a second conurbation (North Staffordshire), and the City of Coventry each with its own economic linkages and dependant commuters, and other significant though smaller centres of economic activity (for example, Shrewsbury and Telford, Hereford, Rugby, Worcester and Bromsgrove) and adjacent and related areas. The West Midlands is a polycentric region with the largest centre being Birmingham. This presents a challenge for the way in which the Our City Region<sup>5</sup> idea is developing. It is important to note that the area included within the Our City Region has a polycentric economy and that this economic structure needs to be supported by a flexible policy framework. Part of the challenge is to ensure that joined-up policy development occurs that spans intraregional administrative boundaries.

- An on-going continual process of restructuring throughout the West Midlands region and within key industrial sectors has occurred and continues to occur.
- Development of a new spatial patterning of production within the region. This new patterning has a number of important elements:
  - Decline of the Black Country manufacturing sectors
  - The continued contraction of the automotive complex in Coventry and the south east of the region.
  - Extension of manufacturing from the conurbation into a surrounding 20-40km **E<sup>3</sup>I belt**.
  - Development of BPS within Birmingham City Centre as well as in the **E<sup>3</sup>I belt** surrounding the conurbation.
  - R&D capacity in the South West and South East of the region is especially pronounced and is centred on Warwick, Stratford, The Malverns, and adjacent districts.
  - Within the **E<sup>3</sup>I belt** there is an important differentiation of activities from centre to centre. This means that the region has developed an increasingly polycentric structure. This structure is being extended by innovative activity beyond the **E<sup>3</sup>I belt**.
  - Production will continue in the primary agricultural sub-regions (for example Herefordshire, Shropshire and Worcestershire), although there are threats from EU agricultural reform and buyer-driven supply chains.
  - The future competitiveness of the West Midlands will be partially based around a set of new and emergent industries as well as established industries. This is not a radical statement as it is based on a combination

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<sup>5</sup> 'Our City Region' is a proposal for the creation of a City Region that would consist of Birmingham, the Black Country, Solihull, Coventry and Telford.

of the analysis in this report and nearly sixty years of research into the changing economic geography of developed market economies. The economy is constantly changing as the division of labour becomes ever more complex. This complexity can create new industrial activities that become the industries of the future, for example the rise of the business and professional services as a core economic activity that occurred from the late 1970s. Some of the new and emergent industries are obscured by the SIC as this is a static representation of a dynamic system. The category of ‘miscellaneous manufacturing’ is especially important in this context. Within the region it is apparent that significant growth in this sector will occur in the South West quadrant. It is important that further detailed research is undertaken to explore the dynamics of this complex sector and this research should begin to unravel the dynamics of enterprise in this quadrant.

- The identification of the belt surrounding the Conurbation as well as the polycentric structure of the West Midlands raises a number of important questions for further discussion: Is the differentiation of processes between one part and another of the **E<sup>3</sup>I belt** a reflection of polycentricity? How can a policy framework be developed effectively to support these place-based growth potentials?
- Not all metal manufacturing is in decline. On-going research being undertaken at GEES, University of Birmingham, suggests that niche metal manufacturers are disengaging from the automotive supply chain and entering new markets with high quality and design-rich products, but they are experiencing major skill shortages. These facets of the region’s enterprise seedbed should not be confused with declining low-tech unprogressive businesses (see Section 7.2). They need to be identified and fostered by policy to enhance the region’s economic growth potentials. This is an area that requires considerable further research.
- What is evident from the spatial patterning is a new emergent economic geography of R&D based in the South East and West of the conurbation. The danger is that this innovation is captured by adjacent regions rather than being integrated into the West Midlands economy. The danger is magnified by the growing external orientation of corporate sector manufacturing in the West Midlands that is controlled from elsewhere, nationally and internationally. The new geography of R&D is being facilitated by the motorway network, specifically the M50, M5 and the M40. This is a major threat as well as opportunity. A threat as the innovation can support activities located adjacent to the region and an opportunity as this infrastructure facilitates access to key markets (London and the South East) as well as centres of corporate control.
- In an increasingly knowledge- or expertise-driven economy, the long-term competitiveness of the region will be undermined by widely recognised skills shortages. These impact on all sectors of the economy. Across all the metal industries there is a shortage of skilled labour that is able to support high-value added niche manufacturing. Within BPS key skills shortages have been identified especially in relation to soft skills that support the commercial exploitation of technical expertise. The LSC and the FE and HE sectors need to produce more people with the requisite skills to add value

with a knowledge- and skill-driven/demanding economy. This issue should be at the core of any regional policy framework.

- The skills deficit needs tackling in collaboration with employers, and courses need to respond to the changing skill demands. In comparison to other UK regions the regional skill base is relatively underdeveloped. Overall, there is a major problem throughout the region, but particular problems exist in places like the Black Country. In this context the qualification is less important than the attainment of commercially viable skill sets.
- The emergence of service offshoring should be taken seriously as a potential threat, reducing the ability of the BPS sector to grow at forecast rates. Service offshoring will only impact on a small proportion of BPS jobs, but this threat may become more significant if the skills deficit forces companies to offshore elements of their production systems.

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