

Coventry & Warwickshire
Economic Assessment
TOPIC PAPER 4

Understanding future sectoral growth in the Coventry, Solihull and Warwickshire Sub-Region

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Introduction & Summary of Key Findings:

The type and nature of future economic growth will have a direct impact on the wider growth of the sub-region. Different businesses will have different needs in terms of employment land, location and supply of labour.

Understanding how our economy may grow and change in the future will therefore help inform our strategic choices about planning, housing, transport, skills and employment for the sub-region. This “driving” role of the economy was recognised within the recent CSW Economic Strategy (see Figure i), and has been carried through into the development of the first Single Integrated Sub-Regional Strategy (SISRS). This paper forms part of the evidence base supporting the development of this wider strategy.

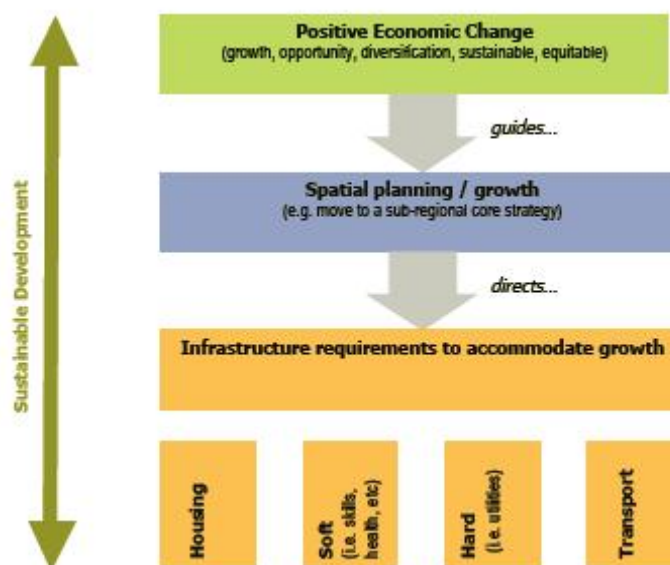


Figure i) Sub-regional hierarchical approach to strategy development (taken from CSW Economic Strategy)

The future clearly cannot be predicted. The majority of jobs that are filled today did not exist twenty years ago, and in twenty years time the only thing we can be sure of is that innovation will continue apace and our working world will be significantly different. However, these changes occur over time and it is important that we seek to understand how the economy may change in broad terms, and take a strategic approach to developing and growing the sub-regional economy as far as possible.

This paper looked at a number of different approaches to considering how the economy may change in the future, and sought to bring these together into some form of consensus view. While the work predominantly focussed on understanding the sectoral profile of future growth of the sub-regional economy, a key conclusion is that the majority of this future growth will be non-sector specific. Research undertaken by NESTA on business growth in the UK has identified that over 50% of new jobs created in the economy are made by a small minority of “high-growth businesses” (defined as those who experience average annual growth in employment of 20% or more over a three year period). These high-growth businesses can and do occur in any sector, and in any location. It is therefore essential that sub-regional partners do what they can to create an economic environment which facilitates and supports the development of these high-growth companies. Analysis suggests that policies to do this should include:

- Re-balancing more business support and engagement towards larger companies (who are more likely to be high-growth than smaller, newer businesses) in the sub-region
- Improving access to finance
- Remove barriers that prevent rapid growth
- Fostering and developing an innovation system in the sub-region

- Creating stronger leaders and managers

However, while creating an environment conducive to high-growth is clearly fundamental, it is also important for the sub-region to identify and promote the key sectors of the economy that are most likely to generate prosperity and growth in the future. This more targeted approach is important to enable partners to agree and focus their interventions in the sub-regional economy; to highlight and promote the sub-region's comparative economic advantages; to provide a clear signal to the private sector about the future and give them greater confidence to invest in the sub-region; and to enable everyone (i.e. the public sector, businesses, individuals) to more effectively plan for the future.

The paper explored the historic growth and change of the sub-regional economy; considered econometric forecasts for future growth; analysed sub-regional specialisation (our “comparative advantage”); and reviewed current strategic plans to develop the national, regional and local economy. This work identified a number of key potential sectors, which could then be considered against the various different criteria/approaches that were looked at. The findings of this “ranking” exercise is shown in Table A below. While this work does, *prima facie*, highlight a number of priority sectors for the sub-region, the analysis also suggests that some sectors play a differing role in the economy. As such, we can consider some sectors as priorities under three main headings:

- **“Core Sectors”** – those sectors that already have a strong presence within the sub-regional economy and are likely to remain key components of the future. These are the Care Sector, Construction, Distribution & Storage, and Retail.
- **“Key Strength Sectors”** – sectors where we have clear specialisms and, in many instances, already have a strong presence in the sub-regional economy. These are Automotive Manufacturing; Computing, Software & Electronics; Creative & Cultural Industries; and Specialist Business Services.
- **“Aspirational Sectors”** – sectors where we currently have some, but limited presence but which we want to grow and which have potentially large future market opportunities to exploit. The sectors that would appropriately fall into this category for the sub-region are: Ultra low-carbon vehicles; Sustainable Construction; elements of Advanced Manufacturing (particularly building on the relative small, but significant, strength in aerospace), and elements of applied design & engineering (i.e. adaptive medical technologies and environmental technologies)

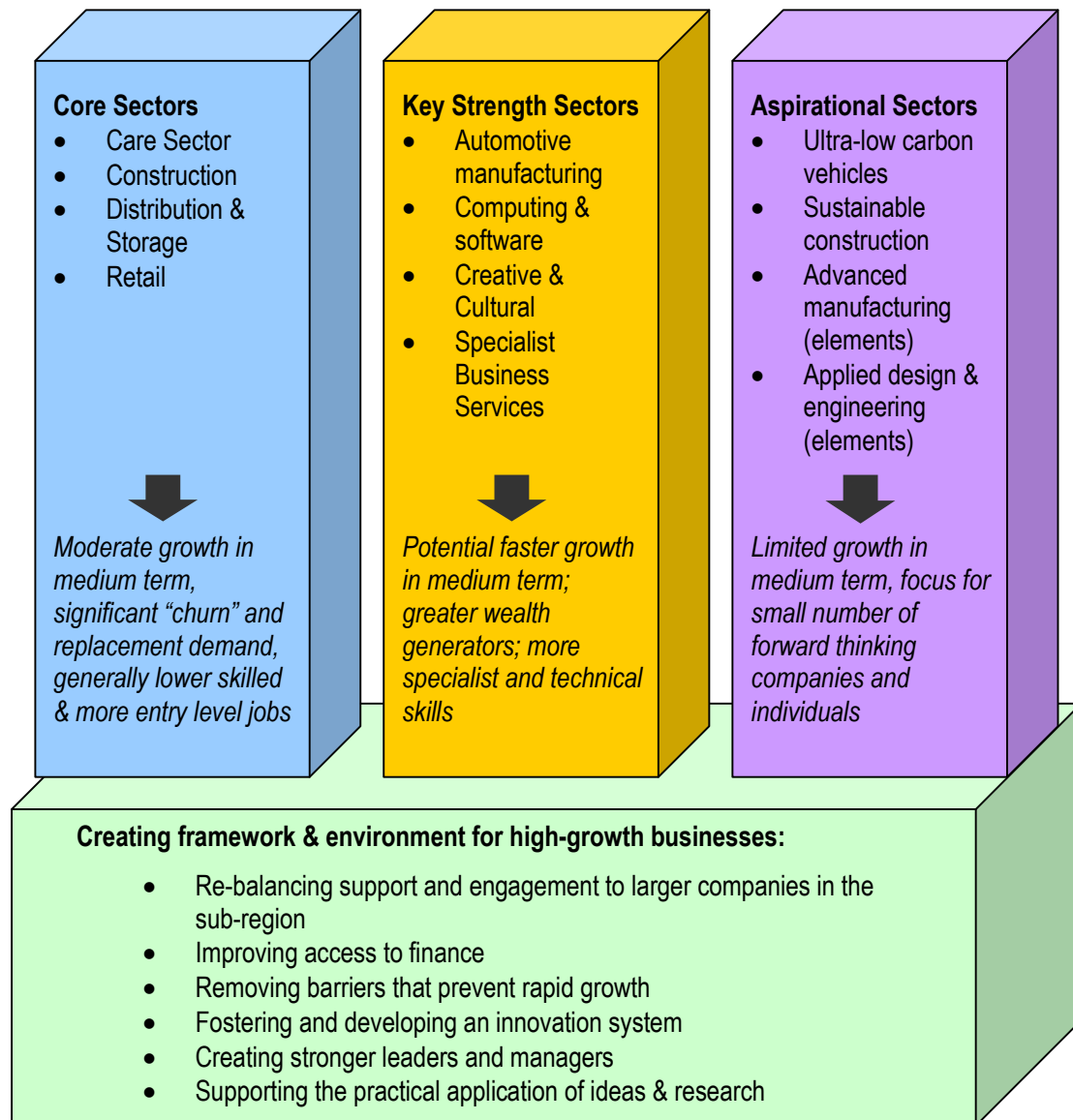
More broadly (moving away from specific sectors and more towards products and market opportunities), the sub-region is also well placed to exploit the linkages between knowledge intensive services and manufacturing/engineering. The sub-region stands at the cross-roads between the more knowledge-based service industry of the wider South East, and the strong manufacturing base of the Midlands. Combined with the sub-region's significant innovation assets, there is a real opportunity to develop and exploit opportunities around the practical application of ideas and research to provide new products and services. This can be in range of areas, including adaptive technologies for people with health problems; the use of “serious gaming”; and low-carbon goods and services.

A framework based around this analysis of future sub-regional economic growth is detailed in Figure ii below.

Table A: Ranking of identified sectors by factor of consideration

Sector	Contribution to employment	Contribution to economic output	Growth potential (baseline forecasts)	CSW competitive advantage/specialisation	Strategic/Target growth sectors		Wider economic benefit	Overall "score"
					Local	National		
Advanced manufacturing	2	4	2	2	4	5	2	21
Automotive manufacturing	3	4	1	5	5	2	3	23
<i>Ultra low-carbon vehicles</i>	1	1	2	4	4	4	3	19
Care Sector	3	2	4	1	1	3	3	17
Computing, software & electronics	3	4	4	5	5	4	2	27
Construction	3	3	4	3	2	2	2	19
<i>Sustainable construction</i>	1	1	1	3	4	3	3	16
Cultural & Creative industries	3	3	3	4	2	4	4	23
Distribution & Storage	4	4	3	5	1	1	4	22
Environmental technologies	1	2	2	2	4	4	2	17
Life sciences & pharmaceuticals	1	1	1	1	3	5	1	13
Public services	2	1	2	2	2	1	2	12
Retail	5	2	3	2	1	1	2	16
Specialist business services	4	5	5	5	4	4	3	30
Tourism	3	2	3	3	2	2	5	20
Utilities	1	4	1	4	1	2	3	16

Figure ii) Summary of key conclusions of future growth of the CSW economy



The remainder of this paper provides further detailed analysis on each of the different approaches to considering future potential growth of the sub-regional economy.

Approach:

There are a number of ways of considering likely or potential sectors of the future. Rather than confining ourselves to one or other approach, it seems sensible to review what each is telling us and use this to develop a synthesised or combined understanding of future growth. While it is highly unlikely that we will ever be 100% accurate in our assumptions on the future, such a multi-strand approach is more likely to provide a richer picture for us to make informed decisions. This study therefore looked at:

- Historic growth based on known data
- Econometric forecasts for sectoral growth
- Strategy based growth assumptions
- Sub-regional strengths and specialisations that might influence sectoral growth
- Non sector-specific growth
- Inter-business relationships
- Qualitative views on business opportunities

Each of these elements will be looked at in turn, and a synthesis of the findings is presented in the concluding section.

Historic sectoral growth

Using data from the Annual Business Inquiry (ABI), Figure 1 below shows the latest data available on employment by key sector in the sub-region's economy, and how this has changed in absolute terms since 1998. One can see that business services (real estate, renting and business activities) is now the largest employer in the sub-region, replacing manufacturing which has seen a significant decline in employee numbers over the past decade. However, the manufacturing sector remains the third largest employer in the sub-region, behind the wholesale & retail sector.

Figure 2 looks at relative change in employment by sector, by looking at the annual average growth rate in employment over this ten year period. One can see that the construction sector has actually been the fastest growing sector in the sub-regional economy; followed by transport, storage & communications. Business services has also seen strong growth as expected in terms of its absolute performance, as well as the education. While "other community, social and personal services" sector has also seen good growth, one can see in Figure 1 that they are not particularly large employers in the sub-region. Significant declines in employment levels have been seen in manufacturing (as expected) and, perhaps more surprisingly, in financial intermediation.

Figure 1: Employment levels by sector, 1998 and 2008

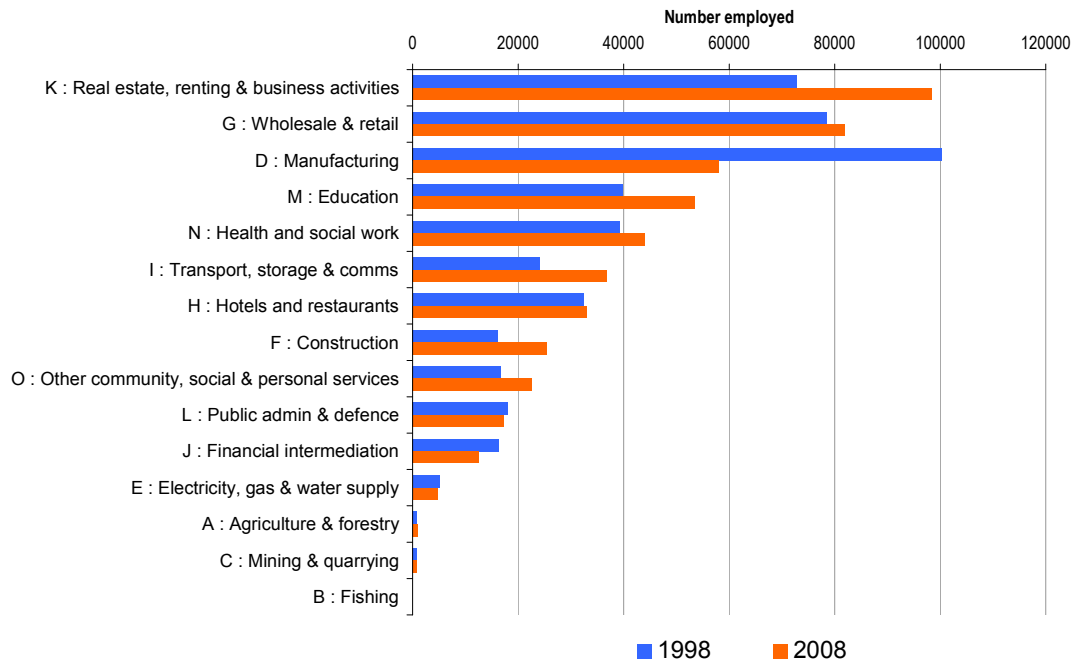
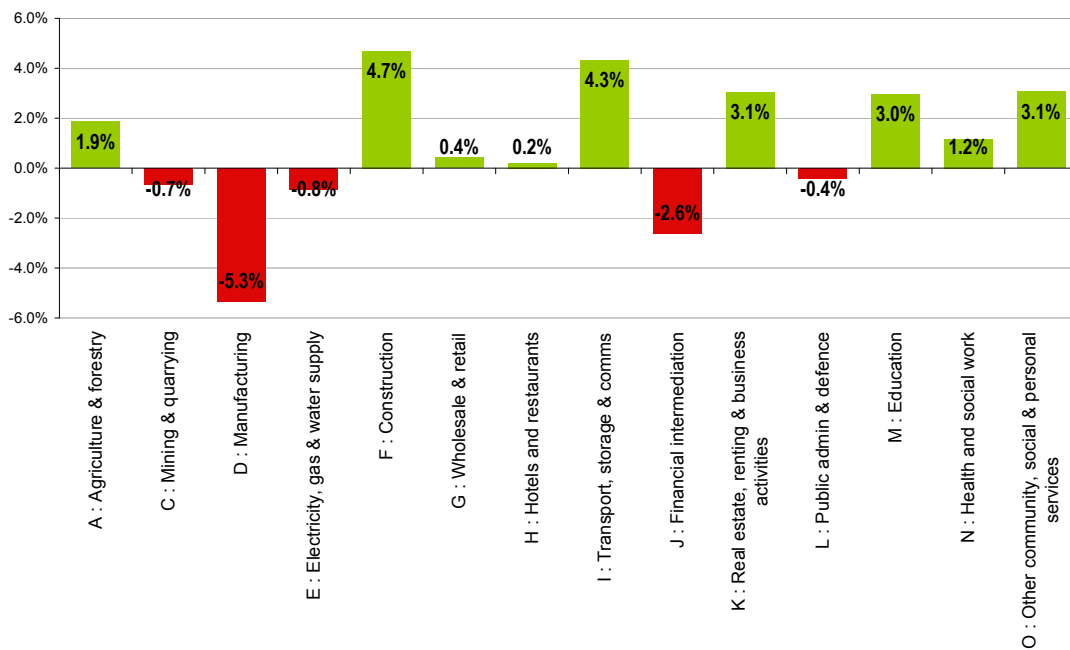


Figure 2: Average annual growth in employment by sector (1998-2008)



The ABI allows us to look in more detail at the particular components of these sectors to help identify further where growth (or contraction) has been occurring. The findings of this analysis is below:

- Construction:** overall has seen strong relative growth of 4.7% p.a., which translates as 9,300 net new jobs over the ten year period. The majority of this growth has been seen in Solihull (accounting for 5,100 of these new jobs). Growth has been fairly constant across the different elements of this sector – building of complete constructions (commercial, domestic & civil); building installation (the various skilled

trades such as electricians and plumbers) and building completion (joinery, plastering, painting, etc.) – although the construction element is the largest part of the sector and has seen the largest absolute growth.

- **Transport, Storage & Communication:** strong relative growth of 4.3% per annum and a large absolute growth of 12,700 net new jobs. The vast majority of this was in Warwickshire (10,500 of the new jobs), with Coventry seeing very little growth in this area. The biggest elements of this growth were cargo handling and storage (accounting for 40% of the employment growth, and seeing the fastest relative growth rate of 18.6% p.a.); post and courier activities (17%) and telecommunications activities (10% of employment growth). Non-tourist travel operators also saw strong relative growth (8.8% employment growth per year), but does not account for a significant share of total employment in this sector.
- **Real estate, renting and business activities:** the sector with the largest absolute growth in employment over the past 10 years, with growth of 25,500 net new jobs at 3.1% per annum. Coventry and Warwickshire have dominated this growth (12,700 and 11,600 new jobs respectively), while Solihull has seen limited growth in this area (1,200 net new jobs). The biggest growth has been seen in the areas of “legal, accounting, auditing” (+7,700), “architecture and engineering services” (+6,200), software consultancy (+5,300) and miscellaneous business activities (+5,100). Strong relative growth has been seen in technical testing & analysis (growth of 21.1% p.a. and 1400 jobs in total); renting of other (i.e. non-automobile) transport (growth of 20.3% p.a. and 1,300 jobs in total), and hardware consultancy (10.9%/400 jobs). It should be noted that while the sector saw overall strong growth, a few elements did see a contraction in employment. These were industrial cleaning (down 3,000 jobs); research into natural sciences (down 2,500 jobs); and labour recruitment services (down 1,250 jobs, but still a big employer overall in this sector).
- **Education:** large absolute growth of 13,600 net new jobs, and relative growth of 3.0% p.a., although this is actually lower than the England average. This growth has largely been concentrated in Warwickshire (10,950 of the new jobs); and split between primary education (+7,000) and secondary education (+6,250). Higher education has remained fairly stable, while adult education has fallen slightly over the period (-475).
- **Other community, social and personal activities:** reasonable relative growth of 3.1% per annum, but more limited absolute growth (5,900 new jobs, almost entirely concentrated in Warwickshire (5,075)). The biggest growth is in the unhelpful category of “other service activities” (+3,600); sporting activities (+2,230) and activities of business, employer and professional organisations (+500). Both “motion picture and video activities” and “news activities” have seen strong relative growth, but account for a very small amount of total employees.
- Other sectors such as **wholesale & retail, public administration** and **health & social work** saw fairly muted growth rates, particularly in comparison to the England average rates for these sectors.

- **Manufacturing:** significant decline of 42,360 jobs in total over the ten period (1998-2008). The largest element of this decline was in the manufacturing of motor vehicles (-14,400 jobs, mostly in Coventry and Solihull); manufacturing of fabricated metals (-6,900, mostly in Warwickshire); and the manufacturing of machinery & equipment (-5,030, mostly in Coventry). The largest relative declines in employment have been seen in the manufacturing of clothing (-18.5% per annum, totalling 1,380 net jobs and mostly in Coventry and Warwickshire); manufacturing of pulp and paper products (-13% p.a. totalling 550 jobs and mostly in Warwickshire and Solihull); and manufacturing of office machinery and equipment (-10.6% p.a. and totalling 420 jobs in Coventry and Solihull, although the sector has seen a slight *increase* in Warwickshire).
- **Financial intermediation:** down 3,850 jobs in total, mostly in Solihull (-2,420) and the least in Coventry (-470). The falls have mostly been in the true financial intermediation part (i.e. the obtaining & redistribution of funds other than through banks), and not so much in the “monetary intermediation” part (i.e. banking, insurance and pensions).

Employment is, of course, just one way of considering a sector’s performance and contribution to the sub-regional economy. An alternative measure is to look at sectoral contribution to total economic output (as measured by Gross Value Added (GVA)). While data on GVA for sectors at the sub-regional level is aggregated into six more generic categories, we can see some clear trends (see Figure 3 below). The biggest growth has again come from the “business services and finance” sector (accounting for 31% of sub-regional GVA), but “construction” has seen the fastest relative growth (annual growth rate of 8.3% over the period 1995-2007, compared to an average of 5.3%). “Distribution, transport & communication” has also seen solid growth and accounts for 23% of sub-regional GVA, and the public sector has grown in importance over the past 12 years – increasing from 17.7% to 20% of sub-regional GVA. The production sector has declined as expected given the changes we have seen in manufacturing, but it still contributes just under 20% of sub-regional economic output.

To look in more detail at sectors, we have to use national data on the economic performance of different areas of the economy, and assume that this holds true for the sub-region. Using this national data, sectors and sub-sectors can be classified into their contribution to total economic output (from high GVA contributors to low GVA contributors). Very high contributors to GVA are limited in number and are either based on physical assets (fuel manufacture, mining, etc.) or significant capital investments (i.e. chemicals manufacturing). The sub-region’s overall breakdown of employment levels against these classifications compared to England overall is shown in Figure 4 below. One can see that we have a lower than average proportion of employment in low and medium-low GVA contributing sectors, and a higher than average proportion of employment in medium and, particularly, medium-high contributing sectors. We have a lower than average share of high GVA contributors, largely because of the factors surrounding these industries detailed above.

Figure 3: Sectoral contribution to sub-regional GVA

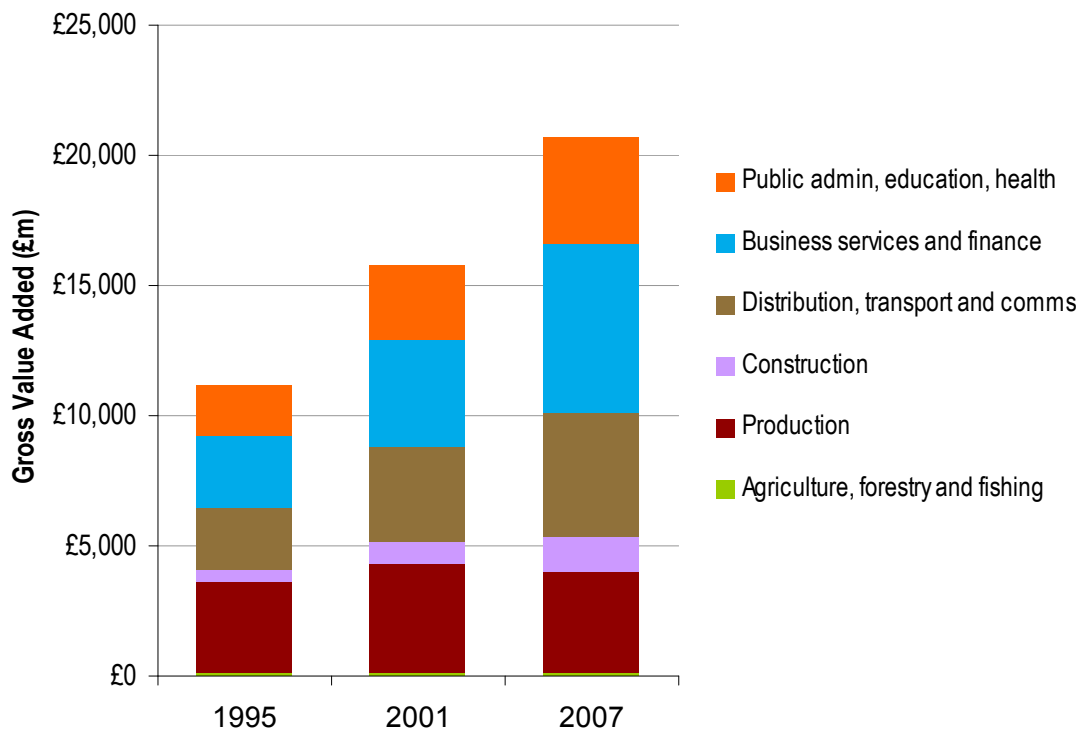
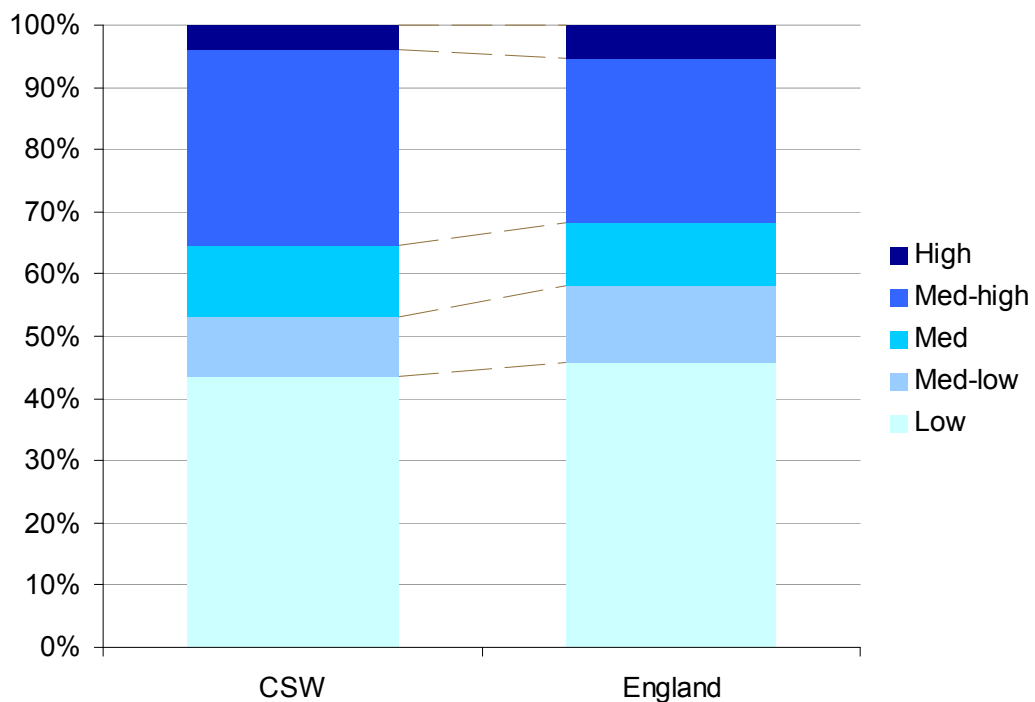


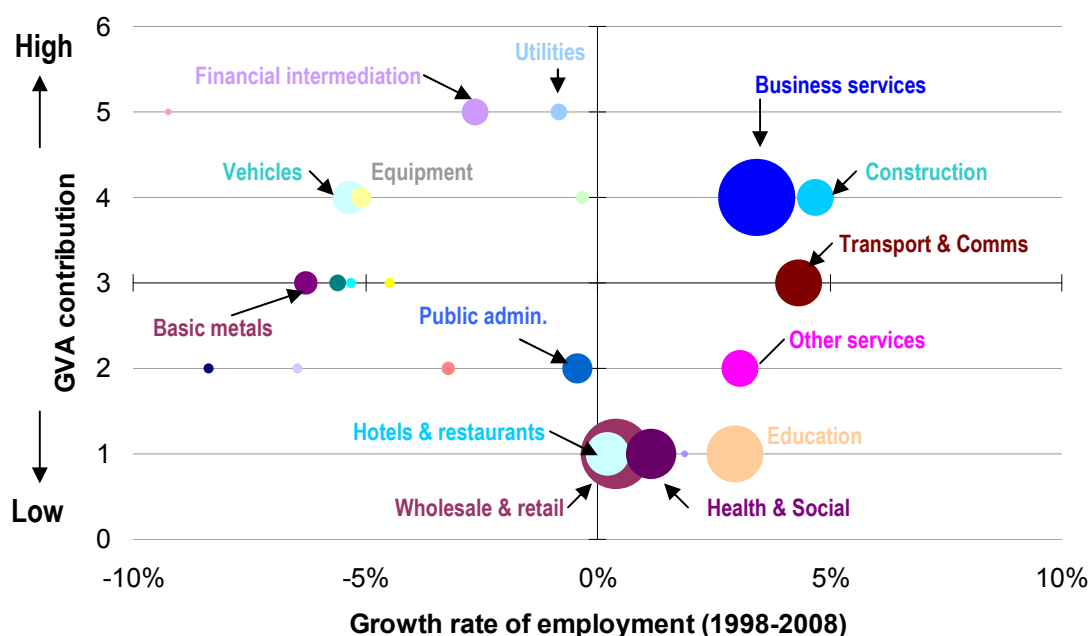
Figure 4: Breakdown of sectors by level of contribution to overall GVA



Using this categorisation of contribution to GVA, along with data on employment growth, we can create a matrix (Figure 5) which looks at how the sub-region's economic growth has been driven in the past 10 years. Essentially, the matrix shows four quadrants, with the top-right area showing those sectors in the sub-region that have seen strong employment growth and which are high GVA-contributing, while the

bottom-left quadrant shows sectors that are low GVA contributors and have seen sluggish employment growth. The relative size of each bubble reflects the total amount of employment that each sector contributes to the sub-regional economy.

Figure 5: GVA contribution and employment growth in the sub-region

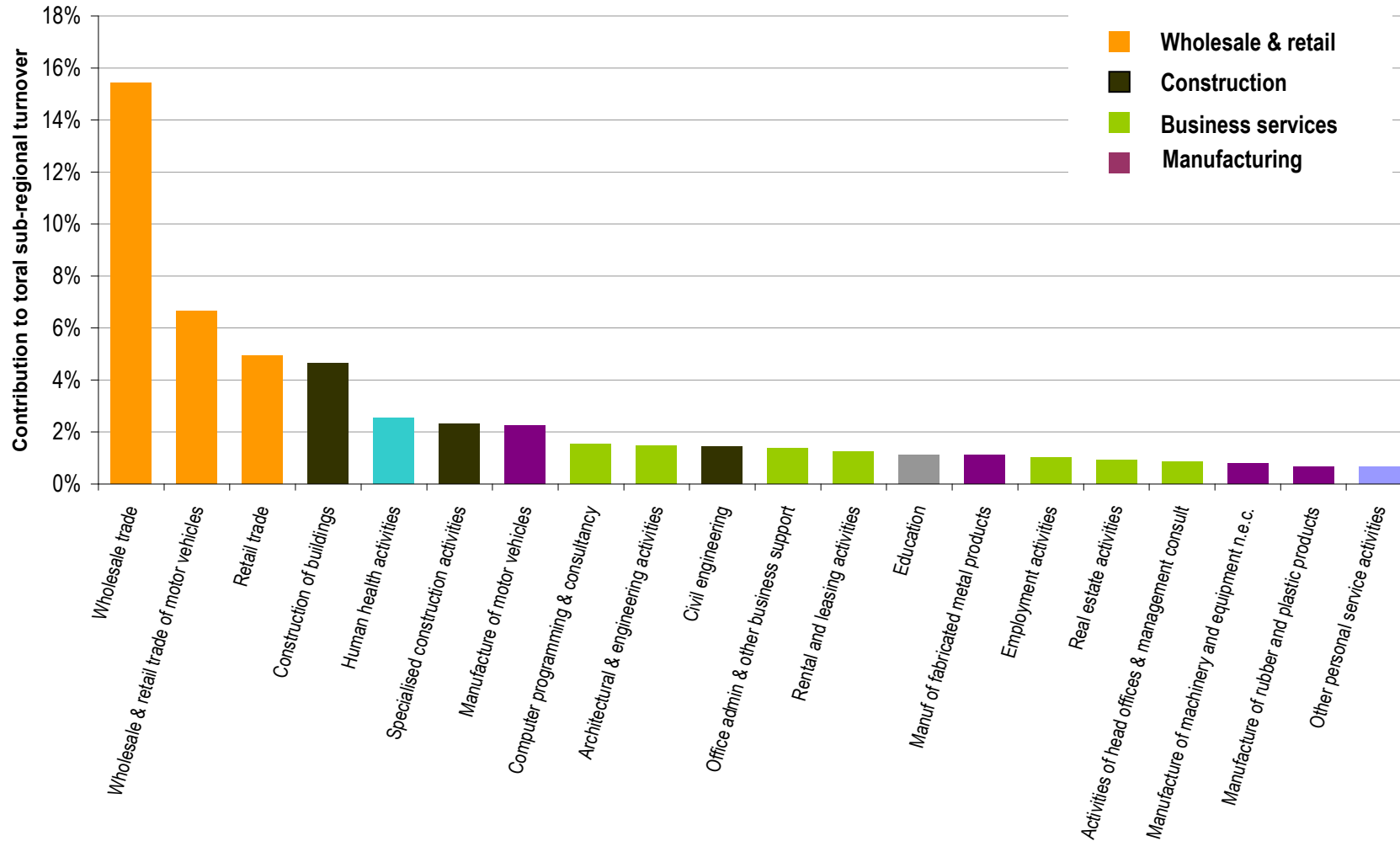


One can see that there are essentially two clusters of sectors that have been driving growth in the sub-regional economy. The first is a set of reasonably high GVA contributing sectors – Business services, construction and transport and communications. These sectors in total also represent a good share of total employment in the sub-region (32%). The second cluster is a set that has seen employment growth, but are generally lower GVA contributing sectors (education, health & social, wholesale & retail, hotels & restaurants, and “other services”). Together, these account for nearly a half (48%) of all employment in the sub-region.

Finally, in absence of real GVA data at the detailed sub-sector level for the sub-region, we can look at business turnover data as a proxy measure. It should of course be noted that turnover can be misleading, in that low value businesses can do a lot of trade (and hence have high turnover) but create little profit or added value to the economy. However, turnover data does give a good indication of local economic activity, and the biggest contributors to total sub-regional turnover on 2009 is shown in Figure 6 below.

Wholesale and retail are clearly big contributors to sub-regional economic activity and turnover, although the analysis above would suggest that they generate less economic output (in terms of GVA) than others. Beyond this broad sector, one can see that construction and business services are again important contributors. In addition, health activities contribute strongly, along with a number of manufacturing sectors (vehicles, metals, machinery and rubber).

Figure 6: Top 20 business sectors by contribution to total sub-regional turnover



Forecast growth

Economic forecasts use complex econometric models to analyse how a wide range of economic variables have performed in the past and, based on a number of predetermined assumptions, and use statistical methods to predict what is likely to happen to these variables in the future. The better and more respected models will, as part of this analysis, consider the relationship between variables as conditions change to include positive and negative feedback loops.

Clearly, such econometric forecasts will never tell you what is actually going to happen. At best, they give you a good indication of the direction of travel for the economy based on the assumption that the future will, by and large, look similar to the past. Models can clearly never anticipate significant changes to the economy – be they through shocks (such as the financial crisis), or substantial innovations. Results from econometric models therefore need to be treated carefully, and if possible, should be compared with others to help develop a consensus view of future directions of travel.

In this section, we will look at two forecasts – one by Cambridge Econometrics for work undertaken by SQW on regional housing demand, and Working Futures 3 (the latest forecasting study undertaken by the Institute of Employment Research at Warwick University). A further forecast using the West Midlands Regional Observatory's Integrated Policy Model will be added once we have received the relevant data updates.

The baseline forecast for employment levels by sector from the SQW/Cambridge Econometrics model are shown in Figure 7 (absolute change by sector over forecast period) and Figure 8 (net change between 2010-2031 by sector and geography). This forecast takes account of the expected impact of the recession, hence the dip in employment from a high in 2006 to a low in 2010, followed by a slow recovery. The "business and financial service" sector is expected to grow the most in the sub-region, increasing by nearly 40,000 net jobs by 2031. Public sector activities (public administration, education, health, etc.) are forecast to be the next biggest growth sector (+19,000), although an amended scenario run by SQW/Cambridge Econometrics looking at expected "public sector austerity" reduces this to under 14,000 (all largely coming in the latter half of the model period – i.e. post 2020). Growth in these public sector activities is dominated by adult social and health care, given forecast demographic changes leading to significantly increased demand. Transport & communications is also expected to see reasonable growth (although not in Coventry), followed by distribution, hotels & catering (which includes retail) and Construction. Total employment levels in manufacturing are expected to decline significantly.

Figure 7: Absolute change in employment levels by sector, baseline forecast

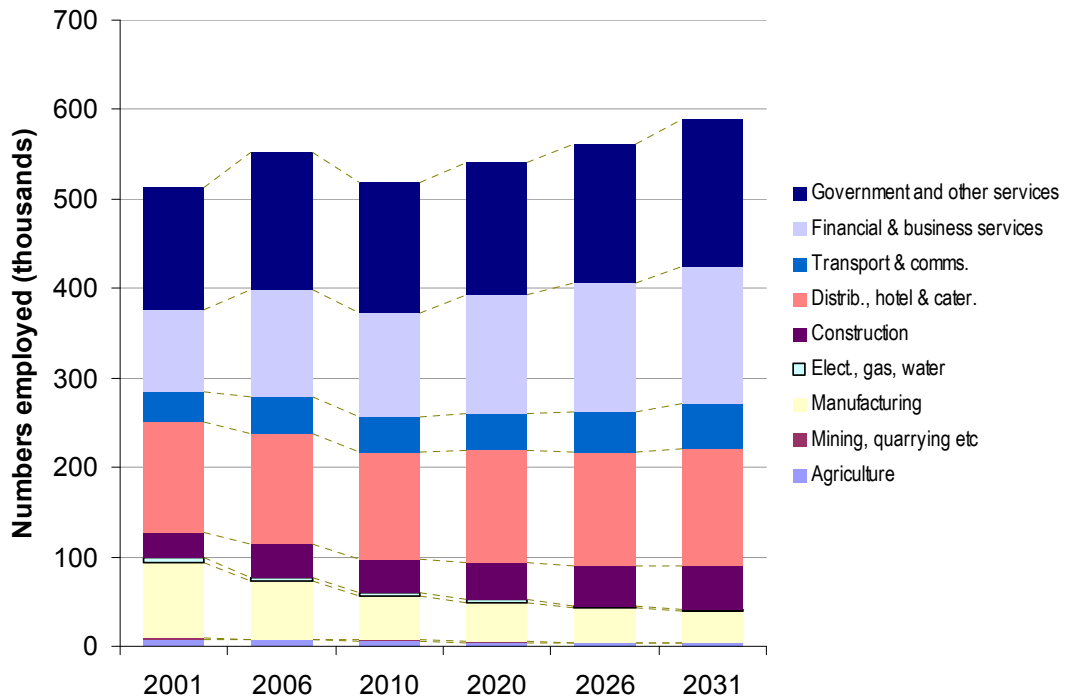
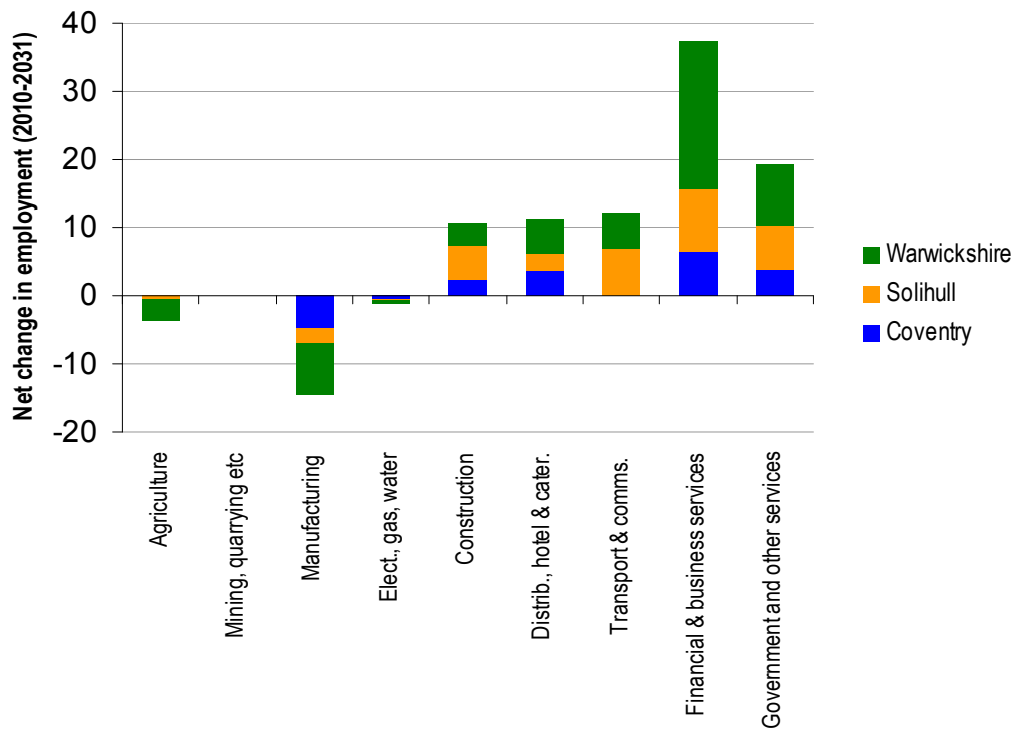


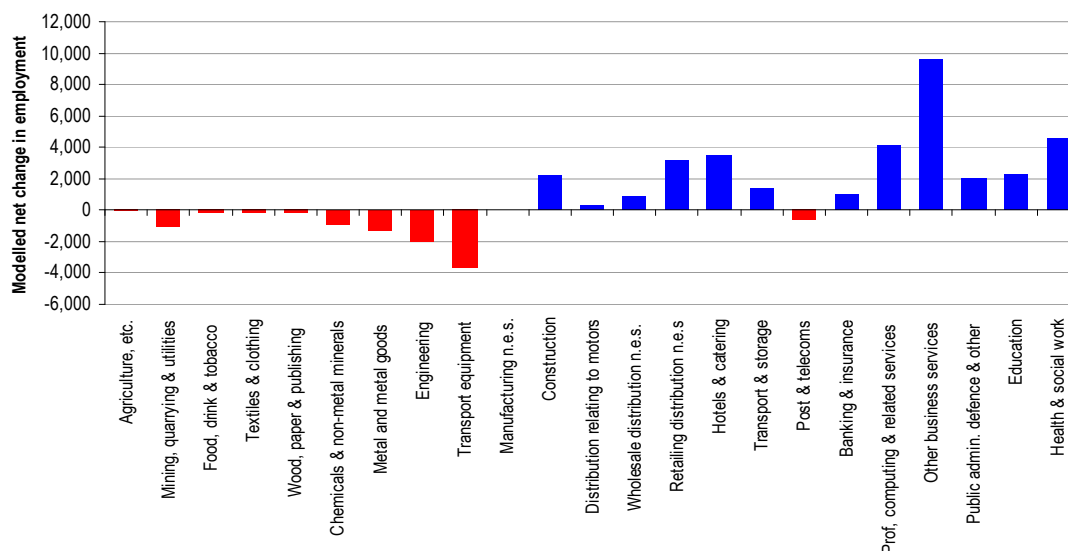
Figure 8: Net change in employment levels by sector and location, 2010-2031



The Working Futures 3 report only presented national level data, so some modelling work has been done to apply these to the sub-regional economy. Furthermore, it

should be noted that this forecast was done before the recession, so caution is needed when looking at the results. However, it is important to distinguish between structural changes to the economy (i.e. general movements and trends) and cyclical ones (absolute and temporary changes to employment demand). Figure 9 below provides estimates for changes for a broader range of sectors, up to 2017.

Figure 9: Modelled change in employment levels by sector, CSW (by 2017)



Unsurprisingly, this forecast presents a similar pattern with strong increases in professional and business services, health and social care, retailing, hotels and catering, and construction. Transport and storage sees lower growth, but it should be noted that in this forecast, distribution activities relating to wholesale and retail are considered separately. Manufacturing sees a decline across the board, but greatest in “transport equipment”, “engineering” and “metals and metal goods”. Lower declines in net employment are expected in food & drink manufacturing, textiles and wood & paper.

Sub-Regional Specialisms

Clearly, our historic growth and that which is forecast into the future, is dependent on (and has been informed by) our particular sub-regional economic specialisms. Economic growth is, by and large, based on exploiting comparative advantage – in essence, focussing activity on what you are better at than your trading partners. As such, better understanding what the particular specialisms of the CSW sub-regional economy will help sharpen our focus on growth potential in the area.

To identify sub-regional specialisation, location quotients will be used. Location quotients (LQ) measure the particular concentration of an industry or sector in any particular area compared to a benchmark area. If an area has a higher than average concentration compared to the benchmark, the calculation will return a figure greater than 1. An area that has lower than average concentrations will have a figure less than 1. Table 1 below looks at both business and employment location quotients. It is important to consider both as we might find we have very few businesses in a particular sector, but that they employ a lot of people – or vice-versa. For ease of reading, only those sectors with a weak, moderate or high location quotient have been highlighted

Table 1: Location Quotients by employment and business units, 2008

SIC 2007 Sector Code	Employees	Businesses
05 : Mining of coal and lignite	7.71	1.58
29 : Manufacture of motor vehicles, trailers and semi-trailers	5.90	2.34
95 : Repair of computers and personal and household goods	3.68	1.17
35 : Electricity, gas, steam and air conditioning supply	2.64	1.49
36 : Water collection, treatment and supply	2.16	1.38
73 : Advertising and market research	1.82	0.90
77 : Rental and leasing activities	1.72	1.03
71 : Architectural and engineering activities; technical testing and analysis	1.62	1.34
41 : Construction of buildings	1.58	1.01
53 : Postal and courier activities	1.57	1.28
52 : Warehousing and support activities for transportation	1.55	1.14
27 : Manufacture of electrical equipment	1.52	0.97
33 : Repair and installation of machinery and equipment	1.44	1.21
62 : Computer programming, consultancy and related activities	1.36	1.09
25 : Manufacture of fabricated metal products, except machinery and equipment	1.29	1.45
82 : Office administrative, office support and other business support activities	1.23	1.14
28 : Manufacture of machinery and equipment n.e.c.	1.20	1.50
45 : Wholesale and retail trade and repair of motor vehicles and motorcycles	1.18	1.06
49 : Land transport and transport via pipelines	1.17	1.21
96 : Other personal service activities	1.16	1.10
85 : Education	1.16	1.02
70 : Activities of head offices; management consultancy activities	1.12	1.21
55 : Accommodation	1.12	1.01
46 : Wholesale trade, except of motor vehicles and motorcycles	1.11	0.94
23 : Manufacture of other non-metallic mineral products	1.10	0.91
26 : Manufacture of computer, electronic and optical products	1.08	1.02
22 : Manufacture of rubber and plastic products	1.05	0.97
78 : Employment activities	1.05	1.06
91 : Libraries, archives, museums and other cultural activities	1.03	0.79
42 : Civil engineering	1.01	1.05

Source: ABI

The above analysis highlights the fact that the sub-region continues to have a strong presence in automotive manufacturing, despite the significant closures that the area has experienced in the recent past and the decline that is continued to be forecast into the future.

Beyond that, one can see the particular concentration of activity in business services (such as advertising, rental and leasing activities, architecture and engineering services, office administration and support services, and employment activities). The sub-region also has a defined strength in computing and electrical equipment (high LQs in repairing computers and other goods; computer programming; manufacturing of electrical equipment; and manufacture of computer, electronic and optical products), along with strong presence in engineering and equipment manufacturing activities. The sub-region also has a relatively strong presence in land transport,

storage and distribution, which is to be expected given the sub-region's location. Construction of buildings is also high, and links well with the high presence in architecture and, to a lesser degree, civil engineering. Finally, the sub-region also has a very strong presence in the "utilities" sector – electricity and gas supply; and water collection, treatment and supply. These economic specialisms are clearly underpinning the forecasts for future growth in the sub-region for professional and business services, ICT and digital media, construction and transport & distribution. The strengths in electrical manufacturing and wider engineering show a strong base with which to build on and enhance, and the utilities sector highlights perhaps a surprising but clear sub-regional strength.

Beyond these particular industrial specialisms, the sub-regional also has a number of key assets and characteristics that help encourage and support growth in particular sectors. These are:

- ***Our location and access to the strategic transport network*** – this has clearly been the major factor in the growth of transport & logistics in the sub-region, but it also has a strong influence in the growth of professional & business services and wider knowledge intensive service industries expanding from the South East. The sub-region is also the meeting point between the more service based economy of the South East, and the manufacturing economy of the Midlands – this presents real opportunities to create more hybrid sectors, combining knowledge intensive services and manufacturing/engineering
- ***Housing & quality of life*** – the sub-region offers a high quality of life, with a good range of quality housing. This has helped support the growth in higher-level, professional and technical occupations; the expansion of the wider South East (i.e. growth in knowledge intensive services); and the concentration of head office functions (as shown in the LQ analysis above)
- ***Cultural offer*** – the sub-region has a strong cultural and heritage offer (the Coventry and Warwickshire sub region houses over a third of the 16 internationally significant heritage and cultural assets in the West Midlands. It also boasts 50% of the West Midlands' historic environment assets, and 20% of the region's tourism assets). This has led to strong growth in the cultural sector (including creative industries), helps attract and retain skilled, professional workers, and probably helps in terms attracting head office function.
- ***Skilled population*** – the sub-region has a relatively highly skilled population, which is clear attractor to businesses seeking to relocate or invest in the area. The sub-region also has a history of technical skills around manufacturing, engineering and the automotive sector, which has helped maintain the levels of specialisation in these areas as shown in the LQ analysis above
- ***Innovation assets*** – the sub-region has a number of innovation and R&D assets, including the universities, research institutions, science parks, incubation & innovation centres; along with a number of businesses that have strong R&D activities. This again helps attract knowledge intensive services and occupations to the area, and provides a real platform to further develop our economy through the practical application of research and knowledge (as identified in the latest CSW Economic Strategy).

These sub-regional assets and specialisms provide further supporting evidence as to why certain sectors have grown in economy over recent years, and highlights the particular areas where investment or interventions could “go with the grain” and build on our existing strengths rather than trying to create new ones. Evidence from around the world shows that it is incredibly difficult (if not impossible) to create sectors or industrial clusters from scratch. They must be built on some existing strength in an area where there is the capacity to expand.

Strategy-based growth

The future does not necessarily follow the past, and through a clear strategy and appropriate interventions, local areas can substantially influence and shape the type and nature of economic growth. This section therefore summarises the sectors that the (current) various economic growth strategies focus on, and therefore the potential growth areas for the sub-region in the future.

Historically, the main economic strategy that provided the context for sectoral growth and development was/is the Regional Economic Strategy (“*Connecting to Success*”, published in 2007). Given the overall structural weaknesses and low productivity of the West Midlands economy, this regional strategy is based largely upon diversifying the existing business base, and encouraging new business starts, in more high value sectors and industries. This element of the strategy is very much focussed on developing “clusters” rather than individual sectors or sub-sectors, recognising that businesses have a supply chain and impacts on businesses outside the target sector (this is explored more below in the section on inter-business relationships). The clusters identified and supported through the Regional Economic Strategy are:

- Building technologies
- Business & professional services
- Environmental technologies
- Food & Drink
- High Value Added Consumer Goods
- ICT
- Medical Technologies
- Screen Image & Sound
- Tourism & leisure
- Transport technologies

These clusters currently make up just over one-third of all employment in the region, but rises to closer to 40% for the sub-region as a whole. Table 2 below looks at the relative strength and presence of these clusters in the sub-regional economy, by considering size, share of all employment in the sub-region, and the location quotient when compared to the West Midlands average.

Table 2: Presence & strength of AWM clusters in the Sub-Region

Cluster	No. employed in CSW	% of employed	LQ
Building Technologies	48,333	9.9%	0.94
Environmental Technologies	6,384	1.3%	0.92
Food & Drink	9,016	1.8%	0.66
HVACP	2,553	0.5%	0.44
ICT	23,171	4.7%	1.51
Screen Media	2,430	0.5%	1.10
Medical Technologies	1,181	0.2%	0.69
Specialist Business Services	26,975	5.5%	1.10
Tourism & Leisure	42,624	8.7%	0.95
Transport Technologies	25,381	5.2%	1.18

This shows that the sub-region has clear strengths in the ICT, Screen Media, Specialist Business Service and Transport Technologies clusters. With the exception of Screen Media, this mirrors the key findings from the sections above. The sub-region also has a large presence (in terms of numbers employed) in Building Technologies and Tourism & Leisure, suggesting these are also sectoral areas to build on. The three clusters that are shaded in grey show areas where we have a particular weak presence at the moment. These are Food & Drink, High Value Added Consumer Goods, and Medical Technologies. This analysis would suggest that it would be difficult for these clusters to grow substantially within the sub-region.

For some time, there has been no national economic development or industrial growth strategy. However, towards the end of the last Government, the policy “New Industry, New Jobs” was developed and heavily promoted. This essentially was a strategy for future economic growth, and identified a number of broad sectoral areas that the Government believed should be the focus of public intervention as these had the greatest potential for growth and success in the UK given our comparative strengths. These were:

- Low carbon industry
- Ultra low carbon vehicles
- Digital media
- Life sciences & pharmaceuticals (including the industrial opportunities from an ageing society)
- Advanced manufacturing (aerospace, composite materials, industrial bio-technology, plastic electronics)
- Professional and financial services
- Engineering construction

Further refinement of these broad areas, along with details of how these sectors would be supported, was to be developed. However, the change in government has put a (temporary?) halt on this work. While clearly the policy “*New Industry, New Jobs*” has been scrapped, the analysis on the comparative advantages that the UK has, or could have, in these areas remains sound. Moreover, the coalition government has reaffirmed the need to rebalance our economy away from an over-reliance on financial services and more towards production based industries. In a speech on economic strategy (28th May), the Prime Minister stated that the new government would be focussed on “*supporting growing industries – aerospace, pharmaceuticals, high-value manufacturing, hi-tech engineering, low carbon technology. And all the knowledge-based businesses including the creative industries*”.

Locally within the sub-region, it is probably fair to say that we have often been guided in our “priority sectors” by the clusters identified by AWM as a result of strategic alignment and pragmatic funding reasons. More recently, these sectors were also starting to be informed by the New Industry, New Jobs terminology and focus. The following table presents a quick review of the key clusters that that each local authority (individually or collectively) in the CSW sub-region are pro-actively targeting as part of their strategic approach to growing the local economy. This is not to say that each area does not consider other clusters or sectors as important, but that they are not currently the focus of their interventions.

Table 2: Review of target clusters/sectors for investment by local authority area

“Cluster”	Coventry	Solihull	Warwickshire
Transport Technologies (inc. automotive and motorsport)	x	x	x
Building Technologies		x	
Business & Professional Services	x	x	
Environmental Technology	x	x	x
Food & Drink			
High Value Added Consumer Goods			
Life Sciences (inc. medical technologies and healthcare)	x	x	x
Digital Media (inc. ICT)	x	x	x

Inter-business relationships

Any activity by business requires inputs from other businesses, and will also sell its goods and services to other businesses as well as consumers. As different sectors grow, they will inevitably therefore increase in demand or supply to other sectors, which may stimulate further, wider growth. In some instances this will lead to clustering (whereby similar businesses work together in identified supply chains and networks, leading agglomeration effects and increased productivity), in others more broadly through indirect multipliers as a result of more economic activity within an economic system.

This section seeks to explore what the nature of these business inter-relationships might be, and whether some sectors have stronger links and cross-benefits across the economy than others. This might help identify sectors where pro-active support might help stimulate wider indigenous business growth.

Input-Output tables generated by the Office for National Statistics breaks the economy down to display transactions of all goods and services between industries and final consumers in the UK for one year. Table 3 below presents a summary of this information for the year 2007 by broad industrial group. To enable comparisons, I have indexed total expenditure for each broad group to 100. Reading from left to right, the table shows where expenditure on products created by each industrial group comes from – be it other businesses as part of intermediate consumption; final domestic consumption by households, government or non-profit making institutions serving households; through exporting; or through gross fixed capital formation (i.e. investment in assets). While the table does show that some sectors (such as agriculture, mining and transport & communications) do have stronger links to some other sectors, and others do not (such as manufacturing, public administration and education), the analysis does not particularly help in strategic targeting of sectors. More fine grained analysis of 123 different sub-sectors can be undertaken, but this would be rather time consuming. Rather, using this approach, a more selective use of this tool will be used to consider the wider economic benefits of a sector as part of the final synthesis of key sectors for the sub-regional economy at the end of this paper.

Table 3: Indexed expenditure of products by broad industrial group, 2007

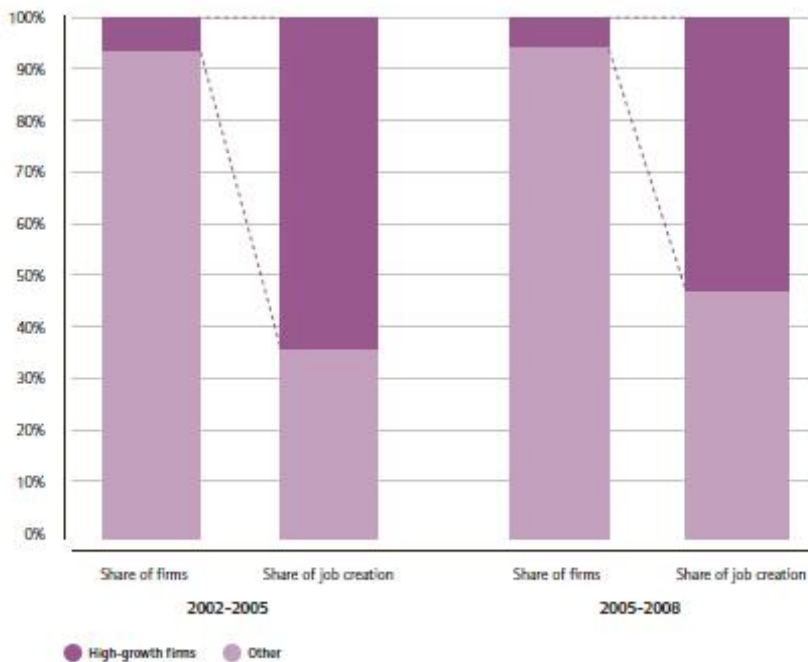
	Intermediate consumption by industry											Domestic consumption	Gross Capital Formation	Export	Total
	Agriculture, forestry & fishing	Mining & quarrying	Manufacturing	Electricity, gas & water supply	Construction	Distribution & hotels	Transport & communication	Finance & business services	Public admin & defence	Education, health & social work	Other services				
Agriculture, forestry & fishing	7	0	32	0	1	6	0	0	0	1	0	46	2	6	100
Mining & quarrying	0	6	30	31	5	0	0	0	0	0	0	0	1	26	100
Manufacturing	1	0	19	0	3	5	2	1	2	3	1	34	7	20	100
Electricity, gas & water supply	1	1	17	27	0	3	1	3	2	3	1	40	0	0	100
Construction	0	0	1	0	26	1	1	6	2	0	0	4	58	0	100
Distribution & hotels	0	0	1	0	1	5	2	4	1	2	1	74	0	7	100
Transport & communication	0	1	7	0	1	16	20	13	3	3	1	25	1	10	100
Finance & business services	0	0	5	1	4	8	4	22	3	3	3	27	5	14	100
Public administration & defence	0	0	0	0	0	0	2	6	0	0	0	88	2	1	100
Education, health & social work	0	0	0	0	0	0	0	2	2	13	0	81	0	1	100
Other services	0	0	3	0	0	2	2	4	3	3	14	61	2	6	100

Non-sectoral business growth

While this paper has been focussed on understanding and predicting sectoral change in the economy to help inform the sub-region's strategic approach to the growth of the area, it must be recognised that growth can often be non-sector specific. Recent research undertaken by NESTA on business growth has suggested that growth in employment in recent years have actually been dominated by *types of businesses*, rather than any particular sector. The research sought to map business growth in the UK, and found that high-growth companies – those who experience average annual growth in employment of 20% or more over a three year period – are the drivers of economic prosperity in the UK.

High-growth companies represent only 6% of all UK firms employing more than 10 people, but generated a majority of jobs (1.3 million out of the 2.4 million new jobs created in the period 2005-2008). The research found that the majority of companies only experience modest growth, and the number of businesses that decrease in size is similar to the number that increase their size. In contrast, the average high-growth company in the UK tripled its employment over a three-year period.

Figure 1: The contribution of high-growth firms to job creation (10+ employees)



Source: ONS Business Structure Database.

Taken from the report "The vital 6 per cent", NESTA Oct 2009

Interestingly, the research finds that these high-growth companies are not confined to the so-called "high-tech" or "high-growth" sectors – they can occur in all sectors (even those in apparent decline) and are equally present in "low tech" as well as "high tech". However, the balance between different sectors does appear to reflect trends in the economy in the period: the sectors with the highest proportion of high-growth firms were financial services (over 9 per cent) and real estate and business services (around 8 per cent), while the lowest share was found in manufacturing (3 to 4 per cent). This is not to say that these sectors have greater potential for growth, just that these sectors reflect the "economic zeitgeist" of the time – for instance the

likely future emphasis on production industries to help re-balance the economy in the future is more likely to see entrepreneurs exploiting business opportunities in this area as opposed to others. High-growth businesses can also be found in all parts of the country, with no particular concentration in terms of share of the total business base (i.e. the South East has more high-growth businesses, but this is only in line with larger business base of that area).

If these high-growth businesses can occur anywhere, and in any sector, the key question is whether there are any characteristics that we can identify to help us support and facilitate the expansion of these businesses? The research suggests the following key factors are important:

- **Age is important** – the majority of high growth firms (70%) are at least five years old. However, young firms are more likely to be high-growth, with 11.2% of all young firms being high growth in 2002-05 compared to 5.4% of older firms; and 8.5% compared to 5.1% in 2005-08.
- **Size is important** – while 30% of high-growth firms were young (less than five years old), these were generally smaller and accounted for a relatively small amount of the total job growth generated by all high-growth businesses. Longer established, larger high growth firms are, therefore, more important in terms of net job creation than the so-called “gazellas” (fast growing new business starts). High growth companies that employed more than 50 people in the base year were responsible for 73% of all high-growth business job growth in 2002-05, and 68% in 2005-08.
- **Innovation drives growth** – innovative firms grow twice as fast (both in terms of employment and sales) than firms that fail to do so. The research used econometric analysis to show that innovation is actually driving business growth (and not just a contributory factor). This effect is also more marked the faster a company is growing. A high growth company that sees a 10% increase in shares of sales from new products adds almost 1.5% to its employment rate growth.

In addition, while the research does not explicitly state this as a factor, one can be fairly sure that the business leaders responsible for these high growth companies are likely to have **strong management & leadership skills**, be **highly entrepreneurial**, and have a **calculated approach to risk**.

Clearly, it is incredibly difficult, if not impossible, to “pick the winners” and identify in advance which are going to be the growth companies of the future. However, the research that has been undertaken does suggest that greater focus on established, larger businesses (rather than just new start-ups) may pay dividends. Furthermore, it will be important in the future to help create the conditions that enable and support the rapid expansion of high-growth companies. This may be through access to finance and venture capital, support for property growth or new investment to create capacity for growth, improving support and linkages to enable innovation to flourish, and removing other barriers to rapid growth.

Synthesis & Summary

The sections above have sought to understand different elements of business growth to help us better gauge the likely future direction of the sub-regional economy. Clearly, no single approach will provide the answer hence the need to consider all aspects together in some synthesised way.

Table 4 below brings the various aspects together, and each identified sector (or in some cases sub-sector) is allocated a score 1 to 5 as to how it rates against each particular aspect (1 being low contribution to that particular aspect, 5 high). The sectors selected for this exercise are based on those that have been identified through the course of the analysis as either being important currently to the sub-regional economy, is a target sector or cluster regionally and locally, or is seen as a sector that is (or may be) strategically important for the future nationally. These sectors would benefit from some more detailed definitions to provide more clarity on what specifically we are talking about, or the specific elements of the sector that we are focussed on:

- **Advanced manufacturing** – high-technology engineering and manufacturing around aerospace, industrial bio-technology, nano-technology, and composite materials
- **Automotive manufacturing** – the manufacture of standard automobiles and high performance (i.e. motorsport) vehicles, along with the associated supply chains
 - **Ultra low carbon vehicles** – a specific sub-set of automotive manufacturing, focussing on the research, development and production of a new generation of vehicles
- **Care sector** – the provision care services to children and adults (particularly the elderly)
- **Computing, software and electronics** – the manufacture of electronic components, computer hardware, software, programming and computer consultancy
- **Construction** – standard building construction, building installation (the various skilled trades such as electricians and plumbers) and building completion (joinery, plastering, painting, etc.)
 - **Sustainable construction** – the research, development and production of zero carbon buildings; probably using off-site factory based manufacturing techniques
- **Cultural & Creative Industries** – this focuses on the creative industries (such as media, advertising, design, fashion, film & video, music, but excluding video & computer games which are considered separately here) and the leisure sector (sports, recreation activity, entertainment; but excluding tourism which is considered separately below)
- **Distribution & Storage** – cargo storage, warehousing, distribution centres, transport delivery and logistics
- **Environmental technologies** – manufacture of renewable energy generation products and related services
- **Life sciences & pharmaceuticals** (including medical technologies) – the research, development and production of medicine, clinical machinery and instrumentation, and other R&D to improve health and well-being (but not the provision of health-related services)
- **Public services** (particularly public sector re-locations from London)
- **Retail**
- **Specialist business services** – professional services such as accounting, law, consultancy, architecture, engineering services, employment services, etc
- **Tourism** – hotels, restaurants, visitor attractions
- **Utilities sector** – companies responsible for the collection and distribution of electricity, gas and water; including head office functions.

Table 4: Ranking of identified sectors by factor of consideration

Sector	Contribution to employment	Contribution to economic output	Growth potential (baseline forecasts)	CSW competitive advantage/specialisation	Strategic/Target growth sectors		Wider economic benefit	Overall "score"
					Local	National		
Advanced manufacturing	2	4	2	2	4	5	2	21
Automotive manufacturing	3	4	1	5	5	2	3	23
<i>Ultra low-carbon vehicles</i>	1	1	2	4	4	4	3	19
Care Sector	3	2	4	1	1	3	3	17
Computing, software & electronics	3	4	4	5	5	4	2	27
Construction	3	3	4	3	2	2	2	19
<i>Sustainable construction</i>	1	1	1	3	4	3	3	16
Cultural & Creative industries	3	3	3	4	2	4	4	23
Distribution & Storage	4	4	3	5	1	1	4	22
Environmental technologies	1	2	2	2	4	4	2	17
Life sciences & pharmaceuticals	1	1	1	1	3	5	1	13
Public services	2	1	2	2	2	1	2	12
Retail	5	2	3	2	1	1	2	16
Specialist business services	4	5	5	5	4	4	3	30
Tourism	3	2	3	3	2	2	5	20
Utilities	1	4	1	4	1	2	3	16

This “scoring” exercise would suggest that the key sectors moving forward for the sub-region are:

1. Specialist Business Services
2. Computing, software and electronics
3. Cultural & Creative Industries
4. Automotive manufacturing
5. Distribution & Storage

However, the different categories highlight different functions or roles that each of the sectors or sub-sectors play in the economy. Some sectors clearly already have a strong presence within the sub-regional economy and are likely to remain key components of the future. These might be termed the “core” sectors and comprise of the Care Sector, Construction, Distribution & Storage, and Retail. There are other sectors where we have clear specialisms and, in many instances, already have a strong presence in the sub-regional economy. These might be termed our “key strength sectors”, and is made up of Automotive Manufacturing; Computing, Software and Electronics; Creative & Cultural Industries; and Specialist Business Services. Finally, there are a set of sectors which we aspire to grow and have potential large market opportunities to exploit. However, the analysis in previous sections above has highlighted the importance on building on existing strengths and business presence, rather than hoping to develop brand new sectors or clusters. As such, the sectors that would most appropriately fall into what could be termed “aspirational sectors” would be: Ultra low-carbon vehicles, Sustainable Construction; elements of Advanced Manufacturing (building on the relatively small but significant strength in aerospace); and elements of applied design and engineering (particularly around adaptive medical technologies and environmental technologies).

Despite the focus on sectoral growth, this paper recognises that it is impossible to “pick the winners” and have clarity about how future prosperity in the sub-region will be driven. It has been shown that high-growth companies are non-sector specific, and that innovation can happen anywhere and at any time. It is therefore important to underpin any approach that we make in the future to support economic growth with a wider framework which creates the best environment to enable and facilitate high-growth wherever it may occur. Within this wider framework, however, it is also important for an economy to recognise its strengths and specifically focus on key sectors that in the medium term have the biggest potential to create wealth and prosperity in the area. Such an approach enables co-ordination of effort and alignment of activity; clarity of focus that provides a good signal to the market and individuals (i.e. education & training); and helps improve the ability to develop clustering and agglomeration benefits.

The conclusions from this paper can be summarised into a framework diagram below.

Diagrammatical Summary of Key Findings

