Business

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Business SWOT

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Cambridgeshire's Business Sectors and Jobs Profile

A reasonably diverse industrial base, with strengths in high and low value manufacturing, engineering, R&D, science and technology, food processing and construction.

The professional, scientific and technical sector accounts for the largest number of businesses in all districts other than East Cambridgeshire and Fenland where construction is the largest sector. However neither sector provides an equivalently high proportion of jobs. Key employment sectors across the county are manufacturing, education and health.

Cambridgeshire's economy remains relatively resilient compared with the national picture.

Total employment in Cambridgeshire increased by 0.7% from September 2010 to September 2011, compared to a decrease of 0.2% nationally. However, the number of businesses in Cambridgeshire grew by only 1.9% from March 2011 to March 2012, compared to a national rise of 2.6%.

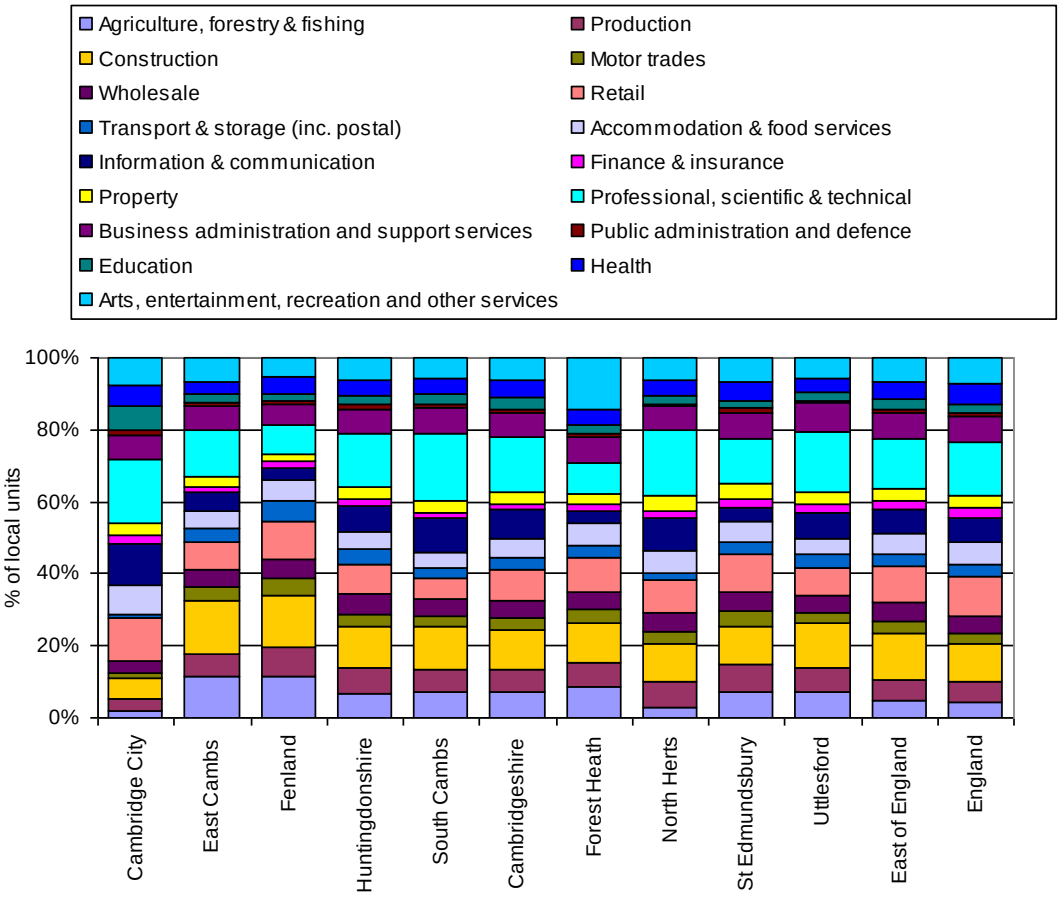
Business by sector

There is a reasonably diverse industrial base in Cambridgeshire, although significant industry and employment differences between the different districts.

Across Cambridgeshire, the professional, scientific and technical sector accounts for the largest number of businesses with 16% of all local units, followed by construction with 11%. The professional, scientific and technical sector accounts for the largest number of businesses in all districts other than East Cambridgeshire and Fenland, where construction is the largest sector, and Forest Heath, where arts, entertainment, recreation and other services is the largest sector.

Figure 1: Businesses in Greater Cambridge by district and industry sector in 2012 at local unit (site) level

Source: ONS – UK Business: Activity, Size and Location



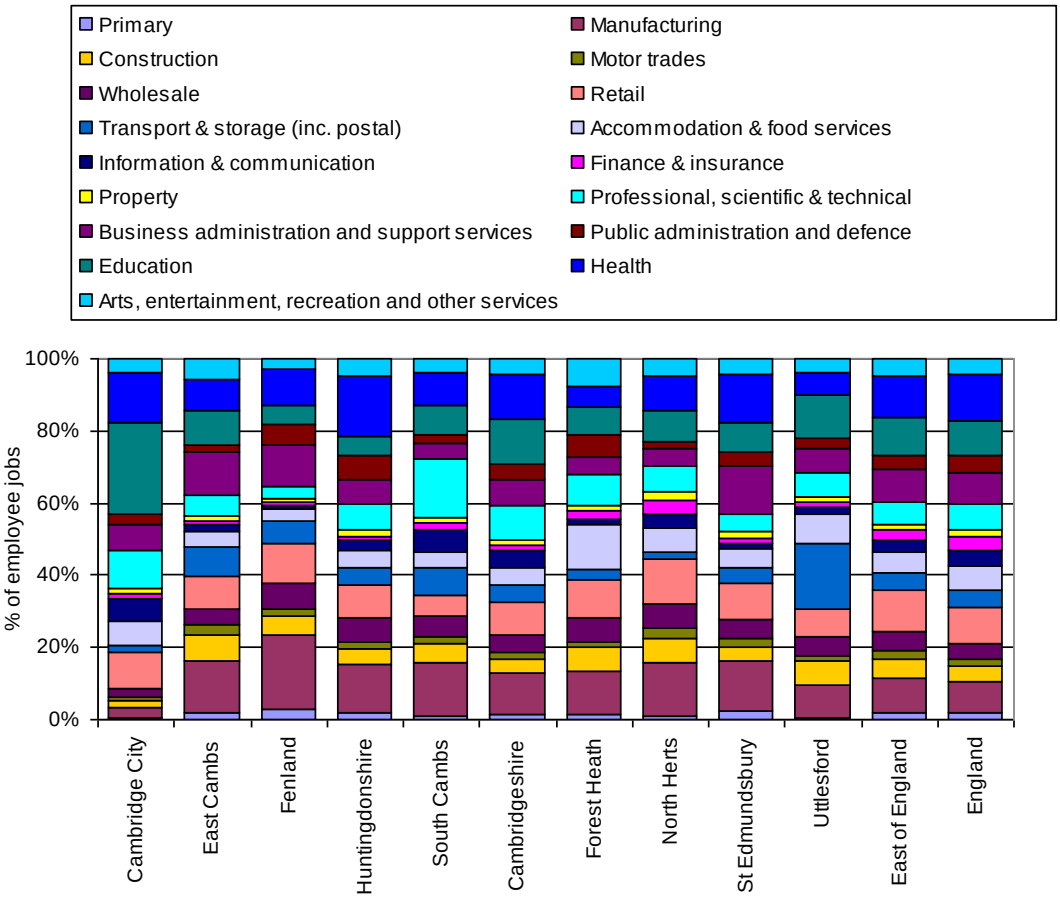
Jobs by sector

The figures below represent employee jobs and therefore exclude self-employed jobs, government-supported trainees and HM forces that together make up Cambridgeshire's total jobs figure of 325,000 in 2011.

A significant proportion of Cambridgeshire's jobs are in manufacturing (primarily Fenland, Huntingdonshire, South Cambridgeshire and East Cambridgeshire) and education (primarily Cambridge City). Although construction is the largest business sector in Fenland and East Cambridgeshire, it does not provide a significantly large proportion of jobs in either district. Although the professional, scientific and technical industry forms the largest business sector in Huntingdonshire, South Cambridgeshire and Cambridge City, it only provides a notably higher proportion of jobs in South Cambridgeshire compared with regional and national figures. Both Huntingdonshire and Cambridge City have a high proportion of jobs in health. There are relatively few jobs in financial services across all districts.

Figure 2: Employee jobs in Greater Cambridge by district and industry sector in 2011

Source: ONS – Business Register and Employment Survey



Change in jobs and businesses

In 2011, **total employment**[1] in Cambridgeshire increased by 1,900 jobs to 290,200[2]. Public sector[3] jobs fell by 2.2%, while private sector[4] jobs increased by 1.2%. Jobs in the "public" sectors[5] of public administration and defence, education, and health increased by 0.4%, while

[1] Employment is defined as employees plus working proprietors
[2] Does not include farm agriculture data due to their unavailability
[3] Public sector employees are those in: Public Corporations/Nationalised Bodies, Central Government and Local Authority.
[4] The private sector is defined as: Company, Sole Proprietor, Partnership and Non Profit Body or Mutual Association.
[5] Alternative definition of public sector

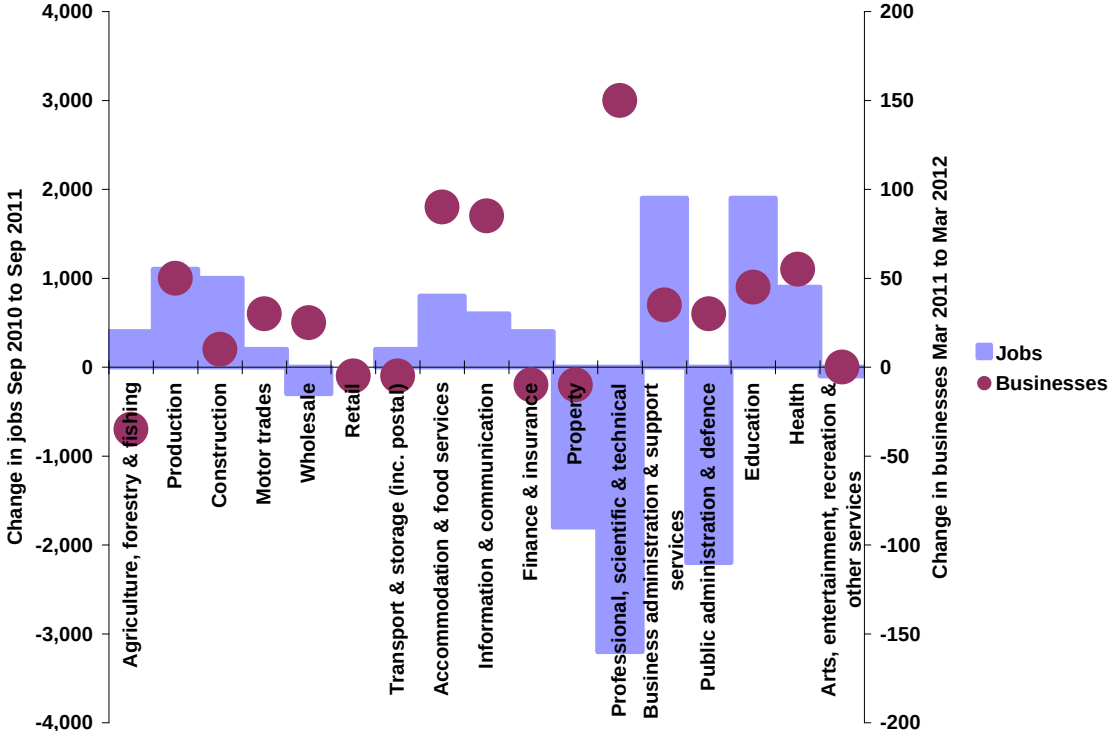
jobs in all other sectors rose by 3.7% overall. Jobs in the "private" sectors of production, business administration and support, and construction were up, while jobs in professional, scientific and technical, property, and the wholesale sector were down.

Table 1: Jobs in Greater Cambridge by district and public/private breakdown in 2010 and 2011
Source: ONS – Business Register and Employment Survey

Total employment	2010			2011		
	Public	Private	Total	Public	Private	Total
Cambridge	19,000	70,800	89,700	18,900	71,600	90,500
East Cambridgeshire	2,500	23,000	25,500	2,600	24,000	26,600
Fenland	4,000	26,400	30,400	3,800	27,700	31,500
Huntingdonshire	17,100	55,100	72,300	16,200	54,000	70,200
South Cambridgeshire	8,000	62,400	70,400	8,100	63,300	71,300
Cambridgeshire	50,700	237,700	288,300	49,600	240,600	290,200
Forest Heath	3,700	20,900	24,600	3,300	21,000	24,300
North Hertfordshire	5,100	42,600	47,700	4,900	42,100	47,000
St Edmundsbury	12,500	43,900	56,300	11,900	47,000	58,800
Uttlesford	4,800	30,900	35,800	4,700	31,200	35,800
Greater Cambridge	76,800	376,000	452,700	74,300	381,800	456,100
Greater Cambridge Greater Peterborough	114,100	505,400	619,500	108,900	510,500	619,400
East of England	482,700	2,014,400	2,497,100	463,200	2,051,600	2,514,800
England	4,981,900	19,000,100	23,982,000	4,745,800	19,302,400	24,048,200

From 2011 to 2012, the number of **businesses** in Cambridgeshire increased by 540 to 28,930. Small businesses with an employment of less than 50 increased by 520 to 27,945. The accommodation and food services and professional, scientific and technical sectors grew the most. Property, finance and insurance and agriculture, forestry and fishing experienced the largest reductions.

Figure 3: Change in jobs and businesses in Cambridgeshire by industry sector over one year
Source: ONS – Business Register and Employment Survey; ONS – UK Business: Activity, Size and Location



Despite a fall in the number of jobs in the professional, scientific and technical sector, possibly as a result of a reduction in public sector spending on these services, the number of businesses in this sector increased by around 150, probably as a result of an increase in self employment.

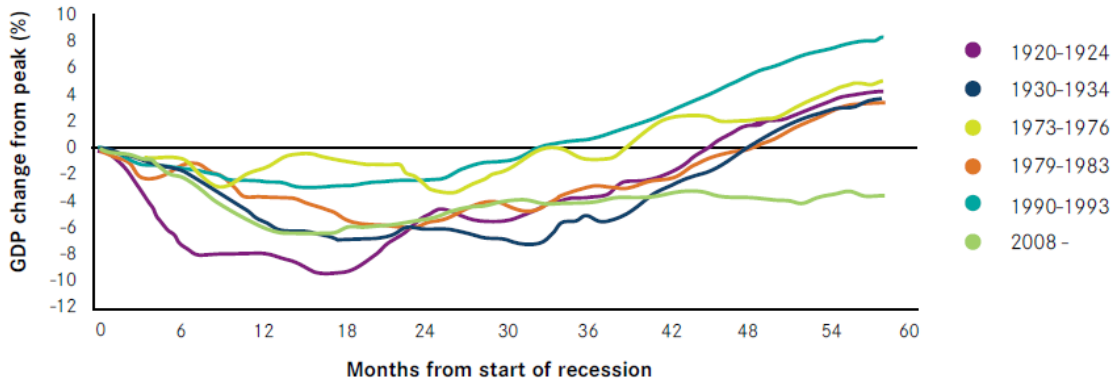
The Wider Economy and the Impact of the Recession

Trends in the national economy

Between the fourth quarter of 2012 and the first quarter of 2013, the UK economy grew by 0.3%. The ONS reported that the service sector continued to support this growth, as it grew by 0.6% and contributed 0.4 percentage points to quarter one's GDP growth. Smaller growth was reported in the production sector which increased by 0.2% and contributed 0.03 percentage points to the increase in GDP. Although these sectors represented positive contributions, there were contractions in other sectors, namely construction, which contracted by 2.4% in the quarter and was a negative contribution of 0.2 percentage points to GDP growth.

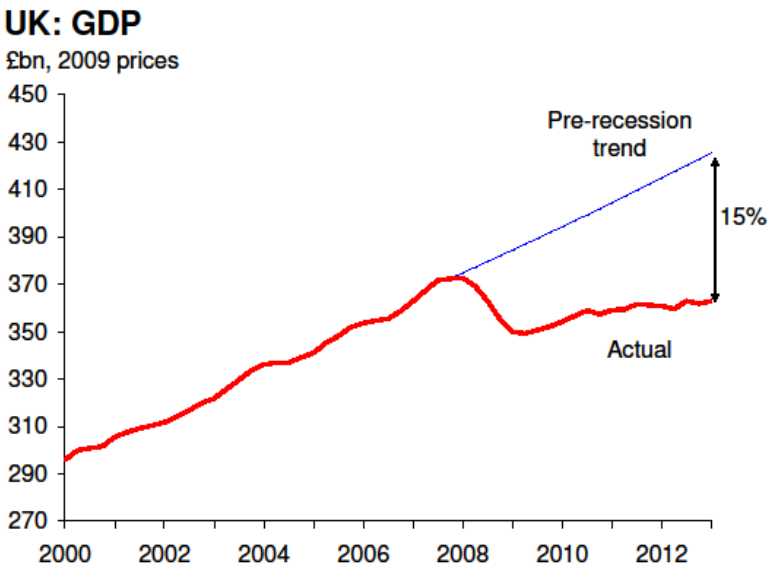
Although growth in the economy is positive, it should be emphasised that this remains very modest, and consequently the UK's GDP figure is still below what it was prior to the recession. Indeed, the recovery from the start of the financial crisis and recession in 2008 has been the longest recorded in the last 100 years. Figure 4 shows that GDP is still around 4% lower, than it was nearly 5 years ago at the start of the recession in 2008.

Figure 4: Economic growth across recessions
Source: NIESR



Not only does the recession mean GDP is below the level it was in 2008, it also means that GDP is around 15% lower in 2013 compared to what it would have been had the economy grown at the same rate as it did before the recession.

Figure 5: Actual GDP and projected GDP from pre-recession trend
Source: Oxford Economics/Haver Analytics



There are several reasons thought to be behind the UK's stuttering output growth. These include the effects of austerity and fiscal tightening, low demand for exports from the Eurozone and tight credit conditions reducing investment. The final two factors are of particular concern to Cambridgeshire. Firstly when measured by value, most of Cambridgeshire's exports are destined for the EU; a value which declined in 2012. Further decreases in this amount could have an adverse impact on businesses in Cambridgeshire. Secondly, hi-tech industries in Cambridgeshire which are capital intensive may suffer from a lack of growth if tight credit conditions restrict investment. To an extent, this is borne out by the data which shows that employee jobs in pharmaceuticals fell in 2011; on the other hand, employee jobs in advanced manufacturing remained level. At present it is hard to understand what the long-term trends will be.

Although output may have fallen and has shown only sluggish growth, the trend that has distinguished the current recession from those of the past has been the resilience of the labour market. This has given rise to the productivity puzzle, whereby employment has risen fairly consistently since 2010; however, national output has continued to struggle. These two factors combined means that according to the data, the productivity of Britain's workforce has effectively fallen.

There have been several theories as to the cause of the productivity puzzle, some of which are described briefly below:

- Underestimation of GDP - If the ONS underestimates GDP then labour productivity will appear reduced. This appears unlikely, however, as measurement methodology has been reviewed and any revisions made to GDP will not be large enough to explain the drop in productivity.
- Labour hoarding - As it is expensive for companies to fire workers when the economy contracts, and subsequently hire new workers as the economy grows, it has been proposed that some companies are retaining workers so that they can avoid these staffing costs whilst also being better placed in a recovery. However, as a lack of economic growth continues, this explanation becomes less likely. Continuing to employ an excess of labour in the long-term is not profitable
- 'Zombie' companies - Current financial conditions could be making it possible for inefficient companies to continue running. If banks are unwilling to close indebted companies then capital will remain available to low-growth firms and labour will continue to be employed unproductively.

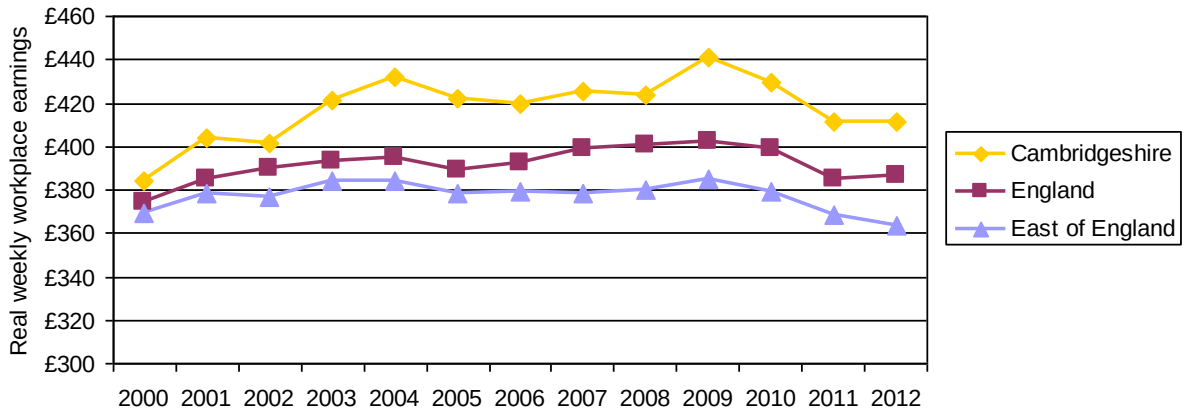
Although these factors may explain part of the productivity puzzle, they are not accountable for the full picture nor are they able to explain why employment has actually risen and not remained stable. Recent research by Pessoa and Van Reenen has shown that the productivity puzzle is more likely caused by a fall in real wages[6].

They show that weaker union power and recent welfare reforms have allowed real wages to fall dramatically during the recession; as a result, firms are able to employ people because the cost of labour is a lot less. Furthermore, the reluctance of banks to lend to firms has made the cost of capital more expensive. As a result, firms are less likely to invest in capital, instead substituting for low cost labour. This means that an increased number of people are employed to use the same amount of capital. In turn this makes each member of the workforce less productive and overall labour productivity falls.

[6] Pessoa and Van Reenen (2013): *The UK Productivity and Jobs Puzzle: Does the Answer Lie in Labour Market Flexibility?*

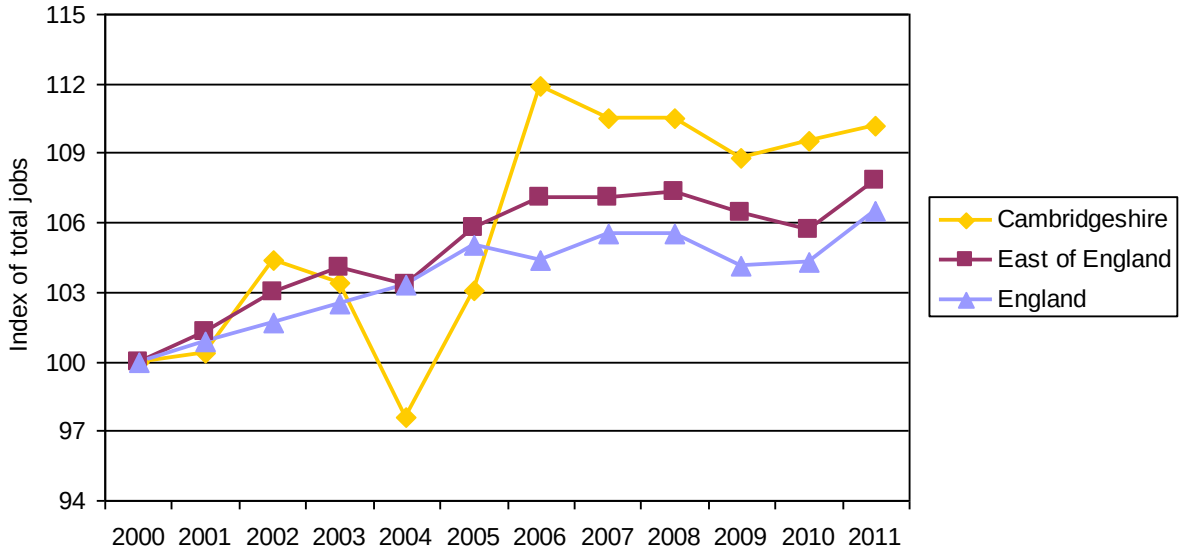
These trends, increasing employment and falling wages, can be seen mirrored in the Cambridgeshire workforce. Figure 6 shows that from 2009 to 2011 there was a sharp drop in real earnings; in Cambridgeshire this was seen to a greater extent than in either the East of England or England as a whole.

Figure 6: Real gross weekly workplace earnings from 2000 to 2012
Source: ONS - Annual Survey of Hours and Earnings (Workplace Analysis)
(Base year=2009)



It is clear from Figure 7 that there was a marked increase in Cambridgeshire's total jobs from 2009 to 2011. This period coincided with the noticeable drop seen in Cambridgeshire's real earnings in Figure 6. This trend appears fairly consistent with the earnings and jobs figures from 2009 to 2011 that are seen nationally and regionally. Although the Cambridgeshire employment level appears more volatile, this is likely the result of the county's smaller survey size.

Figure 7: Index of total jobs from 2000 to 2012
Source: ONS - Jobs Density
(2000=100)



The data seems to suggest that the trends observed by Pessoa and Van Reenen on a national level, falling wages (relative to inflation) and rising employment, can also be seen in the Cambridgeshire labour market. This implies that in Cambridgeshire, those who are in employment are willing to take a reduction in their earnings, and job-seekers are willing to accept a lower wage when entering the workforce.

Combining this reduction in earnings with increasing inflation rates means that the income of the average person in the county is reduced and consequently their usual standard of living may now be less affordable. Whilst this has put a strain on households, it does however mean that firms are more able to retain their existing workforce and also to create new employment opportunities.

Future economic growth: A focus on local government

In 2012, Lord Heseltine was commissioned by the Prime Minister to produce a report on economic growth in the UK. The result, *No Stone Unturned,* outlines 89 recommendations for the Government with themes covering the drivers of the economy - business, central government and local government. Ultimately, Lord Heseltine's report stresses the importance of creating a wealth creation culture, with drivers re-organised and re-structured to meet this agenda. To achieve this, the following points are put forward:

- empower and incentivise local communities to collaborate for growth;
- rejuvenating the partnership between the public and private sectors involving both local and central government;
- a dynamic, strategic central government with wealth creation at its heart, working more effectively in the national interest to support wealth creation and embracing a culture of both public and private sector decision making;
- a private sector led business support infrastructure accessible everywhere;
- a system for producing the skills that our economy needs now and in the future;
- businesses, irrespective of size, sector or location which are engaged with their wider communities and ambitious to grow.

Fundamental to these plans is to devolve power and money away from Whitehall and towards local government, thus empowering local partnerships to develop strategies 'based on the economic reality of their area'. Lord Heseltine's first recommendation is that

> "Central government should identify the budgets administered by different departments which support growth. These should be brought together into a single funding pot for local areas, without internal ring fences."[7]

As such, the report recommends greater responsibility for Local Enterprise Partnerships (LEPs) in terms of bidding for funds, and furthermore, in developing and implementing their own economic development strategies. Heseltine points towards £47 billion of central government funds which could have been put into the single funding pot for local authority use.

Although the importance of decision making at the LEP level is maintained, the report does not see the two-tier model of local government as the most efficient or the most conducive for economic growth. Instead, recommendation 11 states that all two-tier local authorities should move towards unitary status. However this recommendation has been rejected by the Government, who reason that although areas may make this step voluntarily, it would be preferable for authorities not to be distracted by structural change[8].

Also recommended is legislation to allow local authorities to elect a mayor. This policy is designed to promote greater leadership to strengthen local governance, champion issues important to the local community and represent an area on matters of wider importance to the UK.

Further to these local issues, there are recommendations for central government, such as producing an overarching and long-term National Growth Strategy. The report also recommends that a National Growth Council should be established. Chaired by the Prime Minister, this Council would be responsible for driving growth and wealth creation, and coordinating growth strategies across all government departments. However, this proposal has only been accepted in part by the Government.

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[7] Heseltine (2012): *No Stone Unturned: In Pursuit of Growth*, p38
[8] *Government's Response to Heseltine's Review* (2013), p47

Innovation and the Potential for Future Growth

Strong innovation performance but constrained by linkages.

Cambridgeshire has the highest share of employment in R&D in the region and attracts a high proportion of public and private investment in R&D. There is concern that private sector R&D investment is highly dependent on a small number of globally significant companies – a structure that lacks long term resilience. Of the three categories of indicator identified in the East of England Innovation Baseline, Cambridgeshire performs the least strongly on 'linkages' – particularly transport infrastructure.

East of England Innovation Baseline

In 2009 EEDA published the East of England Innovation Baseline which reviews the nature, scale and scope of innovation in the East of England relative to other UK and international regions. Most of the baseline information is available at regional level rather than local authority level, but such information still can reflect the position of innovation in Cambridgeshire given the county's contribution to the region's innovation status.

The study sets out three broad categories of indicators with a number of sub-categories to measure the level of innovation of the region. These three categories are input, linkages and output. Input indicators include research and development investment, education and skills. Linkages indicators highlight the interactions between businesses and universities as well as transport and communication infrastructure. The output indicators measure innovative activities as well as novel innovations.

The findings of the study indicate that the overall performance of the East of England is very good across these innovation indicators. The region has a strong research-intensive economy with particular strengths in research and development, the commercial exploitation of new knowledge via patents, and connectivity to London. National comparison puts the region as one of the most innovative regions in the UK. There are, however, some indicators that present a challenge to the long-term innovation performance for the region.

The study recognises the strong contribution that Cambridgeshire makes to the region's innovative performance.

Inputs
Within the region, Cambridgeshire has the highest share of employment in R&D, including a distinct niche in life science and biotechnology which employs 7 times the national average. Cambridge attracts a large proportion of government funding such as health research - several Medial Research Council establishments are located near Cambridge. Private sector investment in R&D in Cambridge makes up a large proportion of the total amount in the region. However there is a concern that business R&D investment is heavily dependent on the investment decisions of a small number of global companies, which may not be resilient in the longer term.

Education and qualification performance are also important indicators within the input category which ensure an area's long-term innovative ability. 53% of pupils in Cambridgeshire achieve 5 or more A* to C in English & Mathematics GCSEs which is above the regional and national averages. The University of Cambridge and Anglia Ruskin University perform the highest in the region in terms of total higher education qualifications obtained. Cambridgeshire is one of the two counties in the region to perform above the national average on the Human Capital Index. The index is a weighted average of NVQs which provides an indication of the skill profile in the area.

Linkages
Cambridge is relatively well connected to London and other places in the region by both road and railway however the county's performance under this indicator is not as strong as its performance in the other two indicators. Cambridge railway station has the highest usage among all the stations in the region.

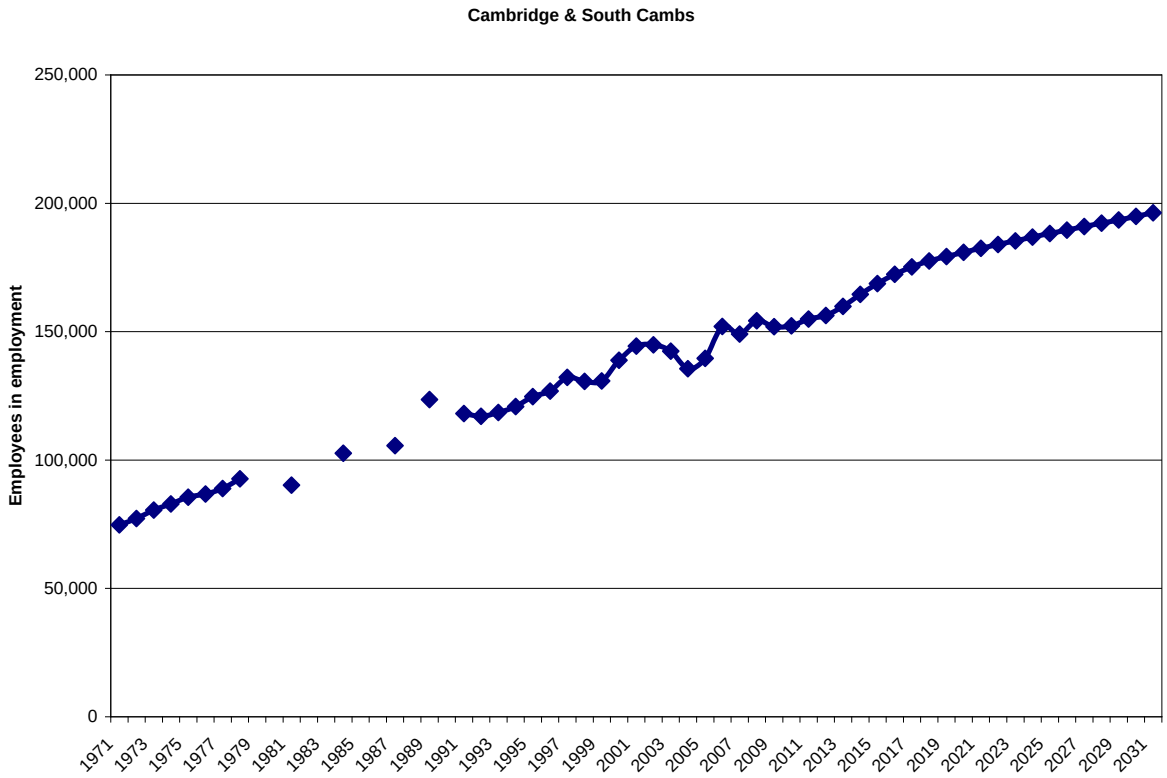
The strong regional performance on business – university research and consultancy is driven by the University of Cambridge's strong interactions with business communities. The University of Cambridge accounts for about 60% of the total value of collaborative research and research/consultancy contracts in the region of which the total amount is the highest level in the UK.

Outputs
Cambridgeshire performs strongly with high knowledge-intensive business densities; the second highest county in the East of England behind Hertfordshire and above the national average.

Job creation

The Cambridge area has a proven track record in job creation, with an estimated 110% increase in employee jobs between 1971 and 2011, as shown in Figure 8. The East of England Forecasting Model projects that, in the absence of development constraints, employee jobs will increase by a further 27% between 2011 and 2031.

Figure 8: Change in employee jobs over time
Source: Office for National Statistics; East of England Forecasting Model



The Cambridge economy is substantial, productive and competitive, and it contains institutions and firms of national and in some cases global significance.

- According to the 2010 Competitiveness Index[9] Cambridge is one of the five most competitive cities in the UK.
- Over the past 50 years the area has developed a global profile and importance in terms of its technology based businesses. In the Cambridge area there are over 1,400 businesses employing 41,000 people[10] (close to a quarter of all jobs)[11]. The contribution to the UK economy is estimated to be £12 billion[12].

[9] Centre for International Competitiveness, University of Wales, 2010
[10] The Cambridge High Tech Cluster Facing the Downturn of 2008-2010, Mohr & Garnsey, 2011

- Integral to the area's success in technology based business is its wider research community, encompassing Cambridge University and other research institutes of global significance[13].

This unique position means that, provided economic growth is supported through policy, the Cambridge area has an on-going ability to attract direct foreign investment and provide a significant contribution to the growth of the UK economy on into the future.

There are concerns, however, that the Cambridge Cluster risks stagnation. Chris Green, CEO of SQW speaking at a recent debate[14] on the Cambridge Cluster stated that 'policy has been too slow to respond to growth' for example, infrastructure and housing requirements have persistently lagged behind demand.

SQW's report on the Cambridge Cluster at 50 also points to the urgent need to "refresh a range of planning polices and restrictions such that the Cambridge area as a whole is fully attuned to the process of doing business within a cluster which is both maturing and evolving". In particular the report identifies key infrastructure requirements in relation to housing and transport as being a constraint to growth.

Leading academics[15] with a track record of studying the Cambridge Cluster have identified that the Cambridge Cluster has been resilient during the economic downturn but it hasn't escaped entirely. The number of firms has shrunk back to year-2000 levels, mainly due to the reduction and consolidation of smaller firms. Growth is also variable by sector with bio-technology and opto-electronics remaining strong whilst the areas of IT services, hardware and software have struggled.

University impact

Universities contribute to an area's economic growth and prosperity in different ways including creating jobs, expenditure in the area, providing knowledge transfer/high-skilled labour, supporting innovation and entrepreneurship.

There are two universities in Cambridgeshire: the University of Cambridge and Anglia Ruskin University. The Higher Education Business and Community Interaction Survey 2007/2008 indicates that the two universities play very different roles in the economic development of the area.

The University of Cambridge as a global research leader attracts inward investment to the area, meets national skills needs- particularly highly-skilled labour, and performs strongly in research collaboration with industry, for example knowledge transfer and spin-out activities. By 2005, 51 companies had spun-out directly from the University of Cambridge alone and 250 companies had been created based on knowledge transfer from the University of Cambridge. In 2005 those companies employed 3,990 people and generated revenues of £574 million. Furthermore, the University of Cambridge is a major attraction for tourists, an industry that generated expenditure of £196 million for Cambridge in 2006.

Anglia Ruskin University has a much greater local focus, centered on improving local accessibility to higher education, supporting small and medium size enterprises and meeting local skills needs.

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[11] The Cambridge Cluster at 50, SQW, March 2011
[12] Greater Cambridge Partnership, 2011
[13] The Cambridge Cluster at 50, SQW, March 2011
[14] Cambridge University Science and Policy Exchange, March 2013
[15] The Cambridge High Tech Cluster Facing the Downturn of 2008-2010, Mohr & Garnsey, 2011

Cambridgeshire's Industries and Occupations

Public sector and knowledge intensive employment

High public sector employment in Cambridge City.

A high proportion of Cambridgeshire's workers are employed in high value occupations, knowledge intensive occupations and the public sector. Knowledge intensive occupations and public sector employment are concentrated in Cambridge City, yet given the level of commuting into the city, a reduction in public sector finance could have a significant impact on employed residents across the wider commuter belt.

The total jobs figure on page 6 is an estimate of jobs within Cambridgeshire. The workplace population is an estimate of people working in Cambridgeshire, and is usually lower than the total jobs figure because, for example, some people have more than one job. Cambridgeshire's workplace population was 301,000 in October 2011 to September 2012, compared to 325,000 in October 2010 to September 2011, an 8% decrease, according to an ONS sample survey.

A significantly higher proportion of Cambridgeshire's workers are in high value occupations, compared with the regional and national average. These occupations are mainly concentrated in the south of the county. The proportion in Fenland is around eight percentage points below the national average. Across most Greater Cambridge districts, excluding Fenland and Huntingdonshire, the proportion of the employed resident population in high value occupations (Table 3 overleaf) is higher than the proportion of the workplace population employed in these occupations (Table 2 below).

About 1.5 times the national proportion work in knowledge intensive occupations across Cambridgeshire (19%), however these roles are largely concentrated in Cambridge City. Fenland has below the regional proportion of knowledge intensive workers at 5%, down from 11% in October 2010 to September 2011.

Public sector workers account for just over a third of all Cambridgeshire workers, slightly above the regional and national average; again, the majority of these roles are in Cambridge City where 45% of all workers, work in the public sector. Huntingdonshire also has above average public sector employment.

Table 2: Workers in high value and knowledge intensive occupations, and workers in public sector and service sector industries, in Greater Cambridge by district in Oct 2011-Sep 2012

Source: ONS – Annual Population Survey (Workplace Analysis); High Value – managers and senior officials, professional occupations, associate professional and technical occupations, and skilled trades occupations; Knowledge Intensive – science and technology professionals, health professionals, teaching and research professionals, and science and technology associate professionals; Public Sector – public administration, education and health; Total Services – all service sectors including public sector

Area	Workplace Population	High Value	Knowledge Intensive	Public Sector	Total Services
Cambridge City	128,200	64.2%	26.1%	44.6%	88.6%
East Cambridgeshire	29,900	52.9%	15.6%	25.2%	62.9%
Fenland	28,100	46.8%	4.8%	15.8%	58.8%
Huntingdonshire	71,900	58.7%	15.5%	30.7%	73.0%
South Cambridgeshire	42,900	60.2%	14.0%	26.9%	81.3%
Cambridgeshire	301,000	59.5%	18.7%	34.2%	78.5%
Forest Heath	36,000	55.1%	8.3%	28.4%	79.3%
North Hertfordshire	52,000	56.6%	12.2%	27.4%	69.8%
St Edmundsbury	61,100	47.0%	12.2%	32.0%	76.5%
Uttlesford	38,400	53.2%	13.7%	18.4%	72.9%
Greater Cambridge	488,700	56.8%	16.1%	31.5%	76.9%
Greater Cambridge Greater Peterborough	659,900	55.9%	15.5%	31.6%	76.8%
East of England	2,591,300	54.1%	12.9%	29.1%	77.5%
England	24,373,500	54.6%	12.2%	29.7%	79.4%

Figure 9: Workplace population in Greater Cambridge by district and occupation group in Oct 2011-Sep 2012

Source: ONS – Annual Population Survey (Workplace Analysis)

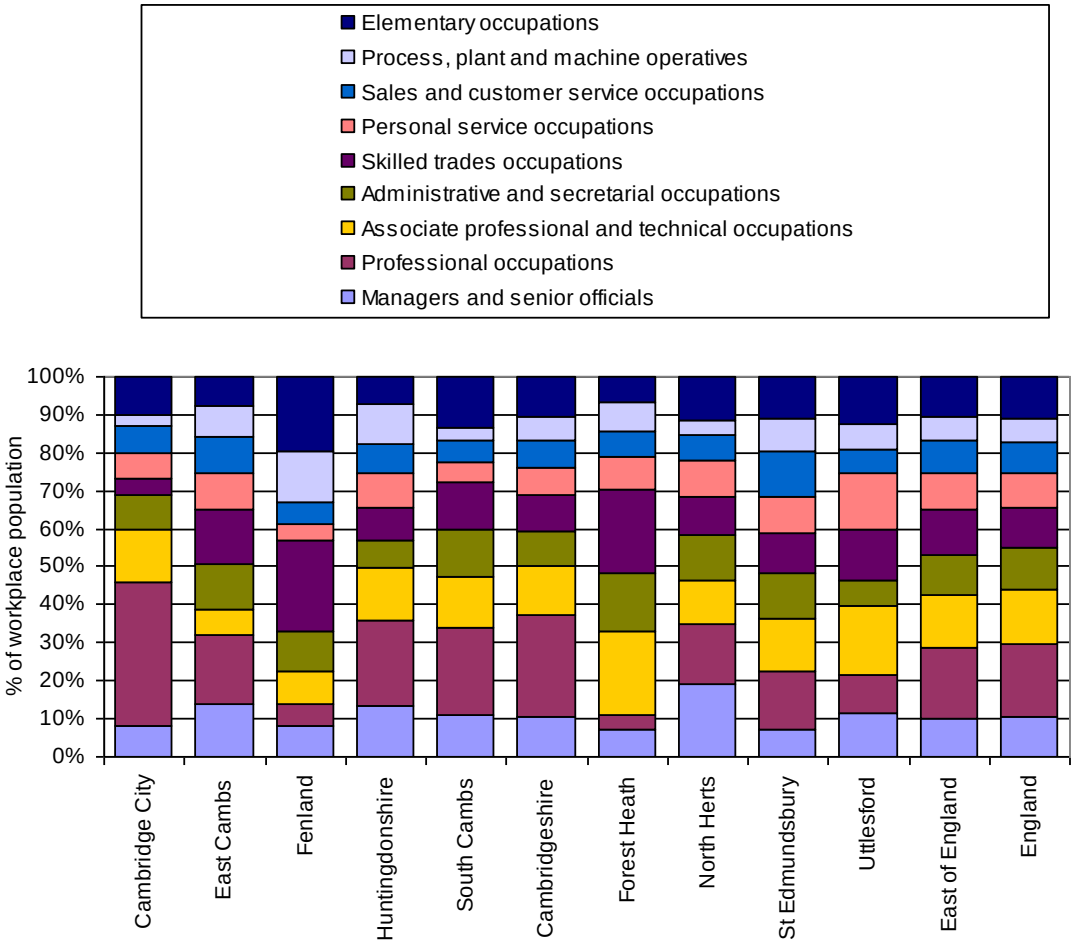


Table 3: Occupational structure of the employed resident population in Oct 2011-Sep 2012

Source: ONS – Annual Population Survey

Area	Managers and senior officials	Professional	Associate prof & technical	Administrative and secretarial	Skilled trades	Personal service	Sales and customer service	Process, plant and machine operatives	Elementary	% employed in 'high value' occupations
Cambridge City	5.0%	47.0%	14.6%	6.3%	3.5%	6.1%	5.0%	1.8%	10.7%	70.1%
East Cambridgeshire	13.0%	20.2%	13.6%	8.6%	9.5%	11.3%	10.7%	5.6%	7.7%	56.3%
Fenland	8.4%	10.4%	18.2%	9.2%	11.1%	4.7%	10.7%	9.2%	18.1%	48.1%
Huntingdonshire	12.8%	24.8%	12.7%	9.1%	10.4%	7.9%	6.9%	7.2%	7.8%	60.7%
South Cambridgeshire	11.3%	28.2%	15.8%	9.2%	8.6%	6.6%	7.0%	2.8%	10.6%	63.9%
Cambridgeshire	10.2%	28.2%	14.6%	8.4%	8.4%	7.3%	7.5%	4.9%	10.3%	61.4%
Forest Heath	12.8%	6.6%	18.4%	15.5%	18.3%	9.0%	5.6%	6.6%	7.2%	56.1%
North Hertfordshire	13.6%	27.0%	15.6%	8.8%	6.5%	8.3%	6.0%	2.4%	11.8%	62.7%
St Edmundsbury	9.1%	19.2%	13.0%	10.1%	10.0%	10.3%	9.8%	6.3%	11.7%	51.3%
Uttlesford	14.5%	10.9%	16.4%	12.4%	14.8%	8.3%	5.9%	6.1%	9.8%	56.6%
Greater Cambridge	11.0%	24.0%	15.0%	9.5%	9.6%	8.0%	7.3%	5.0%	10.4%	59.6%
Greater Cambridge Greater Peterborough	10.9%	22.5%	14.2%	9.9%	9.8%	8.1%	7.2%	5.8%	11.3%	57.4%
East	11.1%	18.7%	14.8%	11.4%	11.0%	8.9%	7.7%	6.0%	10.0%	55.6%
England	10.4%	19.3%	14.4%	10.9%	10.5%	8.9%	8.1%	6.3%	10.8%	54.6%

Sector niches

Strengths in education, R&D, high value manufacturing, bio-chemicals, agriculture, processing and tourism.

Cambridge City is a key centre of employment for education and R&D; Huntingdonshire has many niches in manufacturing, both high and low value; South Cambridgeshire is a regional and national centre for R&D- its wide, mainly knowledge intensive industrial mix, means that this district is the key driver of productivity within Cambridgeshire and the wider region. The economies of Fenland and East Cambridgeshire are lower value, with strengths in agriculture, low value manufacturing, construction and wholesale, reflecting their more rural nature. North Herts and Uttlesford have higher value economies displaying strengths in R&D, bio-chemicals (North Herts), high value manufacturing and air transport (Uttlesford). Forest Heath and St Edmundsbury have lower value economies with key niches in tourism, sporting activities (Forest Heath), meat processing and lower value manufacturing (St Edmundsbury).

The Annual Business Inquiry allows us to highlight a number of niches within Cambridgeshire using location quotients. The quotient states the share of employment in a sector compared to the national average – any figure greater than 1 means a sector has a share greater than the national level.

Cambridgeshire's major niche is within R&D activity, with over 7 times the national average, with the largest employer in the sub-region being higher education (17,600). Software consultancy is also a niche and a major employer (7,000), as are agricultural activities (4,800) and wholesale of household goods. There is also a very diverse range of manufacturing employment across the sub-region, a mix between high and low value activity. Overall the specialisms point to a diverse economic base, albeit with a considerable concentration in education. Tourism is also an important sector of employment with around 21,500 full-time equivalents in 2009 and supporting an estimated £1,500m of business turnover.

Within districts:
Cambridge is a key centre for both higher education and R&D (over 10 and 8 times higher than the national shares of employment respectively), together with a range of high value manufacturing activity. Another major specialism is within software consultancy, 2.5 times the national quotient, and employing around 3,000 people in the city.

Huntingdonshire has a range of niches, many within manufacturing, some high value and some low value. Most notable in terms of employment within this sector is the manufacture of plastic products and the knowledge intensive technical testing and analysis (the latter over 11 times the national average and employing over 1,000).

South Cambridgeshire is both a regional and national centre for R&D (much of it private sector led), this employs over 5,000 and has a share of employment nearly 20 times the national average. There is a very diverse private sector economy, with manufacturing activity ranging from pharmaceuticals, aircraft (an important employer), to manufacture of concrete and cement and to electrical equipment. There are many other elements of high value activity, including software consultancy (employing 2,500) and architectural activities (employing 2,000). This wide, mainly knowledge intensive industrial mix, means that this district is the key driver of productivity within Cambridgeshire and the wider region which is positive for future growth within the locality and the sub-region – a more diverse industry mix means the greater the ability to withstand external shocks.

East Cambridgeshire's economy is a key centre for manufacturing (mainly lower value) and processing. Employment in the manufacture of agricultural and forest machinery and manufacture of insulated wire and cable are respectively 29 and 18 times higher than the national average. There are some employment concentrations apparent in higher value manufacturing, namely the manufacture of chemical products, instruments and television/radio receivers. Aside from manufacturing, other significant niches are the recycling of metal waste and scrap and various construction related industries.

Fenland has a very high share of employment in food processing, construction based manufacturing and other manufacturing activities, mainly lower down the value chain. Other significant niches include food wholesale and camping, reflecting the importance of the agricultural industry and the rural nature of the district. Higher value activity includes technical testing and machinery manufacture.

The rural nature of Forest Heath is emphasised with the two highest quotients (camping, 23 times higher than the national average, and other short stay accommodation and forestry activities, 22 times higher than the national average). Other key niches which also employ significant numbers are sporting activities (employing over 2,000, with Newmarket a major employer) and veterinary activities, reflecting Newmarket's horse racing heritage. This is generally a lower value economy, one which builds upon its own local strengths and geography.

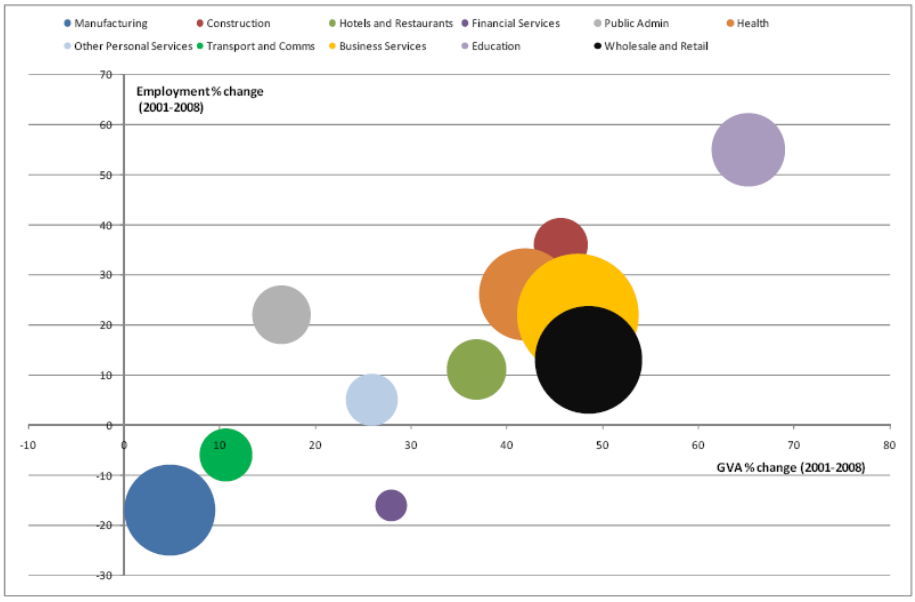
In St Edmundsbury, like Forest Heath, the sub-sector niches highlight a generally lower value economy, with the key niches being in preserving of meat (a quotient 11 times the national level) and a range of manufacturing activities, mainly lower down the value chain. Again, this profile highlights a rural place that is disengaged (physically and economically) from major economic activity in the Greater Cambridge core.

North Hertfordshire has a diverse, high value economy with key niches in R&D and high value engineering and manufacturing, including bio-chemicals, instruments and industrial equipment, mechanical engineering and electronics. The district also has a significant share of employment in hardware and software consultancy and motor vehicle related industries.

The influence of Stansted airport on Uttlesford's economy is clear with air transport and aircraft manufacture being two significant employment niches. The district also has a high share of employment in a range of manufacturing industries including chemicals, instruments and electricity distribution through to clothing and rubber. Agriculture is also an important source of employment in the district, mainly crop growing with some animal husbandry.

Growth sectors within Cambridgeshire are diverse, with prominent growth within construction, hotels and restaurants, business activities and education. Notably, public admin functions have declined across most areas, although this has been offset by major increases in education and health. A key issue therefore for Cambridgeshire will be how its employment rates are affected by cuts in public spending in an economy that is becoming increasingly reliant upon public sector employment.

Figure 10: Growth in GVA and employment in Cambridgeshire between 2001 and 2008 (size of each circle indicates employment within the sector in 2008)
Source: Annual Business Inquiry 2008; EEFM 2009



The hi-tech 'community' in Cambridgeshire and Peterborough

Hi-tech community accounted for 12% of jobs in 2010. Evidence of increase in firm size between 2008 and 2010.

The wider hi-tech 'community' provided 51,500 jobs at the start of 2010, and the overall share of jobs covered by the broad 'hi-tech community' definition was estimated to be 12%. Hi-tech employment shrank by over 1,300 jobs between early 2008 and early 2010, while at the same time the number of hi-tech businesses also fell; overall, the average employment size of hi-tech businesses has continued to rise.

Detailed analysis of the figures by the University of Cambridge shows that the majority of the decrease in hi-tech jobs was due to some existing companies reducing their size. This analysis also highlighted the significance of the four independent largest firms to the hi-tech cluster as a whole, in terms of the level, and resilience to the downturn, of the employment they provide.[16]

The hi-tech 'community' in Cambridgeshire and Peterborough is the subject of considerable interest and debate. Its high profile has resulted in numerous studies and investigations into the nature of growth in 'knowledge-based' industries. Studies of cluster development regard the area as a model for replication elsewhere in the UK. The vital importance of the businesses comprising the 'community' is recognised as a key national asset – and considerable emphasis is placed on nurturing the sector, both through indigenous growth and through selective inward investment.

Cambridgeshire County Council's database of employment in the hi-tech 'community' provides key statistical information which helps describe the community and recent developments in detail. It is based on a survey, by both post and telephone, of over 1,500 businesses, agencies and research institutes operating in Cambridgeshire and Peterborough.

Hi-tech employment in early 2010

Responses to the County Council's survey of hi-tech businesses and employers indicate that the wider hi-tech 'community' provided 51,471 jobs at the start of 2010. The definition of the hi-tech 'community' is very broad, encompassing all employment concerned with the development, production, marketing and support of products and services which can be classified as 'hi-tech'. The overall share of jobs in Cambridgeshire and Peterborough covered by the broad 'hi-tech community' definition is estimated to be 12%. The table and maps below show the concentration of jobs in the Cambridge / South Cambridgeshire area – 39,000 in all, over three-quarters of the total number of hi-tech jobs in Cambridgeshire. Huntingdonshire is the third focus in district terms, with around 7,100 hi-tech jobs.

Table 4: Hi-tech employment in Cambridgeshire and Peterborough by district in 2010
Source: Cambridgeshire County Council – Research Group

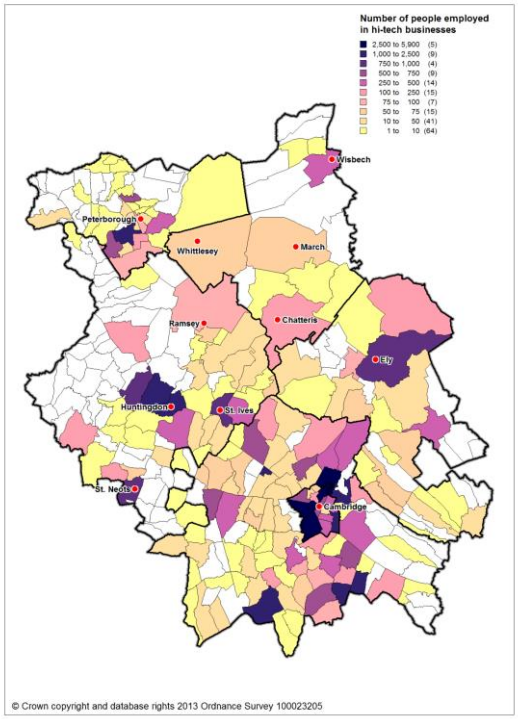
District	Hi-tech employment 2010	% share	% all jobs
Cambridge City	18,355	35.7%	19.3%
East Cambridgeshire	1,749	3.4%	6.0%
Fenland	609	1.2%	1.8%
Huntingdonshire	7,123	13.8%	8.5%
Peterborough	2,988	5.8%	2.8%
South Cambridgeshire	20,647	40.1%	25.5%
Cambridgeshire and Peterborough	51,471	100.0%	12.0%
Cambridgeshire	48,483	94.2%	15.0%

[16] The Cambridge High Tech Cluster Facing the Downturn of 2008-2010, Mohr & Garnsey, 2011

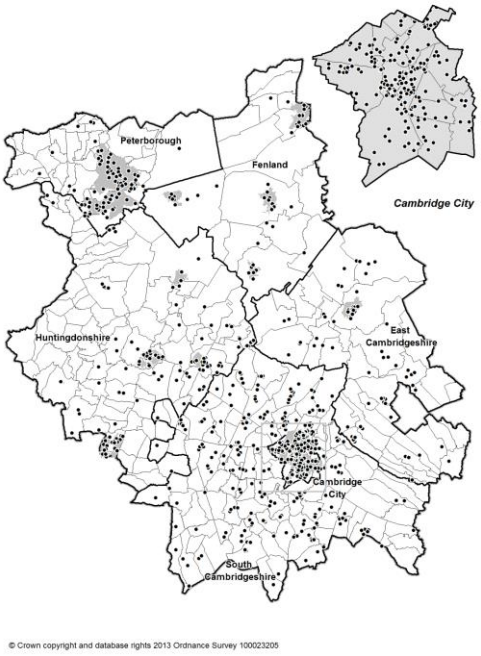
Figure 11: Hi-tech employment and businesses in Cambridgeshire and Peterborough in 2010

Source: Cambridgeshire County Council – Research Group

Employment in the Hi-tech 'Community', 2010



All Hi-tech 'Community' Businesses in Cambridgeshire & Peterborough 2010



As well as a snapshot of the hi-tech 'community' at the start of 2010, the County Council's database provides an overview of changes occurring between 2008 and 2010. The table below shows that hi-tech employment fell by over 1,300 jobs between early 2008 and early 2010. At the same time, the number of hi-tech businesses also fell – from 1,740 to 1,585.

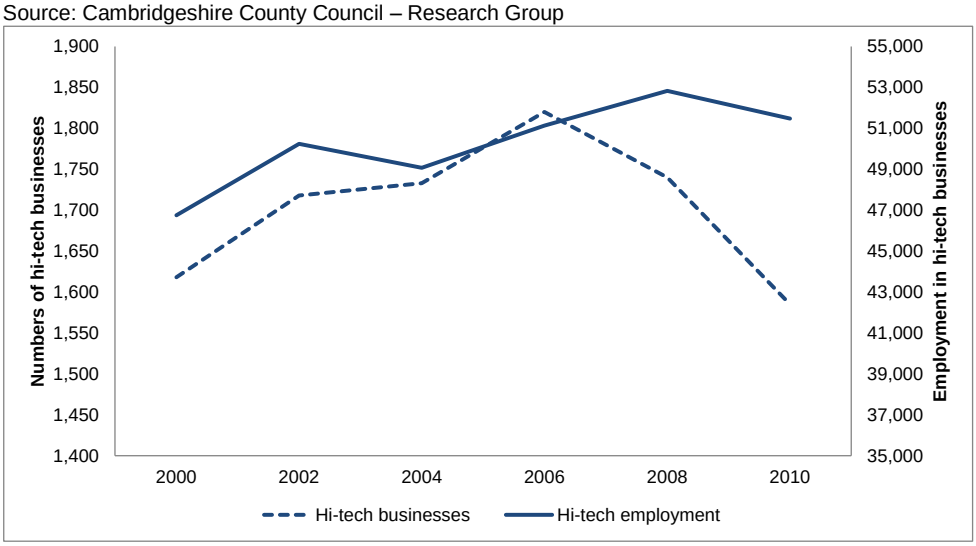
Table 5: Hi-tech businesses and employment in Cambridgeshire and Peterborough by year

Source: Cambridgeshire County Council – Research Group

Year	Hi-tech businesses	Hi-tech employment
2000	1,618	46,745
2002	1,718	50,239
2004	1,733	49,066
2006	1,820	51,125
2008	1,740	52,825
2010	1,585	51,471

Figure 12: Employment in the hi-tech 'community' in Cambridgeshire and Peterborough in 2000-2010

Source: Cambridgeshire County Council – Research Group



The research suggests there was a reduction in hi-tech employment across all Cambridgeshire districts apart from Cambridge City and South Cambridgeshire, where numbers of jobs increased in 2010 as compared with 2008. The number of hi-tech businesses has also fallen since 2008, continuing a trend shown between 2006 and 2008. Overall, changes in employment and business numbers have led to an increase in the average employment size of hi-tech businesses between 2008 and 2010; a continuation of a trend seen since 2000. Detailed analysis of these figures shows that the average employment size increase was "driven by…increases in average firm size in the research and development sector, and among IT hardware firms".[17]

Within the hi-tech community, strengths in R&D, computer services, higher education, consultancy, electronics and mechanical engineering, chemicals and instruments.

Key industry sectors within the hi-tech community are research and development, computer services and consultancy, higher education and technical services (including consultancy). Manufacturing and production employment accounted for just under 29% of the total hi-tech community jobs. Electronics engineering is the biggest manufacturing sector, contributing more than 3,750 jobs in the county as a whole. Other significant manufacturing sectors include chemicals and instrument engineering. Of the manufacturing sectors the largest increases between 2008 and 2010 were in computer and office hardware. Service sectors were dominated by an increase in education and training employment.

A breakdown by key industry sector is shown in the table below for Cambridgeshire and Peterborough as a whole. Research and development businesses account for over 13,200 jobs, 25.6% of the total. Computer software and services contribute almost 8,600 jobs (17% of all). Three other significant sectors include education and training, which provides around 6,300 jobs (12% of the total), technical services and consultancy, which provides around 4,000 jobs (8% of the total), and electronics engineering, which provides almost 3,800 jobs (7% of all hi-tech jobs).

Table 6: Hi-tech employment in Cambridgeshire and Peterborough by key industry sector in 2010
Source: Cambridgeshire County Council – Research Group

Industry sector	Hi-tech employment 2010	% share 2010
Chemicals	2,501	4.9%
Specialist mechanical engineering	1,580	3.1%
Computer and office hardware	1,958	3.8%
Electronic engineering	3,778	7.3%
Instrument engineering	2,524	4.9%
Aero engineering	1,652	3.2%
Publishing	359	0.7%
Other manufacture	405	0.8%
Specialist wholesaling	1,668	3.2%
Specialist retailing	687	1.3%
Telecommunications	1,081	2.1%
Technical services and consultancy	3,959	7.7%
Computer software and services	8,592	16.7%
Research and development	13,202	25.6%
Education and training	6,292	12.2%
Other services	1,233	2.4%
All manufacturing	14,757	28.7%
All services	36,714	71.3%
All biotech (manufacturing and services)	14,879	28.9%
All sectors	**51,471**	**100.0%**

The research suggests that, between 2008 and 2010, most manufacturing sectors experienced a decrease in hi-tech employment. The only manufacturing sectors that experienced an increase in hi-tech employment were office machinery manufacturing, (up by almost 100, or 5.3%) and publishing, (up by 15, or 4.4%). Most 'services' sectors also experienced a decrease in employment. However, education and training experienced a very large rise in employment, increasing by over 1,000 jobs at the county level.

[17] The Cambridge High Tech Cluster Facing the Downturn of 2008-2010, Mohr & Garnsey, 2011

Cambridge Cluster at 50

'The Cambridge economy: retrospect and prospect' (March 2011) was commissioned by the East of England Development Agency (EEDA) and local partners to better understand the state of the economy in and around Cambridge, and the challenges and issues it faces, in order to inform future interventions and policy decisions to ensure it reaches its full economic potential.

The main focus of the report[18] is the high tech cluster, which includes high tech firms, Cambridge University and related research institutions, and specialist services which are located in Cambridge principally to support these core activities. The study also took a broader view of the Cambridge economy, examining five distinct roles that were chosen because of their economic significance:

- Cambridge as a high tech business hub
- Cambridge as a 'research community' (focusing on science and technology research)
- Cambridge as a city economy
- Cambridge as a regional centre for public sector
- Cambridge as an international visitor destination

The importance and relative strength of the Greater Cambridge economy, and its contribution to the national economy, is widely recognised. The UK Competitiveness Index identifies Cambridge as 'One of the most competitive cities in the UK', and in the Cities Outlook 2010, Cambridge was highlighted as one of the most recession-proof cities in the UK and one of the most likely places to lead Britain back to growth.

The growth in the high tech sector and knowledge based industries has contributed to much of this success over the last 50 years. But the continued success of the Cambridge Cluster and its contribution to the local and national economy cannot be assumed. The high tech sector is projected to grow more slowly than in the past and forecasts suggest that the Greater Cambridge area may not be making the best use of its knowledge-based assets.

The report proposes an ambitious Agenda for Action in order to address the barriers to growth being faced by businesses in and around the city. It provides recommendations to central government and local private and public sector partners on the actions needed to ensure the high tech cluster can reach its economic potential, such as:

- improving connectivity between the city, key employment sites - such as the Science Park - and the railway station (and London);

- a change in approach to planning new developments outside the city centre – creating social spaces rather than locations for smart, new office buildings – recognising the important role networking has played and will continue to play in the Cambridge Cluster;

- developing a strategy and masterplan for the city centre which recognises the changing nature of 'doing business' in the 21st century knowledge economy, whilst preserving the physical character of the city;

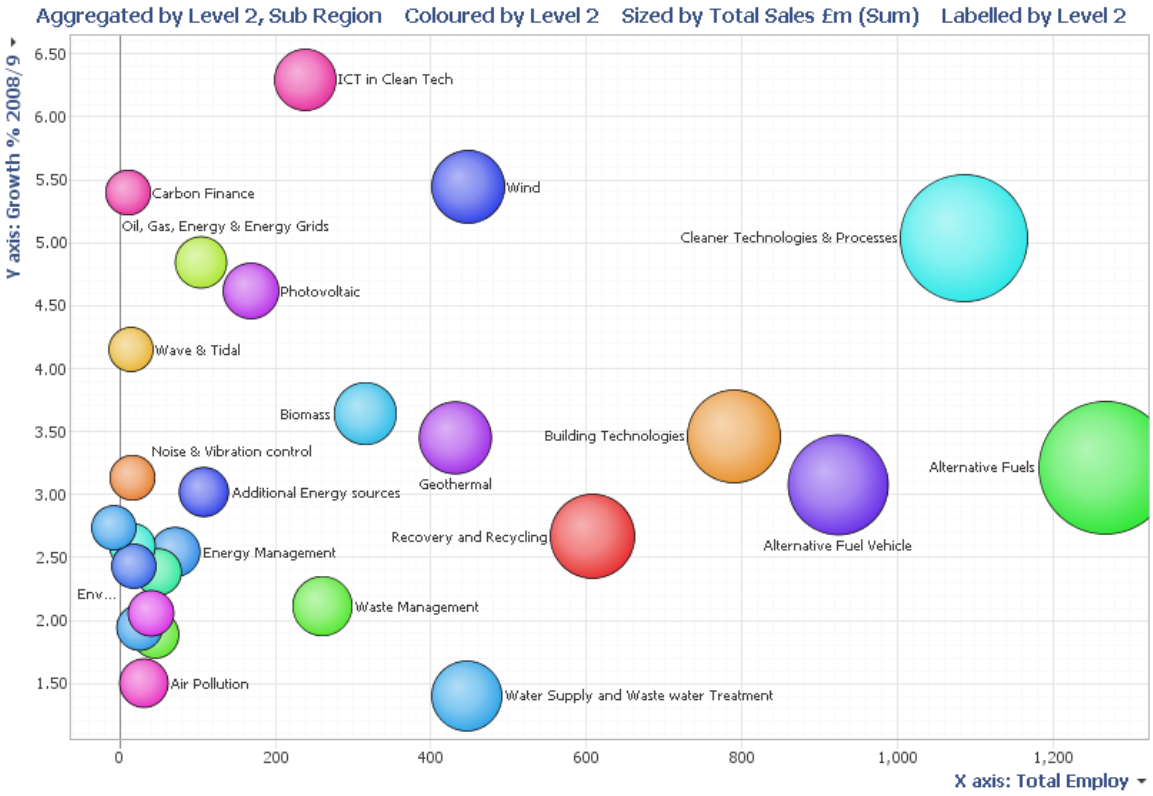
- national policy changes on migration, healthcare regulation and access to finance which make it easier for high tech businesses to start-up, and access global talent and finance.

[18] The Cambridge Cluster at 50, SQW, March 2011

Clean technology

The East of England Cleantech sector has a market value of £12.9 billion, with 6,234 companies employing about 103,000 people. The Cleantech sector in Greater Cambridge had a market value of £1,139 million in 2008/09 with 450 companies employing about 7,385 people.[19]

Figure 13: Greater Cambridge Area Cleantech sub-sectors by market value (size of bubble), employment numbers (horizontal axis) and 2008/09 growth (vertical axis)
Source: GCP Cleantech Strategy and Action Plan



The GCP Cleantech Strategy and Action Plan (2010) found that Greater Cambridge has genuine comparative national strengths in:

- Biotech in Cleantech
- Cleaner technologies and processes; including advanced materials and advanced manufacturing
- Alternative fuel vehicles
- Recovery and recycling
- Carbon capture and storage
- Building technologies

This is supported by a high level of research expertise and knowledge in some of the key emerging technology areas including:

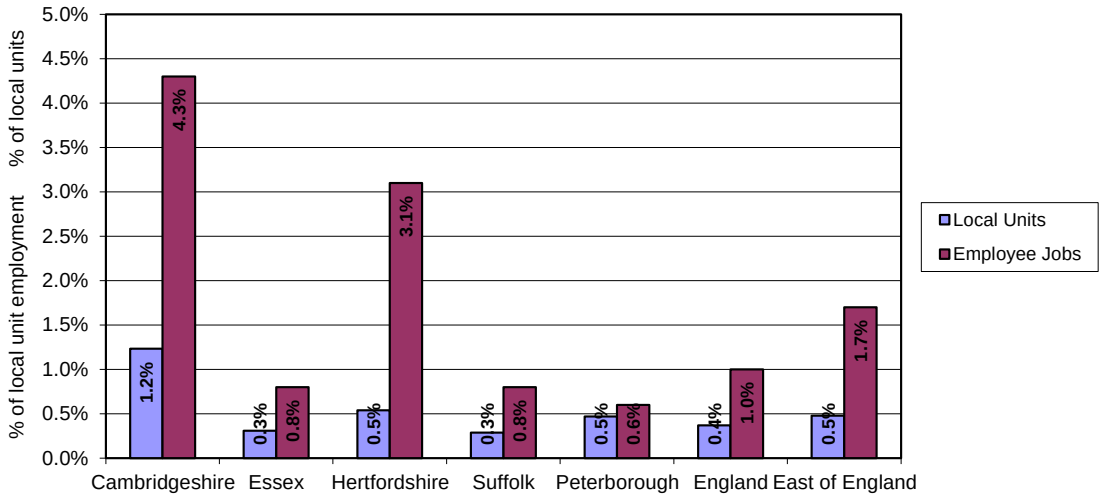
- New energy sources
- Biomass and bioenergies
- Energy grids and transmissions
- Sustainable construction
- Building technologies
- Waste management and recovery and recycling

[19] GCP Cleantech Strategy and Action Plan

Pharmaceuticals

The following graphs show the proportion of employee jobs and local units (i.e. businesses) in pharmaceuticals, based on the New Industry New Jobs definition of life sciences and pharmaceuticals, which covers manufacture, wholesale and research.[20]

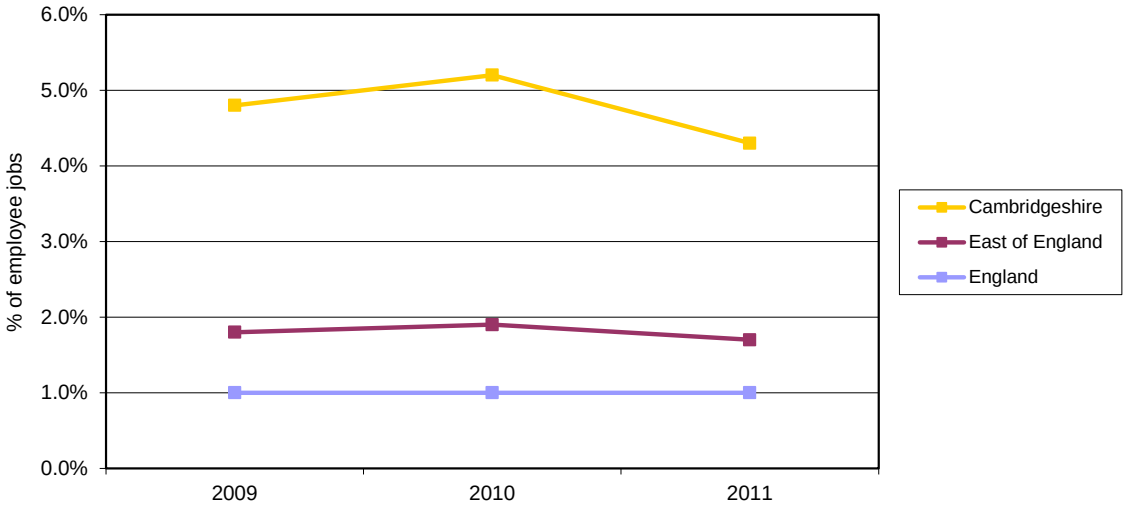
Figure 14: Employees and local units in pharmaceuticals by county in 2011
Source: ONS – UK Business: Activity, Size and Location



Both the proportion of businesses and employee jobs are significantly higher within Cambridgeshire than in neighbouring counties and the regional and national averages.

As a proportion of Cambridgeshire's jobs, pharmaceuticals employees appeared to have been steadily increasing until 2010, however this proportion dropped in 2011. With the expansion of Addenbrooke's Hospital, it is possible that the proportion of employees in this sector will return to growth in the medium term.

Figure 15: Employees in pharmaceuticals in Cambridgeshire, East of England and England by year
Source: ONS – Business Register and Employment Survey



[20] Based on 2007 SIC codes: Manufacture of basic pharmaceutical products; Manufacture of pharmaceutical preparations; Manufacture of irradiation, electromedical and electrotherapeutic equipment; Manufacture of medical and dental instruments and supplies; Research and experimental development on natural sciences and engineering; Wholesale of pharmaceutical goods.

Businesses in creative industries

Greater Cambridge has significant strengths in software, computer games and electronic publishing.

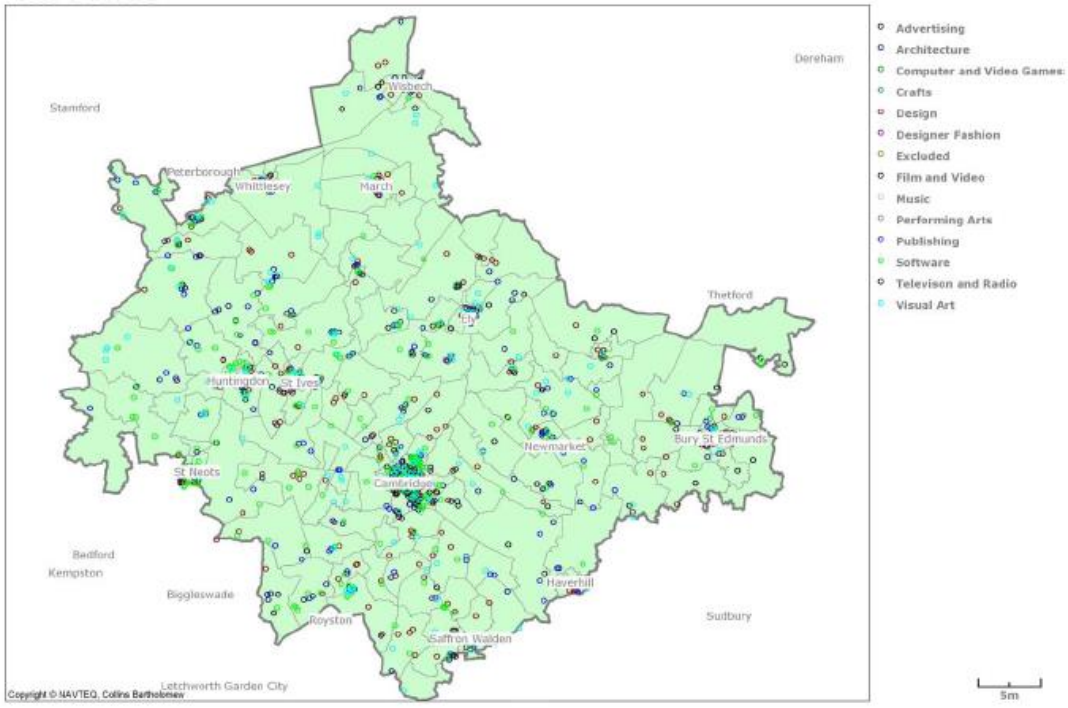
1,665 creative enterprises were identified in Greater Cambridge (2008), employing an estimated 12,000 full time equivalents and turning over just under £1bn per annum.

Figures 16 and 17 below show that Cambridgeshire has a similar proportion of employee jobs and businesses in creative industries as seen regionally, but slightly less than seen nationally. To allow comparison with neighbouring counties, creative industries have been defined based on the DCMS SIC code based definition.[21]

However, work completed for the Greater Cambridge Creative Industries Strategy and Action Plan found that within this wider definition of creative industries, Greater Cambridge has significant strengths in software, computer games and electronic publishing – recognised as the most valuable and fast growing of all the creative industry categories with the largest export value of all the sub-sectors.

1,665 creative enterprises were identified in Greater Cambridge (2008), employing an estimated 12,000 full-time equivalents and turning over just under £1bn per annum. 10% of the UK's computer games developers are within five miles of Cambridge city centre.

Map 1: The geographic spread of creative industry businesses across Greater Cambridge
Source: Greater Cambridge Creative Industries Strategy and Action Plan



[21] Based on 2007 SIC codes: Printing of newspapers; Pre-press and pre-media services; Reproduction of recorded media; Book publishing; Publishing of newspapers; Publishing of journals and periodicals; Other publishing activities; Publishing of computer games; Other software publishing; Motion picture, video and television programme production activities; Motion picture, video and television programme post-production activities; Motion picture, video and television programme distribution activities; Motion picture projection activities; Sound recording and music publishing activities; Radio broadcasting; Television programming and broadcasting activities; News agency activities; Architectural activities; Advertising agencies; Media representation; Specialised design activities; Photographic activities; Performing arts; Support activities to performing arts; Artistic creation; Operation of arts facilities.

Figure 16: Employees in creative industries in Cambridgeshire, East of England and England by year
Source: ONS – Business Register and Employment Survey

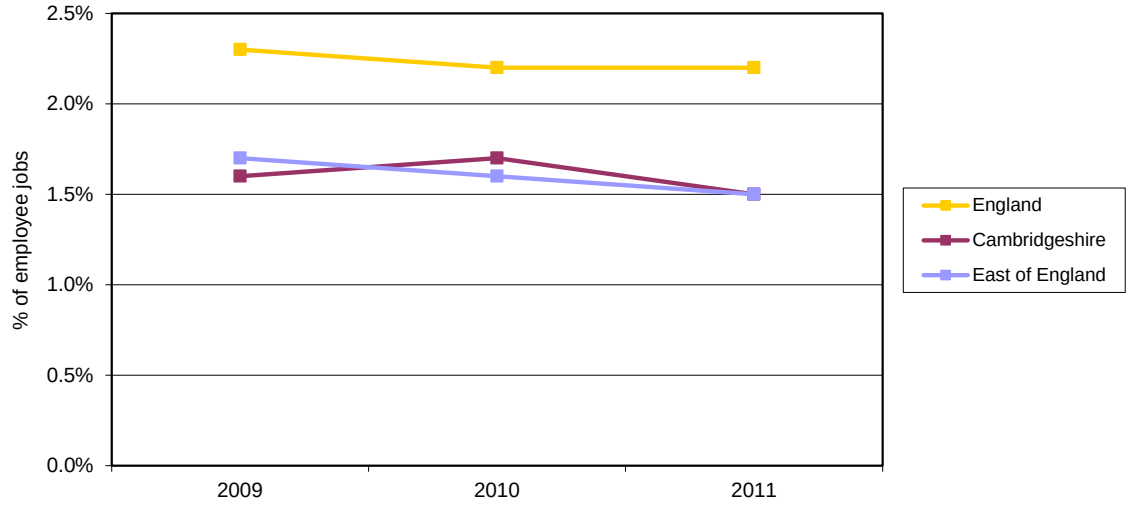


Figure 17: Employees and local units in creative industries by county in 2011
Source: ONS – UK Business: Activity, Size and Location

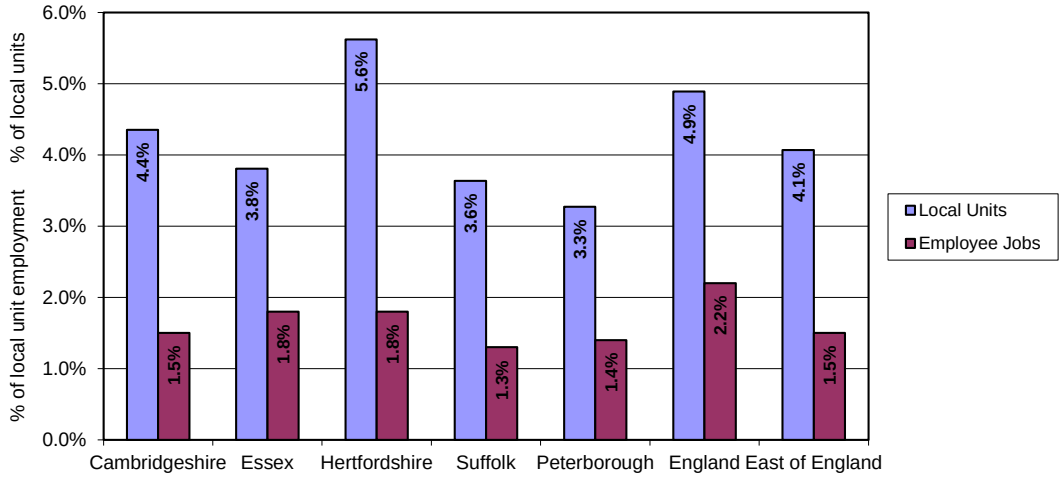
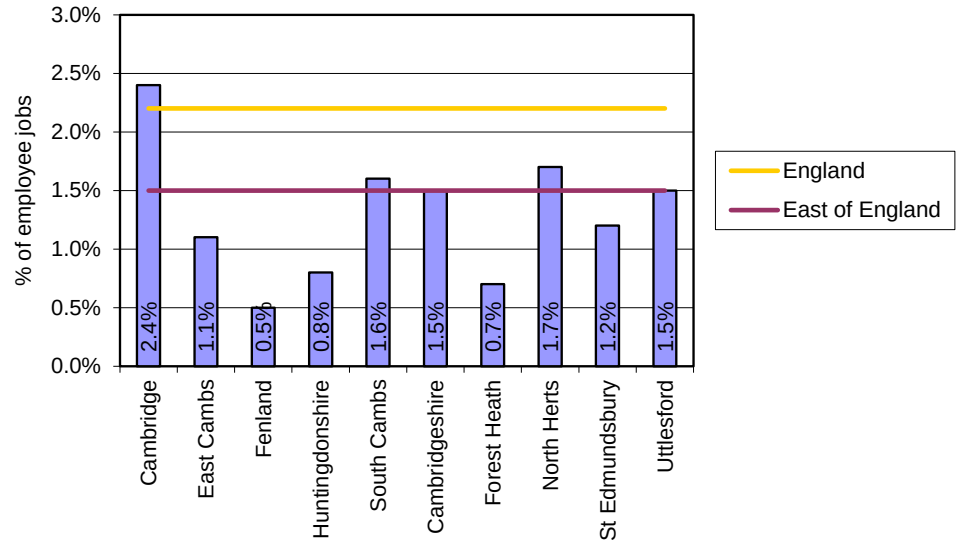


Figure 18: Employees in creative industries in Greater Cambridge by district in 2011
Source: ONS – Business Register and Employment Survey



Advanced manufacturing

The following graphs show the proportion of employee jobs and local units (i.e. businesses) in advanced manufacturing, based on the OECD classification of manufacturing based on technology – high tech and medium high tech industries (not including pharmaceuticals).[22]

Figure 19 shows Cambridgeshire to have a high proportion of businesses and relatively high employment in the sector. Peterborough has a very high proportion of employment in high value manufacturing but with a lower proportion of businesses, implying a sector characterised by much larger businesses than in Cambridgeshire.

Figure 19: Employees and local units in advanced manufacturing by county in 2011
Source: ONS – UK Business: Activity, Size and Location

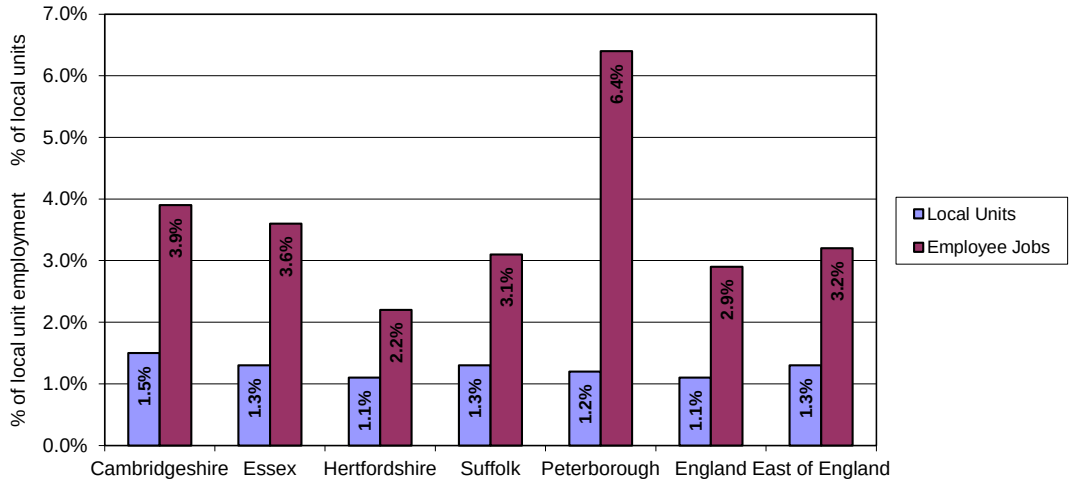
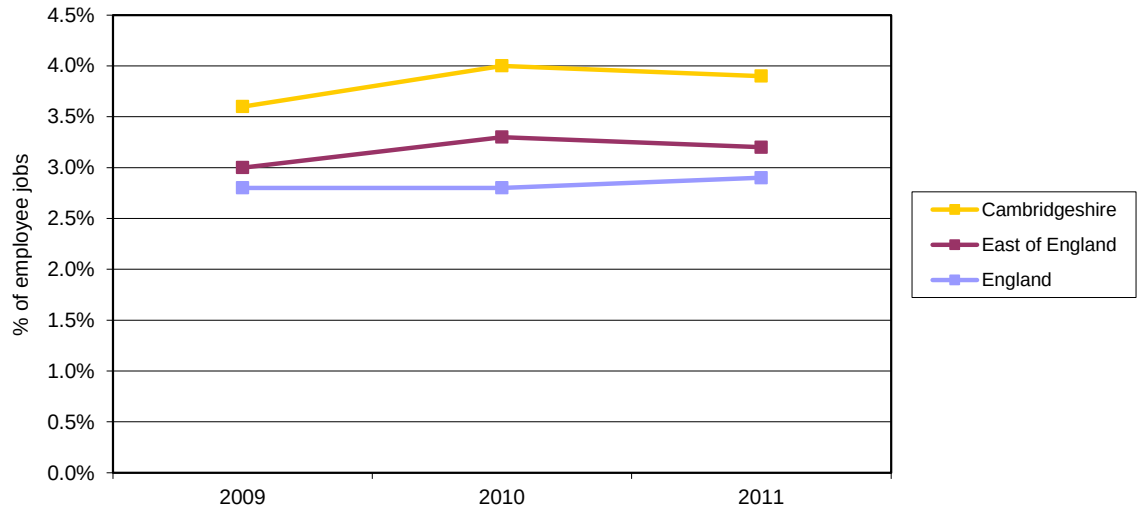


Figure 20 shows a recent slight decrease in the proportion of employee jobs in advanced manufacturing in Cambridgeshire and across the East of England, but a slight rise in the sector across England as a whole from 2010 to 2011.

Figure 20: Employees in advanced manufacturing in Cambridgeshire, East of England and England by year
Source: ONS – Business Register and Employment Survey



[22] Based on 2007 SIC codes: Manufacture of chemicals and chemical products; Manufacture of computer, electronic and optical products; Manufacture of electrical equipment; Manufacture of machinery and equipment n.e.c.; Manufacture of motor vehicles, trailers and semi-trailers; Manufacture of other transport equipment.

Digital economy

The following graphs show the proportion of employee jobs and local units (i.e. businesses) in the digital economy, based on the New Industry New Jobs definition, which includes manufacture of computers and related goods, telecommunications, printing, publishing and digital content.[23]

Hertfordshire, followed by Cambridgeshire, has the highest proportion of businesses in digital economy industries.

Figure 21: Employees and local units in digital economy industries by county in 2011
Source: ONS – UK Business: Activity, Size and Location

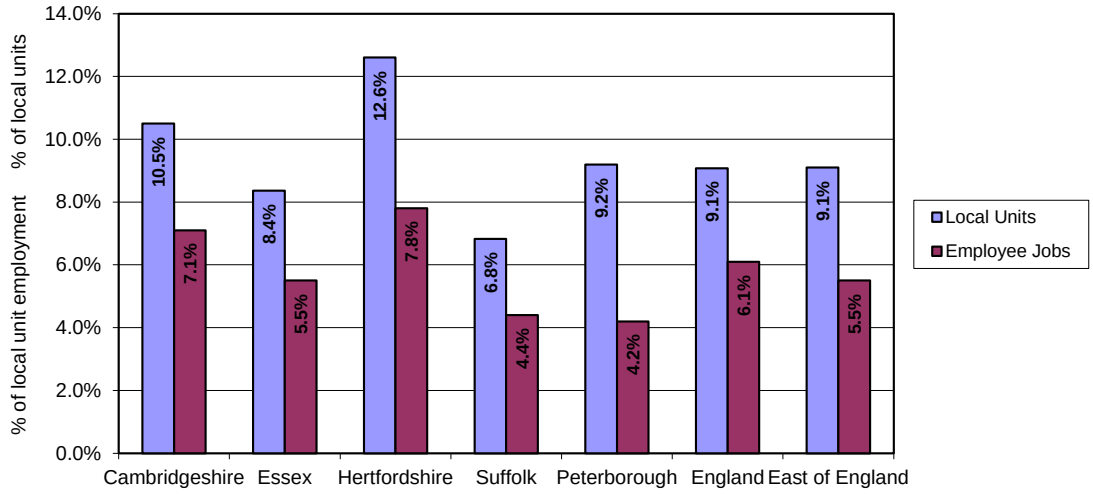
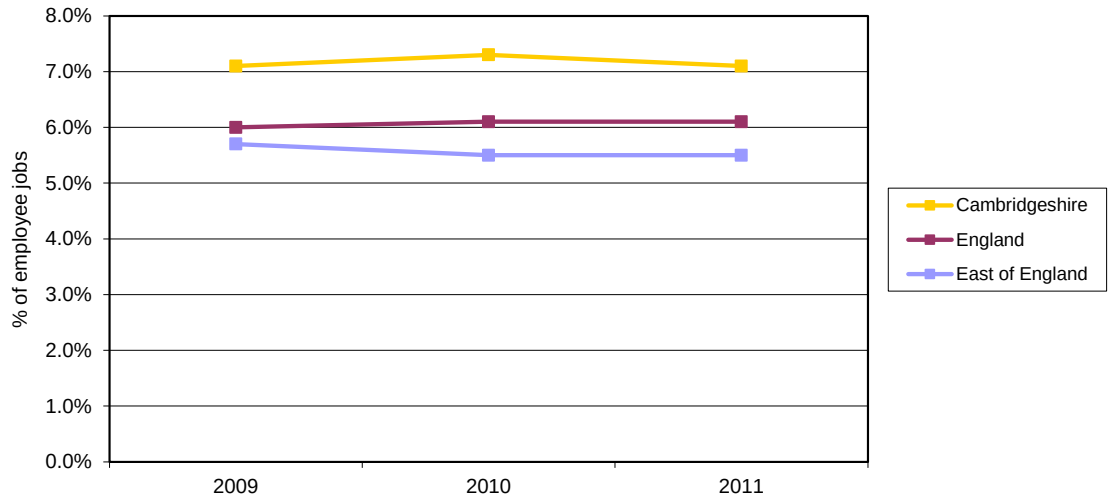


Figure 22 shows a fairly consistent level of employment over time in Cambridgeshire, the Eastern region, and England as a whole, with Cambridgeshire having a higher proportion of its total employees working in the digital economy sector than the region or country.

Figure 22: Employees in digital economy industries in Cambridgeshire, East of England and England by year
Source: ONS – Business Register and Employment Survey



[23] Based on 2007 SIC codes: Printing and reproduction of recorded media; Manufacture of computer, electronic and optical products; Publishing activities; Motion picture, video and television programme production, sound recording and music publishing activities; Programming and broadcasting activities; Telecommunications; Computer programming, consultancy and related activities; Information service activities; Manufacture of wiring and wiring devices; Wholesale of information and communication equipment; Advertising; Photographic activities; Repair of computers and communication equipment; Wholesale of other office machinery and equipment; Renting and leasing of office machinery and equipment (including computers).

Agri-food

Agri-food is an important source of employment in Greater Cambridge but the sector faces significant recruitment difficulties, particularly for higher skilled workers.

The agri-food sector is a very important source of employment in the north of the county. Recent reports suggest that the future workforce is unlikely to fall and may rise due to increased production. However the sector finds it very hard to recruit qualified workers and has become increasingly dependent on migrant workers to the extent that many employers are concerned about where their future workforce will come from.

The Fens contain around half of the grade one agricultural land in England and produce 24% of all potatoes grown in the UK.

In the East of England the agri-food sector is a major employer with a labour force in excess of 375,000 people, of whom 122,000 are employed in agriculture, food processing and ancillary businesses, 115,000 in food retail and 139,000 in the catering sector (DEFRA 2009). The food chain thus represents 1 in 7 jobs in the region's economy. Within some Greater Cambridge districts the concentration of employment is very high, for example Fenland has 37 times the national proportion of employment in the processing and preserving of fruit and vegetables.

However, evidence suggests the sector has struggled to attract enough good new people and is not seen as a career of choice by many people, and levels of progression and formal qualifications are low by comparison with many other sectors. There is also a need for skilled technologists and those with higher level management skills able to run increasingly large and complex business operations.

In part the skills gap in the sector has been met by migrants who have become an increasingly important component of the food and farming sector's workforce, with many now progressing into management roles and becoming part of the long term workforce. However, most employers have concerns about how dependent they have become on this source of new recruits, and have expressed worries about where their future workforce will come from.[24]

The issues identified regionally are aligned with national research, which has highlighted a need to increase UK food production to deliver food security by increasing the focus on research and skills. But, this challenge occurs at the end of a 20 year period in which agricultural student numbers declined until 2005, with only small improvements being seen in the last few years, and then only in part time student numbers. Agricultural and food related research has also been cut and many former research facilities have closed.

To address the challenges outlined above in relation to production and sustainability many reports have highlighted the need to increase recruitment to the sector (LANTRA 2006), improve technology transfer, develop the science base and increase skill levels.

Whilst direct agricultural employment had been declining for many years, 2008 saw the first recent significant rise (+3%) in employment due to increased production. Whilst there remains scope for some further mechanisation on some farms, many larger (in particular) arable businesses, feel that the future workforce will not fall as we are approaching the limit of machinery size which can be used.

[24] The Skills Challenge for the East of England's Food & Farming Sector to 2020 (2010)

Business Activity and Demography

Business size and numbers

High number of businesses, concentrated in Huntingdonshire, South Cambridgeshire and Cambridge City.

There was a slight increase in the number of enterprises in Cambridgeshire in 2012, and generally business density remains fairly high across the county, with the highest number of businesses in Huntingdonshire and South Cambridgeshire, followed by Cambridge City, East Cambridgeshire and Fenland. All Cambridgeshire districts apart from Cambridge City have a significantly higher proportion of businesses employing fewer than 10 people than seen nationally.

In 2012 there were 28,930 local units in VAT and/or PAYE based enterprises in Cambridgeshire, compared to 28,395 in 2011, a 1.9% increase. Analysis by size shows that 84% of businesses had an employment of less than ten, and 97% had an employment of less than 50. Uttlesford has the highest proportion of "micro" (0-9 employee) businesses, with 88%, and Cambridge City has the highest proportions of "small", "medium" and "large" businesses, with 17%, 5% and 1% respectively, reflecting the large health and education employers in the district.

Map 2 shows that local units within Cambridgeshire in 2011 were concentrated in Huntingdonshire and South Cambridgeshire, with around 50% of all local units, and that around 30% of all local units were located in East Cambridgeshire and Fenland, with Cambridge City accounting for the remaining 20%.

Table 7: Businesses in Greater Cambridge by district in 2012 at local unit (site) level
Source: ONS – UK Business: Activity, Size and Location

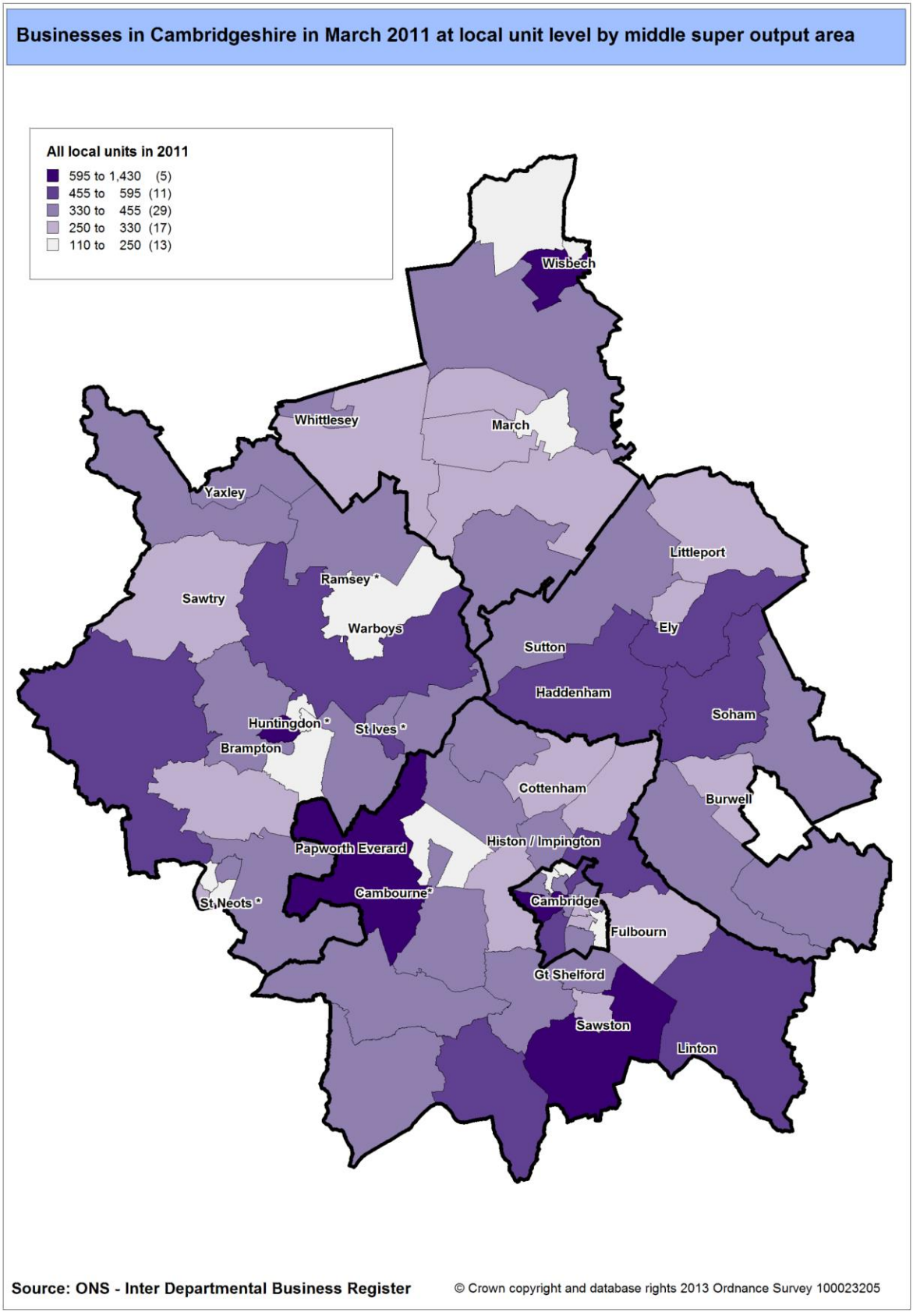
Area	Local Units	Employment Size			
		% 0 - 9	% 10 - 49	% 50 - 249	% 250 +
Cambridge City	5,850	76.7%	17.3%	5.4%	0.7%
East Cambridgeshire	4,020	86.6%	11.4%	1.9%	0.1%
Fenland	3,675	84.9%	12.2%	2.4%	0.4%
Huntingdonshire	7,770	84.6%	12.5%	2.6%	0.3%
South Cambridgeshire	7,615	85.2%	11.9%	2.4%	0.5%
Cambridgeshire	28,930	83.5%	13.1%	3.0%	0.4%
Forest Heath	2,625	82.3%	14.3%	3.2%	0.2%
North Hertfordshire	6,470	85.4%	12.4%	2.0%	0.2%
St Edmundsbury	4,985	81.2%	14.9%	3.3%	0.5%
Uttlesford	5,115	87.5%	10.2%	2.1%	0.3%
Greater Cambridge	48,125	83.9%	13.0%	2.8%	0.4%
Greater Cambridge Greater Peterborough	62,385	83.2%	13.4%	2.9%	0.4%
East of England	255,135	84.1%	12.8%	2.7%	0.4%
England	2,218,245	83.1%	13.6%	2.9%	0.4%

Box 1: Enterprises and local units

The Inter Departmental Business Register has two levels of data: enterprises and local units. ***Enterprises*** *are the head offices;* ***local units*** *are the branches of the enterprises. For small businesses such as sole traders, the enterprise and local unit are the same.*

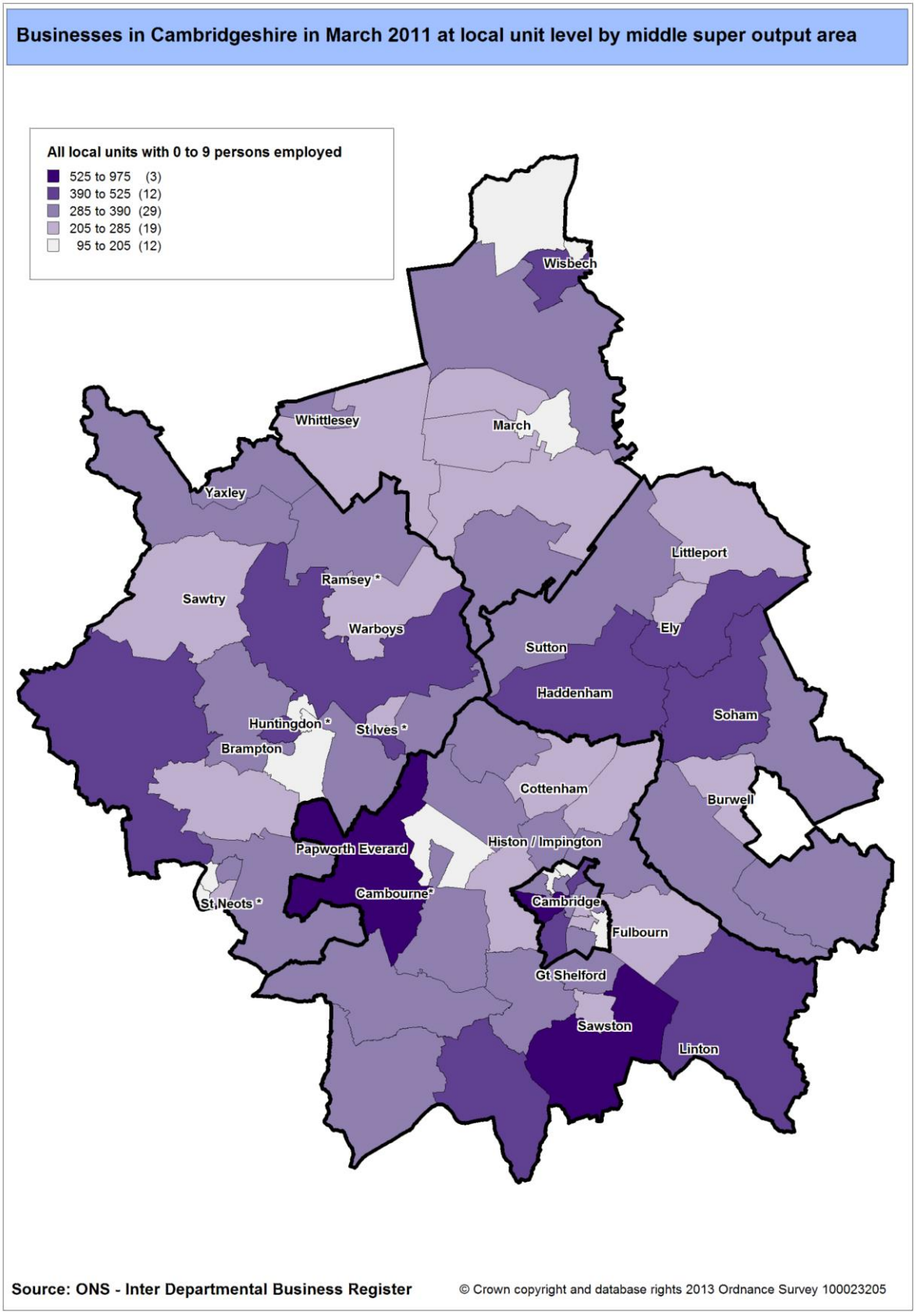
Map 2: Cambridgeshire's workplaces in 2011

Source: ONS – Inter Departmental Business Register



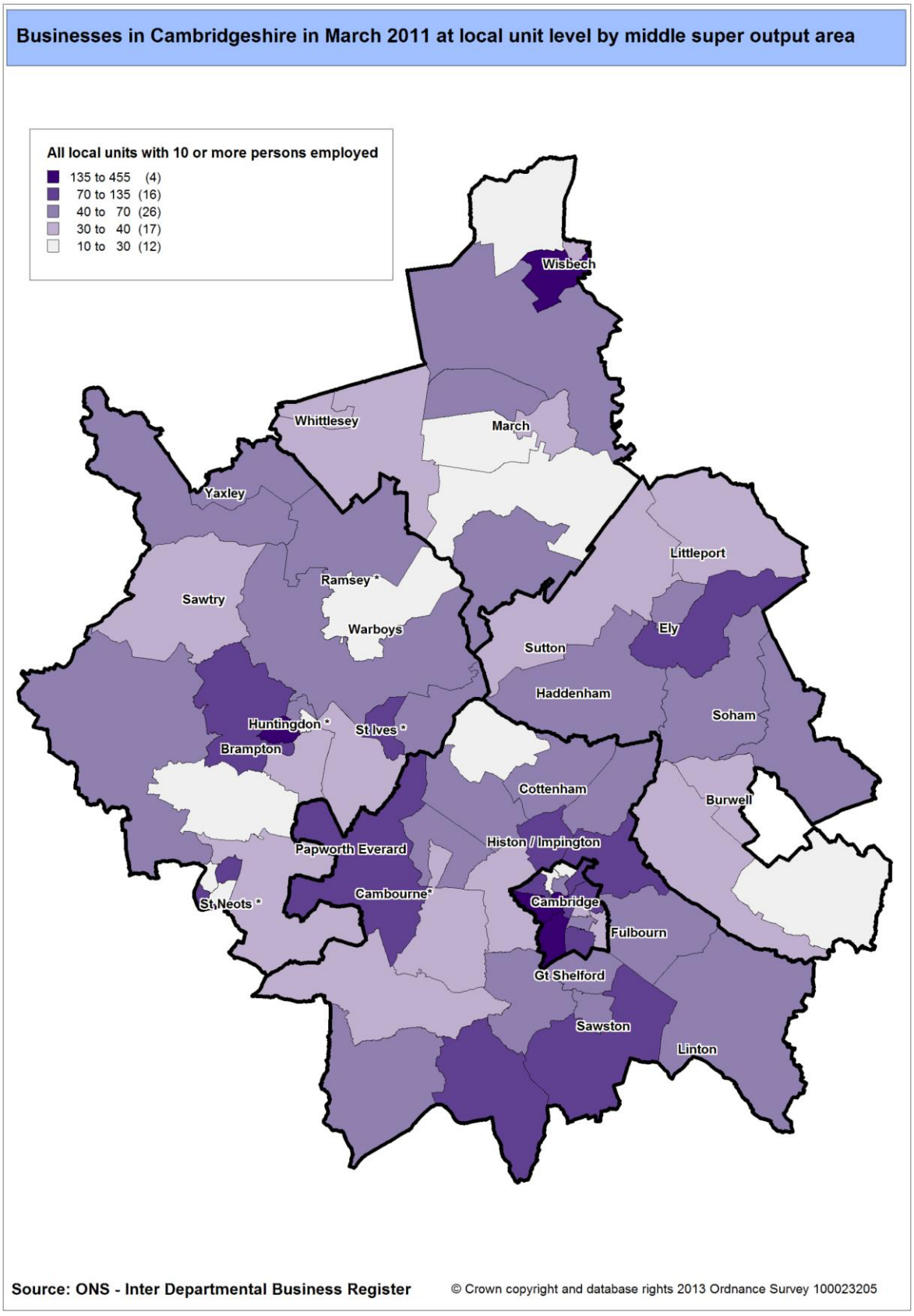
Map 3: Cambridgeshire's workplaces with 0 to 9 persons employed

Source: ONS – Inter Departmental Business Register



Map 4: Cambridgeshire's workplaces with 10 or more persons employed

Source: ONS – Inter Departmental Business Register



Business density

Generally high business density across most of the functional economic area.

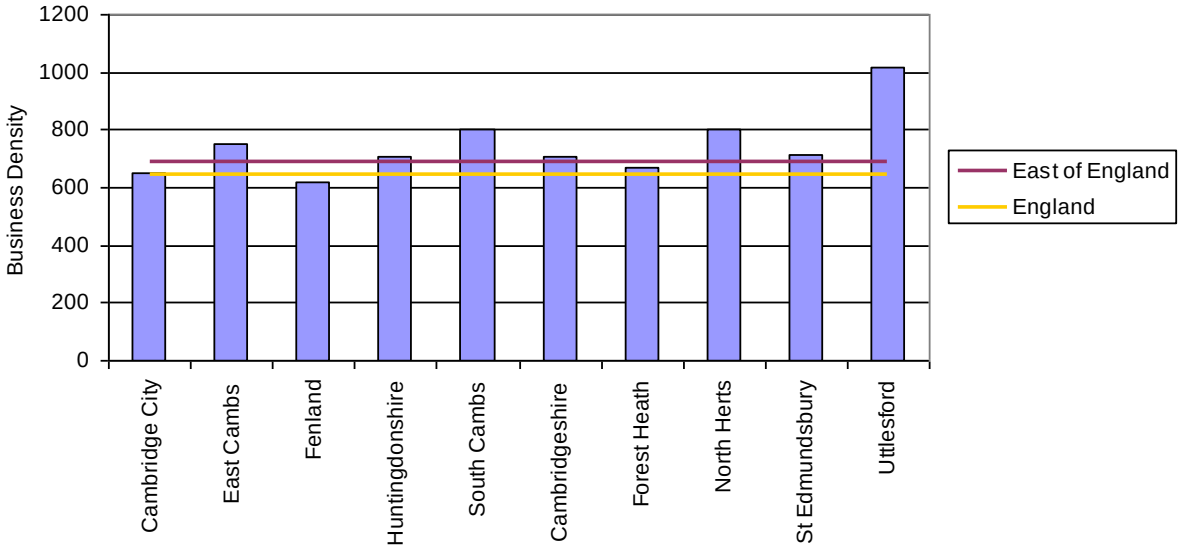
Cambridgeshire and Greater Cambridge have higher ratios of businesses to working age residents than the regional and national averages. All Cambridgeshire districts saw an increase in business density between 2004 and 2012; however business density decreased in all districts between 2009 and 2012.

A high density of businesses is crucial in creating the levels of agglomeration required to enable effective knowledge flow between people and firms, important for the growth of any successful economy. Cambridgeshire's business density – the ratio of businesses to working age residents – was 708.9 per 10,000 residents in 2012, compared to 701.1 in 2011. Cambridgeshire's business density has increased markedly between 2004 and 2012, with an overall density notably higher than the regional and national averages. However, the figure has fallen across all districts from 2009 to 2012, possibly as a result of high population growth over this period and the recession. Business density is relatively low in Cambridge City compared with other Greater Cambridge districts and decreased slightly between 2009 and 2012. As well as the above reasons, a loss of office space in the city centre may have contributed towards this fall.

Table 8: Business density (per 10,000 residents aged 16-64) in Greater Cambridge by district and year
Source: ONS – UK Business: Activity, Size and Location; ONS – Mid-Year Population Estimates

Area	Business Density			% Change		
	2004	2009	2012	2004 to 2009	2009 to 2012	2004 to 2012
Cambridge City	587.7	651.8	647.8	10.9%	-0.6%	10.2%
East Cambridgeshire	649.2	759.0	754.2	16.9%	-0.6%	16.2%
Fenland	574.4	670.8	620.8	16.8%	-7.5%	8.1%
Huntingdonshire	582.6	741.6	706.4	27.3%	-4.8%	21.2%
South Cambridgeshire	657.9	837.7	799.1	27.3%	-4.6%	21.5%
Cambridgeshire	609.1	736.0	708.9	20.8%	-3.7%	16.4%
Forest Heath	640.6	703.8	671.4	9.9%	-4.6%	4.8%
North Hertfordshire	684.3	837.4	799.8	22.4%	-4.5%	16.9%
St Edmundsbury	657.5	786.3	713.2	19.6%	-9.3%	8.5%
Uttlesford	890.4	1097.9	1016.9	23.3%	-7.4%	14.2%
Greater Cambridge	646.8	779.1	742.4	20.5%	-4.7%	14.8%
Greater Cambridge Greater Peterborough	623.4	748.8	708.6	20.1%	-5.4%	13.7%
East of England	576.0	708.0	686.0	22.9%	-3.1%	19.1%
England	537.0	667.7	645.8	24.3%	-3.3%	20.3%

Figure 23: Business density (per 10,000 residents aged 16-64) in Greater Cambridge by district in 2012
Source: ONS – UK Business: Activity, Size and Location; ONS – Mid-Year Population Estimates



Businesses by employment and turnover

Strong enterprise counts in South Cambridgeshire and Huntingdonshire.

Increase in the enterprise count in all Cambridgeshire districts from 2011 to 2012, with similar increases in the local unit count. South Cambridgeshire remains the district with the highest enterprise turnover, followed by Huntingdonshire, although these figures have fallen since 2009. Fenland remains the district with the lowest enterprise turnover.

In 2012 there were 24,695 VAT and/or PAYE based enterprises in Cambridgeshire, compared to 24,170 in 2011, a 2.2% increase. In 2011, Cambridgeshire's enterprises had a total employment of 244,221, and a total turnover of £25,270,463 thousand, giving an average employment per enterprise of 10, and an average turnover per enterprise of £1,046 thousand. Within Greater Cambridge, average turnover is highest in South Cambridgeshire enterprises and lowest in Fenland enterprises. Employment per enterprise is by far the highest in Cambridge City, reflecting the large health and education employers based there.

Table 9: Businesses in Cambridgeshire by district in 2011 & 2012 at enterprise & local unit level

Source: ONS – Inter Departmental Business Register

Area	Enterprise Count 2011	Enterprise Count 2012	Enterprise Employment 2011	Enterprise Turnover £ Thousand 2011	Local Unit Count 2011	Local Unit Count 2012	Local Unit Employment 2011
Cambridge City	4,015	4,190	76,626	4,991,702	5,660	5,850	86,935
East Cambridgeshire	3,590	3,670	22,216	2,910,015	3,940	4,020	26,680
Fenland	3,060	3,115	19,794	2,486,855	3,620	3,675	32,300
Huntingdonshire	6,655	6,765	62,844	7,318,224	7,660	7,770	73,078
South Cambridgeshire	6,850	6,955	62,741	7,563,667	7,510	7,615	70,400
Cambridgeshire	24,170	24,695	244,221	25,270,463	28,390	28,930	289,393

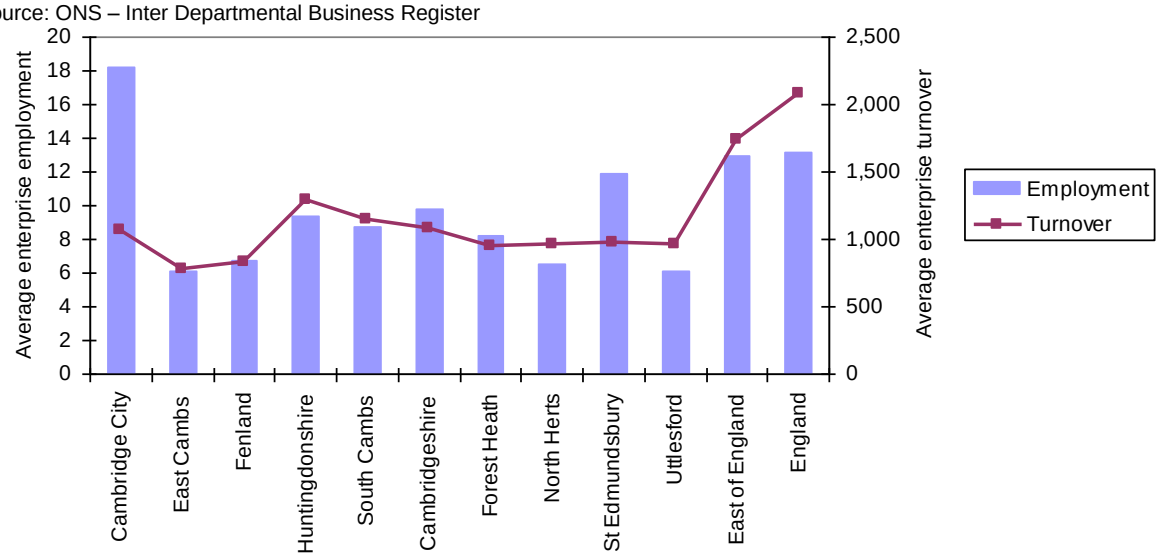
Table 10: Businesses by district in 2009 & 2012 at enterprise & local unit level

Source: ONS – Inter Departmental Business Register

Area	Enterprise Count 2009	Enterprise Count 2012	Enterprise Employment 2009	Enterprise Turnover £ Thousand 2009	Local Unit Count 2009	Local Unit Count 2012	Local Unit Employment 2009
Forest Heath	2,295	2,175	18,820	2,181,755	2,745	2,625	25,982
North Hertfordshire	5,830	5,640	37,975	5,625,168	6,590	6,470	46,625
St Edmundsbury	4,155	4,040	49,472	4,070,529	5,095	4,985	52,562
Uttlesford	4,650	4,650	28,232	4,467,699	5,160	5,115	36,835
Greater Cambridge	41,895	41,200	379,681	43,219,265	48,810	48,125	448,316
Greater Cambridge Greater Peterborough	53,770	52,795	553,841	85,718,668	63,390	62,385	615,361
East of England	217,930	216,585	2,832,598	379,448,380	259,125	255,135	2,450,522
England	1,844,030	1,842,680	24,196,489	3,843,970,081	2,237,555	2,218,245	23,666,856

Figure 24: Average employment and turnover (£ thousand) per enterprise in Greater Cambridge by district in 2009

Source: ONS – Inter Departmental Business Register



Business age and survival

A fairly stable business stock with enterprise survival rates higher than seen regionally and nationally.

Most districts within Greater Cambridge have a higher proportion of businesses aged 10+ years than seen regionally or across the country as a whole. Fenland and East Cambridgeshire in particular have a high proportion of long established businesses. Business survival rates across Cambridgeshire are above the national average, suggesting a relatively stable business stock, however a lack of 'churn' of new business means a lack of competition which can restrict innovation.

In 2012, 14% of VAT and/or PAYE based enterprises within Cambridgeshire were less than two years old, and 47% were ten or more years old – a higher proportion of long established businesses than across the region or England as a whole.

The Cambridgeshire five-year survival rate for businesses born in 2006 and still active in 2011 was 48.6%, above the East of England rate of 45.9%, and the England rate of 44.8%. The one-year survival rate for Cambridgeshire businesses was 97.1%, compared to 93.5% for businesses born in 2008, and 89.9% for 2010 births.

Figure 25: Survival of enterprises born in 2006 in Cambridgeshire, East of England and England
Source: ONS – Business Demography

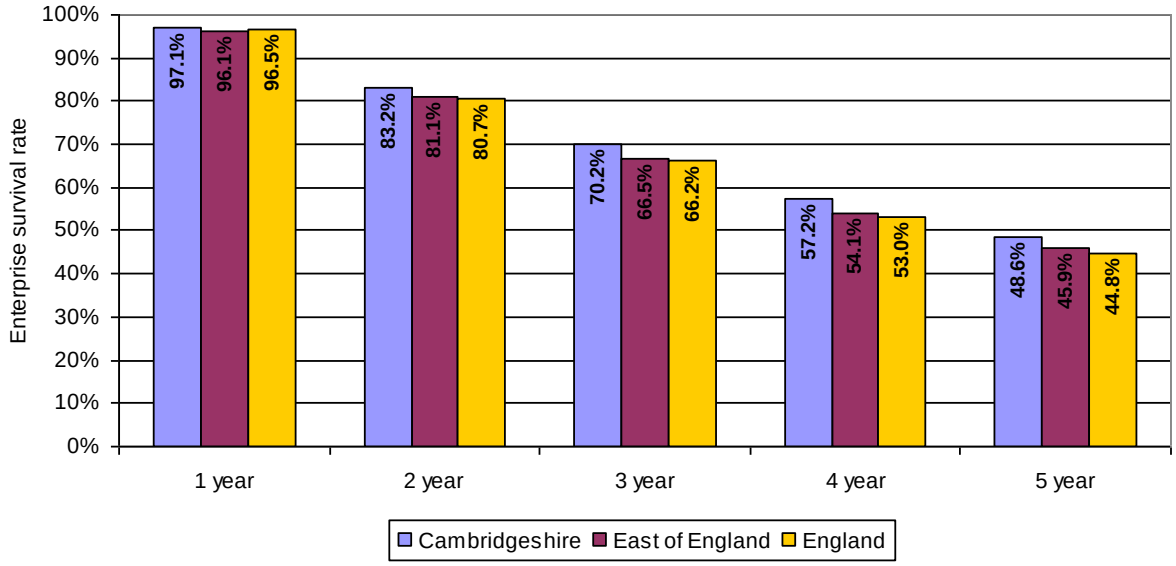
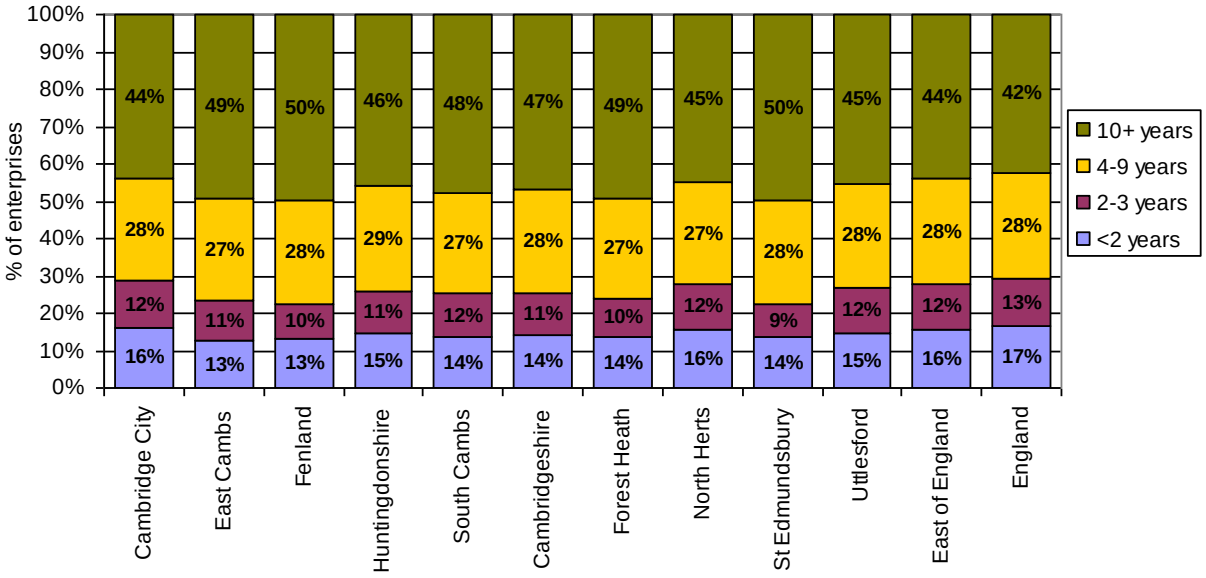


Figure 26: Enterprises in Greater Cambridge in 2012 by district and age of business
Source: ONS – UK Business: Activity, Size and Location



Business creation and innovation

Increase in the number of births of new enterprises; enterprise births per 10,000 adult residents increased for the first time in three years.

In 2011 there was growth in the number of enterprise births in Cambridgeshire and decline in the number of deaths. Following three years of falls in enterprise births per 10,000 adult residents, an increase in this rate of births is encouraging, as business start-up levels are a good indicator of future economic growth. Within Cambridgeshire, the 'birth rate' per 100 active enterprises in 2011 was highest in Cambridge City, although this was below the national figure. However, the 'death rate' per 100 active enterprises was below the national figure across all Greater Cambridge districts.

Business start-up levels are a good indicator of future economic growth. In addition to the direct employment they bring, new businesses help foster innovation and can have a beneficial effect through enhancing competition, thus helping to improve efficiency.

During 2011 there were 2,540 births of new enterprises in Cambridgeshire, compared to 2,330 during 2010, a 9% increase. There were 2,320 deaths of enterprises in 2011, compared to 2,710 in 2010, a 14% decrease. The stocks of active enterprises were 25,915 in 2011 and 25,595 in 2010, giving birth and death rates per 100 active enterprises of 9.8% and 9.0% in 2011, and 9.1% and 10.6% in 2010. The 'birth rate' of new enterprises per 100 active enterprises in 2011 was highest in Cambridge City (unlike the 'birth rate' per 10,000 adult residents, which is low due to the high ratio of residents to businesses), North Hertfordshire and Huntingdonshire, yet below the national figure across all Greater Cambridge districts.

Table 11: Enterprise births and deaths in Greater Cambridge by district in 2011
Source: ONS – Business Demography

Area	Births of New Enterprises	Deaths of Enterprises	Active Enterprises	Per 100 active enterprises	
				Births	Deaths
Cambridge City	525	445	4,720	11.1%	9.4%
East Cambridgeshire	340	295	3,635	9.4%	8.1%
Fenland	295	295	3,125	9.4%	9.4%
Huntingdonshire	705	655	7,125	9.9%	9.2%
South Cambridgeshire	675	630	7,310	9.2%	8.6%
Cambridgeshire	2,540	2,320	25,915	9.8%	9.0%
Forest Heath	220	200	2,230	9.9%	9.0%
North Hertfordshire	625	555	6,230	10.0%	8.9%
St Edmundsbury	380	360	4,195	9.1%	8.6%
Uttlesford	485	455	4,885	9.9%	9.3%
Greater Cambridge	4,250	3,890	43,455	9.8%	9.0%
Greater Cambridge Greater Peterborough	5,505	5,140	55,690	9.9%	9.2%
East of England	24,930	22,640	236,605	10.5%	9.6%
England	232,460	202,365	2,040,980	11.4%	9.9%

Enterprise births are defined as new businesses registering for either VAT and/or PAYE for the first time. Figure 27 shows Cambridgeshire had a birth rate of 50.0 new enterprises per 10,000 adult residents aged 16+ in 2011, compared to 46.2 in 2010. Within Greater Cambridge, Figure 28 shows Uttlesford has the highest new business registration rate, with 76, and Fenland has the lowest, with 37.

Figure 27 shows Cambridgeshire experienced a sharp drop in enterprise births in 2008, while regional and national birth rates remained at a higher level. Two reasons suggested for the sharp drop were that the Cambridgeshire knowledge based businesses were disproportionately affected by the credit crunch, and that the skills of those being made redundant in Cambridgeshire were less well suited to self employment. The regional and national birth rates experienced a similar drop in 2009, as businesses outside Cambridgeshire were affected by the credit crunch, but the drop was not as sharp.

Encouragingly, in 2011 there was an increase in the enterprise birth rate in Cambridgeshire, as well as the East of England and England. However, the regional and national rates remain above that for Cambridgeshire. Indeed, as shown in Figure 28, the only Cambridgeshire district with an enterprise birth rate greater than that seen nationally is South Cambridgeshire. All other Cambridgeshire districts are below both the regional and national rates.

Figure 27: Enterprise births per 10,000 adult residents in Cambridgeshire, East of England and England by year
Source: ONS – Business Demography

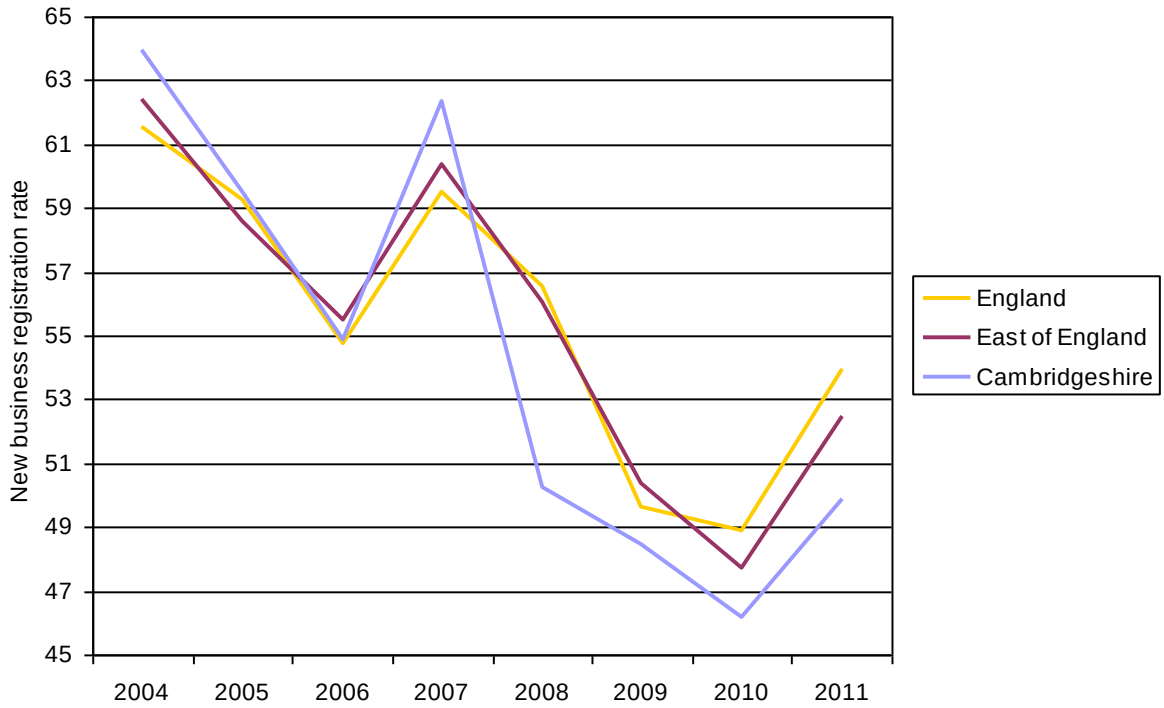
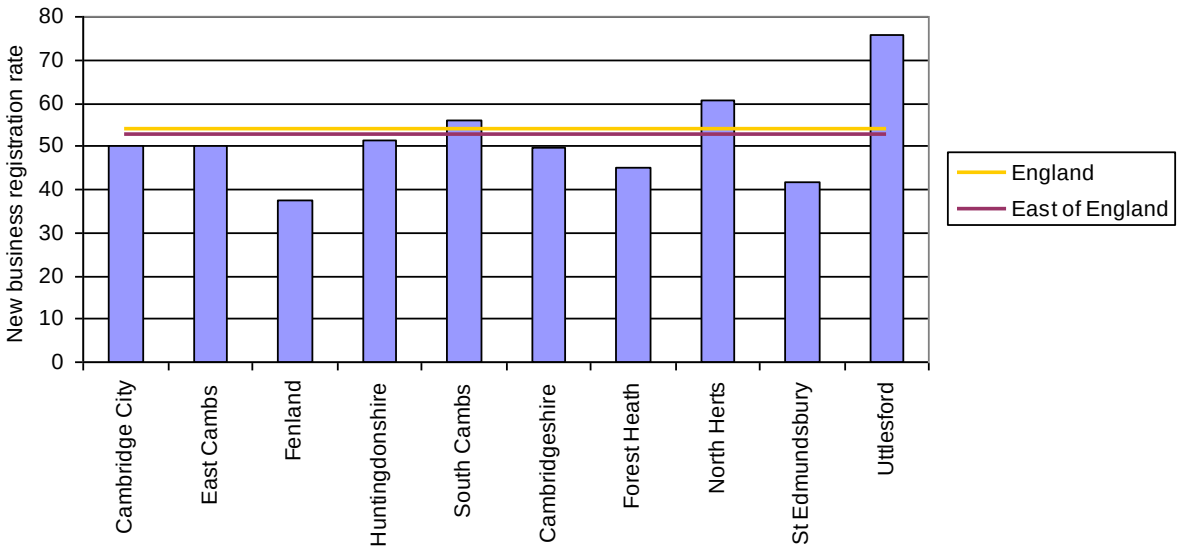


Figure 28: Enterprise births per 10,000 adult residents in Greater Cambridge by district in 2011
Source: ONS – Business Demography



Community Innovation Survey

The East of England exhibits a high level of innovation activity and international working, primarily driven by factors such as quality improvements but limited by the cost of finance.

There is a high level of innovation among East of England businesses, with 41.2% being categorised as innovation active which is the joint highest proportion of UK regions. East of England businesses are particularly active in the acquisition of computer hardware and software. The East of England scored strongly in terms of innovation co-operation, with 98% of innovation active enterprises having co-operation partners, however, skill levels were reported as being below average. Barriers to innovation mainly concerned cost factors of innovation.

The Community Innovation Survey is a Europe-wide survey giving information on the innovation of different sectors and regions in the member states of the EU. The latest survey was conducted in 2011 and covers the period 2008 to 2010. The 2011 survey sampled over 28,000 UK enterprises and achieved a 51% response rate.

Innovation active enterprises
The 2011 results show that 41.2% of businesses in the East of England were innovation active in the period 2008-2010, the joint highest proportion among the regions in the UK, level with the South East. In contrast the East of England had the fourth highest proportion of innovation active businesses in the 2009 survey.

Innovation activities
There are many innovation-related activities including internal and external R&D, and the acquisition of equipment and external knowledge. In the East of England, the most commonly reported innovation activities were acquisition of computer hardware and software. With regard to the market introduction of innovation, the East of England had a high proportion of enterprises engaged in changing to marketing methods and launch advertising, compared to other regions. The East of England had the third highest level of internal research and development; however, it was relatively low in terms of the acquisition of external research and development.

Export markets
Of all enterprises in the East of England, 16.1% were exporters. This was the fifth highest proportion compared to all other UK regions, behind the East Midlands, West Midlands, South East and Northern Ireland, and was higher than the national proportion of 15.3%.

Skills
Skill levels in East of England enterprises tended to be below average compared with other regions. The survey shows that 5.3% of all enterprise employees had degree level qualifications in Science or Engineering subjects, the joint sixth highest proportion and 5.8% had degree level qualifications in other subjects, the second lowest proportion.

Innovation co-operation
From 2008 to 2010, in the East of England 98.1% of innovation active enterprises had co-operation partners. For innovation activities, the East of England had the highest proportion of enterprises with co-operation partners of all UK regions, and for on-going activities this proportion was second highest. With regard to innovation agreements, 97.6% of innovation active enterprises had agreements with national co-operators and 100% of innovation active enterprises had agreements with overseas co-operators.

Factors driving innovation and barriers to innovation
The greatest proportion of enterprises rated improving quality of goods and services as an important innovation factor, with increasing market share and increasing range of goods and services also rated highly. In terms of factors constraining innovation, the 2011 results show that in the East of England, cost factors were considered the strongest barriers against innovation, particularly the cost of finance, the availability of finance and the direct innovation cost.

Employment growth of small businesses

Employment growth in small businesses is relatively low, particularly in the north and east.

In 2008, most districts had employment growth between the regional and national averages, other than Cambridge City, which was above the national average, and Fenland, which was below the regional average.

3,180 of the 22,765 registered enterprises in Cambridgeshire with employment of less than 50 in 2007 showed an increase in employment by 2008, meaning the percentage of small businesses showing employment growth in 2008 was 14.0%, compared to 14.2% in 2007 – a slight drop reflecting the national trend. The percentage of enterprises with employment growth was highest in Cambridge City, with 14.5%, and lowest in Fenland, with 13.6%.

Figure 29: Percentage of small businesses in Cambridgeshire, East of England and England showing employment growth by year

Source: BIS – Data for National Indicator 172 (discontinued)

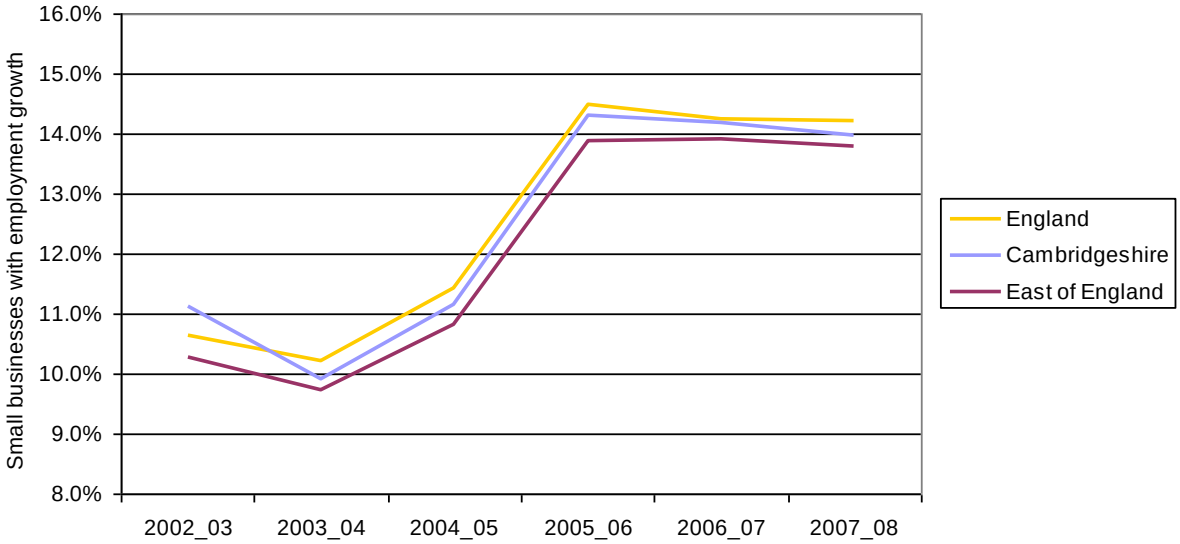
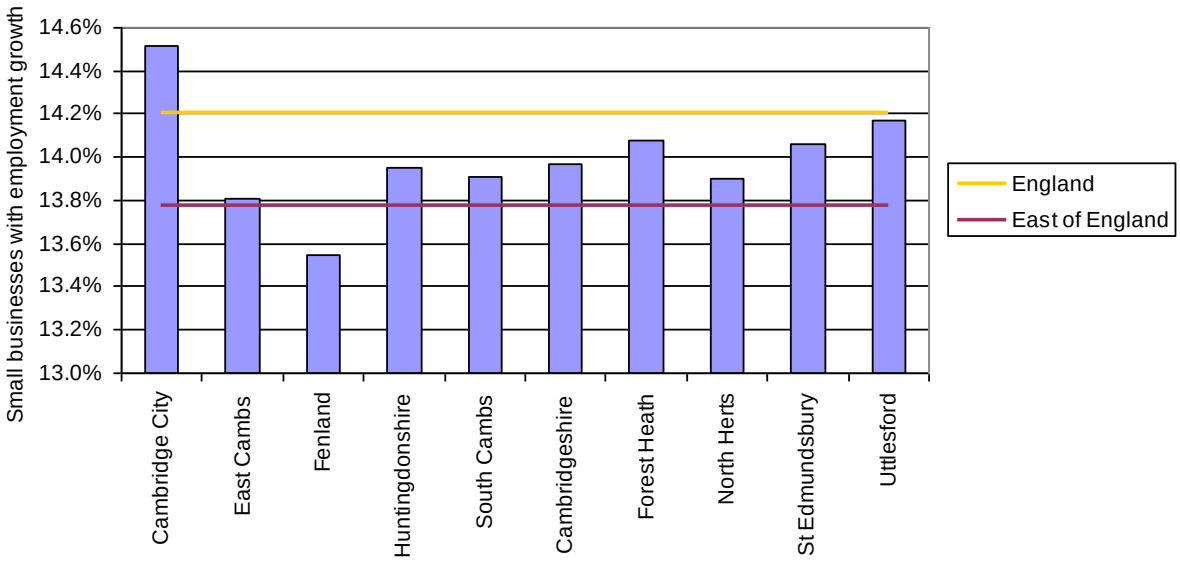


Figure 30: Percentage of small businesses in Greater Cambridge showing employment growth in 2008 by district

Source: BIS – Data for National Indicator 172 (discontinued)



Jobs, Earnings and Productivity

Total jobs and jobs density

Labour demand is high in Cambridge City and South Cambridgeshire but low in East Cambridgeshire and Fenland.

Across Greater Cambridge, only in Cambridge City is the labour demand higher than the available workforce, accounting for the significant levels of commuting into the city. East Cambridgeshire, Huntingdonshire and Fenland have lower ratios of jobs to working age residents than the regional and national averages.

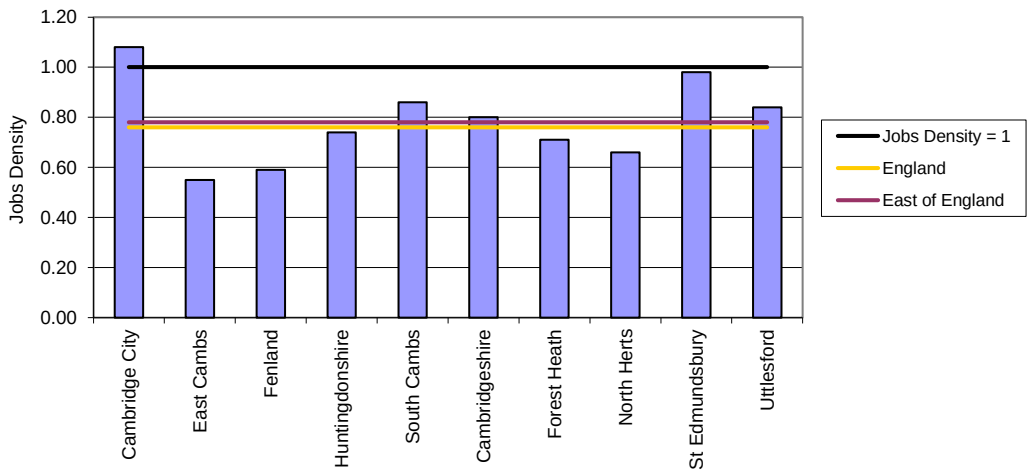
Employee jobs, shown by industry on page six, are included in Cambridgeshire's total jobs, as are self-employment jobs, government-supported trainees and HM Forces. In 2011 there were 325,000 jobs in Cambridgeshire, up from 323,000 in 2010, an increase of 0.6%. With 98,000 jobs, Cambridge City provided 30% of the county's total jobs in 2011.

Cambridgeshire's jobs density – the ratio of total jobs to working age residents – was 0.80 in 2011, the same density as in 2010, but lower than in 2001. With a jobs density figure of less than one, the county's labour demand is not as high as its available workforce. Cambridgeshire's jobs density is higher than regional and national figures. Across Greater Cambridge, only in Cambridge City is the labour demand higher than the available workforce, with a jobs density figure of 1.08 in 2011. East Cambridgeshire has the lowest jobs density in the county.

Table 12: Total jobs and jobs density in Greater Cambridge by district in 2001 and 2011
Source: ONS – Jobs Density

	Total Jobs			Jobs Density	
Area	2001	2011	Change 01-11	2001	2011
Cambridge City	96,000	98,000	2,000	1.20	1.08
East Cambridgeshire	26,000	29,000	3,000	0.57	0.55
Fenland	33,000	35,000	2,000	0.64	0.59
Huntingdonshire	74,000	81,000	7,000	0.72	0.74
South Cambridgeshire	67,000	82,000	15,000	0.79	0.86
Cambridgeshire	296,000	325,000	29,000	0.81	0.80
Forest Heath	28,000	28,000	0	0.76	0.71
North Hertfordshire	59,000	53,000	-6,000	0.79	0.66
St Edmundsbury	55,000	68,000	13,000	0.87	0.98
Uttlesford	39,000	42,000	3,000	0.88	0.84
Greater Cambridge	476,000	516,000	40,000	0.82	0.80
East of England	25,430,000	26,859,000	1,429,000	0.80	0.78
England	2,654,000	2,826,000	172,000	0.77	0.76

Figure 31: Jobs density in Greater Cambridge by district in 2011
Source: ONS – Jobs Density



Employee jobs and part-time working

Increase in the number of employee jobs in Cambridgeshire but with a relatively low proportion of part-time jobs.

Cambridgeshire experienced a 2.7% increase in employee jobs from 2010 to 2011, an increased percentage than the year previously. Across Cambridgeshire, part-time jobs account for a lower proportion of employee jobs than nationally, with particularly low levels in Fenland. Part-time work can allow people to enter the workforce who otherwise might not be able to due to commitments such as family. As a percentage of the employment, Cambridge has the lowest proportion of working proprietors, whereas Fenland and East Cambridgeshire have the highest proportions.

Businesses in Cambridgeshire across all industry sectors excluding farm agriculture provided 278,800 employee jobs in 2011, compared to 271,500 in 2010, a 2.7% increase.[25] Primary sector businesses (other than farms) provided 1.5% of employee jobs in 2011, manufacturing companies provided 11.3%, 4.1% were provided by construction firms, and 12.7% of employee jobs were in education. [Also see Figure 2.]

Part-time employee jobs accounted for 30% of all employee jobs, over two percentage points less than the national figure of 32%. Part-time jobs formed a relatively low proportion of employee jobs in Fenland, at 27%. Cambridge City had the highest proportion of part-time jobs, at 31%. In the four other Greater Cambridge districts, part-time jobs are a larger proportion of all employee jobs than in any Cambridgeshire district. St Edmundsbury has by far the highest proportion, with 39% of jobs being part-time, followed by Uttlesford and Forest Heath, both 35% and North Hertfordshire with 34%.

Employment is defined as employees plus working proprietors. East Cambridgeshire and Fenland have the highest proportion of working proprietors, with 6% of employment. At 4%, Cambridge City has the lowest proportion of working proprietors, below the regional figure of 5%. This is reflective of the size and volume of employers in each area, with rural districts perhaps having a greater proportion of small employers and urban districts having a higher number of employers with large employment size.

Table 13: Employee jobs and employment in Greater Cambridge by district in 2011
Source: ONS – Business Register and Employment Survey

Area	Employee Jobs	Employee Jobs		Employment = Employees + Working Proprietors
		Full-time	Part-time	
Cambridge City	88,100	61,200	26,900	90,500
East Cambridgeshire	24,900	17,600	7,300	26,600
Fenland	29,700	21,600	8,100	31,500
Huntingdonshire	67,600	47,200	20,400	70,200
South Cambridgeshire	68,400	47,800	20,600	71,300
Cambridgeshire	278,800	195,400	83,400	290,200
Forest Heath	23,100	15,100	8,000	24,300
North Hertfordshire	44,800	29,700	15,100	47,000
St Edmundsbury	56,800	34,400	22,400	58,800
Uttlesford	34,300	22,100	12,100	35,800
Greater Cambridge	437,800	296,800	141,000	456,100
Greater Cambridge Greater Peterborough	594,600	403,400	191,300	619,400
East of England	2,401,800	1,557,300	844,500	2,514,800
England	23,058,900	15,595,700	7,463,300	24,048,200

[25] Does not include farm agriculture data due to their unavailability

Job growth

Above average jobs growth in Cambridgeshire since 2001.

Jobs growth exceeds the national rate across Cambridgeshire as a whole. However, jobs growth has been largely concentrated in South Cambridgeshire and Huntingdonshire, with 76% of jobs growth in Cambridgeshire between 2001 and 2011 being located in these districts.

In 2011, there were 29,000 more jobs in Cambridgeshire than in 2001, an increase of 10%, well above the national increase of 6%. However, 76% of this increase in jobs has been located in South Cambridgeshire and Huntingdonshire, where job numbers rose by 15,000 and 7,000 respectively. The number of jobs grew by 3,000 in East Cambridgeshire, and by 2,000 in each of Fenland and Cambridge City. South Cambridgeshire and East Cambridgeshire have seen the largest percentage increases, with 22% and 12% respectively.

29,000 additional jobs over the 10 years from 2001 to 2011, or 2,900 jobs per year on average, falls short of Cambridgeshire's former job growth target (RSS Policy E1) of 75,000 jobs over 20 years, which was 3,750 jobs per year on average. [Also see Table 11.]

Figure 32: Change in total jobs since 2001 in Cambridgeshire, East of England and England
Source: ONS – Jobs Density

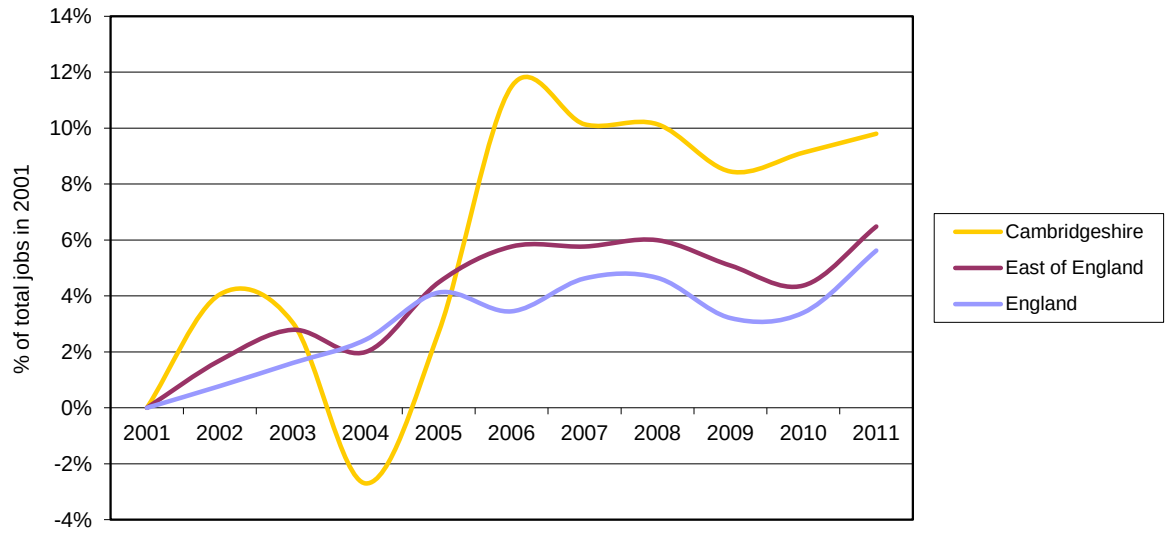
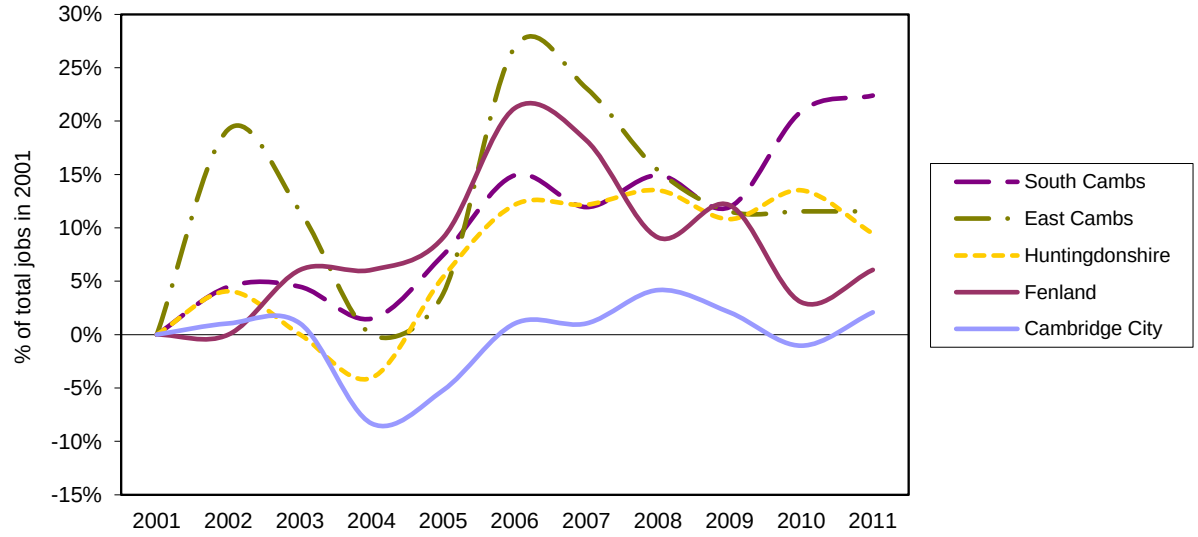


Figure 33: Change in total jobs since 2001 in Cambridgeshire by district
Source: ONS – Jobs Density



Earnings of employees

Wages are high in South Cambridgeshire. Greater pay gap between men and women for those who are resident rather than working in Cambridgeshire.

Workplace earnings are high in South Cambridgeshire and Cambridge City, whereas across the other districts workplace earnings are less than the national level. The difference in workplace earnings between females and males is significant, but similar to the difference seen nationally. Workplace earnings are more equal than residential earnings.

The median gross weekly pay for full-time employee workplace jobs in Cambridgeshire in 2011 was £528.60, compared to £527.60 in 2010. The average wage across Cambridgeshire has remained above regional and national figures over the last ten years, and has steadily increased roughly in line with both figures over the past three years.

Median earnings of all full-time employees are lowest in Fenland, and highest in South Cambridgeshire. South Cambridgeshire jobs pay on average 46% more than Fenland jobs. The difference in workplace earnings between females and males is highest in East Cambridgeshire; this contrasts to the difference in its residence earnings, which are the second most equitable. Across Cambridgeshire as a whole, the difference between male and female workplace earnings is less than the difference seen in resident earnings.

The differentials between resident (Table 15) and workplace (Table 14) earnings in Huntingdonshire and East Cambridgeshire suggest high levels of out-commuting to higher paid, higher value jobs.

The percentage increase in workplace employee wages over the last five years has been highest in Cambridge City, followed by South Cambridgeshire and Huntingdonshire. East Cambridgeshire and Fenland both experienced falls in workplace employee wages by 2.5% and 2.0% respectively.

Table 14: Median full-time gross weekly employee earnings in Greater Cambridge by district of workplace and gender in 2012

Source: ONS – Annual Survey of Hours and Earnings (Workplace Analysis)

Area	All Full-time Workers	Male Full-time Workers	Female Full-time Workers	Female Earnings as % of Male Earnings
Cambridge City	£585.90	£643.90	£513.20	79.7%
East Cambridgeshire	£445.90	£494.00	£339.00	68.6%
Fenland	£415.50	£459.90	£376.90	82.0%
Huntingdonshire	£488.60	£517.50	£444.80	86.0%
South Cambridgeshire	£606.20	£656.00	£515.80	78.6%
Cambridgeshire	£528.60	£571.80	£482.60	84.4%
Forest Heath	£417.10	£509.30	£355.50	69.8%
North Hertfordshire	£498.00	£577.10	£411.30	71.3%
St Edmundsbury	£454.70	£492.50	£401.60	81.5%
Uttlesford	£519.80	£575.50	£441.70	76.8%
Greater Cambridge	-	-	-	-
Greater Cambridge Greater Peterborough	-	-	-	-
East of England	£495.20	£538.70	£425.90	79.1%
England	£512.10	£553.00	£452.30	81.8%

Figure 34: Median full-time gross weekly workplace and resident (circle) employee earnings in Greater Cambridge by district in 2012

Source: ONS – Annual Survey of Hours and Earnings (Workplace and Resident Analysis)

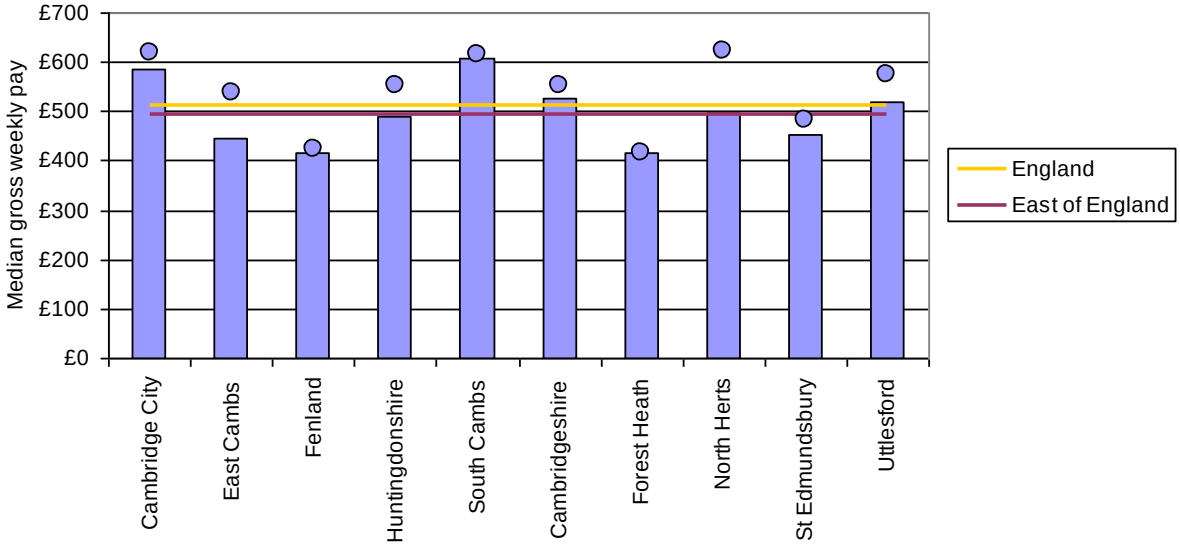


Table 15: Median full-time gross weekly employee earnings in Greater Cambridge by district of residence and gender in 2012

Source: ONS – Annual Survey of Hours and Earnings (Resident Analysis)

Area	All Full-time Workers	Male Full-time Workers	Female Full-time Workers	Female Earnings as % of Male Earnings
Cambridge City	£618.90	£726.20	£516.20	71.1%
East Cambridgeshire	£537.10	£571.50	£442.80	77.5%
Fenland	£424.50	£452.90	£380.70	84.1%
Huntingdonshire	£551.50	£610.60	£446.40	73.1%
South Cambridgeshire	£614.20	£689.90	£502.40	72.8%
Cambridgeshire	£551.00	£603.80	£472.30	78.2%
Forest Heath	£417.70	£495.80	£396.90	80.1%
North Hertfordshire	£624.00	£650.20	£513.90	79.0%
St Edmundsbury	£480.80	£503.80	£417.10	82.8%
Uttlesford	£576.30	£596.10	£524.10	87.9%
Greater Cambridge	-	-	-	-
Greater Cambridge Greater Peterborough	-	-	-	-
East of England	£531.00	£580.40	£461.10	79.4%
England	£512.70	£553.30	£453.00	81.9%

Employment forecasts

Forecasts to 2031 suggest growth in employment across all Greater Cambridge districts.

Cambridgeshire's employment is forecast to grow by 16% between 2012 and 2031, with the most significant increase in East Cambridgeshire, where employment is forecast to grow by 24% relative to total employment in 2012.

Forecasts from the East of England Forecasting Model suggest that Cambridgeshire's total employment (jobs) will increase from 334,700 in 2012 to 389,800 by 2031, a rise of 16%. Total employment across Greater Cambridge will increase by 14% over 19 years, compared to a 13% rise across the East of England.

Figure 35: Employment growth forecasts for Cambridgeshire, Greater Cambridge and East of England

Source: Cambridgeshire Insight – East of England Forecasting Model Spring 2013 Baseline Forecast

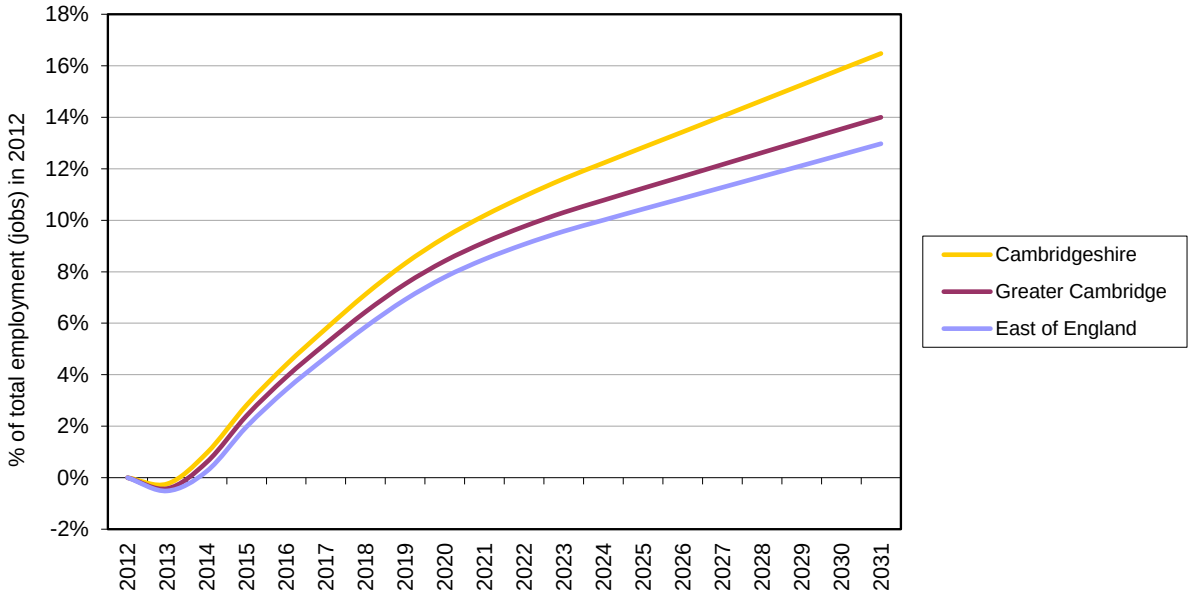
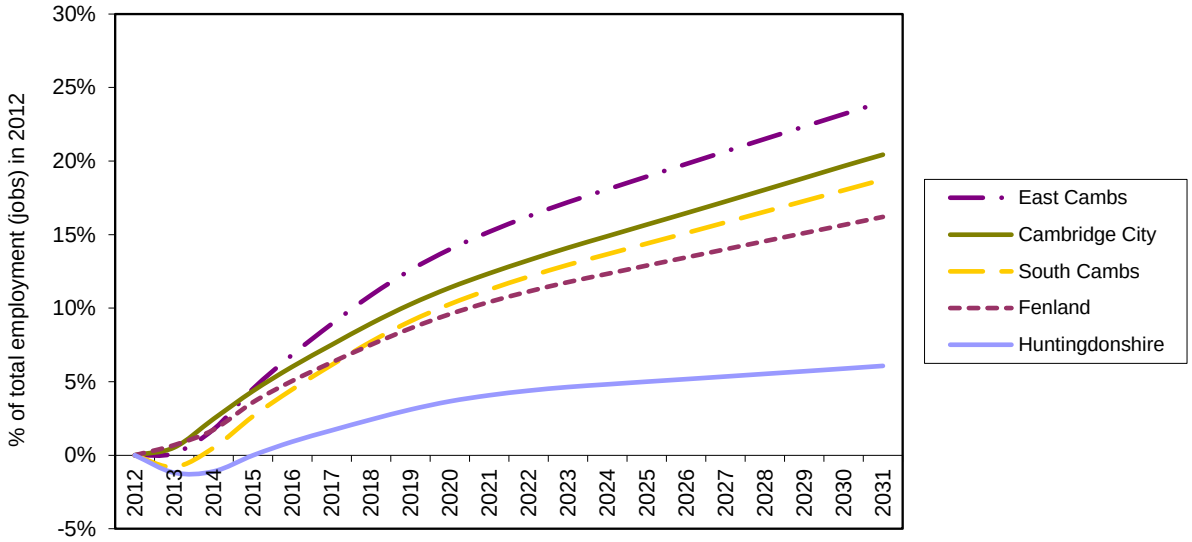


Figure 36: Employment growth forecasts for Cambridgeshire by district

Source: Cambridgeshire Insight – East of England Forecasting Model Spring 2013 Baseline Forecast



Cambridgeshire's gross value added

Productivity and prosperity are highest in areas with higher value industries and high jobs density.

Cambridgeshire has a GVA per head of population above the regional and national averages, predominantly caused by high value added activity in South Cambridgeshire and a high jobs density in Cambridge City pushing up the county average. Productivity is highest in South Cambridgeshire, reflecting the concentration of high value industry in this district. Since 2002 public administration, education and health, financial and insurance activities and business service activities have provided the largest increases in their contribution to total GVA. Information and communication and distribution, transport, accommodation and food industries have seen a decrease in their contribution to total GVA.

Productivity of the economy is measured by GVA (Gross Value Added), and GVA per head. Calculated on a workplace basis, Cambridgeshire's GVA (at current basic prices) was £14,284 million in 2011, compared to £13,787 million in 2010, a 4% increase. Cambridgeshire's GVA per head of population was £22,716 in 2011, 17% above the East of England average of £19,355 per head, and 6% above the England average of £21,349 per head.

Figure 37: GVA per head in Cambridgeshire, East of England and England by year

Source: ONS – Regional Gross Value Added

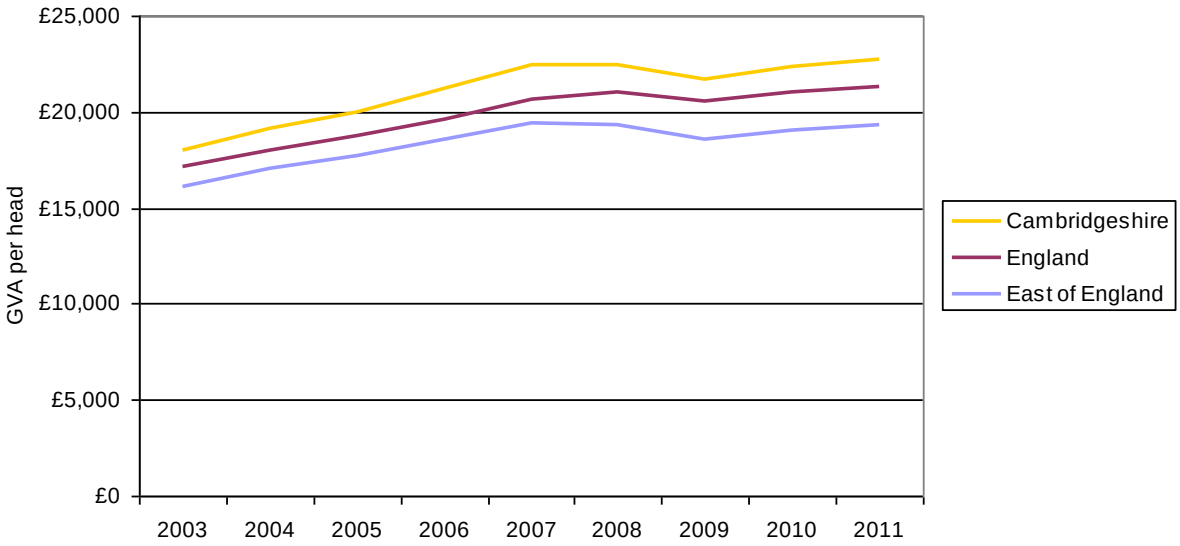


Figure 38 overleaf shows that since 2002 the largest contributor to GVA within Cambridgeshire has come from the public administration, education and health industry. The information and communication sector and distribution, transport, accommodation and food sector have seen their contributions to total GVA decrease since 2002. Those districts with a concentration of these industries, for example Fenland for distribution and transport and Cambridge City for information and communication, may face difficulties if these industries continue to decline in importance.

Figure 39 illustrates labour productivity levels for each of the Greater Cambridge districts. Labour productivity should give an indication of the efficiency of labour, in this case, in terms of the output produced per job. Cambridgeshire's labour productivity of £40,800 per job is above the regional and national figures of £37,900 and £39,000 respectively, however, this masks large differences between districts. Whilst South Cambridgeshire's labour productivity is £47,900 per job, Fenland's is only £33,200. This shows how Fenland's economy produces a lower value output with more labour intensive industry, in stark comparison to high value, capital intensive industry in South Cambridgeshire.

GVA per capita shows the contribution that each individual makes to total output in a region. It is calculated by dividing the total value of output in the region (less intermediate consumption), by the total resident population of the region. Overall, Cambridgeshire's GVA per capita is £21,600, which is above the regional and national values of £18,200 and £19,600 respectively, but,

similarly to labour productivity there is a polarisation of values across the county. Cambridge City has a high GVA per capita because it encompasses more high value industry with a high ratio of jobs to residents. GVA per capita in other districts such as Fenland and East Cambridgeshire may be lower because they have lower value output and a lower ratio of jobs to residents.

Figure 38: GVA in Cambridgeshire by year and industry
Source: ONS – Regional Gross Value Added

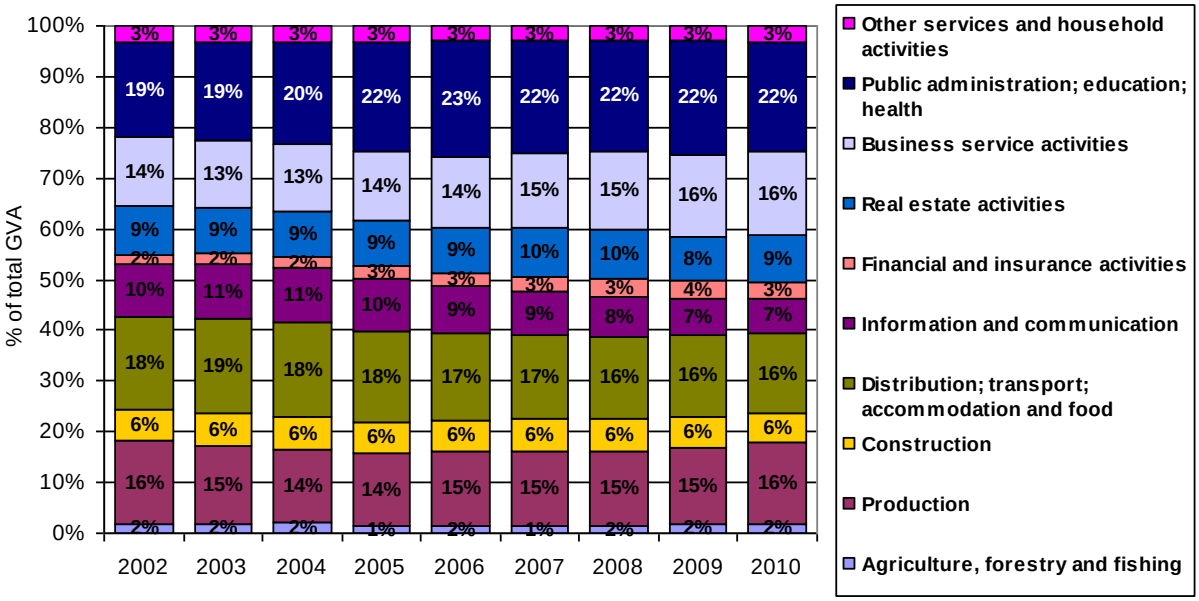
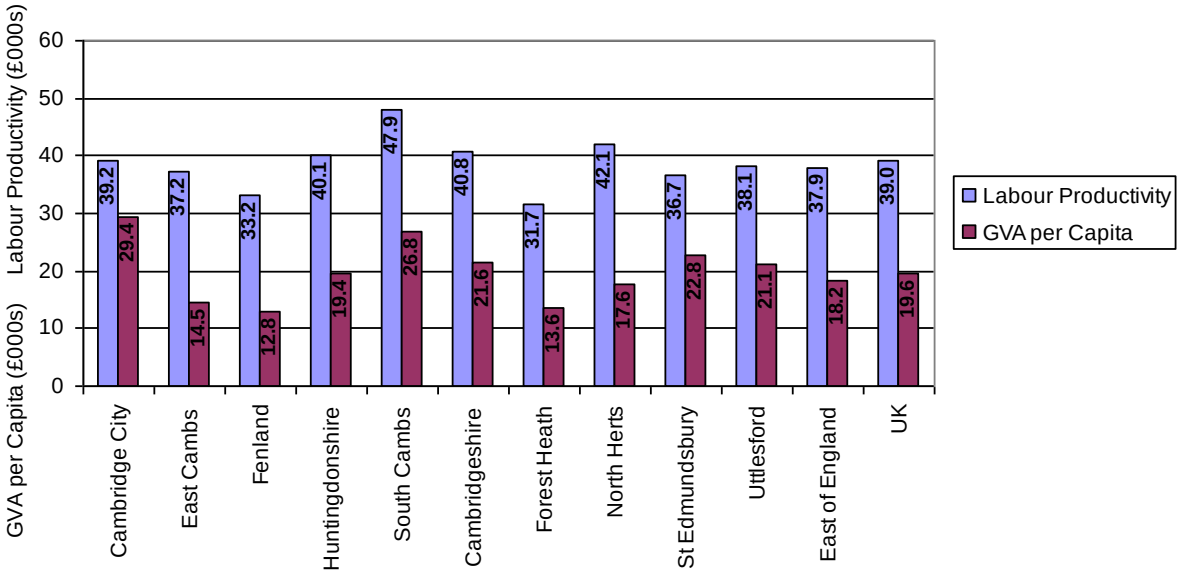


Figure 39: GVA per capita and labour productivity in Greater Cambridge by district in 2010
Source: Cambridgeshire Insight – East of England Forecasting Model Spring 2012 Baseline Forecast; GVA per Capita (£000s per head of population); Labour Productivity (£000s per job (employees and self-employed))



Health and productivity

A report published by the Work Foundation in April 2010 argues that the cost of 'presenteeism' (being at work but not productive) could match or account for one-and-a-half times more working time lost than the estimated £13bn annual cost of sickness absence. Physical and mental health of employees can have a significant impact on productivity. The Joint Strategic Needs Assessment[26] analyses the health of residents in detail.

[26] www.cambridgeshirejsna.org.uk

GVA forecasts

Forecasts to 2031 suggest growth in GVA across all Greater Cambridge districts.

Cambridgeshire's GVA is forecast to grow by 74% between 2012 and 2031, with the most significant increase in East Cambridgeshire, where GVA is forecast to grow by 82% relative to total GVA in 2012.

Forecasts from the East of England Forecasting Model suggest that Cambridgeshire's total GVA (at 2009 prices) will increase from £132,962 million in 2012 to £24,252 million by 2031, a rise of 74%. Total GVA across Greater Cambridge will increase by 70% over 19 years, compared to a 67% rise across the East of England.

Figure 40: GVA growth forecasts for Cambridgeshire, Greater Cambridge and East of England

Source: Cambridgeshire Insight – East of England Forecasting Model Spring 2013 Baseline Forecast

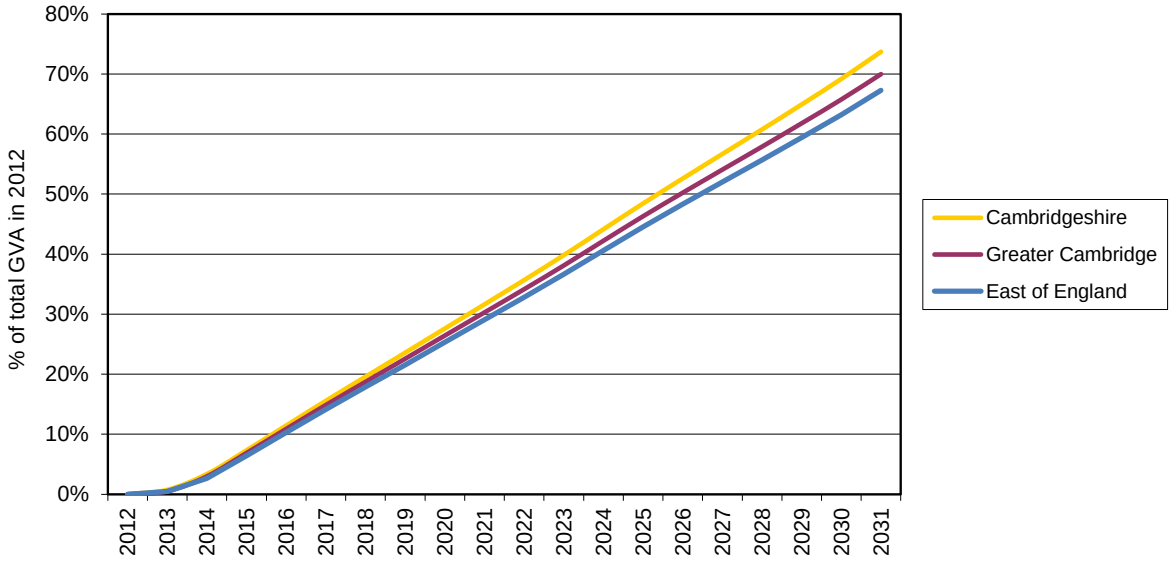
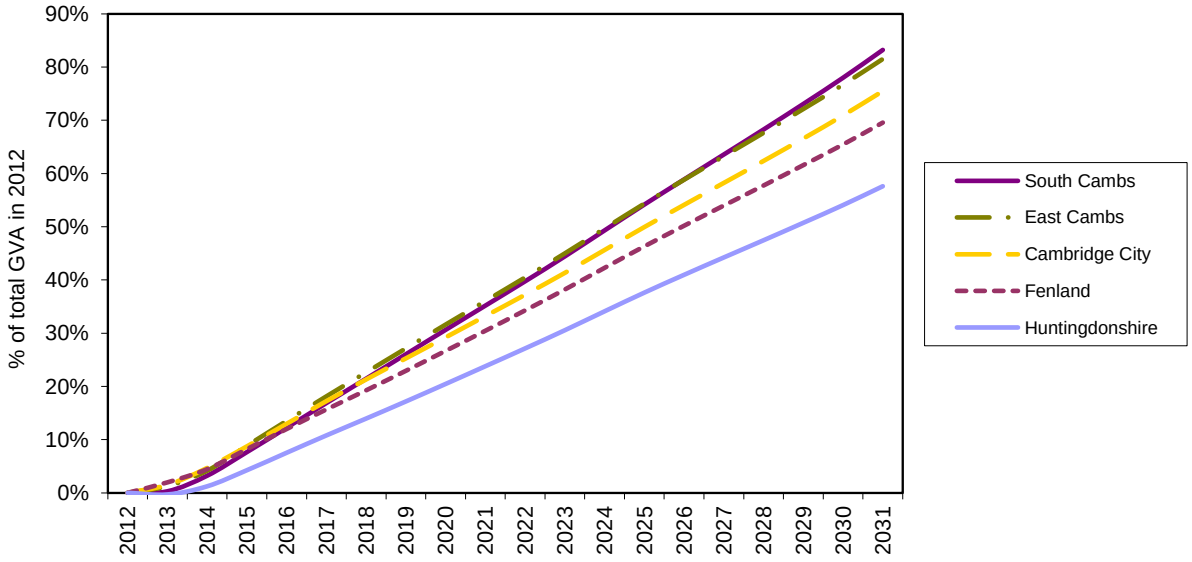


Figure 41: GVA growth forecasts for Cambridgeshire by district

Source: Cambridgeshire Insight – East of England Forecasting Model Spring 2013 Baseline Forecast



Trade value

The pharmaceutical industry generates significant export value; however the East of England as a whole imports significantly more than it exports.

The East of England imports approximately 1.8 times the value of goods that it exports. The majority of export links are with the EU. A high proportion of export value is attributable to machinery and transport industry and chemicals, implying that the pharmaceutical industry within Greater Cambridge generates significant export value.

In 2011, the East of England moved ahead of the North West to be the third highest exporting region by value, with exports valued at £27,634 million. Although this figure dropped to £26,783 million in 2012, it remained in third place behind London and the South East.

Between 2009 and 2012, the East of England consistently generated the second largest value of EU exports of all regions, behind the South East. However, on non-EU exports the East of England performs less well and in 2012, the region was the fifth highest region by export value. This highlights the importance of the EU economy for businesses in the East of England. It seems likely that the fall in EU exports in 2012 is a result of a fall in demand brought on by financial instability in the Eurozone.

The East of England is unlike other regions across England in that the majority (56%) of its total exports are to the EU. Across most other regions, the value of non-EU exports slightly exceeds that of EU exports.

Figure 42: East of England export value by year
Source: HMRC – Regional Overseas Trade Statistics

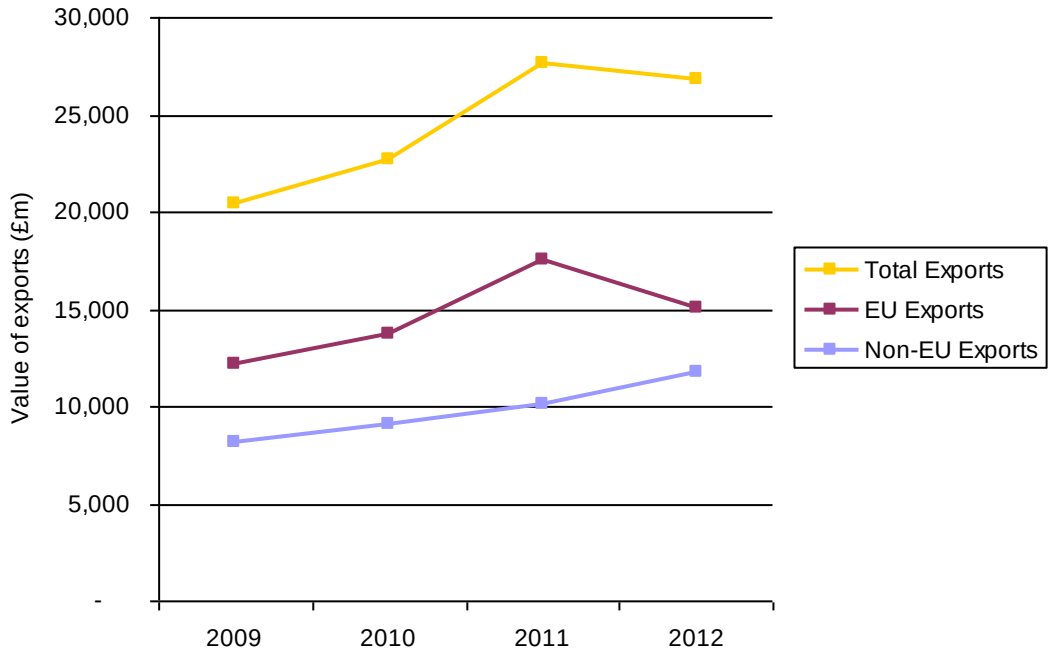
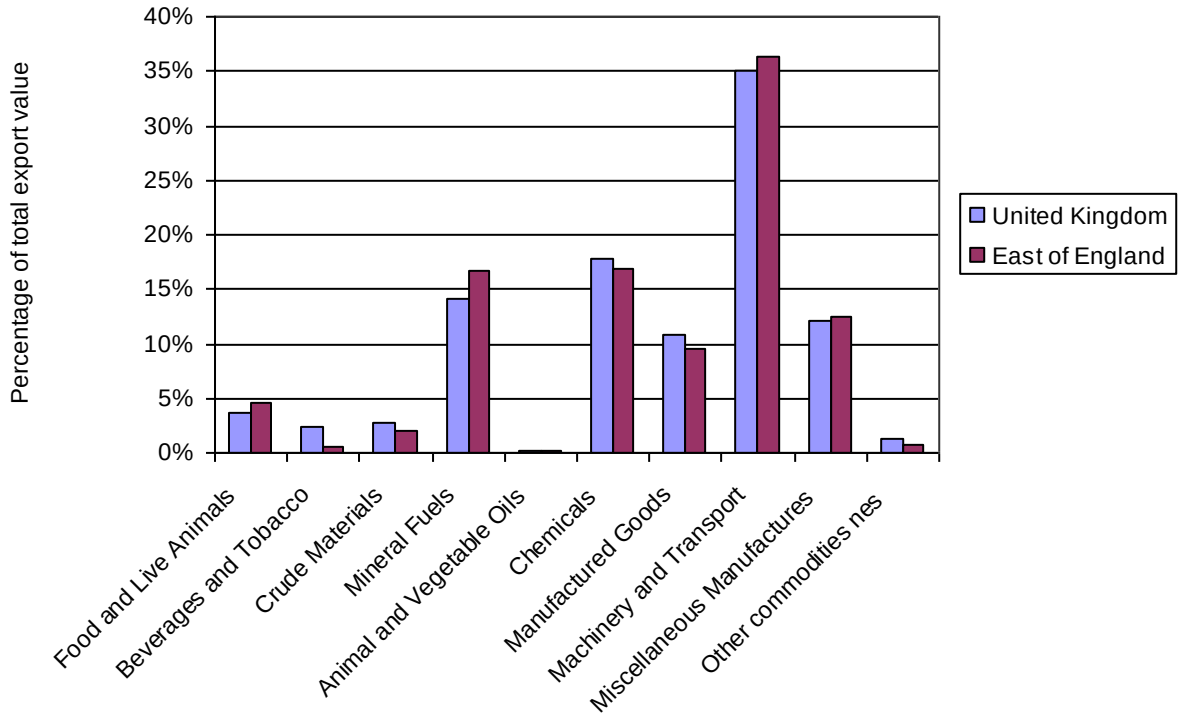


Figure 43 over the page shows that a higher proportion of the East of England export value is generated from the machinery and transport industry (reflecting the strength of the car industry in the region) and the chemical industry (reflecting the pharmaceutical strengths across Greater Cambridge) than across the UK as a whole.

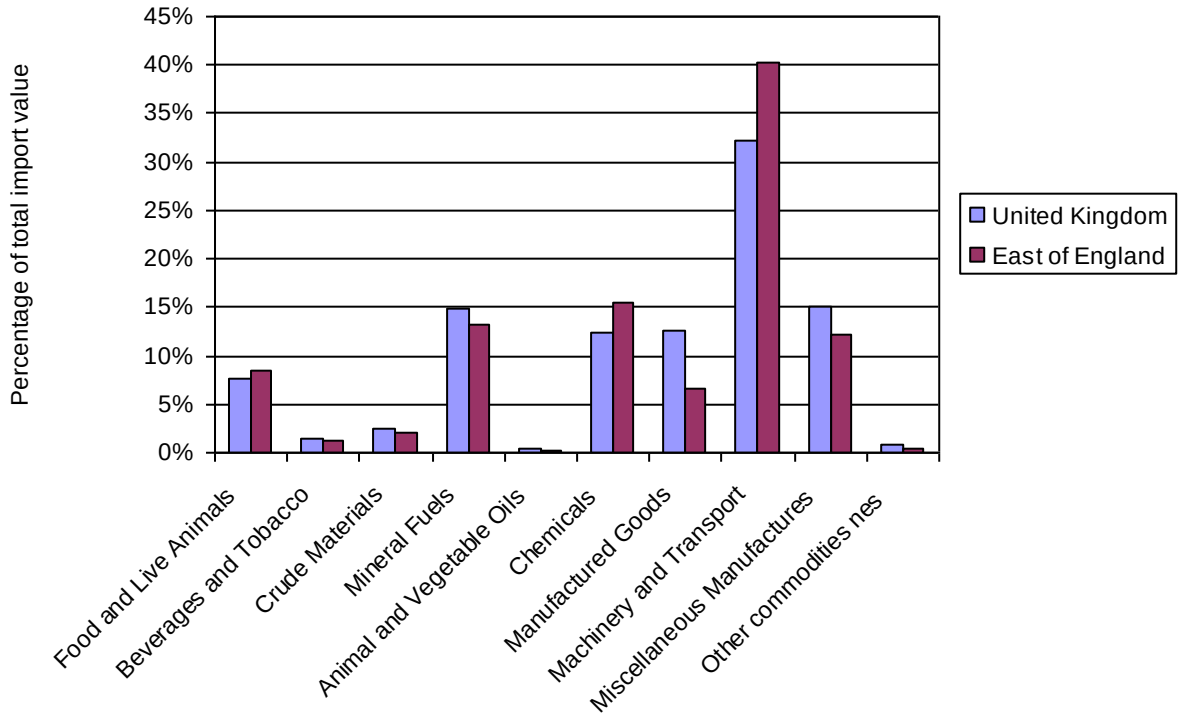
Figure 43: Total export value by SITC section in 2012
Source: HMRC – Regional Overseas Trade Statistics



In 2012, the East of England imported approximately 1.8 times the value of goods that it exported, a higher ratio than across the UK as a whole, where the value of imports is around 1.4 times the value of exports.

A high proportion (over 40%) of import value is attributable to machinery and transport, again reflecting the significant car industry in the East of England.

Figure 44: Total import value by SITC section in 2012
Source: HMRC – Regional Overseas Trade Statistics



Skills Profile and Employer Demand

Skills priorities cut across technical, managerial, entrepreneurial and core skills.

1) Secure Cambridgeshire's success and increase its contribution to UK plc.

- *Increased promotion and funding of technical and scientific skills in support of ICT, engineering and high value manufacturing.*
- *Targeted managerial training for potential high growth companies and bespoke training support (short and flexible) for smaller companies who have little spare capacity to undertake training or take on apprentices.*
- *Up-skilling and re-skilling the existing workforce, across the public, private and third sectors. Future projections indicate that demand for intermediate and high skilled employees is anticipated to outstrip demand for low skilled employees – 75% of the 2020 workforce is already in work.*
- *Furthermore, the 're-balancing' of the economy away from the public sector will require significant re-skilling of public sector workers, significant investment in entrepreneurship skills and up-skilling of third sector organisations.*

2) Raise economic activity levels in deprived areas.

- *Increase targeted, tailored and co-ordinated interventions that address core skills and low level learning, particularly among long term benefit claimants and in rural areas. This will be vital in driving the economic prosperity of more deprived areas, increasing the available workforce for existing employers and opening up opportunities such as self employment to the resident population.*
- *Enable the targeting of resource to small geographic areas to build educational participation and attainment of young people from deprived areas, therefore increasing the available, skilled workforce for local employers and supporting economic growth.*

Key areas of unmet demand articulated by employers

- Corporate managers, specifically in relation to ICT, digital economy and technological change;
- Health and social care professionals;
- Science and technology professionals in pharmaceutical and medical technology industries;
- Professional and technical roles particularly in manufacturing/process sectors and construction;
- Customer service, particularly for the tourism and retail industries;
- Food technologists for the manufacturing and processing industries.

Evidence from Connected Cambridge Linked In Group Discussion (1477 members)

- High number of vacancies in the ICT sector – 200 jobs advertised on Connected Cambridge every week with a churn of only 13%, i.e. vacancies not being filled.
- Recruitment often takes place from outside of Cambridge or the UK for vacancies within CB1/CB2.
- Many Cambridge organisations have high expectations of academic qualifications in addition to technical expertise, but maintain lower salaries than London.
- Development staff are very academic and technically competent but often don't have the commercial experience or business knowledge to drive a successful business.

Evidence from Fenland 2009 Business Survey (225 responses)

- 30% of respondents experienced difficulty in recruiting skilled manual workers.
- Many respondents also encountered problems in recruiting managerial, professional, clerical and semi-skilled workers.

Employer Skills Forum – Conducted for Greater Cambridge Partnership in 2009-10

Construction sector skills gaps/needs

- The highest numbers of skills gaps are within skilled trade professions (LSC Employer Skills Survey 2007).

- Management skills gaps (oral communication; team working; delegating; supervising; writing; IT customer focus; and finance) exist in the industry in Greater Cambridge.
- The sector requires low carbon/BREEAM excellent building training targeted at small sub-contractors.

Food processing sector skills gaps/needs

- ESOL provision is a priority for the sector, both for safety and to ensure migrant workers are fulfilling their economic potential.
- 11% of employers in the region state skills gaps are most prominent in the machine operative/production line worker area – the bulk of the need is for technical and practical skills.
- The sector has struggled to attract enough good new people and is not seen as a career of choice by many people and levels of progression and formal qualifications are low by comparison with many other sectors.[27]
- It is recognized that there will be demand for skills at all levels, but businesses are anticipating a larger increase in the demand for higher level and technical skills in subjects as diverse as electronics, mechanisation, quality control, ICT and production science as the industry becomes more sophisticated.
- The 2010 Skills Challenge report found that, looking forward, businesses highlighted particular needs in relation to:
    - Finding young highly skilled operators for large, complex and computerised machinery;
    - Managers with a balance of technical and management skills to promote growth and efficiency;
    - Finding enough scientists and professionals who wish to specialize in the sector e.g. engineers, bankers, accountants and solicitors;
    - Finding new leaders and entrepreneurs to drive the sector forward and create new products and enterprises, as well as supporting the growth needs of existing entrepreneurs.

The report identified four areas that need to be addressed:

- Attracting young people - who have an increasingly wide range of careers available to them. To compete, the sector must be clear on the career potential it offers, dispel the myth that it is a closed shop and focus on the 14-16 age group as they make career choices. The sector needs to use routes such as partnerships with schools or Young Farmers to reach out into non-traditional markets and develop innovative ways into the sector for the young. A full range of routes is required including the 14-19 diploma (funding permitting) as well as both academic and vocational routes.
- Attracting career changers - who in many industries are an increasing source of new recruits. To do this the industry has to encourage people in by clearly explaining the benefits of the sector and selling the sector as a career of choice, helping them to make the transition and by clearly explaining how their transferable skills are valuable within the sector. Some businesses are already doing this and finding it an effective way to obtain skills in areas such as supply chain management or mechanisation. Flexible post-graduate provision is also vital to provide the routes for professionals to retrain within the sector.
- Selling a positive message to key influencers - most people, whether young or old are influenced heavily by those around them, and in relation to careers this includes family, friends, colleagues and services such as the careers service and teachers. It is critical that these people also understand the benefits of working within the industry and are positive about it.
- Promoting attractive conditions - the sector has to ensure that its conditions of employment are competitive, and then promote the rewards which the sector offers to potential new entrants. By investing in new technology the value added per employee can be increased

[27] The Skills Challenge for the East of England's Food & Farming Sector to 2020 (2010)

and this can lead to more attractive conditions, both physically and financially, being provided.

High value manufacturing sector skills gaps/needs

- 64% of companies in the East of England reported skills gaps in mechanical engineering, general engineering and electronics (SEMTA) and this appears to reflect local needs.
- On generic skills, SEMTA found staff lacked core personal skills, management skills, ICT skills and marketing/selling skills.
- All four universities operating in the sub-region are involved in collaborative initiatives with local businesses. However, research from both the Institute for Manufacturing (Cambridge University) and the University of Hertfordshire points to the need for bespoke support for smaller companies – identifying problems and working through individual solutions outside of a business improvement framework or any other generic model. A clear distinction between the needs of medium and small companies needs to be made and a move away from a 'one size fits all' approach to training.

Projected replacement and expansion demand by sector and occupation

Pre-recession, employment growth in Cambridgeshire was greatest in:

- By industry: public administration, education and health; financial and business services; construction
- By occupation: professional occupations; managers and senior officials

Occupational forecasts for Cambridgeshire based on the East of England Forecasting Model estimate that over the next five years replacement demand is likely to be strongest in:

- Professional occupations (particularly teaching and research professionals)
- Managers and senior officials
- Caring personal service occupations
- Associate technical and professional occupations

However all professions are likely to experience a significant level of replacement demand that outstrips any projected decline in total employment resulting in a net requirement in all professions.

Focus groups that took place as part of part of the Cambridgeshire Work and Skills Plan development pointed to likely future growth in health, software, creative industries (including games and sound and imaging), R&D and advanced manufacturing (including biotechnology, pharmaceuticals, ICT, instruments and engineering, materials, printing and packaging and recycling), tourism and hospitality and environmental goods and services. Local economic development policy seeks to encourage hi-tech employment, creative industries, tourism, clean technologies and high value manufacturing.

The East of England Forecasting Model Spring 2010 run, on which the occupational forecasts are based, forecasts that between 2010 and 2015 the largest increases in employment in Cambridgeshire will be in business services, retail, transport and communications, financial intermediation, hotels, distribution and construction. The Spring 2013 run forecasts a somewhat different picture, suggesting that between 2012 and 2017 the largest increases in employment will be in professional services, business services, hotels and restaurants, R&D, construction and land transport.

Occupational forecasts for Cambridgeshire based on the East of England Forecasting Model estimate that over the next five years expansion demand is likely to be strongest in:

- Caring personal service occupations
- Managers and senior officials
- Associate technical and professional occupations

- Professional occupations
- Sales and customer service occupations

All other occupations are projected to experience very little, or negative expansion demand.

Skills for current vacancies

Jobcentre Plus vacancy figures – which relate just to vacancies notified to Jobcentre Plus – show that the greatest numbers of opportunities currently or recently available are in:

- Real estate, renting and business activities. Consistently the industry sector with the highest number of notified vacancies, in 2012 this sector accounted for 50-60% of all Cambridgeshire's notified vacancies in each month.
- Wholesale and retail trade. Although the retail sector has been affected by the recession, there remains a sizeable proportion of vacancies falling in this industry. For Cambridgeshire in 2012, there was an average of around 330 vacancies per month or around 10% of the total. These figures are subject to a lot of seasonal variation.
- Health and social work, and other community, social and personal service activities notified vacancies have increased significantly in this period, especially when compared to the three years previously. In 2012, there were around 2,500 notified vacancies for covering other community, social and personal service activities; however in 2008 there were only around 900.
- In terms of occupations, the highest numbers for 2012 fell into caring professional service occupations and elementary administration and service occupations.

The highest number of unfilled vacancies is consistently in elementary occupations and caring personal service occupations. There is a high proportion of vacancies for process, plant and machine operatives in the north of the county, and more opportunities for science and technology professional and corporate managers in the south.

The National Employer Skills Survey 2011 found that in the UK vacancies for skilled trade occupations were proportionally the hardest to fill. This occupational group accounts for eight per cent of all vacancies but 15 per cent of hard-to-fill vacancies; overall 41% of vacancies for skilled trade occupations are hard to fill.