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Scenario Projections for the Cambridgeshire Local Authorities and Peterborough UA

A final report for the Cambridgeshire Local Authorities and Peterborough UA

7 November 2012

Revision and Authorisation History

Version	Date	Authorised for release by	Description
4.0	7/11/12	Richard Lewney	Final Report with corrected final columns in Tables 7.1, F.3-F.6, G.3-G.6 and H.3-H.6.
3.0	6/7/12	Richard Lewney	Final Report
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1.0	30/5/12	Richard Lewney	Tables and Figures only

Contents

Executive Summary

- This report provides projections of the number of jobs in Cambridgeshire districts and Peterborough to 2031. It updates the projections published in the Cambridgeshire Development Study in 2009. Various sensitivity scenarios are also included:

  - a scenario in which population growth matches projections made by Cambridgeshire County Council Research Group

  - high and low growth scenarios based on stronger or weaker growth in the UK economy and the consequences for Cambridgeshire & Peterborough

The number of additional jobs expected over 2011-31 is much higher than at the time of the Cambridgeshire Development Study

- The baseline projection expects an additional 96,000 jobs in Cambridgeshire & Peterborough by 2031, compared with the number in 2011. This is considerably higher than the 65,000 additional jobs expected at the time of the Cambridgeshire Development Study for the same period. Since the same method was used in both cases, the difference reflects the change in view over the past three years. In 2009, the impact of the recession on employment was expected to be more severe than has turned out to be the case (so far, at least). The UK forecast that underpins the baseline projection now has a modest recovery in the period to 2021 (when public spending austerity cuts continue to depress growth), followed by a period of stronger growth over 2021-31. The net effect of this change in view in the UK forecast is stronger growth in jobs over the whole period.

- When considering projections for the future, it is helpful to draw on the views of more than one forecasting source. The latest forecast from the East of England Forecasting Model (published in May 2012) expects 82,000 additional jobs over 2011-31, fewer than in our baseline projection but again considerably higher than expected at the time of the Cambridgeshire Development Study.

Peterborough and South Cambridgeshire are expected to see the largest increase in jobs

- More than half (53%) of the additional jobs are expected to be located in Peterborough and South Cambridgeshire. Cambridge City and Huntingdonshire account for a further 30%. East Cambridgeshire is expected to see faster growth than Cambridgeshire & Peterborough as a whole, but in absolute terms, the number of additional jobs in the district is small. In Fenland, the number of additional jobs is also small, and the growth rate is among the lowest of all the districts (although it is still faster than the UK average). However, the projections for Huntingdonshire have not been adjusted to reflect the impact of the Enterprise Zone at Alconbury, which will be the subject of a separate report.

High and low growth scenarios suggest a range of 58,000 – 129,000 jobs, around the 96,000 baseline

- If the long-term annual rate of UK GDP growth was 0.5 percentage points higher than in the baseline, the number of additional jobs over 2011-31 in Cambridgeshire & Peterborough is estimated to rise from 96,000 to 129,000. If the rate was 0.5 percentage points lower, the number of additional jobs would drop from 96,000 to 58,000. If the baseline is adjusted to reflect the population assumptions of the Cambridgeshire County Council Research Group, the impact on the demand for population-related services would generate more jobs than in the baseline: 104,000 additional jobs over 2011-31 instead of 96,000. But if account were also taken of the impact of the additional supply of workers available to work (in any sector), the number would be higher.

1 Introduction

In March 2012, Cambridge Econometrics (CE) and SQW Ltd were commissioned by the local authorities of Cambridgeshire and Peterborough UA to undertake a study to update the economic scenario projections developed (in 2009) for the Cambridgeshire Development Study. At the same time, CE was asked to develop a high and a low growth scenario to give an indication as to the range of possible outcomes for employment growth in Cambridgeshire & Peterborough and its constituent local authorities.

The scenarios developed for the study, using Cambridge Econometrics' Local Economy Forecasting Model (LEFM) were: a Baseline Scenario, effectively assuming that historical trends compared with the wider UK economy seen over the past 15 years continue into the future and making projections using CE's baseline economic forecasts for the nations and regions of the UK; an Alternative Demography Scenario, in which dwellings-led population projections from Cambridgeshire County Council Research Group were used to determine the demand for population-related services; a High Growth Scenario, in which the annual rate of UK GDP growth was assumed to be ½ percentage point faster than the Baseline over the forecast period; and a Low Growth Scenario in which annual UK GDP growth was assumed to be ½ percentage point slower than the Baseline over the forecast period.

These scenarios were all developed using a model-based approach, and, with the exception of the population projections used in the Alternative Demography Scenario, they have not been adjusted in the light of 'local' information. The most notable factor that will have an impact on growth in Cambridgeshire & Peterborough over the forecast period but which has not been explicitly taken into account in the scenarios is the development of the Enterprise Zone at Alconbury.

This report discusses how each of the scenarios was developed and presents the resulting employment projections: Chapter 2 presents the Baseline Scenario; Chapter 3 compares the current Baseline with that from the Cambridgeshire Development Study; Chapter 4 compares the Baseline Scenario with the latest Baseline available from the East of England Forecasting Model; Chapter 5 presents the Alternative Demography Scenario and compares it with the Baseline; and Chapter 6 presents the High and Low Growth Scenarios and compares them with the Baseline Scenario. Chapter 7 brings together the key findings of the study.

2 Baseline Scenario Employment Projections for Cambridgeshire and Peterborough

2.1 Introduction

This chapter presents the Baseline Scenario projections that were developed for each of the local authorities and Cambridgeshire & Peterborough as a whole. Section 2.2 discusses the modelling framework and key assumptions underlying the Baseline Scenario, while the remaining sections describe the projections themselves.

2.2 LEFM and the Baseline Scenario

The Baseline Scenario projections were developed in LEFM

The Baseline Scenario employment projections presented in this chapter were developed using the Local Economy Forecasting Model[1] (LEFM) tailored to the economy of each district in Cambridgeshire and Peterborough UA (Cambridge, East Cambridgeshire, Fenland, Huntingdonshire, South Cambridgeshire, Peterborough UA).

LEFM is a demand-led model that models the relationships between firms, households, government and the rest of the world in a highly disaggregated framework (eg 41 industries), which enables the impact on the economy (employment and value added) of demand side factors (such as an increase in demand due to stronger world growth) to be analysed. The disaggregated nature of the model is important because it allows the model to distinguish the very different relationships that exist between particular industries. For example, electronics is distinguished from other, more basic, manufacturing sectors that operate in completely different markets.

Only demand-side impacts are modelled

In LEFM, the impact on a local economy of faster population growth, say, would be shown through the increased demand for goods or services in industries that are particularly dependent on population growth (eg retailing, public administration, health, education, leisure services, construction), which would feed through into higher output and employment (and into household incomes and spending) in those sectors.

The demand-side impact of a faster-growing population would not impact on firms in the electronics sector in the local area, say, as demand for goods from this sector will come almost entirely from the rest of the UK or world. The impact of supply-side factors, such as an increasingly-skilled workforce in the area attracting firms in particular sectors, is, as in other similar models, not modelled in LEFM.

Population is an input to LEFM…

In common with most sub-national economic models, population in LEFM is one of a number of *inputs* to the model – that is, population in LEFM is taken as given and does not change if economic growth in the local area changes.

…and the Baseline uses the ONS 2008-based SNPP

The population projections used for the Baseline Scenario are based on the ONS' 2008-based Sub National Population Projections (SNPP) made consistent with the latest mid-year estimates (to 2010). The 2010-based SNPP were not published in time

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[1] See 7Appendix A: for a description of the Local Economy Forecasting Model.

to use, and in any case they are not consistent with the official ONS mid-year population estimates that we rely on as historical data.

The Baseline Scenario assumes the continuation of past relationships

The Baseline Scenario projections are based on the assumption that historical relationships between growth in the local area relative to the East of England or UK (depending on which area it has the strongest relationship with), on an industry-by-industry basis, continue into the future. Thus, if growth in an industry in the local area outperformed the same industry in the region (or UK) as a whole in the past, then it will be assumed to do so in the forecast period. Similarly, if it underperformed the East of England (or UK) in the past then it will be assumed to underperform the region (or UK) in the future.

The projections are consistent with CE's latest regional forecast, from March 2012

The projections are consistent with CE's latest forecast for the regions and nations of the UK, as developed using the Multi-Sectoral Dynamic Model (MDM-E3) of the UK economy and published in March 2012.

The results for the local areas are projections rather than forecasts. They represent the results of model-based analysis, but have not been refined in the light of qualitative information, legislative changes or other 'soft' information.

The projections are neutral to new policy at local level

Except insofar as particular policies were in force during the period over which the historical relationships have been estimated (around 15 years), and insofar as new policies are taken into account in CE's forecasts at a regional level (which drive the local area projections), the Baseline Scenario projections by local authority are policy neutral. For example, they would not take into account a new policy that favours a particular sector in the local area, or a decision to release land for economic development at a different rate than in the past.

The Baseline Scenario does not include the impact of the EZ at Alconbury

In particular, the Baseline Scenario does not take into account new development planned for the Enterprise Zone at Alconbury. This could have a significant impact on employment prospects in particular sectors in all local authority districts in Cambridgeshire & Peterborough (and elsewhere) as well as the direct impacts in Huntingdonshire itself. An analysis of the direct impact of the development at Alconbury on Huntingdonshire is being undertaken by SQW and CE separately to this study.

There are no constraints on labour supply

In the scenarios developed for this study, it is assumed that employment growth is not restricted by labour market constraints, except insofar as such constraints have existed in the recent past (which would be reflected in the historical relationships that are estimated). If, in the forecast period, the labour supply in the local area is not sufficient to satisfy the level of employment projected, then the shortfall is assumed to be made up by increased net in-commuting.

Employment in LEFM is measured as 'jobs'

The measure of employment in LEFM is 'jobs'. This means that the actual number of *people* employed in each area can be less than this figure, if, for example, someone has more than one part-time job. It is also important to note that the metric is 'jobs', some of which are part time; the metric is not full time equivalent jobs. This measure includes self-employment, whether on a full-time or part-time basis.

2.3 Headline findings for the Baseline Scenario

Overall growth projections for Cambridgeshire & Peterborough

Figure 2.2 shows Baseline Scenario projections for Cambridgeshire & Peterborough as a whole, compared with CE's forecasts for the East of England and UK. The data have been indexed to 2010=100, so that they can be presented and compared in the same chart. In the Baseline Scenario, UK GDP (which is estimated to have grown by an average of 1.4% pa over 2001-11, which includes the recession) is forecast to increase by 2.6% pa over 2011-21 and 2.4% pa over 2021-31, while GVA[2] growth in the East of England, which averaged 1.2% pa over 2001-11, is forecast to accelerate to 2.5% pa over 2011-21 and still further to 3.3% pa over 2021-31. The chart shows that in this scenario total employment in Cambridgeshire & Peterborough is projected to grow faster than the UK average, and very slightly faster than the East of England.

Figure 2.2: Employment in the Baseline Scenario
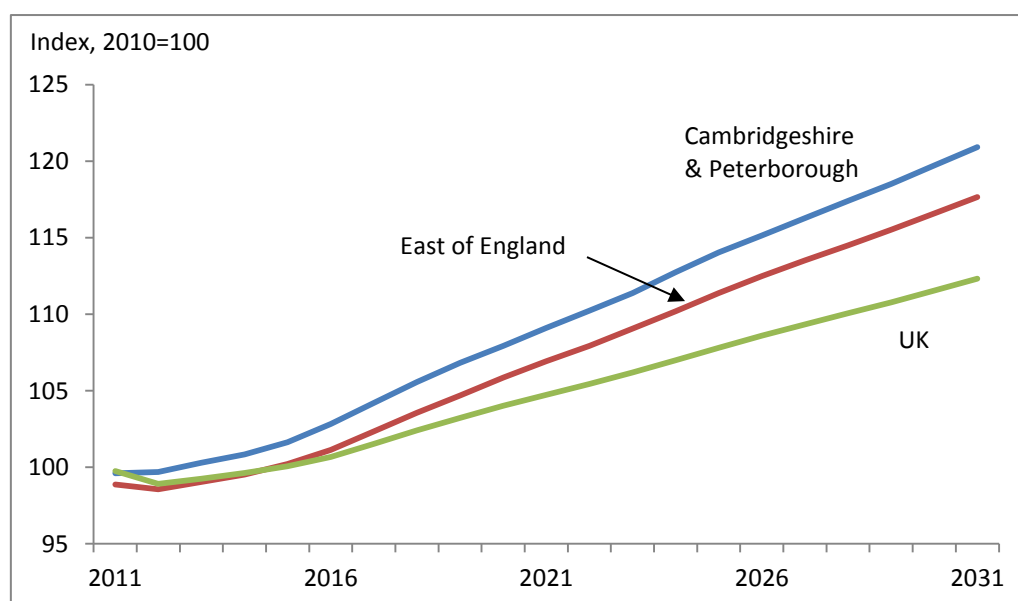
Figure 2.1: Employment in 2011 and projected change in jobs 2011-2031 in the Baseline Scenario, Cambridgeshire districts and Peterborough (000s)

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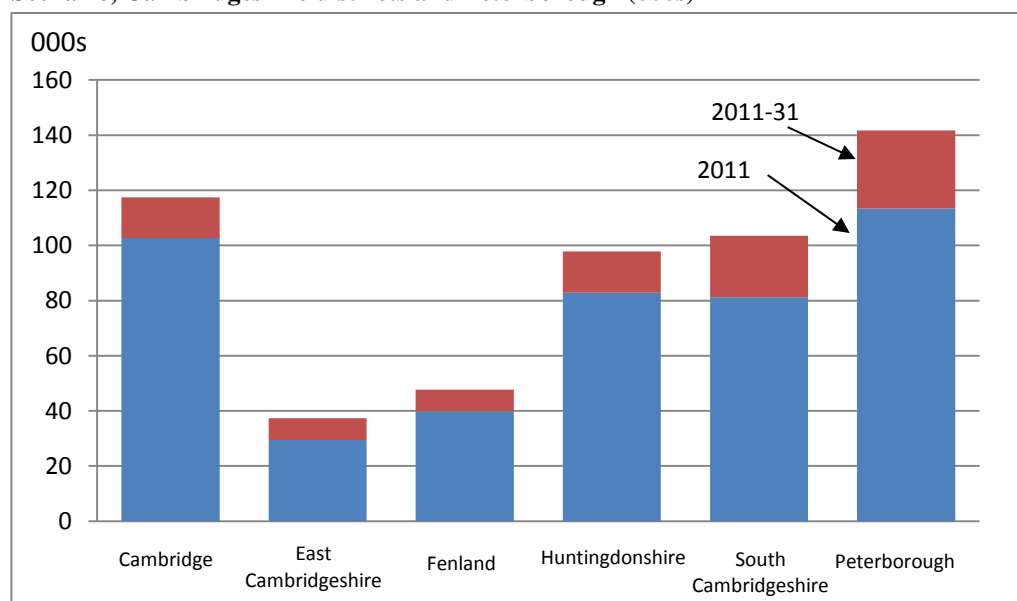
[2] GDP is not measured at subnational level. GVA ('Gross value added') is the nearest equivalent.

Growth projections by district

- The Baseline projections show employment growth in *Cambridge* accelerating from 0.5% pa over 2011-21 to 0.8% pa over 2021-31. This is a considerable increase from the growth rate between 2001 and 2011 (0.1% pa). Employment growth in Cambridge is projected to match that of the UK over 2011-21 and be marginally more rapid (0.8% pa versus 0.7% pa) in the subsequent decade.

- *East Cambridgeshire* had the fastest employment growth rate amongst the areas studied between 2001 and 2011, at 2.7% pa. This far surpassed the average growth in Cambridgeshire and Peterborough combined (1.2% pa) and the national average of 0.4%. The Baseline projects a slowing in employment growth, to 1.2% pa, over 2011-21, although this is still faster than average growth across Cambridgeshire and Peterborough as a whole. Over 2021-31 growth is projected to slow, and to average 1.1% pa across this period.

- According to the LEFM Baseline projection, *Fenland* experienced rapid employment growth, averaging 2.5% pa, over 2001-11. Its growth is expected to move closer to the average level for Cambridgeshire and Peterborough through the period covered by the LEFM projections, slowing to 1% pa over 2011-21 and 0.9% over 2021-31. Fenland's employment growth is similar to the neighbouring region of East Cambridgeshire. As in East Cambridgeshire, the lower growth rates projected over 2011-21 and 2021-31 represent a movement closer to the growth rate for Cambridgeshire and Peterborough as a whole.

- *Huntingdonshire* is projected to experience stable growth in employment in the future, with average annual growth rates of 0.7% over 2011-21 and 0.9% over 2021-31. Growth in Huntingdonshire is expected to be slightly slower than in the wider East of England region, although faster than the UK average. It should be noted that the model does not consider the implications of the new enterprise zone at Alconbury, and that should this deliver the new employment it promises (and should this employment be truly new, rather than pulled from other areas of

Table 2.1: Employment projections in the Baseline Scenario, Cambridgeshire districts and Peterborough UA

	2001-11		2011	2021	2031	2011-21		2021-31	
	(000s)	(% pa)	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Cambridge	0.9	0.1	102.7	108.5	117.5	5.7	0.5	9.0	0.8
East Cambridgeshire	7.0	2.7	29.5	33.4	37.4	3.9	1.2	4.0	1.1
Fenland	8.8	2.5	39.7	43.8	47.7	4.0	1.0	3.9	0.9
Huntingdonshire	6.9	0.9	82.9	89.0	97.8	6.1	0.7	8.8	0.9
South Cambridgeshire	12.8	1.7	81.2	91.3	103.5	10.1	1.2	12.2	1.3
Peterborough	13.2	1.2	113.4	126.3	141.7	12.9	1.1	15.4	1.2
Cambridgeshire & Peterborough (C&P)	49.6	1.2	449.5	492.2	545.6	42.8	0.9	53.4	1.0
East of England	164.7	0.6	2,849.7	3,081.8	3,391.4	232.1	0.8	309.6	1.0
UK	1,207.2	0.4	31,101.8	32,650.5	35,015.4	1,548.7	0.5	2,364.9	0.7
C&P as % of East of England	30.1	0.6*	15.8	16.0	16.1	18.4	0.1*	17.2	0.1*

Notes: * percentage point per annum difference from East of England growth.
Source: Cambridge Econometrics, May 2012.

employment in the district) it will significantly affect the employment growth in Huntingdonshire over the forecast period.

- *South Cambridgeshire* is projected to see robust employment growth (1.2% pa) over 2011-21, followed by 1.3% pa over 2021-31. While this is a slower rate than in the previous decade (1.7% pa), it is the most rapid projected growth of any of the districts studied.

- Employment in Peterborough is projected to grow by 1.1%-1.2% pa over 2011-31, considerably faster than growth in either the East of England or the UK. Employment growth in Peterborough will continue to make the largest absolute contribution (that is, measured in thousands of jobs) of any of the districts to total employment growth across Cambridgeshire and Peterborough.

Growth projections by sector   Table 2.2 shows the Baseline Scenario employment projections by broad sector, for Cambridgeshire & Peterborough as a whole. The table shows that by far the biggest absolute increase in employment is projected to be in Financial & Business Services, which accounts for almost 60% of the total increase in employment in Cambridgeshire & Peterborough over 2011-21 (2% pa), and 45% of the total increase over 2021-31 (1.6% pa). Within this broad sector, the growth is projected to be in non-financial business services, which includes computing services, professional services (such as architects and lawyers) and other business services (such as advertising, labour recruitment, security and industrial cleaning).

In all areas apart from Cambridge, growth in Financial & Business Services is projected to be by far the biggest driver of employment growth across the local authority districts.

Among the other broad sectors, employment in Government & Other Services is projected to pick up in the longer term, particularly in Cambridge, with fairly strong growth (just over 1% pa) leading to an increase of almost 17,000 jobs in Cambridgeshire & Peterborough during 2021-31. Within this broad sector, the growth is expected to be in education, health and miscellaneous services (such as hairdressers and leisure services) rather than public administration.

Table 2.2: Employment projections by broad sector in the Baseline Scenario, to 2031. Cambridgeshire & Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	10.5	10.7	11.0	0.2	0.2	0.3	0.2
Mining & quarrying	0.2	0.2	0.1	-0.1	-2.9	0.0	-2.2
Manufacturing	41.9	40.4	39.7	-1.5	-0.4	-0.7	-0.2
Electricity, gas & water	1.9	3.3	4.2	1.4	5.4	0.9	2.5
Construction	26.2	29.3	30.8	3.1	1.1	1.5	0.5
Distribution., hotels & catering	97.1	104.5	112.6	7.4	0.7	8.1	0.8
Transport & communications	22.2	23.1	25.1	0.8	0.4	2.0	0.9
Financial & business services	113.1	138.5	162.8	25.4	2.0	24.4	1.6
Government & other services	136.2	142.3	159.2	6.1	0.4	16.9	1.1
Total	449.5	492.2	545.6	42.8	0.9	53.4	1.0

Source: Cambridge Econometrics, May 2012.

Figure 2.3: Employment in 2011 and projected change in jobs 2011-2031, by sector, in the Baseline Scenario, Cambridgeshire & Peterborough

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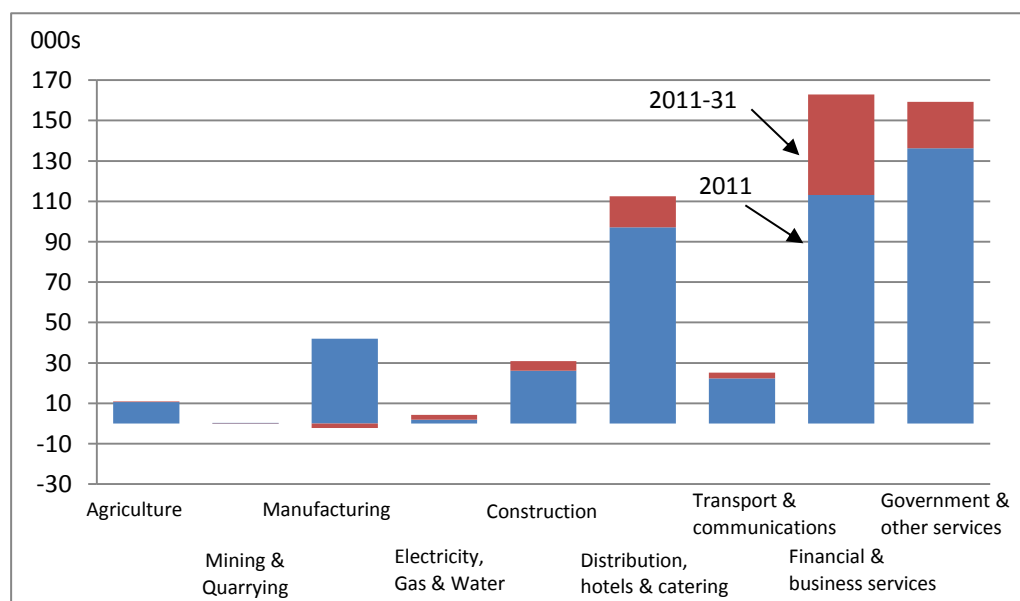
3   Comparison of Cambridgeshire Development Study and Current LEFM Baseline Scenario

3.1   Introduction

This chapter compares the current LEFM baseline scenario described in Chapter 2– which was prepared in April 2012 – with the findings of the baseline scenario prepared for the earlier Cambridgeshire Development Study (CDS).

CDS was completed in 2009 by WSP – in association with Pegasus Planning, SQW and CE – and, at the time, it was regarded as an important piece of work. The context for it was the review of the East of England Plan over the period to 2031. Its timing coincided with the onset of recession and one of its principal findings was that the latest data showed that across Cambridgeshire (excluding Peterborough), employment growth over the period 2001-08 had been far slower than previously assumed and that future projected growth rates over the then-plan period (to 2021) would also be relatively slow.

CDS was informed by two sets of projections which were commissioned from CE – essentially a baseline projection (or "trend" scenario) and a policy-led projection. In terms of their broad structure, these two projections paralleled exactly the two main scenarios developed for the current study; the former was, literally, trend, while the latter included population projections that were informed by dwelling targets from the East of England Plan. In addition, both CDS projections included some "adjustments" to deal, *inter alia*, with the planned move of Papworth Hospital; Cambridge University jobs at North West Cambridge; the treatment of agricultural employment; and the distribution of employment linked to mental health services. Given subsequent improvements to underlying data, the need for adjustments of this nature has diminished somewhat and hence similar adjustments were not made in the context of the current exercise. Nevertheless, it is important to be aware of these issues in making direct comparisons.

In drawing comparisons, two further points are important:

- First, the original CDS considered Cambridgeshire only; it did not examine employment (or any other) issues in Peterborough. However, to provide a comparable dataset, we have generated a set of numbers for Peterborough that represents what we would have projected at the time of the CDS: these are based on the same regional and national forecasts (from 2009) and make exactly the same assumptions as those that informed the original study. These numbers have not been seen previously, but they are included here to allow comparison of our current projections with a CDS-comparable projection also for Peterborough.

- Second, the principal focus of the original CDS was the period 2007-31 and the annexes to that report (in which employment projections are considered in detail) all relate to this period. The current study is focusing on the period 2011-31. To allow comparability for a common projection period (2011-31), we have recovered the full data underpinning the CDS to extract information relating to 2011. These data were not published in the original CDS report, but were implicit in the 2007-31 projections that were published.

3.2   Headline findings

Overall growth projections for Cambridgeshire & Peterborough

Other than the adjustments that were made to the CDS baseline (as described above), the only difference between the CDS baseline and that produced for the current study is the information available at the time the two projections were produced. The first set was prepared in early 2009, at the start of the recession; the current projections were prepared just over three years later. Hence the difference, essentially, relates to the assumptions that were made regarding the duration and severity of recession.

As shown in Figure 3.1, overall, the baseline projection from CDS suggested an increase of 51,000 jobs across Cambridgeshire between 2011 and 2031; adding in data for Peterborough, the increment rises to 65,000. The current baseline projection points to growth of 97,000 jobs overall (of which 68,000 are in Cambridgeshire).

While the recession has lasted longer than originally expected (especially as we have now entered the double dip), overall employment numbers have proved fairly resilient: employers have opted for shorter hours and reduced pay rather than wholesale redundancies. It is for this reason that the employment numbers in the later projections are more bullish; obviously though, reduced hours and reduced pay will have an impact on the output (value added) associated with that employment.

Figure 3.1: Comparison of Projected Employment Growth in Cambridgeshire Development Study 'Trend' and Current LEFM Baseline Scenario, 2011 and 2011-31
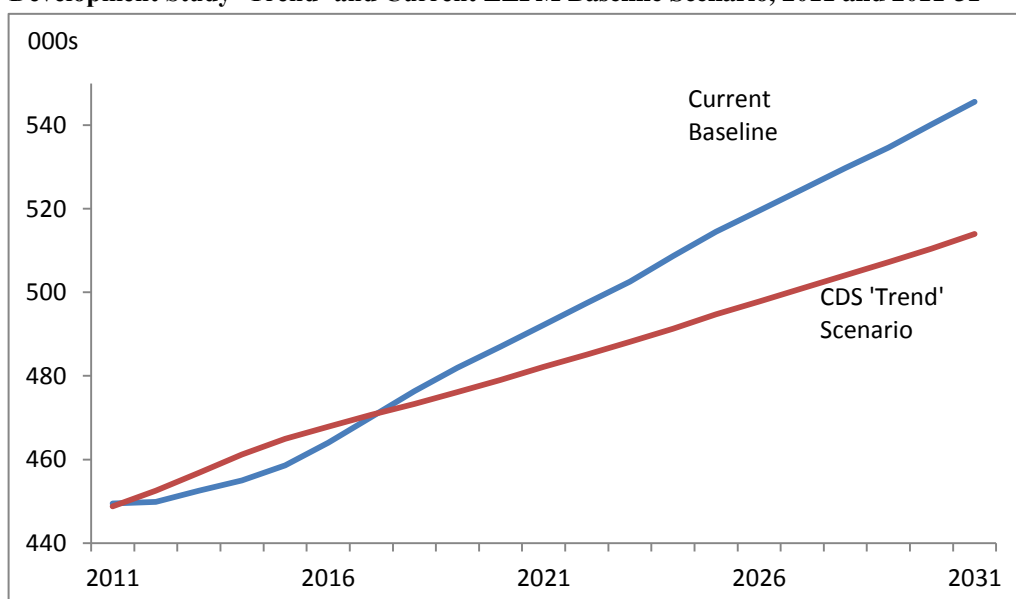
Growth projections by district

Table 3.1 compares projected trend-based employment growth from CDS (with Peterborough data added in) with that derived from the new projections for the period 2011-31 at the scale of individual districts. As ever, some care is needed in interpretation as economic models inevitably become subject to greater uncertainty at smaller spatial scales. Nevertheless, the following headline observations are important:

- For *Cambridge*, the new projections are suggesting slower growth over 2011-31 in employment than CDS (and Cambridge is the only district for which this is the case). However the absolute scale of projected increase of employment remains substantial, second only to South Cambridgeshire among the Cambridgeshire districts; it is worth noting that over 2001-11, Cambridge saw very little employment growth

Table 3.1: Comparison of Projected Employment Growth in Cambridgeshire Development Study (2009) 'Trend' and Current LEFM Baseline Scenario

| | CDS 'Trend' | | | | Current Baseline | | | |
| | | | 2011-31 | | | | 2011-31 | |
	2011	2031	(000s)	(% pa)	2011	2031	(000s)	(% pa)
Cambridge	99	117	17.8	0.8	103	117	14.7	0.7
East Cambridgeshire	35	41	6.8	0.9	30	37	7.9	1.2
Fenland	41	43	2.0	0.2	40	48	8.0	0.9
Huntingdonshire	84	92	7.9	0.4	83	98	14.9	0.8
South Cambridgeshire	77	93	16.2	1.0	81	104	22.3	1.2
Peterborough	113	127	14.4	0.6	113	142	28.3	1.1
Cambridgeshire & Peterborough	449	514	65.2	0.7	449	546	96.1	1.0

- Projected rates of employment growth are very similar in East Cambridgeshire and South Cambridgeshire on both sets of projections, and in both cases, the current baseline projections are more bullish than those produced for the CDS

- In relation to both *Fenland* and *Huntingdonshire*, the two projections are substantially different. For the former, whereas the baseline projection from CDS anticipated an increase of 2,000 jobs over the period 2011-31, the new projections suggest growth of 8,000 jobs over the same timescale (although the rate of growth remains lower than the average for Cambridgeshire and Peterborough). In Huntingdonshire, the CDS baseline projected 8,000 new jobs whereas the new projections suggest 15,000 (again, at rates of growth which in both cases are lower than the average)

- In relation to *Peterborough*, the newer projections are more bullish than the old and whereas the first set were less optimistic than for Cambridgeshire and Peterborough as a whole, the newer projections suggest faster growth.

Growth projections by sector

Table 3.2 (below) summarises the two sets of projections, this time cut by broad sector.

Both sets of projections suggest that *financial and business services* are likely to account for the largest share (in absolute terms) of employment growth over both decades. However while the rate of growth is similar on both projections from 2021-31, the earlier projections suggested that this sector would account for almost 80% of total number of additional jobs while the current ones indicate that it will account for less than 50%.

The difference in the share of financial and business services growth in the total is driven in part by what is projected in relation to other sectors. In particular:

- The earlier CDS projections anticipated a substantial fall in *manufacturing* employment over both decades. While still suggesting a loss of manufacturing employment, the scale of job loss in the current projections is much reduced, reflecting the 'rebalancing' of the wider UK economy: overall, the CDS projections suggest a loss of over 15,000 manufacturing jobs between 2011 and 2031 whereas the new projections point to a loss of 2,200 jobs

- The newer projections are more bullish than those generated for CDS in relation to *government and other services*: whereas the earlier exercise projected 17,200 additional jobs, the later one points to an extra 23,000 jobs in this sector.

Table 3.2: Employment projections by Sector in the CDS 'Trend' Scenario and Current LEFM Baseline Scenarios in Cambridgeshire & Peterborough

	CDS 'Trend'				Current LEFM Baseline			
	2011-21		2021-31		2011-21		2021-31	
	(000s)	(% pa)	(000s)	(% pa)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	-1.5	-1.5	-1.4	-1.7	0.2	0.2	0.3	0.2
Mining & quarrying	0.0	-1.7	0.0	-2.0	-0.1	-2.9	0.0	-2.2
Manufacturing	-7.2	-1.6	-8.1	-2.2	-1.5	-0.4	-0.7	-0.2
Electricity, gas & water	-0.1	-0.5	0.0	-0.3	1.4	5.4	0.9	2.5
Construction	1.8	0.6	1.3	0.4	3.1	1.1	1.5	0.5
Distribution., hotels & catering	6.5	0.7	5.4	0.6	7.4	0.7	8.1	0.8
Transport & communications	2.2	1.0	1.7	0.7	0.8	0.4	2.0	0.9
Financial & business services	22.3	2.0	25.0	1.8	25.4	2.0	24.4	1.6
Government & other services	9.3	0.6	7.9	0.5	6.1	0.4	16.9	1.1
Total	33.4	0.7	31.8	0.6	42.8	0.9	53.4	1.0

Figure 3.2: Comparison of CDS 'Trend' and Current LEFM Baseline Employment Projections for Cambridgeshire & Peterborough
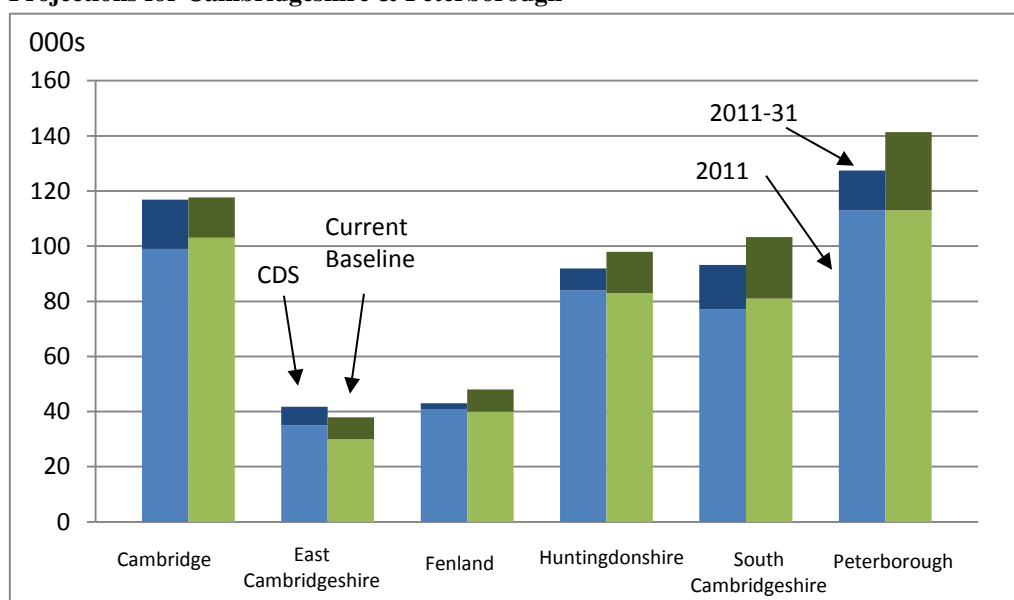
3.3 Conclusions

Overall the baseline projections that informed CDS are more cautious than those generated as part of the current exercise. The main reason for this is the different assumptions made in relation to the scale and impact of recession, and their consequences in relation to job loss. Three main implications follow. Compared to the projections that informed CDS, the new data point to:

- a greater overall scale of employment growth across Cambridgeshire and Peterborough over the period 2011-31

- a changed distribution of growth – with *Cambridge* accounting for rather less; and *Fenland, Huntingdonshire* and *Peterborough* each accounting for a greater share

- a changed sectoral profile with a smaller loss of *manufacturing* jobs and a greater increase of employment in *government and other services* (particularly in the second decade when it is assumed that there is some reaction to the impact of austerity measures in the first decade).

4 Comparison of East of England Forecasting Model Baseline and Current LEFM Baseline Scenario

4.1 Introduction

Over recent years – led initially by the regional agencies – significant investment has been made in the development of an East of England Forecasting Model (EEFM) which is currently being run by Oxford Economics. Since the demise of the regional tier, administrative responsibility for EEFM has shifted to Cambridgeshire County Council. In May 2012, Oxford Economics produced a new set of baseline projections through EEFM and this chapter considers these alongside the current LEFM baseline for Cambridgeshire and Peterborough (which was described in detail in Chapter 2).

EEFM, like LEFM, relies on key assumptions. Both models are complex and a straightforward comparison of their methodologies is not easy. One important difference however relates to population and its link to housing. Overall, EEFM population assumptions are higher than those within LEFM, mainly because the former estimates population by making assumptions for average household size and applies these to assumptions for housing (whereas LEFM makes direct assumptions for population without constraining these to any views on housing supply).

In the past, there have been particular concerns expressed by the local authorities with regard to the modelled outputs from EEFM for Cambridge City – which have been much higher than the actual pattern of employment growth over the last decade. In developing the latest set of outputs, however, OE has made different assumptions, treating Cambridge City in a similar way to all other districts (with results that are discussed below).

4.2 Headline findings

Overall growth projections for Cambridgeshire and Peterborough

Figure 4.1 below provides a headline comparison of the most recent baseline projections from EEFM and LEFM for Cambridgeshire and Peterborough. It suggests that:

- Overall, over the period 2011-31, LEFM is projecting higher levels of employment growth than EEFM: an increment of 96,200 jobs (LEFM) compared to 82,100 (EEFM). By 2031, LEFM is suggesting close to 550,000 jobs in Cambridgeshire & Peterborough while EEFM is estimating a more conservative figure of just under 525,000

- However, LEFM and EEFM are in some disagreement with regard to the timing of employment growth:

  - EEFM suggests much faster recovery from recession and, indeed, much faster employment growth over the early part of the next decade: overall, it projects growth of 1.2% per annum over the period 2011-21, compared to the 0.9% per annum projected through LEFM

  - This picture is reversed over the decade from 2021: EEFM suggests a relatively cautious growth rate (0.5% per annum) while LEFM generates a more optimistic one (1.0% per annum).

Figure 4.1: Comparison of EEFM and LEFM Baseline Employment Projections for Cambridgeshire & Peterborough
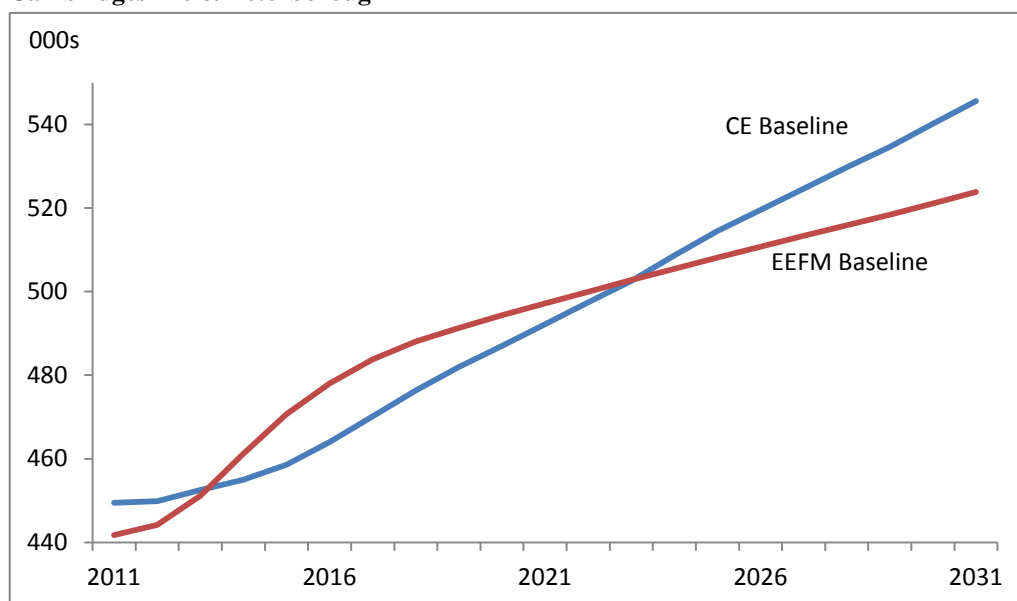
Growth projections by district Table 4.1 provides a detailed breakdown of projected employment growth by district. Taking the two sets of baseline projections at face value, the following observations are important:

Table 4.1: Comparison of EEFM and LEFM Employment Projections for Cambridgeshire LAs and Peterborough

	EEFM Baseline				LEFM Baseline			
	2011-21		2021-31		2011-21		2021-31	
	(000s)	(% pa)	(000s)	(% pa)	(000s)	(% pa)	(000s)	(% pa)
Cambridge	15.4	1.5	6.7	0.6	5.7	0.5	9.0	0.8
East Cambridgeshire	5.6	1.5	2.1	0.5	3.9	1.2	4.0	1.1
Fenland	3.8	0.9	1.1	0.3	4.0	1.0	3.9	0.9
Huntingdonshire	4.1	0.5	0.9	0.1	6.1	0.7	8.8	0.9
South Cambridgeshire	15.3	1.7	9.4	0.9	10.1	1.2	12.2	1.3
Peterborough	11.2	1.0	6.4	0.5	12.9	1.1	15.4	1.2
Cambridgeshire & Peterborough	55.4	1.2	26.7	0.5	42.8	0.9	53.4	1.0
East of England	306.1	1.0	139.8	0.4	232.1	0.8	309.6	1.0
UK	2,152.2	0.7	777.8	0.2	1,548.7	0.5	2,364.9	0.7

Sources: Oxford Economics, EEFM Baseline, May 2012 and Cambridge Econometrics, May 2012.

- In relation to *Cambridge City*, EEFM projects over 15,000 new jobs in the decade to 2021 compared to LEFM's 5,700. Both figures need to be seen in the context of virtually no employment growth over the period 2001-11. The EEFM numbers, in particular, appear to be quite optimistic in these terms. In the second decade, the two rates of growth are more similar (0.6% per annum from EEFM and 0.8% per annum from LEFM).

- For *East Cambridgeshire*, EEFM is more bullish in the first decade while LEFM is more optimistic in the second. Both models suggest that East Cambridgeshire will grow slightly more quickly than Cambridgeshire and Peterborough as a whole over both decades.

- For *Fenland*, the patterns of projected employment growth are broadly similar to the average for Cambridgeshire and Peterborough. Moreover, particularly in the first decade, EEFM and LEFM are similar to each other; in the second decade, LEFM is the more optimistic.

- In relation to *Huntingdonshire*, both models project that the district will grow more slowly than Cambridgeshire and Peterborough over both decades. It is important to note that no account is taken of the likely impact of the Enterprise Zone at Alconbury. This is planned to generate 1,500 direct jobs by 2015 and 8,000 by 2036; if these plans come good and if – as is intended – these jobs are genuinely additional, then they will have a substantial bearing on the outturn in the district and actual growth will significantly outpace that predicted through either of the baseline projections.

- In the context of *South Cambridgeshire*, both models anticipate that the district will grow more quickly than Cambridgeshire and Peterborough over both decades. In fact, both models suggest that South Cambridgeshire will be the fastest-growing district throughout.

- For *Peterborough*, the expectation – from both models – is a pattern of employment growth that is broadly similar to the average for Cambridgeshire and Peterborough as a whole: overall, LEFM is slightly more optimistic (especially in the second decade), but the differences between the projections are quite modest.

Growth projections by sector Table 4.2 provides data on employment growth (and growth rates) by sector, generated from the two different models and relating to the two decades. The picture is quite complicated, but the main points are as follows:

- Overall, the sector that is projected to see substantial growth – on both models and over both decades – is *financial and business services*. During the first decade, on both models, this sector accounts for 60-65% of net employment growth. EEFM projects a similar share in the second decade whereas for LEFM, the sector's share of growth in the period 2021-31 is lower, at 45%. It is important to note that this sector is very wide-ranging. It includes high end services – like professional services and R&D – but also activities in which there are large numbers of poorly paid jobs (e.g. cleaning and security). In addition it tends to include jobs provided via employment agencies which may, in practice, relate to a whole variety of sectors.

- There are notable and important differences between the two models in relation to *manufacturing*. EEFM projects a substantial loss of jobs over both decades. Conversely, for LEFM, whilst job numbers do fall, the rate and scale of decline is

much more modest. For example, over the decade from 2021-31, LEFM suggests a loss of 700 jobs across Cambridgeshire and Peterborough whereas EEFM is suggesting a loss of almost 7,000. The future of the manufacturing sector is important for Cambridgeshire and Peterborough: the view embodied in LEFM is that a vibrant high tech cluster needs associated manufacturing activity and the trend to outsource manufacturing to low wage countries seems to be slowing (as the wage differential declines and the costs of shipping escalate).

Table 4.2 Comparison of EEFM and LEFM Employment Projections by Sector for Cambridgeshire LAs and Peterborough

	EEFM Baseline				LEFM Baseline			
	2011-21		2021-31		2011-21		2021-31	
	(000s)	(% pa)	(000s)	(% pa)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	-0.9	-1.2	-1.2	-1.9	0.2	0.2	0.3	0.2
Mining & quarrying	0.0	-2.8	0.0	-3.5	-0.1	-2.9	0.0	-2.2
Manufacturing	-6.7	-1.5	-6.8	-1.8	-1.5	-0.4	-0.7	-0.2
Electricity, gas & water	-0.5	-1.2	-0.4	-1.2	1.4	5.4	0.9	2.5
Construction	5.6	2.1	2.8	0.9	3.1	1.1	1.5	0.5
Distribution., hotels & catering	12.2	1.3	3.4	0.3	7.4	0.7	8.1	0.8
Transport & communications	2.1	1.0	0.2	0.1	0.8	0.4	2.0	0.9
Financial & business services	37.3	2.9	17.8	1.1	25.4	2.0	24.4	1.6
Government & other services	6.4	0.5	11.0	0.7	6.1	0.4	16.9	1.1
Total	55.4	1.2	26.7	0.5	42.8	0.9	53.4	1.0

Sources: Oxford Economics, EEFM Baseline, May 2012 and Cambridge Econometrics, May 2012.
Note: LEFM projections by sector are defined in terms of SIC2003, EEFM projections by sector are defined in terms of SIC2007. Some differences between the projections by the sectors in this table may be due to differences in definitions between SIC2003 and SIC2007.

- Both models anticipate growth in both *distribution, hotels and catering and transport and communications*. Over the two decades, the levels of growth are fairly similar, but the temporal distribution is different: in line with the overall projections, EEFM is more bullish about the first decade whilst LEFM concentrates growth in the second.

- There are important differences between the two sets of projections in relation to *construction*. Whereas EEFM points to an additional 8,400 jobs over the two decades, LEFM is more cautious, with total projected growth summing to 4,600 jobs.

- Both models point to slow employment growth in *government and other services* over the first decade: in absolute terms this amounts to just over 6,000 jobs in both cases, created at a rate of 0.5% per annum (EEFM) or 0.4% per annum (LEFM). Growth levels and rates are higher in the second decade, but particularly for LEFM.

4.3   Conclusions

The two models make different assumptions about the process of employment growth and each should be regarded as "a view" on the local economy: neither is "right" and

both offer perspectives/insights that ought to be considered in the light of local knowledge.

Overall, the two baseline projections – which were prepared at roughly the same time in 2012 – suggest employment growth of between 82,100 (EEFM) and 96,200 (LEFM) jobs over the period 2001-31. In 2011, the total number of jobs in Cambridgeshire and Peterborough was estimated to be 449,500 (LEFM) and hence it is clear that on either baseline projection, the scale of future growth is significant. However there are clear differences between the two sets of projections in terms of the timing of growth; its spatial distribution; and its sectoral profile. Moreover (by definition), neither of the baseline projections takes any account of some major planned new developments, notably the Enterprise Zone at Alconbury and the new Cambridge Science Park railway station: investments of this nature ought, in principle, to provide a catalyst for growth, some of which will be additional.

5 Alternative Demography-Based Projections for Cambridgeshire and Peterborough

5.1 Introduction

In September 2011, Cambridgeshire County Council Research Group (CCCRG) published its 2010-based population and dwelling stock forecasts[3]. These are 'housing-led' projections, consistent with planned levels of housebuilding between 2011 and 2031, as set out in the East of England Plan draft revision Policy H1: Regional Housing Provision.

The population projections in this scenario come from the Cambridgeshire County Council Research Group

This chapter presents the results of an 'Alternative Demography' scenario developed using the Local Economy Forecasting Model (LEFM), in which the Baseline Scenario population projections (which are based on ONS 2008-based Sub-National Population Projections) were replaced with the CCCRG population projections for each local authority. The exception to this was East Cambridgeshire, for which a more-recently commissioned (also from CCCRG) set of population projections consistent with a more recent dwelling forecast was used.

This scenario shows the sensitivity of the projections for each local authority and by sector to alternative population projections.

5.2 Using the CCCRG Population Projections in LEFM

The CCCRG population projections were adjusted to match the ONS mid-year estimates for 2010

As with the ONS 2008-based SNPP, the population figures for 2010 in the CCCRG population projections are not consistent with the latest ONS mid-year population estimates (the CCCRG has its own method for estimating population in the county). The projections were therefore made consistent with the mid-year estimates by applying the *growth* in the CCCRG projections to the 2010 base year figures from the mid-year estimates. In this way, the *level* of population in the adjusted projections differ from the source CCCRG projections, but the annual growth rates for each age group by gender are the same. If this adjustment had not been made then there would have been a spurious impact on the economic projections in 2011 simply due to differences in the data for the base year.

The adjusted population projections were used as an input to LEFM

The adjusted CCCRG population projections were then input as assumptions into the LEFM model for each local authority to generate the Alternative Demography Scenario. As discussed in Chapter 2, population is an *input* into LEFM and affects the local economy through demand-side drivers. The impact on employment (and output) in each local economy will therefore be apparent in those sectors in which demand is most directly dependent on population growth, such as retailing, public administration, education, health, leisure services and construction. As with all models of this type, there are no supply-side linkages in the model such that an increased supply of a labour force with particular skills, say, would lead to expansion in a sector that requires those skills.

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[3] See

http://www.cambridgeshire.gov.uk/business/research/populationresearch/population/population/Researchgrouppopulationestimates.htm

5.3   Headline findings

The CCCRG population projections show much faster growth than the Baseline over 2011-21

Figure 5.1 and Table 5.1 show the adjusted CCCRG population projections and Baseline Scenario (based on 2008-based SNPP) population projections. They show that the CCCRG projections project much faster growth over the first half of the forecast period, to about 2020, than the Baseline Scenario population projections. This reflects the differences in underlying assumptions, with the ONS-based projections (Baseline Scenario) broadly assuming continued rates of population growth as seen over the five years or so up to 2008, and the CCCRG projections (Alternative Demography Scenario) being based on planned levels of housebuilding in each local authority.

Population is projected to increase by 30,000 more than the Baseline, by 2031, in the CCCRG projections

Overall, population in Cambridgeshire & Peterborough is projected to increase by 150,000 (19%) over 2011-31 in the Baseline Scenario and by 181,000 (23%) over the same period in the Alternative Demography Scenario. For comparison, in the ten year period over 2001-11 (which includes a projection for 2011), population in Cambridgeshire & Peterborough is estimated to have increased by 85,000 (12%).

Population in Cambridge, South Cambridgeshire and Peterborough is projected to grow much faster than the Baseline in the CCCRG projections…

Within Cambridgeshire & Peterborough, the differences between the two sets of population projections are varied. For Fenland, the population projections follow a similar pattern in both scenarios, with the population projected to increase by 22,500 over 2011-31. On the other hand, total population in Cambridge is projected to grow by 15,000 in the Baseline Scenario over 2011-31 but by much more, 30,000 people, in the Alternative Demography scenario. Similarly, population is expected to increase much faster in the Alternative Demography Scenario than the Baseline in Peterborough and South Cambridgeshire.

…but more slowly than the Baseline in East Cambridgeshire and Huntingdonshire

Conversely, population growth in East Cambridgeshire and Huntingdonshire is projected to be much faster in the Baseline than the Alternative Demography Scenario. In the Alternative Demography Scenario total population in Huntingdonshire is projected to fall in the long term, over 2021-31.

- *Cambridge City* experienced average population growth of 1.5% pa between 2001 and 2011. While the Baseline scenario forecasts population growth of 0.6% pa over 2011-31, the scenario taking into account CCCRG's population projections has much faster growth, of 1.1% pa.

- The projected growth rate for *East Cambridgeshire's* population over 2011-31 in the baseline model is 1.2% pa. This is much more rapid than in the CCCRG population projections, where growth averages 0.8% pa. This slower rate in the Alternative Demography scenario means that growth in East Cambridgeshire is projected to be slower than the overall rate for Cambridgeshire and Peterborough, and equal to the rate for the East of England region (which, in the Baseline scenario, it comfortably exceeds).

- The incorporation of the CCCRG population projections does not affect the projected growth rate of population in the *Fenland* district, with both scenarios estimating it to be 1.1% pa. Under both of the scenarios this population growth rate exceeds the growth rate in the wider Cambridgeshire and Peterborough area as well as the East of England and UK growth rates.

- In the Baseline scenario, *Huntingdonshire's* population is projected to continue growing at the same rate as it is estimated to have over 2001-11 (0.7% pa). In the scenario incorporating the CCCRG population projections Huntingdonshire's

projected growth rates is considerably slower, at only 0.4% pa (the lowest in the Cambridgeshire and Peterborough region). While growth in the Baseline scenario is slower than the growth projected for the Cambridgeshire and Peterborough area and the East of England region, the slower rate in the Alternative Demography scenario is even further from the growth rates of the surrounding areas, and slower than the projected UK growth rate (the only district with this feature in either scenario).

- The population in *South Cambridgeshire* is projected to grow at 1% pa in the Baseline scenario, while in the scenario incorporating CCCRG's population projections the rate is faster, at 1.2% pa. Both of these figures are lower than the population growth of 1.3% pa estimated to have taken place in South Cambridgeshire over 2001-11. However, both of these projected rates are faster than the growth rates of the wider Cambridgeshire and Peterborough area, the East of England region and the UK as a whole.

- *Peterborough* experienced estimated population growth of 1.1% pa over 2001-11, the same as the growth rate in the Cambridgeshire and Peterborough area. In the Baseline scenario, Peterborough unitary authority is forecast to continue mirroring the population growth in the wider area, at 0.9% pa over 2011-31. The scenario incorporating the CCCRG population projections forecasts stronger population growth for Peterborough, of 1.4% pa over the same period. This figure is faster than the 1% pa growth rate forecast for the wider Cambridgeshire and Peterborough region.

Figure 5.1: Population in the Baseline and Alternative Demography Scenarios in Cambrideshire & Peterborough
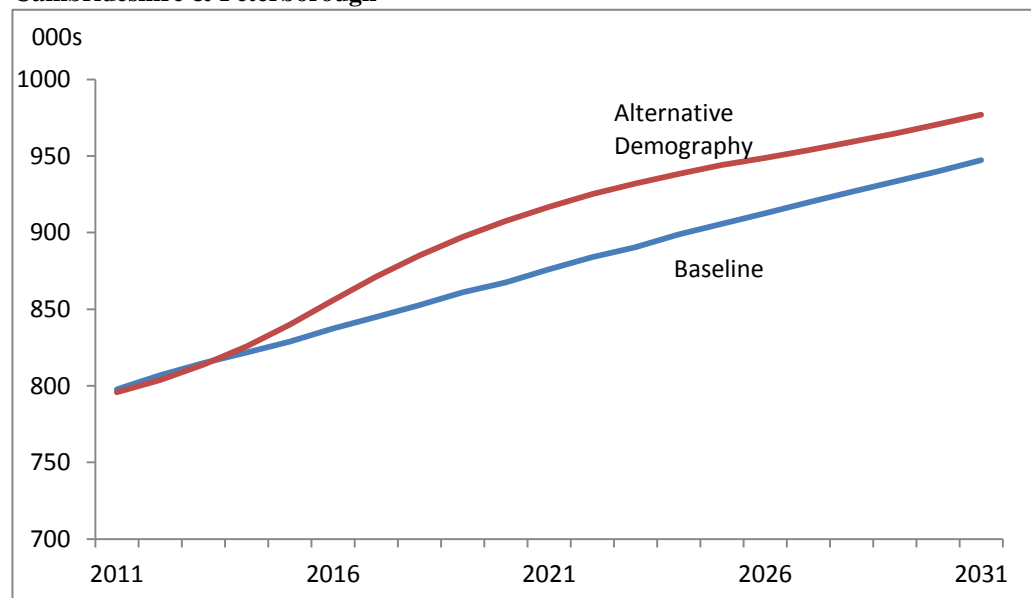
Table 5.1: Population projections to 2031 in the Baseline and Alternative Demography Scenarios

	2011	2001-11		Baseline 2031	2011-31		Alternative Demography 2031	2011-31	
	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)
Cambridge	128	17.7	1.5	143	15.2	0.6	158	30.4	1.1
East Cambridgeshire	86	12.6	1.6	109	23.2	1.2	100	14.8	0.8
Fenland	93	9.1	1.0	115	22.5	1.1	115	22.5	1.1
Huntingdonshire	168	11.0	0.7	191	23.4	0.7	183	14.6	0.4
South Cambridgeshire	148	17.5	1.3	181	33.0	1.0	189	41.4	1.2
Peterborough	175	17.6	1.1	207	32.3	0.9	232	57.5	1.4
Cambridgeshire & Peterborough	798	85.5	1.1	947	149.7	0.9	977	181.2	1.0
East of England	5,849	448.8	0.8	6,832	982.5	0.8	6,832	982.5	0.8
UK	62,418	3,304.5	0.5	69,815	7,397.0	0.6	69,815	7,397.0	0.6

Source: Cambridge Econometrics, May 2012.

The pattern of impacts on the employment projections reflect the profile of the differences in the population projections

Figure 5.2 and Table 5.2 show the employment projections in the Alternative Demography and Baseline Scenarios. The chart shows that the impact on employment of the alternative population projections has a similar profile to the difference between the two sets of population projections, as expected, with faster growth in the first half of the forecast period and slower growth in the second half. The impact on employment is less than proportionate. As already discussed, in LEFM population will only impact on particular sectors, and the overall impact depends on the relative size of those sectors. By 2031, total population in the Alternative Demography Scenario is 3.8% (50,000 people) higher than in the Baseline scenario, while employment is only 1.5% (8,000 jobs) higher in the same period.

Figure 5.2: Employment in the Baseline and Alternative Demography Scenarios in Cambridgeshire & Peterborough
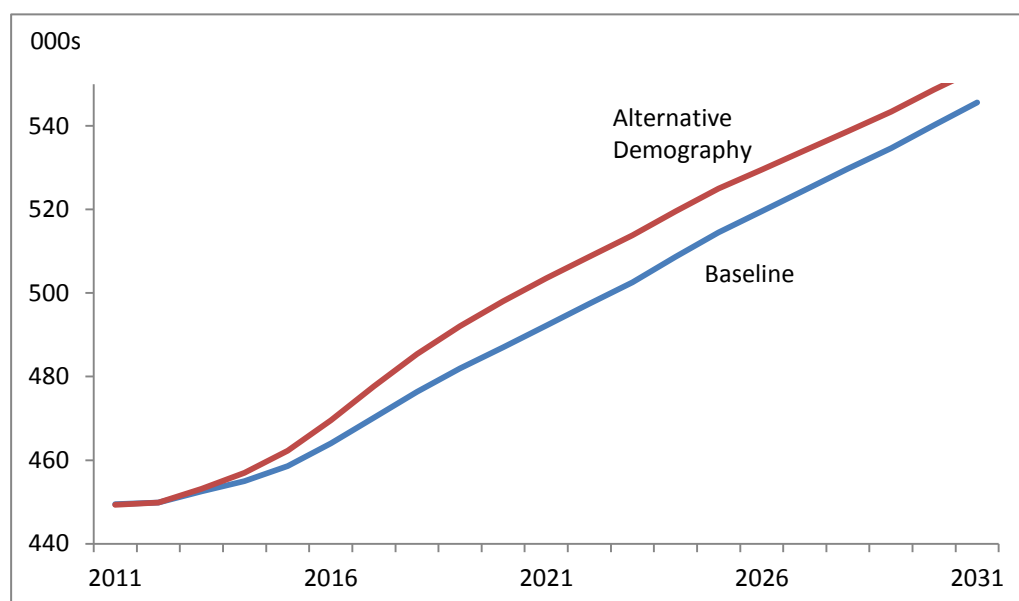
Table 5.2: Employment projections in the Baseline and Alternative Demography Scenarios

	2011	2001-11		Baseline			Alternative Demography		
				2031	2011-31		2031	2011-31	
	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)
Cambridge	103	0.9	0.1	117	14.7	0.7	122	19.6	0.9
East Cambridgeshire	30	7.0	2.7	37	7.9	1.2	36	6.8	1.0
Fenland	40	8.8	2.5	48	8.0	0.9	48	7.9	0.9
Huntingdonshire	83	6.9	0.9	98	14.9	0.8	96	12.9	0.7
South Cambridgeshire	81	12.8	1.7	104	22.3	1.2	104	23.3	1.3
Peterborough	113	13.2	1.2	142	28.3	1.1	147	33.9	1.3
Cambridgeshire & Peterborough	449	49.6	1.2	546	96.1	1.0	554	104.4	1.1
East of England	2,850	164.7	0.6	3,391	541.7	0.9			
UK	31,102	1,207.2	0.4	35,015	3,913.6	0.6			

Source: Cambridge Econometrics, May 2012.

Table 5.2 shows how the employment projections in the Alternative Demography Scenario compare to the Baseline across the local authorities. The pattern of differences in employment projections follows the pattern of differences in population projections, as expected. The biggest positive differences (Alternative Demography versus Baseline) in employment terms are in Cambridge and Peterborough, with around 5,000 extra jobs projected in both authorities by 2031 in the Alternative Demography Scenario. The biggest negative impact of the Alternative population projections is in Huntingdonshire, where total employment is projected to be 2,000 jobs lower than the Baseline in 2031.

- The incorporation of higher population growth rates for *Cambridge City* between 2011 and 2031 result in employment growth accelerating from 0.7% pa to 0.9% pa over the same period. Despite this, employment growth in Cambridge City remains slower than in the wider Cambridgeshire and Peterborough area.

- The impact of the reduced population growth in *East Cambridgeshire* that is part of the CCCRG projections is that employment growth rate slows to 1% pa over 2011-31 (compared to growth in the Baseline scenario of 1.2% pa. This is slower than the employment growth projected for the wider area of Cambridgeshire and Peterborough, which is 1.1% pa.

- The projected employment growth rate for *Fenland* remains the same in both the Baseline scenario and the scenario incorporating CCCRG's population projections. This is in line with expectations, as the population growth rates are identical in both of these scenarios.

- Employment growth in *Huntingdonshire* is slightly slower when the slower growth in population is taken into account. However, the slowdown is minimal, with average employment growth slowing from 0.8% to 0.7%. Under both scenarios Huntingdonshire's employment growth is slower than that of the wider Cambridgeshire and Peterborough area, as well as that of the East of England region.

- Incorporating the CCCRG's population projections into the model pushes *South Cambridgeshire's* projected employment growth rate up to 1.3% (from 1.2% in the Baseline model). This is faster than the 1.1% pa employment growth projected for the wider Cambridgeshire and Peterborough area.

- *Peterborough's* projected employment growth is slightly higher under the scenario built around CCCRG's population projections, at 1.3%, than the 1.1% annual growth projected under the Baseline scenario. Both figures are more rapid than the growth of the wider Cambridgeshire and Peterborough area. Peterborough is expected (under both scenarios) to have the largest increase in employment (in absolute terms) of the six districts analysed.

5.4   Industry Sector Analysis for Cambridgeshire & Peterborough

The largest impact of the alternative population projections is on Government & Other Services

Table 5.3 and Figure 5.3 compare the employment projections from the two scenarios, by sector, for Cambridgeshire & Peterborough. They show that the biggest impact on employment is in Government & Other Services, as this includes public administration, health, and education, for which growth prospects are linked to population growth in LEFM. At a more disaggregated level, the impact is greatest in education and health, in the first half of the forecast period (ie 2011-21).

There is also an increase of 1,000 jobs compared to the Baseline in Distribution, Hotels & Catering, by 2031, which includes retailing.

Table 5.3: Employment projections by Sector in the Baseline and Alternative Demography Scenarios in Cambridgeshire & Peterborough

	2011	2001-11		Baseline			Alternative Demography		
				2031	2011-31		2031	2011-31	
	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)
Agriculture	10.5	5.5	7.6	11.0	0.4	0.2	11.0	0.4	0.2
Mining & quarrying	0.2	-0.1	-2.3	0.1	-0.1	-2.6	0.1	-0.1	-2.6
Manufacturing	41.9	-18.9	-3.7	39.7	-2.2	-0.3	39.7	-2.2	-0.3
Electricity, gas & water	1.9	1.0	7.9	4.2	2.3	4.0	4.2	2.3	4.0
Construction	26.2	7.3	3.3	30.8	4.7	0.8	31.1	5.0	0.9
Distribution, hotels & catering	97.1	15.2	1.7	112.6	15.5	0.7	113.6	16.5	0.8
Transport & communications	22.2	0.8	0.3	25.1	2.9	0.6	25.3	3.0	0.6
Financial & business services	113.1	17.9	1.7	162.8	49.7	1.8	163.7	50.6	1.9
Government & other services	136.2	20.9	1.7	159.2	23.0	0.8	164.9	28.9	1.0
Total	449.2	49.6	1.2	545.6	96.1	1.0	553.7	104.4	1.1

Source: Cambridge Econometrics, May 2012.

Figure 5.3: Projected change in jobs 2011-31, by Sector, in the Baseline and Alternative Demography Scenarios, Cambridgeshire & Peterborough
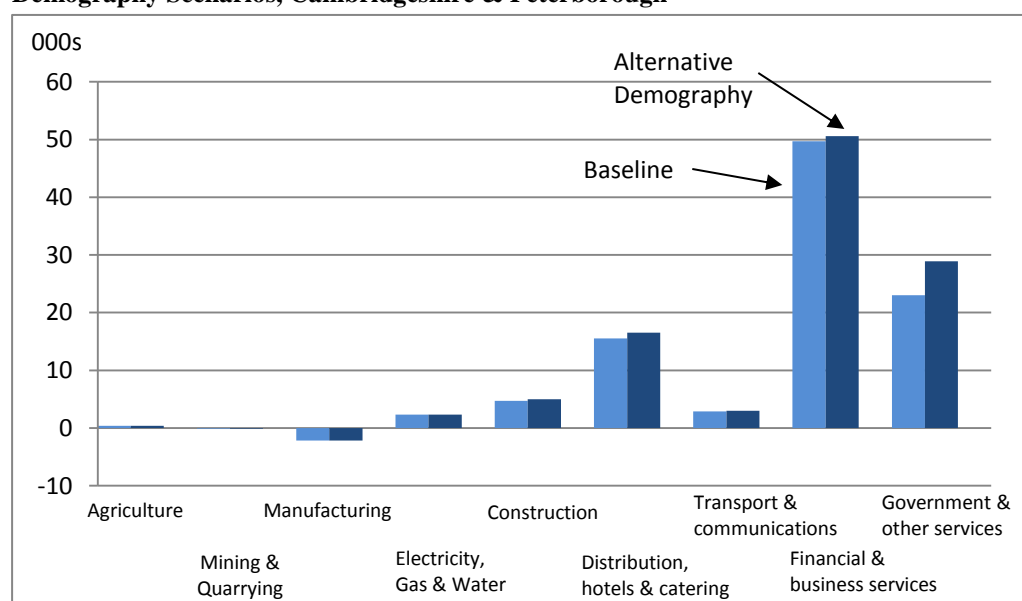
6   High and Low Growth Projections for Cambridgeshire and Peterborough

6.1   Introduction

As part of this study, High and Low Growth Scenarios were developed, to give an indication of the range of possible growth in Cambridgeshire & Peterborough over the next 20 years.   This chapter discusses how those scenarios were developed and presents the resulting employment projections.

6.2   Developing the High and Low Growth Scenarios

The High and Low Growth Scenarios were developed using a top-down approach

The High and Low Growth Scenarios were developed using a top-down approach. That is, scenarios were first developed for the UK as a whole, using Cambridge Econometrics' Multi-sectoral Dynamic Model (MDM-E3) of the UK economy. The impacts on growth by sector at a UK level then fed down into the regions (eg East of England) and nations of the UK via the framework of relationships between the various sectors (eg government, households, firms) and industries in each region. Then, the alternative scenario forecasts for the East of England were used as inputs into the LEFMs for each local authority and the impacts on the various industries in those authorities calculated.

UK GDP growth is boosted/reduced by around 0.5 pp pa

For the High Growth Scenario, overall GDP growth at the UK level was adjusted (through stronger export growth and household spending) to be 0.5 percentage points (pp) per annum (pa) faster than in the Baseline forecast, throughout the forecast period. UK GDP growth (which is estimated to have averaged 1.4% pa over 2001-11) grows by 3.1% over 2011-21 and 2.9% pa over 2021-31 in this scenario. As a result, GVA growth in the East of England is also precisely 0.5 pp higher in this scenario than in the Baseline, and grows by 3% pa and 3.8% over 2011-21 and 2021-31 respectively.

For the Low Growth Scenario, GDP growth was adjusted in a similar manner, to give overall GDP growth 0.5 pp pa slower than in the Baseline forecast, at 2.2% pa over 2011-31 and 1.9% pa over 2021-31. The impact upon GVA growth in the East of England is of a similar magnitude over 2011-31, growing by an average of 2% pa, although the gap between the Low Growth and Baseline Scenarios widens over 2021-31, with GVA growth of 2.6% pa projected for the East of England, 0.7 pp slower than in the Baseline.

These scenarios give a plausible range of outcomes around the Baseline Scenario at the UK level, and subsequently at the local authority level, that could reflect a faster or slower rebalancing of the economy, say, than in the Baseline Scenario.

6.3   Headline findings

Figure 6.1and Table 6.1 show the projections for total employment in Cambridgeshire & Peterborough and the local authorities in each of the Baseline, High and Low Growth Scenarios.

Employment in Cambridgeshire & Peterborough is boosted/reduced by 6/7% above/below the Baseline

By 2031, the number of additional jobs compared with 2011 ranges from 58,000 in the Low Growth Scenario to 128,000 in the High Growth Scenario. This is a range of some 6-7% either side of the Baseline Scenario projection for 2031. That range is slightly larger than the ranges for employment in both the East of England and UK (5½-6% either side of the Baseline Scenario forecast). Thus, the projections for Cambridgeshire & Peterborough are more sensitive to these alternative scenarios, because of the particular industries affected, than the East of England and UK as a whole.

Figure 6.1: Total Employment in the Baseline, High and Low Growth Scenarios
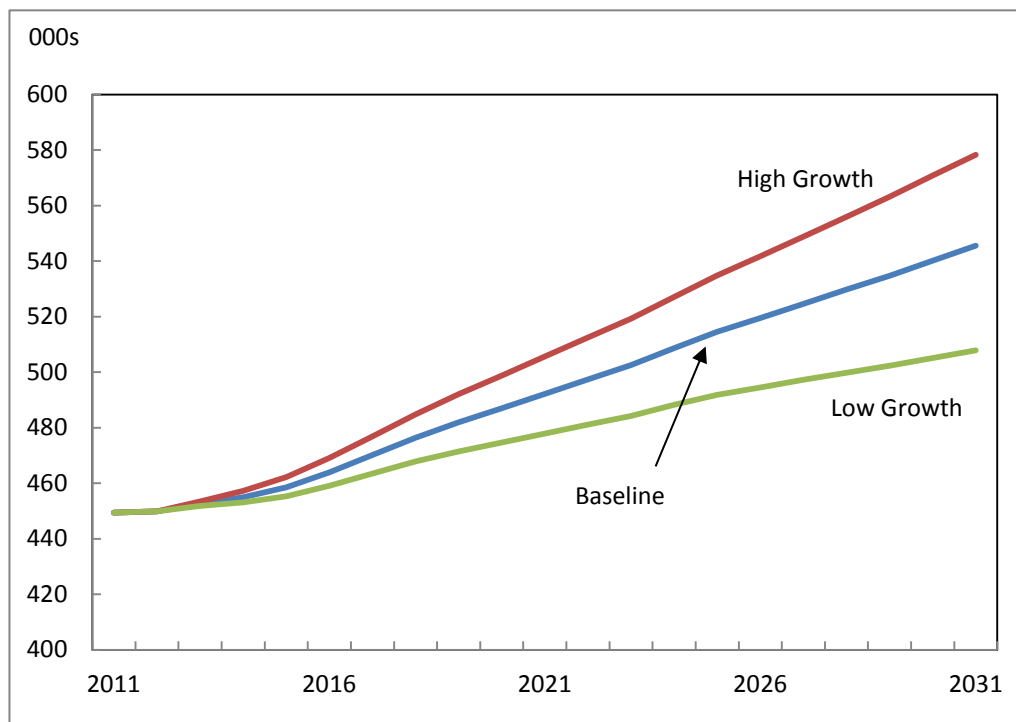
Growth projections for individual districts

Among the local authorities, Cambridge stands out as the area least sensitive to these scenarios, with total employment only 3/5% above/below the Baseline projection in 2031. Again, this reflects the industry mix in the City. At the other extreme, total employment in East Cambridgeshire is *most* sensitive to these scenarios, at 8/8% above/below total employment in the Baseline Scenario in 2031. Peterborough is also quite sensitive to the scenarios, at 7/7% above/below Baseline. Interestingly, South Cambridgeshire is less sensitive to the High Growth Scenario than the average for Cambridgeshire & Peterborough, but more sensitive to the Low Growth Scenario, at 6/9% above/below the Baseline total employment projection for 2031. This, again, reflects the industry mix in the district and the industries that are most affected in the scenarios.

- In the high-growth scenario, *Cambridge City's* employment growth over 2011-31 is projected to be 0.9% pa, 0.2% pp faster than the Baseline scenario projection of 0.7% pa. The low-growth scenario reduces the projected growth rate to 0.4%. Under all scenarios employment growth in Cambridge City is the slowest of the six districts analysed.

- The projected growth in employment in *East Cambridgeshire* in the high-growth scenario is 1.5% pa, 0.3 pp faster than in the Baseline forecast (1.2% pa) and 0.7%

pp faster than in the low-growth scenario (0.8% pa). East Cambridgeshire is projected to grow faster than all regions in the study apart from South Cambridgeshire, and more rapidly than the wider East of England and the UK, under all three scenarios.

- The *Fenland* district is projected to experience employment growth of 0.9% pa in the Baseline scenario. In the high-growth scenario, this is projected to speed up to 1.2% pa, while the low-growth scenario projects annual employment growth of 0.6% pa. These rates are similar to the employment growth expected in the Cambridgeshire and Peterborough area as a whole.

- *Huntingdonshire* is projected to experience employment growth of between 0.5% (in the low-growth scenario) and 1.1% pa (in the high-growth scenario) over 2011-31. Huntingdonshire has the second slowest projected employment growth (after Cambridge City) of all of the regions studied. The projected growth rates are also slightly slower than the rates for the East of England region, but faster than the UK average.

Table 6.1: Employment projections in the Baseline, High and Low Growth Scenarios

	Baseline				High Growth			Low Growth		
	2011	2031	2011-31		2031	2011-31		2031	2011-31	
	(000s)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)
Cambridge	103	118	14.8	0.7	122	19.7	0.9	112	9.2	0.4
East Cambridgeshire	30	37	7.9	1.2	40	10.5	1.5	34	4.9	0.8
Fenland	40	48	8.0	0.9	51	10.9	1.2	45	4.8	0.6
Huntingdonshire	83	98	14.9	0.8	103	20.4	1.1	92	8.6	0.5
South Cambridgeshire	81	104	22.3	1.2	110	29.2	1.5	95	14.0	0.8
Peterborough	113	142	28.3	1.1	152	38.2	1.5	131	17.1	0.7
Cambridgeshire & Peterborough	449	546	96.1	1.0	578	128.9	1.3	508	58.4	0.6
East of England	2,850	3,391	541.7	0.9	3,573	723.1	1.1	3,184	334.4	0.6
UK	31,102	35,015	3,913.6	0.6	36,949	5,847.3	0.9	32,878	1,776.0	0.3

Source: Cambridge Econometrics, May 2012.

- The Baseline, high-growth and low-growth scenarios all maintain relatively strong employment growth in *South Cambridgeshire*, matching East Cambridgeshire's projected growth rates of 1.5% pa in the high-growth scenario and 0.8% pa in the low-growth scenario. All three scenarios result in total employment in South Cambridgeshire exceeding that of Huntingdonshire before 2031.

- *Peterborough's* projected employment growth in the high-growth scenario is 1.5% pa, 0.4% pp faster than the growth in the Baseline scenario. This level of growth would put Peterborough amongst the fastest growing regions in Cambridgeshire and Peterborough. The low-growth scenario projects employment growth of 0.7% pa, which is more rapid than the Cambridgeshire and Peterborough area as a whole, as well as being faster than the East of England region and the wider UK.

Growth projections by sector Table 6.2 and Figure 6.2 show employment by *sector* in Cambridgeshire & Peterborough in the Baseline, High, and Low Growth Scenarios. They show that the biggest impact on growth in a sector is on Construction, in which growth over 2011-31 is boosted from 19% in the Baseline to 31% in the High Growth Scenario, and reduced to only 2% in the Low Growth Scenario.

In absolute terms, however, the biggest impact compared to the Baseline Scenario is on Financial & Business Services, in which an additional 12,000 jobs are created over 2011-31 in the High Growth Scenario, and 15,000 fewer jobs are created in the Low Growth Scenario.

Table 6.2: Employment projections by Sector in the Baseline, High and Low Growth Scenarios in Cambridgeshire & Peterborough

		Baseline			High Growth			Low Growth		
	2011	2031	2011-31		2031	2011-31		2031	2011-31	
	(000s)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)
Agriculture	11	11	0.4	0.2	12	1.0	0.5	10	-0.2	-0.1
Mining & quarrying	0	0	-0.1	-2.6	0	-0.1	-2.6	0	-0.1	-2.6
Manufacturing	42	40	-2.2	-0.3	42	0.3	0.0	37	-4.7	-0.6
Electricity, gas & water	2	4	2.3	4.0	5	2.8	4.5	4	1.6	3.1
Construction	26	31	4.7	0.8	34	8.1	1.4	27	0.6	0.1
Distribution, hotels & catering	97	113	15.5	0.7	119	22.3	1.0	105	8.4	0.4
Transport & communications	22	25	2.9	0.6	27	4.3	0.9	24	1.3	0.3
Financial & business services	113	163	49.7	1.8	175	61.8	2.2	148	34.4	1.3
Government & other services	136	159	23.0	0.8	165	28.3	0.9	153	17.2	0.6
Total	449	546	96.1	1.0	578	128.9	1.3	508	58.4	0.6

Source: Cambridge Econometrics, May 2012.

Figure 6.2: Projected change in jobs 2011-31, by Sector, in the Baseline, High and Low Growth Scenarios, Cambridgeshire & Peterborough
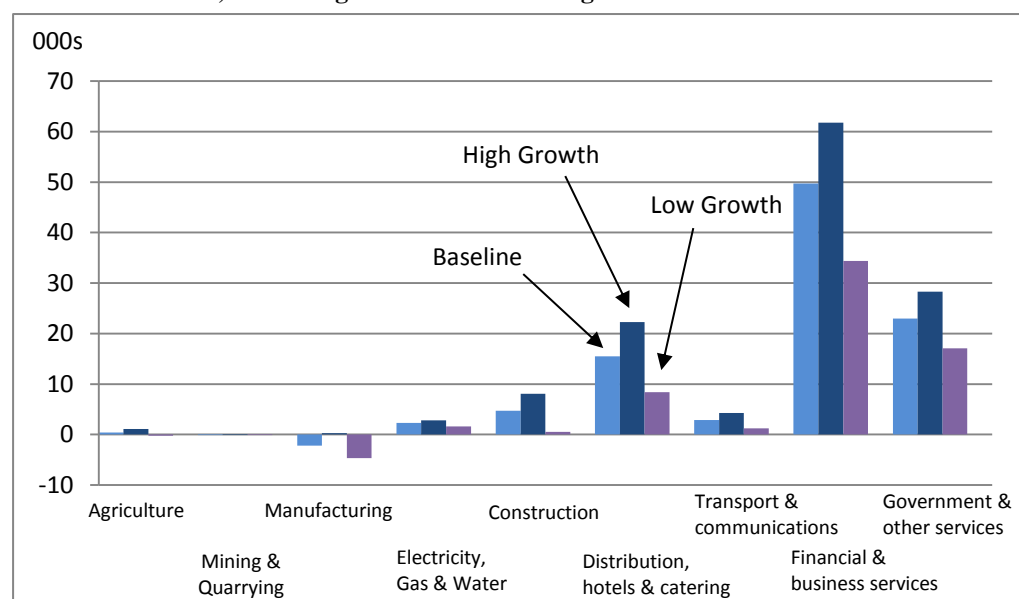
7 Conclusions

A summary of the projections is included in Table 7.1 below.

Table 7.1: Overview of employment projections

	Baseline				High Growth			Low Growth			Alternative Demography		
	2011	2031	2011-31		2031	2011-31		2031	2011-31		2031	2011-31	
	(000s)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)	(000s)	(000s)	(% pa)
Cambridge	103	117	14.7	0.7	122	19.7	0.9	112	9.2	0.4	122	19.6	0.9
East Cambridgeshire	30	37	7.9	1.2	40	10.5	1.5	34	4.9	0.8	36	6.8	1.0
Fenland	40	48	8.0	0.9	51	10.9	1.2	45	4.8	0.6	48	7.9	0.9
Huntingdonshire	83	98	14.9	0.8	103	20.4	1.1	92	8.6	0.5	96	12.9	0.7
South Cambridgeshire	81	104	22.3	1.2	110	29.2	1.5	95	14.0	0.8	104	23.3	1.3
Peterborough	113	142	28.3	1.1	152	38.2	1.5	131	17.1	0.7	147	33.9	1.3
Cambridgeshire & Peterborough	449	546	96.1	1.0	578	128.9	1.3	508	58.4	0.6	554	104.4	1.1
East of England	2,850	3,391	541.7	0.9	3,573	723.1	1.1	3,184	334.4	0.6			
UK	31,102	35,015	3,913.6	0.6	36,949	5,847.3	0.9	32,878	1,776.0	0.3			

Source: Cambridge Econometrics, May 2012.

This illustrates the major differences in terms of outcomes for employment across the four scenarios considered.

In the Baseline Scenario, employment grows by 1% pa in Cambridge & Peterborough over 2011-31

- The Baseline scenario has an increase of 96,000 jobs over 2011-31. This compares with 65,000 jobs for the same period expected at the time of the Cambridgeshire Development Study, and 82,000 jobs expected in the East of England Forecasting Model projection published in May 2012.

Increased UK GDP drives faster employment growth in the High Growth Scenario

- The High Growth Scenario shows the largest increase in employment over the period 2011-31. The increased growth of GVA across the region (0.5 pp higher than in the Baseline Scenario) has a clear positive impact on employment across all areas with 129,000 additional jobs; the largest impact is in Peterborough, while the other extra jobs are shared relatively equally (in absolute and percentage terms) across the other five areas.

An accelerated rate of population increase results in higher employment levels in the Alternative Demography Scenario

- The faster projected growth in population across Cambridgeshire & Peterborough as a whole results in the Alternative Demography Scenario showing a higher number of jobs by 2031 as compared to the base case. The primary increases are in the major urban locations of Cambridge and Peterborough, where population-related services are concentrated; while the population growth in South Cambridgeshire is more rapid in the Alternative Demography Scenario than in the Baseline, this is not reflected in the employment figures.

Slower economic growth in both the UK and the East of England constrains employment growth in the Low Growth Scenario

- The Low Growth Scenario is significantly more pessimistic than the others. Over 2011-31 only 58,000 additional jobs are expected, 61% of the total in the Baseline. In percentage terms this weaker growth is relatively equally distributed across the areas, with growth 0.3-0.4 pp slower in every area, while in absolute terms job growth falls most in Peterborough and South Cambridgeshire rates; although both are still higher than the average for Cambridgeshire & Peterborough as a whole.

The following headline findings emerge from the different sets of projections considered in this study:

- Overall, on the baseline projection prepared for this study, employment in Cambridgeshire & Peterborough is projected to grow slightly more quickly than in the East of England which in turn is projected to grow more quickly than the UK, over the period 2011-31.

- Within this, there are clear spatial differences at a district level: South Cambridgeshire and East Cambridgeshire are the fastest-growing districts; Cambridge and Huntingdonshire are the slowest. However, these baseline projections take no account of some key interventions – notably the Enterprise Zone at Alconbury.

- Compared to the 2009 CDS, the new baseline projections are more bullish. This is because of changed assumptions regarding the duration and severity of recession. While the recession is, perhaps, lasting longer than expected, it has not – in general – resulted in high levels of job loss (as was originally anticipated); instead employers have saved money by reducing wages and hours (but not overall job numbers).

- Over the decade from 2011-2021, EEFM is projecting faster employment growth than LEFM. This pattern is reversed over the subsequent decade. Overall, over the period 2011-2031, LEFM baseline projections are more bullish than those from EEFM. Sectorally, there are some important differences between the two sets of baseline numbers: specifically, LEFM is less pessimistic than EEFM in terms of prospects for manufacturing, while LEFM is more optimistic in relation to government and other services, particularly between 2021 and 2031.

- As part of this study, CE produced a new set of policy-led projections, reflecting the implications for the demand for population-related services arising from alternative population growth assumptions (which themselves reflect policy commitments linked to housing). Overall, for Cambridgeshire & Peterborough, the policy-led projection generates 8,300 additional jobs as compared to the baseline over the period 2011-31. However the distribution of employment growth is rather different. Compared to the baseline, the policy-led projections suggest more employment growth in Cambridge, South Cambridgeshire, and (especially) Peterborough, and less in East Cambridgeshire. and Huntingdonshire. This reflects the fact that current spatial policy largely directs growth to the two main urban centres.

The implications differ across the local authorities in Cambridgeshire and Peterborough. And throughout, it is very important to remember that none of the projections take any real account of some key planned interventions – most notably

the Enterprise Zone at Alconbury and the planned new railway station at Cambridge Science Park.

However, standing back from the numbers, three overarching observations seem to us to be of general importance, and we draw these out by way of conclusion.

- First, different sets of projections are depicting very different futures with regard to the area's manufacturing sector: EEFM points to continuing rapid decline whereas LEFM suggests a much slower decline. For the area as a whole, the future of the manufacturing sector is important – partly in relation to Alconbury (which has a clear potential niche in this context) but also in relation to the wider high tech cluster. This variation in view indicates that there is greater uncertainty about the future for manufacturing employment than for other sectors, and this reflects the wider uncertainty about the extent to which 'rebalancing' of the sectoral mix of growth will be achieved in the longer term for the UK economy (so that growth is less dependent on the financial sector than it was in the decade leading up to the recession).

- Second, in line with the East of England Plan, the policy-led (Alternative Demography) projections suggest a greater focus of future employment growth on the main urban areas (Cambridge/South Cambridgeshire and Peterborough).

- Thirdly, Cambridgeshire and Peterborough are projected to perform strongly in terms of employment growth when considered alongside projections for the East of England and the UK. But it should not be forgotten that London is also likely to see relatively strong employment growth, suggesting that demand for housing within Cambridgeshire and Peterborough from commuters could also rise.

Appendices

Appendix A: The Local Economy Forecasting Model (LEFM)

LEFM has been developed by CE in collaboration with the Institute for Employment Research at the University of Warwick. It is, to our knowledge, the only software package in Europe tailored to model regional and local economies and designed to conventional commercial software standards. It has been commercially available since the early 1990s (since when it has been continually developed) and is designed to empower organisations to undertake detailed economic analysis in-house. It is used extensively by local agencies, including local authorities, and by CE for more specialised analysis often commissioned by development agencies.

LEFM has been designed to project economic indicators for a local area by explaining the output of local industries through an explicit representation of expenditure flows in the area and their links with the world outside the local area. In this it differs from other methods of local economy modelling which typically link local output or employment (by sector) directly to national or regional output or employment. Such methods include shift-share or econometrically estimated equations. While these methods allow a user to derive projections for local output or employment growth from national or regional projections, they offer little scope for introducing an explanation of local performance relative to these higher levels, and they are typically not suitable for analysing the indirect effects on the local economy arising from the opening of a new enterprise or the closure of an existing one.

LEFM is also distinguished from other approaches by its sectoral detail. It identifies 41 sectors (defined on SIC03), allowing (for example) electronics to be distinguished from electrical engineering & instruments, and computing from other business services. Detailed disaggregation by sector is usually valuable because different sectors have different prospects (eg technological change is driving much faster growth in electronics and computing than in the other sectors with which they are commonly combined), because they have different employment characteristics, and also because it allows local knowledge about specific firms to be more easily incorporated in the forecast. There is, however, a cost to working in such detail: most variables in the model have to be disaggregated by sector (or a similar classification: see below for more details).

LEFM's structure draws heavily on that of MDM, Cambridge Econometrics' multi-sectoral model of the UK economy and its regions, and it shares the same software.

LEFM's Main Inputs and Outputs

The main input assumptions used in LEFM are:
- forecasts for the UK and region in which the local economy lies for selected variables, including

  - the components of domestic final expenditure, disaggregated into spending by function as published in the UK National Accounts
  - components of personal incomes
  - gross output, value-added and employment by 41 sectors
  - matrices to convert the components of domestic final expenditure into commodity demand for 41 sectors

- input-output coefficients and projected changes
- projected changes in occupational structure and gender forecasts for the local economy
- population by 5-year age band and gender
- participation rate by gender for a constant level of unemployment (these are then adjusted by the model in response to actual changes in unemployment)

- Outputs for the local economy (to 2025) include:

  - value-added and employment by sector (41)
  - employment by gender and status (full-time, part-time, self-employed)
  - employment by occupation (25 occupations, SOC2000)
  - disposable income and consumer spending
  - population and labour force by age (7 age bands) and gender
  - net commuting
  - implications for qualifications and key and generic skills

LEFM's Main Relationships

Accounting structure Figure 1 summarises the model's accounting structure, which follows the social accounting matrix approach adopted in MDM. In most cases, the variables shown in the diagram are disaggregated (eg by sector for output and employment).

Each industry's gross output is determined as the difference between commodity demand (the sum of demand coming from the final expenditure components together with intermediate demand coming from production in the local economy) and imports to the local area. Each industry's value-added is assumed to be in the same proportion to its gross output as is the case for the region as a whole.

How the main variables are determined Employment in the local area generates incomes. Assumptions are made for net commuting, which determines the extent to which incomes from local employment accrue to non-residents. Similarly, some incomes in the local area are derived from employment outside the area, or from non-employment sources (eg unemployment benefit). Aggregate household expenditure by residents in the local area is determined by real household disposable incomes (deflated by the national household expenditure deflator) and projections for the household saving ratio (derived from changes in the regional household saving ratio). Household expenditure is then disaggregated into spending by function according to the proportions forecast for the region.

Government final expenditure (disaggregated by type) in the local economy is projected on the basis of changes in the local area's share of the region's population. Investment by sector is determined by a simple relationship with output. Projections for social investment (eg education, health) and investment in social services (eg roads), which are treated as assumptions at the UK level in MDM, are allocated to the local area according to population changes.

Intermediate expenditure by sector and commodity is determined by applying the national input-output coefficients to local economy gross output by sector.

Exports by sector from the local economy are linked to national gross commodity output in each sector. In effect, local firms are treated as competing in the national pool. Export projections then depend upon UK gross commodity output in each sector, and on assumptions for trends in the local economy's share of this output. In some cases, simple methods have been tried to model these export shares (eg to

represent the effects of policies to promote inward investment). Imports by sector to the local economy depend on the demand for commodities in the local economy and on assumptions for import shares.

Employment by sector is determined by gross output and trends in productivity per person employed derived from regional projections (which in turn are derived from econometric estimates). Employment by gender and type is determined by the sectoral composition of employment and local information on the representation of genders and types of employment in each industry The default projections for trends in this representation are based on historical data for the local area, with the user given the option to change these default values. A similar procedure is followed for employment by occupation.

Projections for the resident workforce are derived from assumptions for the population for working age (by gender) and projected participation rates which vary with the unemployment rate. Unemployment is the difference between the workforce, local employment and 'net commuting'.

Figure A.1: The Structure of LEFM
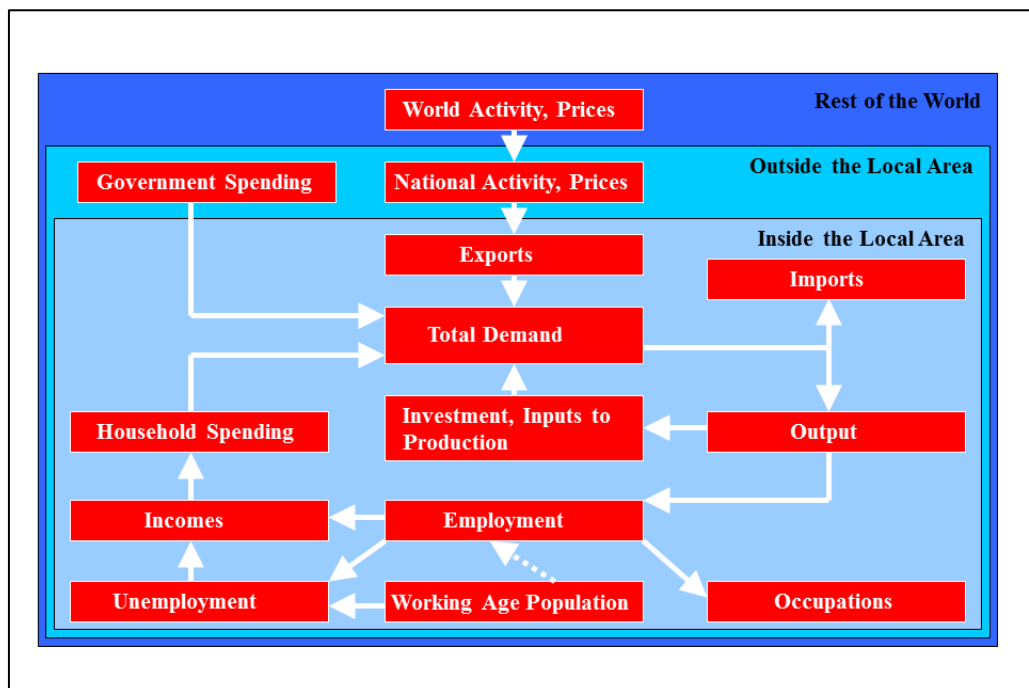
Appendix B: Summary Results for Cambridge

Table B.1: Total Employment in each Scenario - Cambridge

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	102.7	108.5	117.5	5.7	0.5	9.0	0.8
High Growth	102.7	110.7	122.4	8.0	0.7	11.7	1.0
Low Growth	102.7	106.1	111.9	3.4	0.3	5.7	0.5
Alternative Demography	102.6	115.4	122.3	12.7	1.2	6.9	0.6

Source: Cambridge Econometrics, May 2012.

Figure B.1: Total Employment in each Scenario - Cambridge
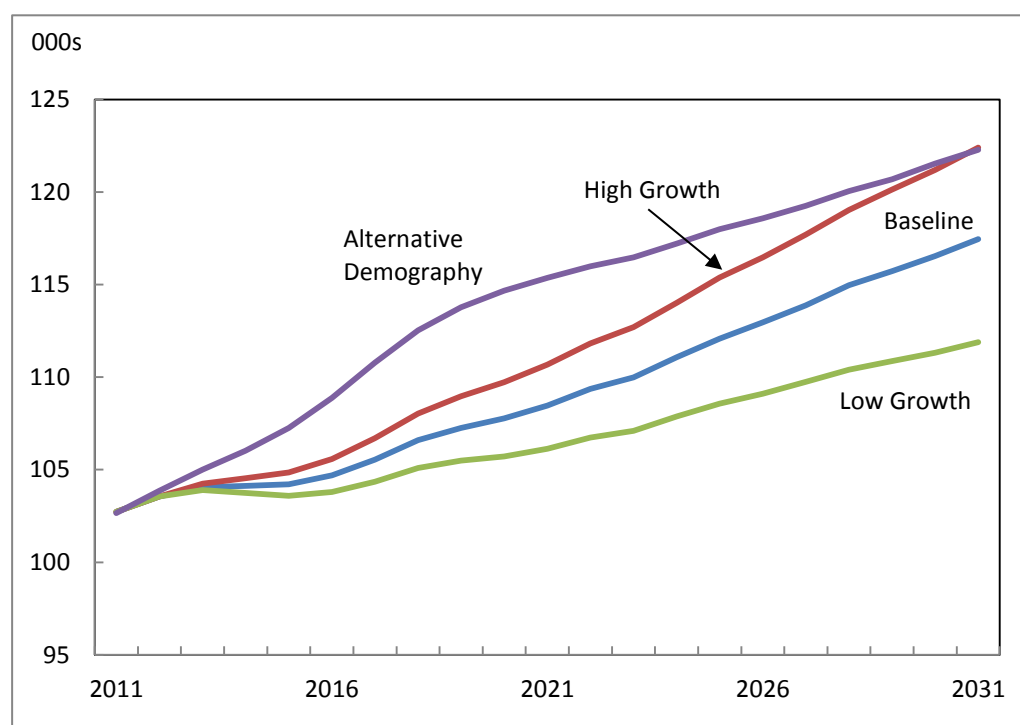
Table B.2: Total Population in the Baseline and Alternative Demography Scenarios - Cambridge

	2011 (000s)	2021 (000s)	2031 (000s)	2011-21 (000s)	2011-21 (% pa)	2021-31 (000s)	2021-31 (% pa)
Baseline	127.7	133.9	142.9	6.2	0.5	9.0	0.7
Alternative Demography	127.4	155.2	157.8	27.7	2.0	2.7	0.2

Source: Cambridge Econometrics, May 2012.

Figure B.2: Total Population in the Baseline and Alternative Demography Scenarios - Cambridge
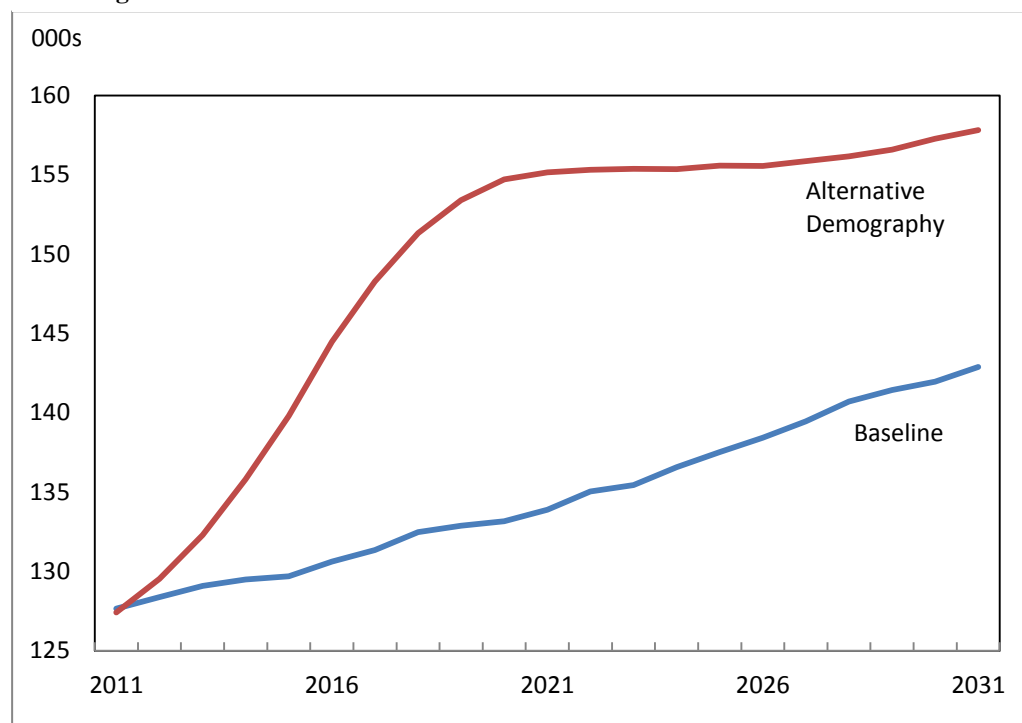
Table B.3: Employment projections by broad sector in the Baseline Scenario - Cambridge

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.1	0.1	0.1	0.0	-2.3	0.0	-2.0
Mining & quarrying	0.0	0.0	0.0	0.0	..	0.0	..
Manufacturing	4.1	4.0	4.2	-0.1	-0.3	0.2	0.5
Electricity, gas & water	0.2	0.2	0.2	0.0	-1.2	0.0	-0.4
Construction	2.9	3.1	3.2	0.2	0.6	0.1	0.4
Distribution., hotels & catering	20.6	21.7	23.4	1.1	0.5	1.7	0.7
Transport & communications	3.7	3.8	3.9	0.1	0.3	0.2	0.4
Financial & business services	27.0	30.4	33.5	3.4	1.2	3.1	1.0
Government & other services	44.0	45.1	48.9	1.1	0.3	3.8	0.8
Total	102.7	108.5	117.5	5.7	0.5	9.0	0.8

Source: Cambridge Econometrics, May 2012.

Table B.4: Employment projections by broad sector in the High Growth Scenario - Cambridge

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.1	0.1	0.1	0.0	-2.0	0.0	-1.6
Mining & quarrying	0.0	0.0	0.0	0.0	..	0.0	..
Manufacturing	4.1	4.2	4.6	0.1	0.2	0.4	0.9
Electricity, gas & water	0.2	0.2	0.2	0.0	-1.1	0.0	-0.2
Construction	2.9	3.2	3.4	0.2	0.8	0.2	0.6
Distribution., hotels & catering	20.6	22.5	24.9	1.9	0.9	2.3	1.0
Transport & communications	3.7	3.8	4.1	0.2	0.4	0.2	0.6
Financial & business services	27.0	31.0	35.0	4.0	1.4	4.1	1.2
Government & other services	44.0	45.7	50.2	1.7	0.4	4.5	0.9
Total	102.7	110.7	122.4	8.0	0.7	11.7	1.0

Source: Cambridge Econometrics, May 2012.

Table B.5: Employment projections by broad sector in the Low Growth Scenario - Cambridge

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.1	0.1	0.1	0.0	-2.5	0.0	-2.6
Mining & quarrying	0.0	0.0	0.0	0.0	..	0.0	..
Manufacturing	4.1	3.8	3.7	-0.3	-0.7	-0.1	-0.2
Electricity, gas & water	0.2	0.2	0.2	0.0	-1.4	0.0	-0.8
Construction	2.9	3.0	3.1	0.1	0.3	0.0	0.1
Distribution., hotels & catering	20.6	20.9	21.9	0.3	0.1	1.0	0.4
Transport & communications	3.7	3.7	3.8	0.0	0.1	0.1	0.3
Financial & business services	27.0	29.8	31.7	2.8	1.0	1.9	0.6
Government & other services	44.0	44.5	47.4	0.5	0.1	2.9	0.6
Total	102.7	106.1	111.9	3.4	0.3	5.7	0.5

Source: Cambridge Econometrics, May 2012.

Table B.6: Employment projections by broad sector in the Alternative Demography Scenario - Cambridge

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.1	0.1	0.1	0.0	-1.9	0.0	-2.1
Mining & quarrying	0.0	0.0	0.0	0.0	..	0.0	..
Manufacturing	4.1	4.0	4.2	-0.1	-0.2	0.2	0.5
Electricity, gas & water	0.2	0.2	0.2	0.0	-1.1	0.0	-0.5
Construction	2.9	3.3	3.4	0.4	1.3	0.1	0.2
Distribution., hotels & catering	20.6	22.7	23.9	2.1	1.0	1.2	0.5
Transport & communications	3.7	3.9	4.0	0.3	0.7	0.1	0.3
Financial & business services	27.0	31.1	34.0	4.2	1.4	2.9	0.9
Government & other services	44.0	49.9	52.4	6.0	1.3	2.5	0.5
Total	102.6	115.4	122.3	12.7	1.2	6.9	0.6

Source: Cambridge Econometrics, May 2012.

Appendix C: Summary Results for East Cambridgeshire

Table C.1: Total Employment in each Scenario – East Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	29.5	33.4	37.4	3.9	1.2	4.0	1.1
High Growth	29.5	34.4	40.0	4.9	1.5	5.6	1.5
Low Growth	29.5	32.3	34.4	2.8	0.9	2.1	0.6
Alternative Demography	29.5	32.9	36.3	3.4	1.1	3.3	1.0

Source: Cambridge Econometrics, May 2012.

Figure C.1: Total Employment in each Scenario – East Cambridgeshire
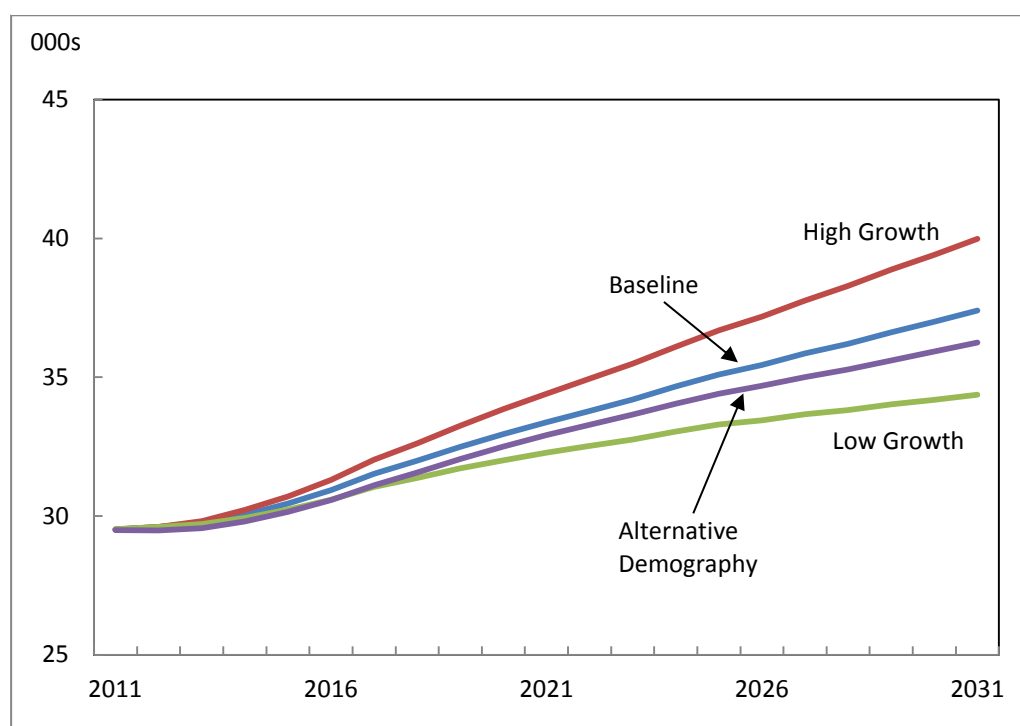
Table C.2: Total Population in the Baseline and Alternative Demography Scenarios – East Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	86.0	98.8	109.2	12.8	1.4	10.4	1.0
Alternative Demography	85.4	94.4	100.2	9.0	1.0	5.8	0.6

Source: Cambridge Econometrics, May 2012.

Figure C.2: Total Population in the Baseline and Alternative Demography Scenarios – East Cambridge
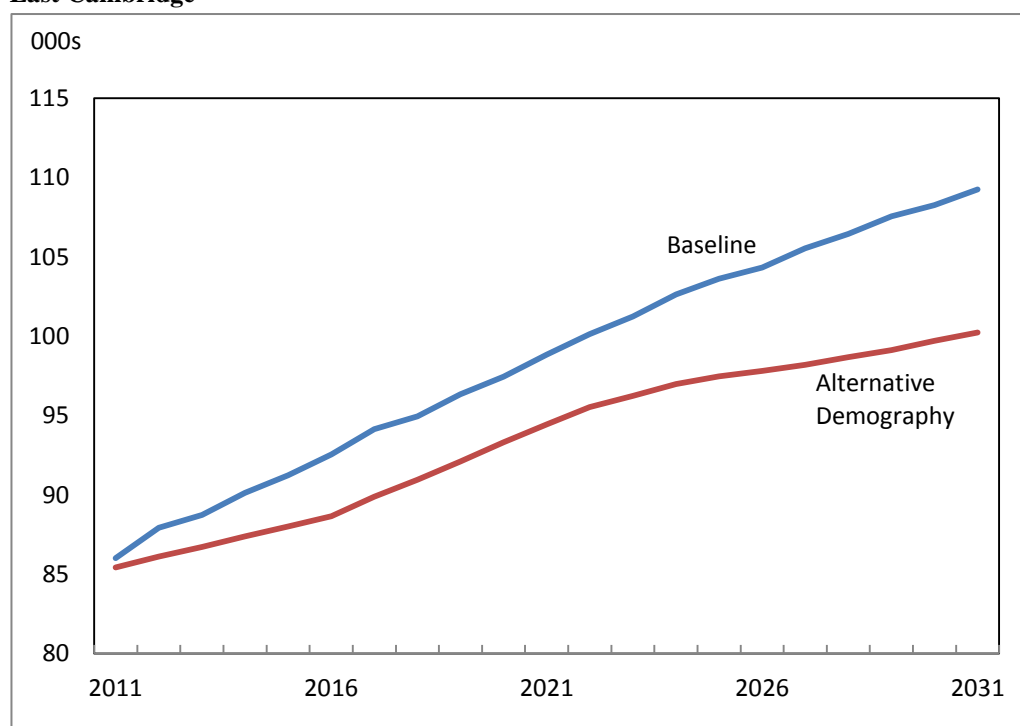
Figure C.3: Employment projections by broad sector in the Baseline Scenario –East Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.7	0.7	0.7	0.0	0.0	0.0	0.0
Mining & quarrying	0.0	0.0	0.0	0.0	-3.4	0.0	-3.0
Manufacturing	3.3	3.1	2.9	-0.2	-0.6	-0.2	-0.7
Electricity, gas & water	0.1	0.0	0.0	0.0	-3.8	0.0	-0.3
Construction	2.8	3.3	3.4	0.4	1.4	0.2	0.5
Distribution., hotels & catering	6.9	7.7	8.4	0.8	1.0	0.7	0.9
Transport & communications	2.5	2.6	3.0	0.1	0.4	0.4	1.4
Financial & business services	6.1	8.1	9.9	2.0	2.8	1.8	2.1
Government & other services	7.0	7.8	8.9	0.8	1.2	1.1	1.3
Total	29.5	33.4	37.4	3.9	1.2	4.0	1.1

Source: Cambridge Econometrics, May 2012.

Figure C.4: Employment projections by broad sector in the High Growth Scenario – East Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.7	0.8	0.8	0.0	0.1	0.0	0.2
Mining & quarrying	0.0	0.0	0.0	0.0	-3.4	0.0	-3.0
Manufacturing	3.3	3.2	3.1	-0.1	-0.3	-0.2	-0.5
Electricity, gas & water	0.1	0.0	0.0	0.0	-3.5	0.0	0.3
Construction	2.8	3.5	3.9	0.6	2.0	0.4	1.2
Distribution., hotels & catering	6.9	7.8	8.7	0.9	1.3	0.9	1.1
Transport & communications	2.5	2.7	3.3	0.2	0.9	0.5	1.8
Financial & business services	6.1	8.4	10.9	2.2	3.2	2.5	2.7
Government & other services	7.0	7.9	9.2	1.0	1.3	1.3	1.5
Total	29.5	34.4	40.0	4.9	1.5	5.6	1.5

Source: Cambridge Econometrics, May 2012.

Figure C.5: Employment projections by broad sector in the Low Growth Scenario – East Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.7	0.7	0.7	0.0	-0.1	0.0	-0.2
Mining & quarrying	0.0	0.0	0.0	0.0	-3.4	0.0	-3.0
Manufacturing	3.3	3.0	2.8	-0.3	-0.8	-0.3	-1.0
Electricity, gas & water	0.1	0.0	0.0	0.0	-4.2	0.0	-0.9
Construction	2.8	3.0	2.9	0.2	0.6	-0.1	-0.5
Distribution., hotels & catering	6.9	7.5	8.0	0.6	0.8	0.5	0.7
Transport & communications	2.5	2.5	2.7	0.0	-0.1	0.2	0.8
Financial & business services	6.1	7.8	8.6	1.6	2.4	0.9	1.1
Government & other services	7.0	7.7	8.6	0.7	1.0	0.9	1.1
Total	29.5	32.3	34.4	2.8	0.9	2.1	0.6

Source: Cambridge Econometrics, May 2012.

Figure C.6: Employment projections by broad sector in the Alternative Demography Scenario – East Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.7	0.7	0.7	0.0	0.0	0.0	0.0
Mining & quarrying	0.0	0.0	0.0	0.0	-3.4	0.0	-3.1
Manufacturing	3.3	3.1	2.9	-0.2	-0.6	-0.2	-0.7
Electricity, gas & water	0.1	0.0	0.0	0.0	-3.8	0.0	-0.5
Construction	2.8	3.2	3.3	0.4	1.2	0.1	0.3
Distribution., hotels & catering	6.9	7.6	8.2	0.7	0.9	0.6	0.8
Transport & communications	2.5	2.6	2.9	0.1	0.3	0.4	1.3
Financial & business services	6.1	8.0	9.7	1.9	2.7	1.7	1.9
Government & other services	6.9	7.6	8.4	0.7	0.9	0.8	1.0
Total	29.5	32.9	36.3	3.4	1.1	3.3	1.0

Source: Cambridge Econometrics, May 2012.

Appendix D: Summary Results for Fenland

Table D.1: Total Employment in each Scenario – Fenland

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	39.7	43.8	47.7	4.0	1.0	3.9	0.9
High Growth	39.7	44.9	50.6	5.2	1.2	5.7	1.2
Low Growth	39.7	42.5	44.5	2.8	0.7	1.9	0.4
Alternative Demography	39.7	43.7	47.6	4.0	1.0	3.9	0.9

Source: Cambridge Econometrics, May 2012.

Figure D.1: Total Employment in each Scenario – Fenland
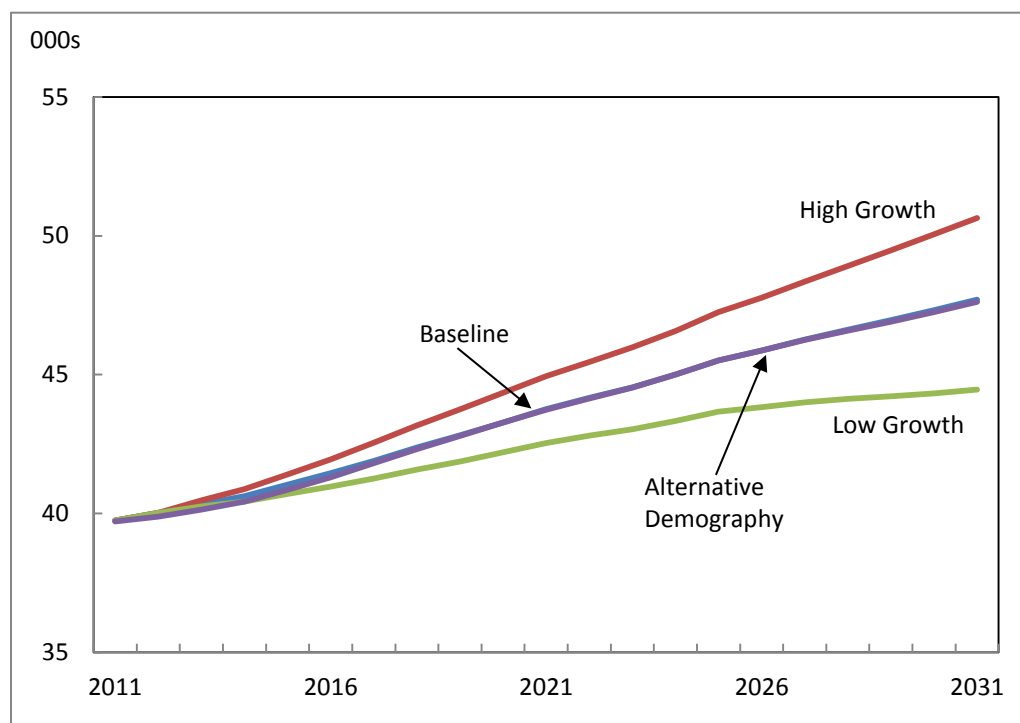
Table D.2: Total Population in the Baseline and Alternative Demography Scenarios – Fenland

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	92.7	104.9	115.2	12.2	1.2	10.4	0.9
Alternative Demography	92.2	104.6	114.7	12.4	1.3	10.1	0.9

Source: Cambridge Econometrics, May 2012.

Figure D.2: Total Population in the Baseline and Alternative Demography Scenarios – Fenland
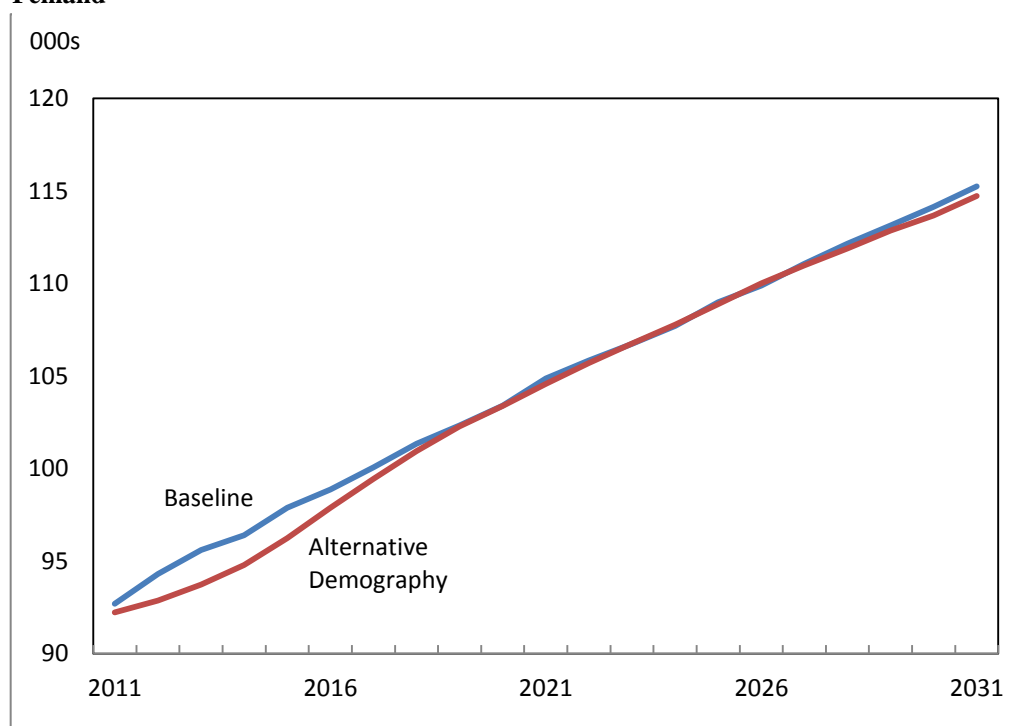
Table D.3: Employment projections by broad sector in the Baseline Scenario – Fenland

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	6.7	6.9	7.1	0.2	0.3	0.2	0.3
Mining & quarrying	0.0	0.0	0.0	0.0	-1.8	0.0	-1.6
Manufacturing	6.2	6.3	6.4	0.1	0.2	0.0	0.1
Electricity, gas & water	0.0	0.0	0.0	0.0	..	0.0	..
Construction	2.5	2.8	3.0	0.4	1.4	0.2	0.5
Distribution., hotels & catering	7.7	8.7	9.7	0.9	1.1	1.0	1.1
Transport & communications	2.2	2.2	2.4	0.0	0.1	0.1	0.6
Financial & business services	5.8	7.4	8.6	1.6	2.5	1.2	1.5
Government & other services	8.6	9.4	10.5	0.8	0.9	1.2	1.2
Total	39.7	43.8	47.7	4.0	1.0	3.9	0.9

Source: Cambridge Econometrics, May 2012.

**Table D.4: Employment projections by broad sector in the High Growth Scenario – Fenland**

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	6.7	7.0	7.5	0.3	0.5	0.5	0.7
Mining & quarrying	0.0	0.0	0.0	0.0	-1.8	0.0	-1.6
Manufacturing	6.2	6.5	6.7	0.3	0.4	0.2	0.2
Electricity, gas & water	0.0	0.0	0.0	0.0	..	0.0	..
Construction	2.5	3.0	3.4	0.5	2.0	0.4	1.2
Distribution., hotels & catering	7.7	9.0	10.3	1.2	1.5	1.4	1.4
Transport & communications	2.2	2.3	2.5	0.1	0.4	0.2	0.8
Financial & business services	5.8	7.7	9.4	1.9	2.8	1.8	2.1
Government & other services	8.6	9.5	10.8	0.9	1.0	1.3	1.3
Total	39.7	44.9	50.6	5.2	1.2	5.7	1.2

Source: Cambridge Econometrics, May 2012.

Table D.5: Employment projections by broad sector in the Low Growth Scenario – Fenland

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	6.7	6.7	6.6	0.0	0.0	-0.1	-0.1
Mining & quarrying	0.0	0.0	0.0	0.0	-1.8	0.0	-1.6
Manufacturing	6.2	6.2	6.1	0.0	0.0	-0.1	-0.2
Electricity, gas & water	0.0	0.0	0.0	0.0	..	0.0	..
Construction	2.5	2.6	2.5	0.1	0.6	-0.1	-0.5
Distribution., hotels & catering	7.7	8.4	9.0	0.6	0.8	0.7	0.8
Transport & communications	2.2	2.2	2.3	0.0	-0.1	0.1	0.3
Financial & business services	5.8	7.2	7.7	1.4	2.1	0.5	0.7
Government & other services	8.6	9.2	10.3	0.7	0.7	1.0	1.0
Total	39.7	42.5	44.5	2.8	0.7	1.9	0.4

Source: Cambridge Econometrics, May 2012.

Table D.6: Employment projections by broad sector in the Alternative Demography Scenario – Fenland

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	6.7	6.9	7.1	0.2	0.3	0.2	0.3
Mining & quarrying	0.0	0.0	0.0	0.0	-1.8	0.0	-1.6
Manufacturing	6.2	6.3	6.4	0.1	0.2	0.0	0.1
Electricity, gas & water	0.0	0.0	0.0	0.0	..	0.0	..
Construction	2.4	2.8	3.0	0.4	1.4	0.1	0.5
Distribution., hotels & catering	7.7	8.7	9.7	0.9	1.1	1.0	1.1
Transport & communications	2.2	2.2	2.4	0.0	0.1	0.1	0.6
Financial & business services	5.8	7.4	8.6	1.6	2.5	1.2	1.5
Government & other services	8.6	9.3	10.5	0.8	0.9	1.2	1.2
Total	39.7	43.7	47.6	4.0	1.0	3.9	0.9

Source: Cambridge Econometrics, May 2012.

Appendix E: Summary Results for Huntingdonshire

Table E.1: Total Employment in each Scenario – Huntingdonshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	82.9	89.0	97.8	6.1	0.7	8.8	0.9
High Growth	82.9	91.4	103.3	8.5	1.0	12.0	1.2
Low Growth	82.9	86.5	91.5	3.6	0.4	5.0	0.6
Alternative Demography	83.0	89.8	95.9	6.8	0.8	6.1	0.7

Source: Cambridge Econometrics, May 2012.

Figure E.1: Total Employment in each Scenario – Huntingdonshire
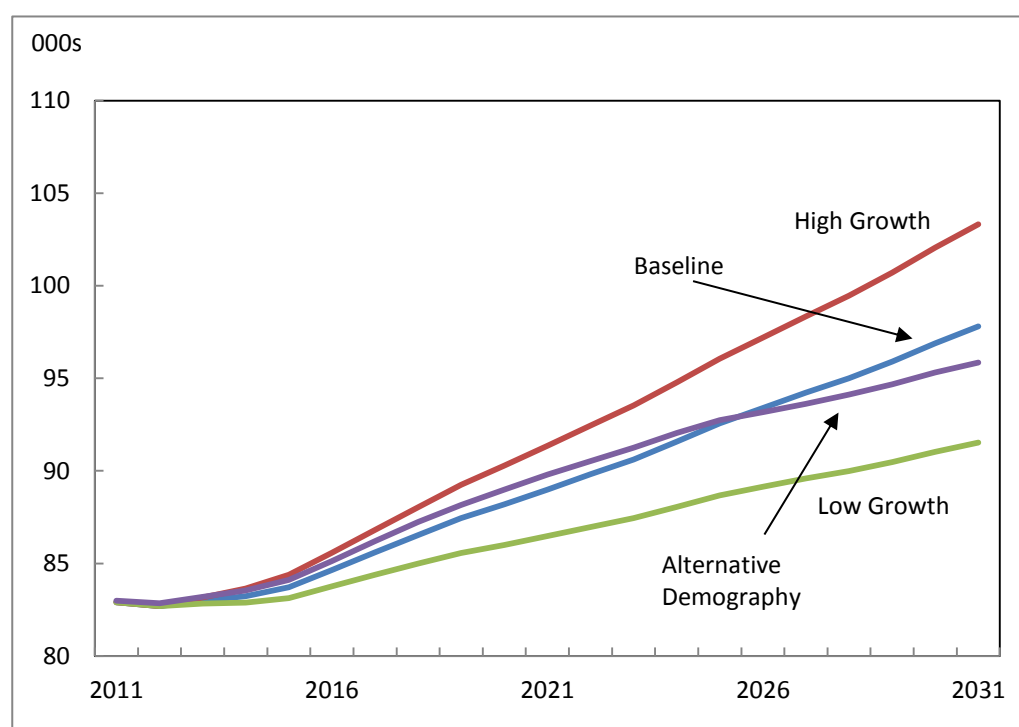
Table E.2: Total Population in the Baseline and Alternative Demography Scenarios – Huntingdonshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	168.0	179.6	191.4	11.6	0.7	11.8	0.6
Alternative Demography	168.6	183.5	183.2	14.9	0.9	-0.4	0.0

Source: Cambridge Econometrics, May 2012.

Figure E.2: Total Population in the Baseline and Alternative Demography Scenarios – Huntingdonshire
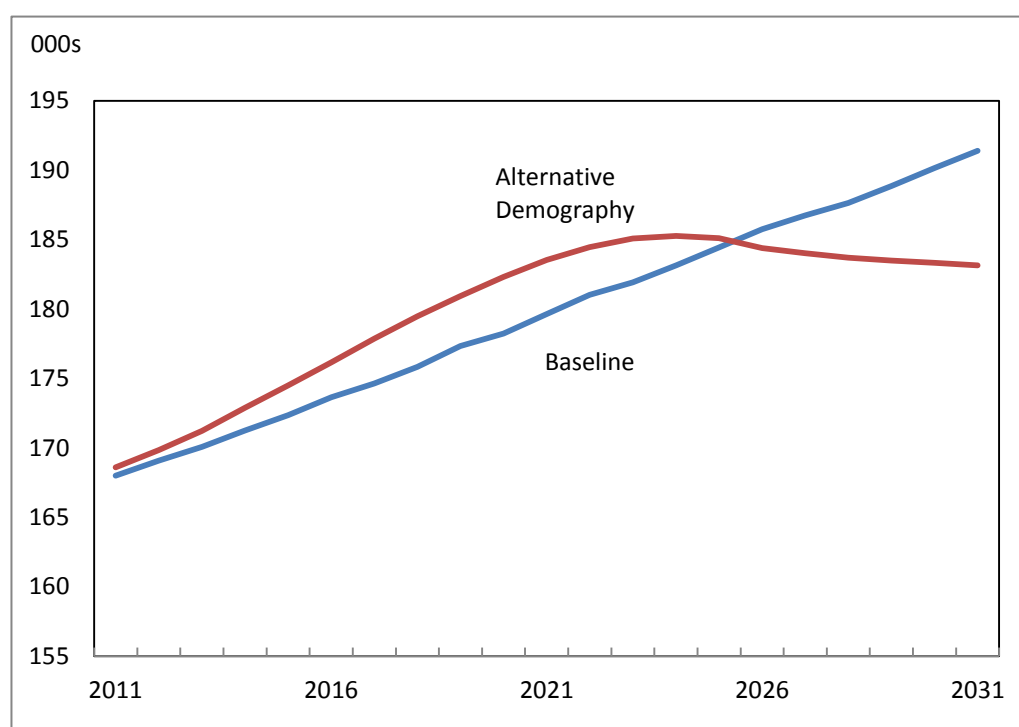
Table E.3: Employment projections by broad sector in the Baseline Scenario – Huntingdonshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	1.0	1.0	1.1	0.0	0.1	0.0	0.1
Mining & quarrying	0.0	0.0	0.0	0.0	-3.0	0.0	-2.7
Manufacturing	9.0	8.7	8.3	-0.3	-0.3	-0.3	-0.4
Electricity, gas & water	1.0	2.0	2.7	1.0	7.3	0.7	3.0
Construction	5.3	5.7	6.0	0.4	0.7	0.3	0.5
Distribution., hotels & catering	18.1	19.0	20.1	1.0	0.5	1.1	0.6
Transport & communications	4.2	4.4	4.9	0.2	0.4	0.5	1.0
Financial & business services	16.2	19.2	22.2	3.1	1.7	3.0	1.5
Government & other services	28.0	28.8	32.4	0.8	0.3	3.6	1.2
Total	82.9	89.0	97.8	6.1	0.7	8.8	0.9

Source: Cambridge Econometrics, May 2012.

Table E.4: Employment projections by broad sector in the High Growth Scenario – Huntingdonshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	1.0	1.1	1.1	0.0	0.2	0.0	0.4
Mining & quarrying	0.0	0.0	0.0	0.0	-3.0	0.0	-2.7
Manufacturing	9.0	9.0	8.9	0.0	0.0	-0.1	-0.1
Electricity, gas & water	1.0	2.1	3.0	1.1	7.7	0.9	3.7
Construction	5.3	5.9	6.4	0.6	1.0	0.5	0.8
Distribution., hotels & catering	18.1	19.8	21.6	1.7	0.9	1.8	0.9
Transport & communications	4.2	4.6	5.2	0.3	0.7	0.6	1.3
Financial & business services	16.2	19.7	23.6	3.5	2.0	3.9	1.8
Government & other services	28.0	29.2	33.5	1.2	0.4	4.2	1.4
Total	82.9	91.4	103.3	8.5	1.0	12.0	1.2

Source: Cambridge Econometrics, May 2012.

**Table E.5: Employment projections by broad sector in the Low Growth Scenario – Huntingdonshire**

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	1.0	1.0	1.0	0.0	-0.1	0.0	-0.2
Mining & quarrying	0.0	0.0	0.0	0.0	-3.0	0.0	-2.7
Manufacturing	9.0	8.4	7.8	-0.6	-0.6	-0.6	-0.8
Electricity, gas & water	1.0	1.9	2.2	0.9	6.4	0.4	1.8
Construction	5.3	5.5	5.5	0.2	0.3	0.0	0.0
Distribution., hotels & catering	18.1	18.3	18.6	0.2	0.1	0.3	0.2
Transport & communications	4.2	4.3	4.5	0.0	0.1	0.3	0.6
Financial & business services	16.2	18.7	20.4	2.5	1.5	1.7	0.9
Government & other services	28.0	28.4	31.4	0.4	0.1	3.0	1.0
Total	82.9	86.5	91.5	3.6	0.4	5.0	0.6

Source: Cambridge Econometrics, May 2012.

Table E.6: Employment projections by broad sector in the Alternative Demography Scenario – Huntingdonshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	1.0	1.0	1.1	0.0	0.1	0.0	0.1
Mining & quarrying	0.0	0.0	0.0	0.0	-3.0	0.0	-2.7
Manufacturing	9.0	8.7	8.3	-0.3	-0.3	-0.4	-0.4
Electricity, gas & water	1.0	2.0	2.7	1.0	7.3	0.7	3.0
Construction	5.3	5.8	5.9	0.4	0.8	0.1	0.2
Distribution., hotels & catering	18.1	19.2	19.8	1.1	0.6	0.6	0.3
Transport & communications	4.2	4.4	4.8	0.2	0.5	0.4	0.8
Financial & business services	16.2	19.3	21.9	3.2	1.8	2.6	1.3
Government & other services	28.1	29.3	31.4	1.2	0.4	2.1	0.7
Total	83.0	89.8	95.9	6.8	0.8	6.1	0.7

Source: Cambridge Econometrics, May 2012.

Appendix F: Summary Results for South Cambridgeshire

Table F.1: Total Employment in each Scenario – South Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	81.2	91.3	103.5	10.1	1.2	12.2	1.3
High Growth	81.2	94.0	110.4	12.8	1.5	16.4	1.6
Low Growth	81.2	88.4	95.2	7.2	0.9	6.8	0.7
Alternative Demography	81.1	91.1	104.4	10.0	1.2	13.3	1.4

Source: Cambridge Econometrics, May 2012.

Figure F.1: Total Employment in each Scenario – South Cambridgeshire
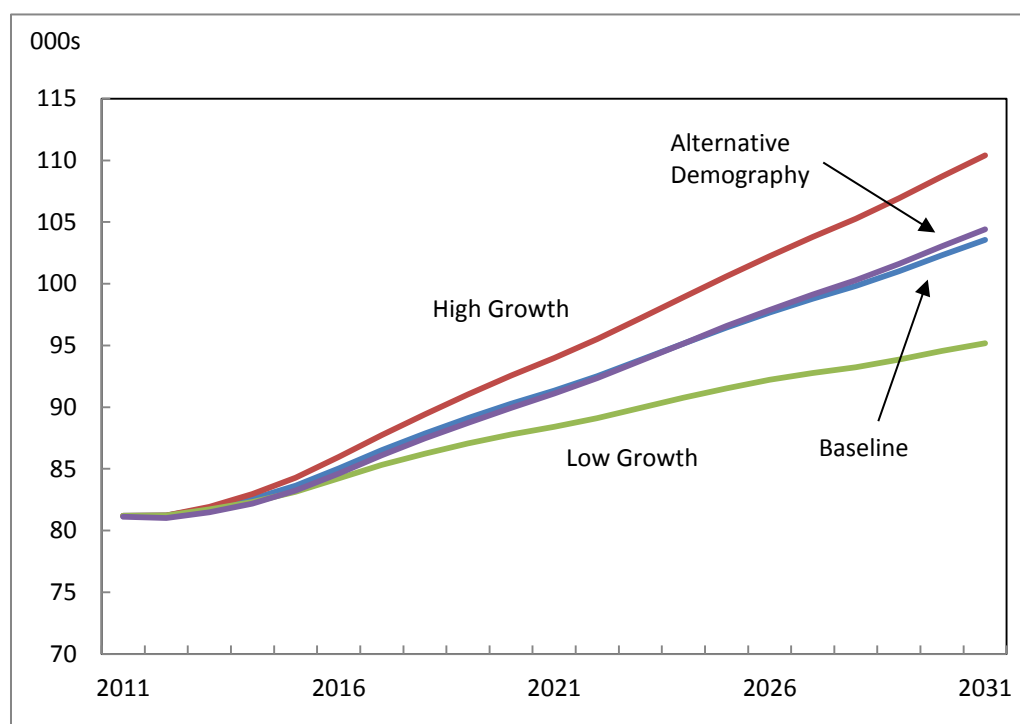
Table F.2: Total Population in the Baseline and Alternative Demography Scenarios – South Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	148.2	166.0	181.2	17.8	1.1	15.2	0.9
Alternative Demography	147.3	165.1	188.7	17.8	1.1	23.6	1.3

Source: Cambridge Econometrics, May 2012.

Figure F.2: Total Population in the Baseline and Alternative Demography Scenarios – South Cambridgeshire
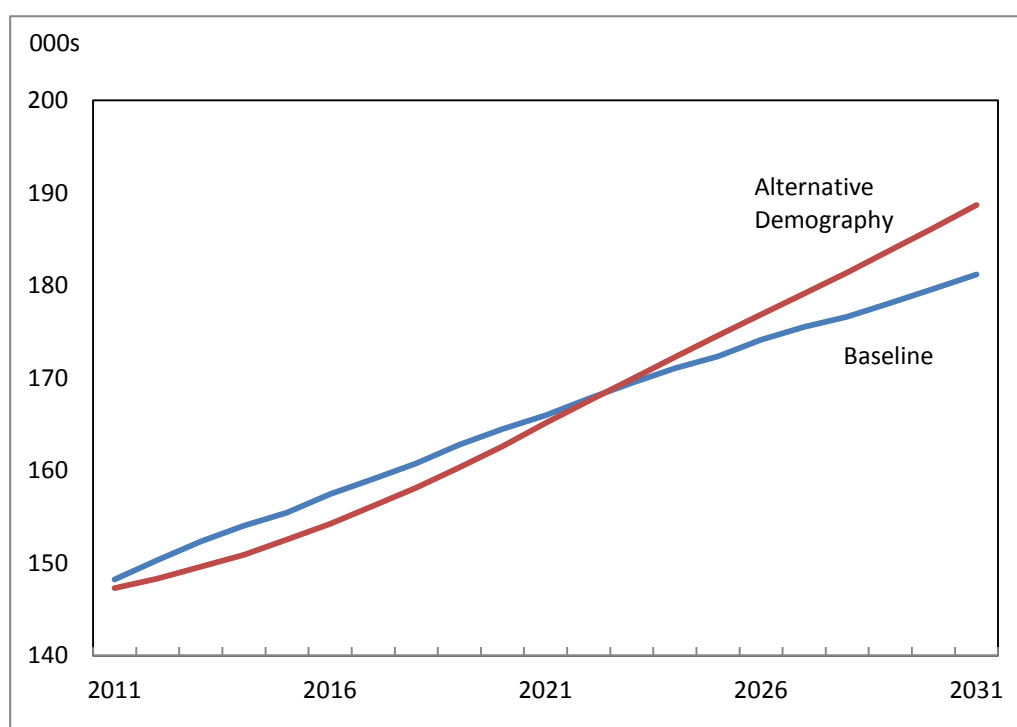
Table F.3: Employment projections by broad sector in the Baseline Scenario – South Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	1.1	1.1	1.1	0.0	0.1	0.0	0.1
Mining & quarrying	0.0	0.0	0.0	0.0	-1.8	0.0	-1.7
Manufacturing	9.5	9.1	8.7	-0.5	-0.5	-0.4	-0.4
Electricity, gas & water	0.0	0.0	0.0	0.0	..	0.0	..
Construction	6.0	6.8	7.2	0.8	1.3	0.4	0.5
Distribution., hotels & catering	18.6	19.9	21.0	1.3	0.7	1.1	0.6
Transport & communications	1.9	2.0	2.1	0.1	0.4	0.1	0.6
Financial & business services	26.5	33.3	41.8	6.8	2.3	8.5	2.3
Government & other services	17.5	19.2	21.6	1.7	0.9	2.5	1.2
Total	81.2	91.3	103.5	10.1	1.2	12.2	1.3

Source: Cambridge Econometrics, May 2012.

Table F.4: Employment projections by broad sector in the High Growth Scenario – South Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	1.1	1.1	1.1	0.0	0.2	0.0	0.3
Mining & quarrying	0.0	0.0	0.0	0.0	-1.8	0.0	-1.7
Manufacturing	9.5	9.4	9.3	-0.2	-0.2	-0.1	-0.1
Electricity, gas & water	0.0	0.0	0.0	0.0	..	0.0	..
Construction	6.0	7.3	8.1	1.2	1.9	0.9	1.1
Distribution., hotels & catering	18.6	20.5	22.1	1.8	0.9	1.6	0.8
Transport & communications	1.9	2.0	2.2	0.1	0.6	0.2	0.9
Financial & business services	26.5	34.3	45.2	7.8	2.6	10.9	2.8
Government & other services	17.5	19.4	22.3	1.9	1.1	2.9	1.4
Total	81.2	94.0	110.4	12.8	1.5	16.4	1.6

Source: Cambridge Econometrics, May 2012.

Table F.5: Employment projections by broad sector in the Low Growth Scenario – South Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	1.1	1.1	1.0	0.0	-0.1	0.0	-0.2
Mining & quarrying	0.0	0.0	0.0	0.0	-1.8	0.0	-1.7
Manufacturing	9.5	8.8	8.2	-0.7	-0.8	-0.7	-0.8
Electricity, gas & water	0.0	0.0	0.0	0.0	..	0.0	..
Construction	6.0	6.4	6.1	0.3	0.6	-0.2	-0.4
Distribution., hotels & catering	18.6	19.3	19.9	0.7	0.3	0.6	0.3
Transport & communications	1.9	1.9	2.0	0.0	0.1	0.1	0.3
Financial & business services	26.5	32.0	37.1	5.6	1.9	5.1	1.5
Government & other services	17.5	18.9	20.9	1.4	0.7	2.0	1.0
Total	81.2	88.4	95.2	7.2	0.9	6.8	0.7

Source: Cambridge Econometrics, May 2012.

Table F.6: Employment projections by broad sector in the Alternative Demography Scenario – South Cambridgeshire

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	1.1	1.1	1.1	0.0	0.0	0.0	0.1
Mining & quarrying	0.0	0.0	0.0	0.0	-1.8	0.0	-1.6
Manufacturing	9.5	9.1	8.7	-0.5	-0.5	-0.3	-0.4
Electricity, gas & water	0.0	0.0	0.0	0.0	..	0.0	..
Construction	6.0	6.8	7.3	0.8	1.3	0.5	0.7
Distribution., hotels & catering	18.6	19.8	21.1	1.2	0.6	1.3	0.6
Transport & communications	1.9	2.0	2.1	0.1	0.3	0.1	0.7
Financial & business services	26.5	33.2	41.9	6.8	2.3	8.6	2.3
Government & other services	17.5	19.1	22.2	1.6	0.9	3.1	1.5
Total	81.1	91.1	104.4	10.0	1.2	13.3	1.4

Source: Cambridge Econometrics, May 2012.

Appendix G: Summary Results for Peterborough

Table G.1: Total Employment in each Scenario – Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	113.4	126.3	141.7	12.9	1.1	15.4	1.2
High Growth	113.4	130.3	151.6	16.9	1.4	21.3	1.5
Low Growth	113.4	122.1	130.5	8.7	0.7	8.4	0.7
Alternative Demography	113.3	130.6	147.3	17.3	1.4	16.6	1.2

Source: Cambridge Econometrics, May 2012.

Figure G.1: Total Employment in each Scenario – Peterborough
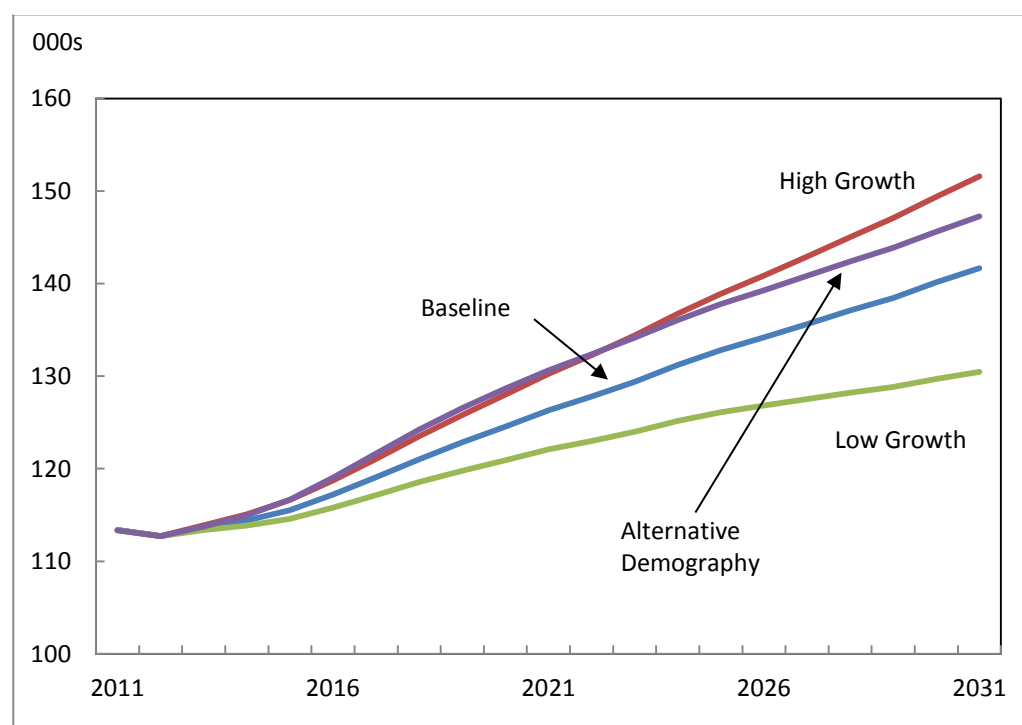
Table G.2: Total Population in the Baseline and Alternative Demography Scenarios – Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	175.1	192.9	207.4	17.8	1.0	14.5	0.7
Alternative Demography	174.8	214.0	232.3	39.2	2.0	18.3	0.8

Source: Cambridge Econometrics, May 2012.

Figure G.2: Total Population in the Baseline and Alternative Demography Scenarios – Peterborough
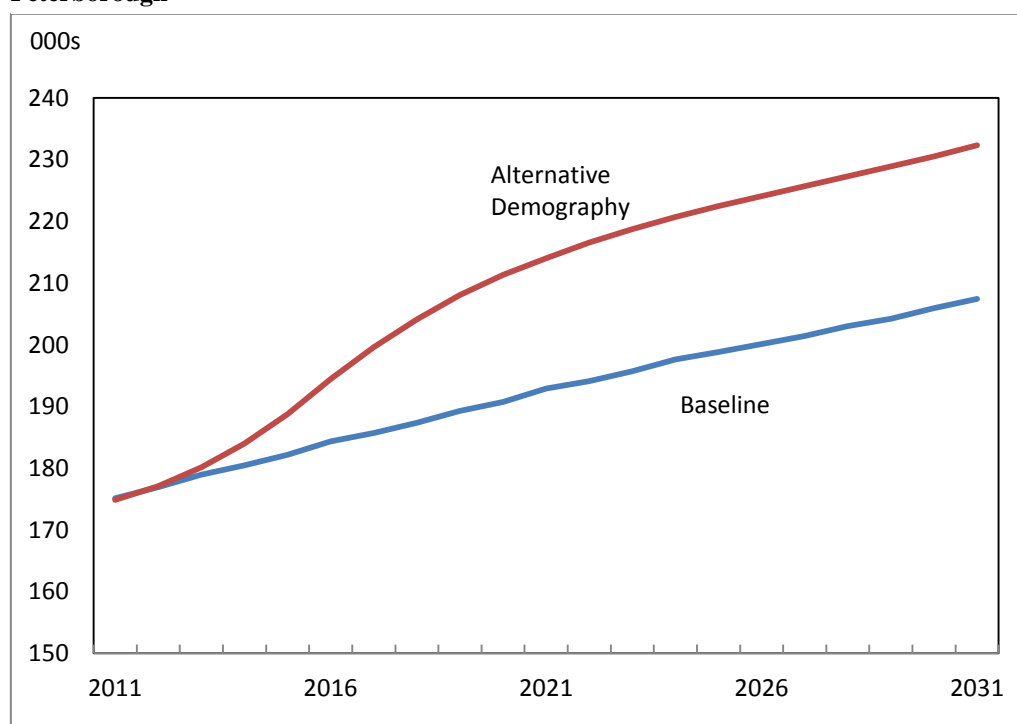
Table G.3: Employment projections by broad sector in the Baseline Scenario – Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.9	0.9	0.9	0.0	0.1	0.0	0.2
Mining & quarrying	0.0	0.0	0.0	0.0	-2.7	0.0	-2.5
Manufacturing	9.8	9.2	9.2	-0.5	-0.6	-0.1	-0.1
Electricity, gas & water	0.7	1.0	1.3	0.4	4.6	0.3	2.3
Construction	6.6	7.5	8.0	1.0	1.4	0.4	0.6
Distribution., hotels & catering	25.1	27.5	30.0	2.4	0.9	2.5	0.9
Transport & communications	7.7	8.0	8.8	0.3	0.4	0.8	0.9
Financial & business services	31.6	40.0	46.8	8.5	2.4	6.8	1.6
Government & other services	31.1	32.0	36.8	0.9	0.3	4.7	1.4
Total	113.4	126.3	141.7	12.9	1.1	15.4	1.2

Source: Cambridge Econometrics, May 2012.

Table G.4: Employment projections by broad sector in the High Growth Scenario – Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	0.9	0.9	1.0	0.0	0.3	0.1	0.5
Mining & quarrying	0.0	0.0	0.0	0.0	-2.7	0.0	-2.5
Manufacturing	9.8	9.5	9.7	-0.2	-0.2	0.1	0.1
Electricity, gas & water	0.7	1.1	1.4	0.4	5.0	0.4	3.0
Construction	6.6	8.0	9.1	1.5	2.0	1.0	1.2
Distribution., hotels & catering	25.1	28.4	31.8	3.3	1.3	3.4	1.1
Transport & communications	7.7	8.3	9.3	0.6	0.7	1.0	1.2
Financial & business services	31.6	41.2	50.7	9.6	2.7	9.5	2.1
Government & other services	31.1	32.8	38.6	1.7	0.5	5.8	1.6
Total	113.4	130.3	151.6	16.9	1.4	21.3	1.5

Source: Cambridge Econometrics, May 2012.

Table G.5: Employment projections by broad sector in the Low Growth Scenario – Peterborough

|	2011 (000s)	2021 (000s)	2031 (000s)	2011-21 (000s)	2011-21 (% pa)	2021-31 (000s)	2021-31 (% pa)
Agriculture	0.9	0.9	0.9	0.0	-0.1	0.0	-0.2
Mining & quarrying	0.0	0.0	0.0	0.0	-2.7	0.0	-2.4
Manufacturing	9.8	9.0	8.7	-0.8	-0.8	-0.4	-0.4
Electricity, gas & water	0.7	1.0	1.1	0.3	3.9	0.1	1.2
Construction	6.6	7.0	6.7	0.4	0.6	-0.3	-0.4
Distribution., hotels & catering	25.1	26.5	28.1	1.5	0.6	1.6	0.6
Transport & communications	7.7	7.8	8.2	0.1	0.1	0.4	0.6
Financial & business services	31.6	38.6	42.0	7.1	2.0	3.4	0.8
Government & other services	31.1	31.2	34.8	0.1	0.0	3.6	1.1
Total	113.4	122.1	130.5	8.7	0.7	8.4	0.7

Source: Cambridge Econometrics, May 2012.

Table G.6: Employment projections by broad sector in the Alternative Demography Scenario – Peterborough

	2011 (000s)	2021 (000s)	2031 (000s)	2011-21 (000s)	2011-21 (% pa)	2021-31 (000s)	2021-31 (% pa)
Agriculture	0.9	0.9	0.9	0.0	0.1	0.0	0.2
Mining & quarrying	0.0	0.0	0.0	0.0	-2.6	0.0	-2.4
Manufacturing	9.8	9.3	9.2	-0.5	-0.5	-0.1	-0.1
Electricity, gas & water	0.7	1.0	1.3	0.4	4.6	0.3	2.3
Construction	6.6	7.8	8.3	1.2	1.7	0.5	0.6
Distribution., hotels & catering	25.1	28.3	31.0	3.2	1.2	2.6	0.9
Transport & communications	7.7	8.2	9.0	0.5	0.6	0.8	0.9
Financial & business services	31.6	40.6	47.6	9.1	2.6	7.0	1.6
Government & other services	31.1	34.5	40.1	3.4	1.1	5.5	1.5
Total	113.3	130.6	147.3	17.3	1.4	16.6	1.2

Source: Cambridge Econometrics, May 2012.

Appendix H: Summary Results for Cambridgeshire & Peterborough

Table H.1: Total Employment in each Scenario – Cambridgeshire & Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	449.5	492.2	545.6	42.8	0.9	53.4	1.0
High Growth	449.5	505.6	578.4	56.2	1.2	72.7	1.4
Low Growth	449.5	477.9	507.9	28.4	0.6	30.0	0.6
Alternative Demography	449.3	503.6	553.7	54.2	1.1	50.1	1.0

Source: Cambridge Econometrics, May 2012.

Figure H.1: Total Employment in each Scenario – Cambridgeshire & Peterborough
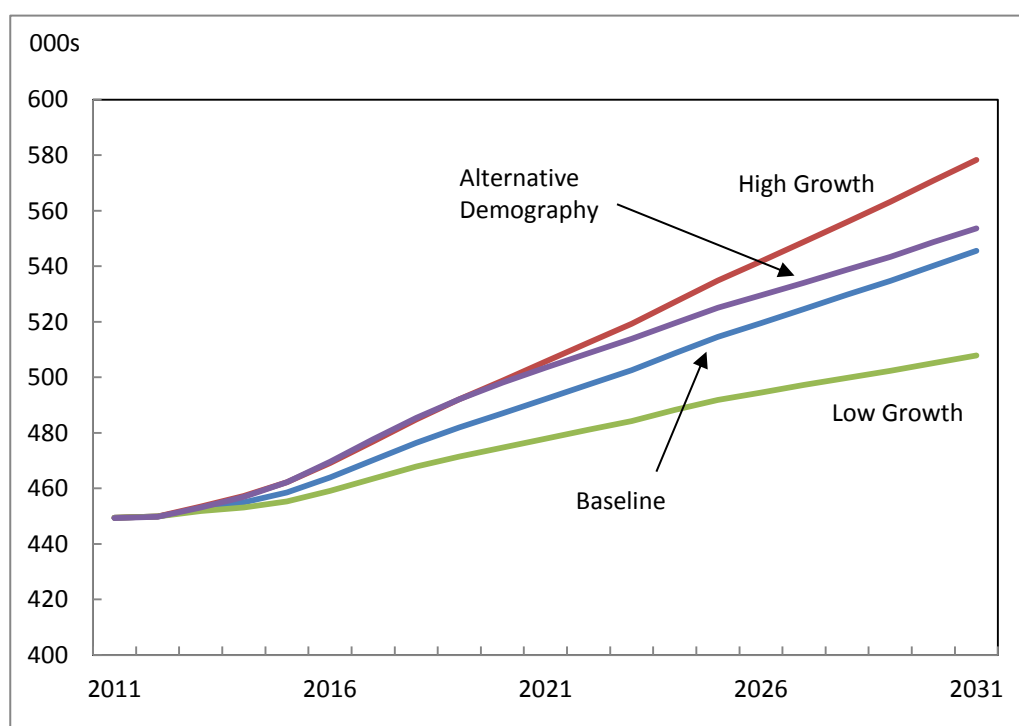
**Table H.2: Total Population in the Baseline and Alternative Demography Scenarios –
Cambridgeshire & Peterborough**

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	797.7	876.1	947.4	78.4	0.9	71.3	0.8
Alternative Demography	795.8	916.9	976.9	121.1	1.4	60.1	0.6

Source: Cambridge Econometrics, May 2012.

**Figure H.2: Total Population in the Baseline and Alternative Demography Scenarios –
Cambridgeshire & Peterborough**
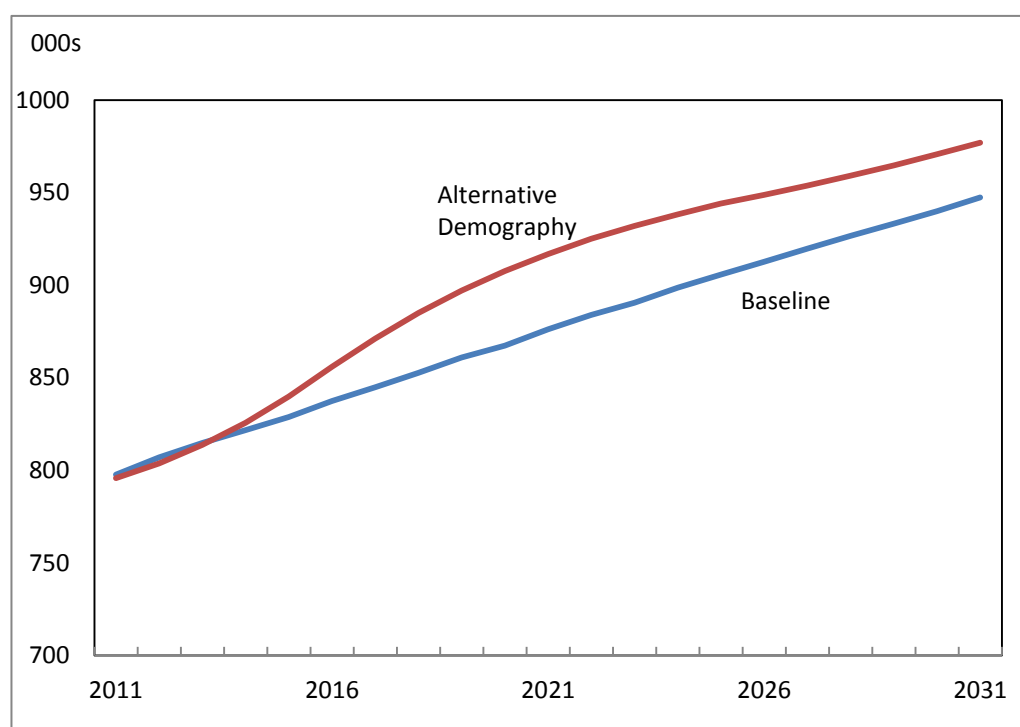
Table H.3: Employment projections by broad sector in the Baseline Scenario – Cambridgeshire & Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	10.5	10.7	11.0	0.2	0.2	0.3	0.2
Mining & quarrying	0.2	0.2	0.1	-0.1	-2.9	0.0	-2.2
Manufacturing	41.9	40.4	39.7	-1.5	-0.4	-0.7	-0.2
Electricity, gas & water	1.9	3.3	4.2	1.4	5.4	0.9	2.5
Construction	26.2	29.3	30.8	3.1	1.1	1.5	0.5
Distribution., hotels & catering	97.1	104.5	112.6	7.4	0.7	8.1	0.8
Transport & communications	22.2	23.1	25.1	0.8	0.4	2.0	0.9
Financial & business services	113.1	138.5	162.8	25.4	2.0	24.4	1.6
Government & other services	136.2	142.3	159.2	6.1	0.4	16.9	1.1
Total	449.5	492.2	545.6	42.8	0.9	53.4	1.0

Source: Cambridge Econometrics, May 2012.

Table H.4: Employment projections by broad sector in the High Growth Scenario – Cambridgeshire & Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	10.5	10.9	11.6	0.4	0.4	0.7	0.6
Mining & quarrying	0.2	0.2	0.1	-0.1	-2.9	0.0	-2.2
Manufacturing	41.9	41.8	42.2	-0.1	0.0	0.4	0.1
Electricity, gas & water	1.9	3.4	4.7	1.5	5.8	1.3	3.3
Construction	26.2	30.8	34.3	4.7	1.7	3.4	1.1
Distribution., hotels & catering	97.1	108.0	119.4	10.9	1.1	11.4	1.0
Transport & communications	22.2	23.8	26.6	1.5	0.7	2.8	1.1
Financial & business services	113.1	142.2	175.0	29.0	2.3	32.8	2.1
Government & other services	136.2	144.5	164.5	8.3	0.6	20.0	1.3
Total	449.5	505.6	578.4	56.2	1.2	72.7	1.4

Source: Cambridge Econometrics, May 2012.

Table H.5: Employment projections by broad sector in the Low Growth Scenario – Cambridgeshire & Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	10.5	10.5	10.3	0.0	0.0	-0.2	-0.2
Mining & quarrying	0.2	0.2	0.1	-0.1	-2.9	0.0	-2.2
Manufacturing	41.9	39.4	37.2	-2.6	-0.6	-2.1	-0.6
Electricity, gas & water	1.9	3.1	3.5	1.1	4.7	0.5	1.5
Construction	26.2	27.5	26.7	1.3	0.5	-0.8	-0.3
Distribution., hotels & catering	97.1	100.9	105.5	3.8	0.4	4.6	0.4
Transport & communications	22.2	22.4	23.5	0.1	0.1	1.1	0.5
Financial & business services	113.1	134.1	147.6	21.0	1.7	13.4	1.0
Government & other services	136.2	139.9	153.4	3.7	0.3	13.4	0.9
Total	449.5	477.9	507.9	28.4	0.6	30.0	0.6

Source: Cambridge Econometrics, May 2012.

Table H.6: Employment projections by broad sector in the Alternative Demography Scenario – Cambridgeshire & Peterborough

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	10.5	10.7	11.0	0.2	0.2	0.2	0.2
Mining & quarrying	0.2	0.2	0.1	-0.1	-2.9	0.0	-2.2
Manufacturing	41.9	40.5	39.7	-1.4	-0.4	-0.8	-0.2
Electricity, gas & water	1.9	3.3	4.2	1.4	5.5	0.9	2.5
Construction	26.1	29.7	31.1	3.5	1.3	1.4	0.5
Distribution., hotels & catering	97.1	106.3	113.6	9.2	0.9	7.3	0.7
Transport & communications	22.2	23.4	25.3	1.1	0.5	1.9	0.8
Financial & business services	113.1	139.8	163.7	26.7	2.1	23.9	1.6
Government & other services	136.1	149.7	164.9	13.6	1.0	15.2	1.0
Total	449.3	503.6	553.7	54.2	1.1	50.1	1.0

Source: Cambridge Econometrics, May 2012.

Appendix I: Summary Results for East of England

Table I.1: Total Employment in each Scenario – East of England

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Baseline	2,849.7	3,081.8	3,391.4	232.1	0.8	309.6	1.0
High Growth	2,849.7	3,159.0	3,572.8	309.3	1.0	413.8	1.2
Low Growth	2,849.7	3,000.0	3,184.1	150.3	0.5	184.1	0.6

Source: Cambridge Econometrics, May 2012.

Figure I.1: Total Employment in each Scenario – East of England
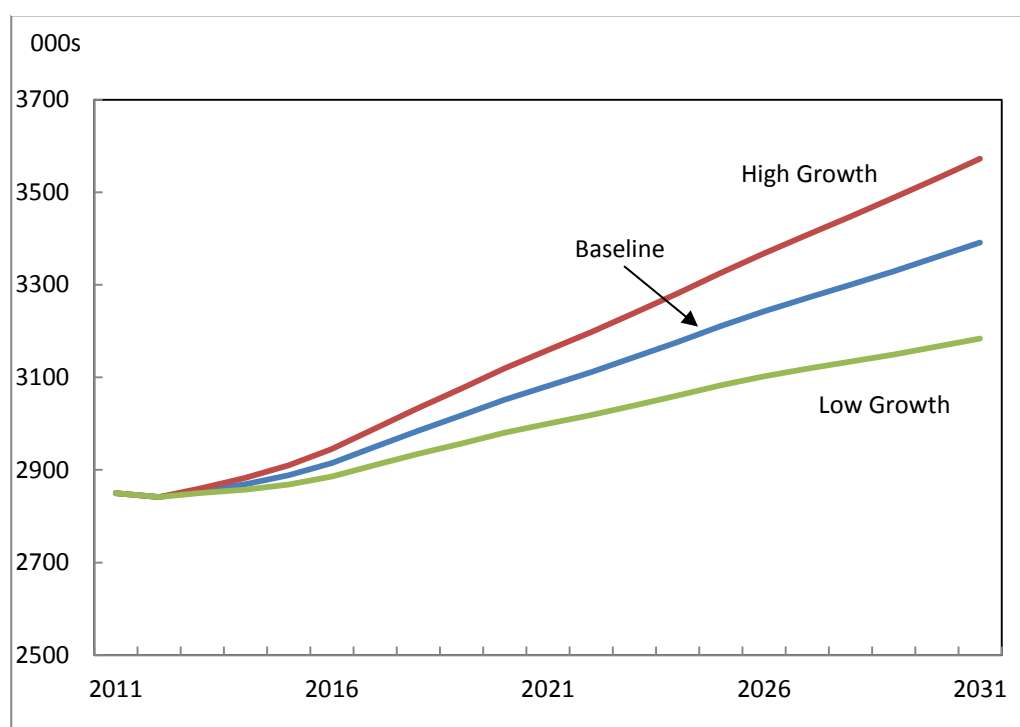
Table I.2: Employment projections by broad sector in the Baseline Scenario –East of England

	2011 (000s)	2021 (000s)	2031 (000s)	2011-21 (000s)	2011-21 (% pa)	2021-31 (000s)	2021-31 (% pa)
Agriculture	47.6	48.7	50.1	1.1	0.2	1.4	0.3
Mining & quarrying	2.2	1.9	1.6	-0.3	-1.7	-0.3	-1.4
Manufacturing	212.1	212.7	211.9	0.6	0.0	-0.8	0.0
Electricity, gas & water	9.5	11.2	11.5	1.8	1.7	0.2	0.2
Construction	217.7	238.5	254.4	20.8	0.9	15.9	0.6
Distribution., hotels & catering	712.0	762.2	824.5	50.2	0.7	62.4	0.8
Transport & communications	169.4	177.3	193.7	7.9	0.5	16.4	0.9
Financial & business services	623.6	736.2	841.7	112.7	1.7	105.5	1.3
Government & other services	855.6	893.1	1002.0	37.5	0.4	108.9	1.2
Total	2,849.7	3,081.8	3,391.4	232.1	0.8	309.6	1.0

Source: Cambridge Econometrics, May 2012.

**Table I.3: Employment projections by broad sector in the High Growth Scenario – East of England**

	2011 (000s)	2021 (000s)	2031 (000s)	2011-21 (000s)	2011-21 (% pa)	2021-31 (000s)	2021-31 (% pa)
Agriculture	47.6	49.5	52.6	1.9	0.4	3.0	0.6
Mining & quarrying	2.2	1.9	1.6	-0.3	-1.7	-0.3	-1.4
Manufacturing	212.1	221.6	227.9	9.5	0.4	6.3	0.3
Electricity, gas & water	9.5	11.4	12.1	2.0	1.9	0.7	0.6
Construction	217.7	248.2	275.8	30.4	1.3	27.7	1.1
Distribution., hotels & catering	712.0	785.6	872.2	73.6	1.0	86.6	1.1
Transport & communications	169.4	182.6	204.6	13.2	0.8	22.0	1.1
Financial & business services	623.6	751.6	890.7	128.1	1.9	139.1	1.7
Government & other services	855.6	906.6	1035.3	51.0	0.6	128.7	1.3
Total	2,849.7	3,159.0	3,572.8	309.3	1.0	413.8	1.2

Source: Cambridge Econometrics, May 2012.

Table I.4: Employment projections by broad sector in the Low Growth Scenario – East of England

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	47.6	47.8	47.3	0.2	0.0	-0.5	-0.1
Mining & quarrying	2.2	1.9	1.6	-0.3	-1.7	-0.3	-1.4
Manufacturing	212.1	206.0	196.2	-6.2	-0.3	-9.7	-0.5
Electricity, gas & water	9.5	10.8	10.5	1.4	1.4	-0.4	-0.3
Construction	217.7	227.3	228.0	9.6	0.4	0.7	0.0
Distribution., hotels & catering	712.0	738.5	775.9	26.5	0.4	37.4	0.5
Transport & communications	169.4	171.9	181.6	2.5	0.1	9.7	0.6
Financial & business services	623.6	717.4	776.6	93.9	1.4	59.2	0.8
Government & other services	855.6	878.3	966.2	22.7	0.3	87.8	1.0
Total	2,849.7	3,000.0	3,184.1	150.3	0.5	184.1	0.6

Source: Cambridge Econometrics, May 2012.

Appendix J: Summary Results for UK

Table J.1: Total Employment in each Scenario – UK

	2011 (000s)	2021 (000s)	2031 (000s)	2011-21 (000s)	2011-21 (% pa)	2021-31 (000s)	2021-31 (% pa)
Baseline	31,101.8	32,650.5	35,015.4	1,548.7	0.5	2,364.9	0.7
High Growth	31,101.8	33,508.3	36,949.1	2,406.5	0.7	3,440.7	1.0
Low Growth	31,101.8	31,758.7	32,877.8	656.9	0.2	1,119.1	0.3

Source: Cambridge Econometrics, May 2012.

Figure J.1: Total Employment in each Scenario – UK
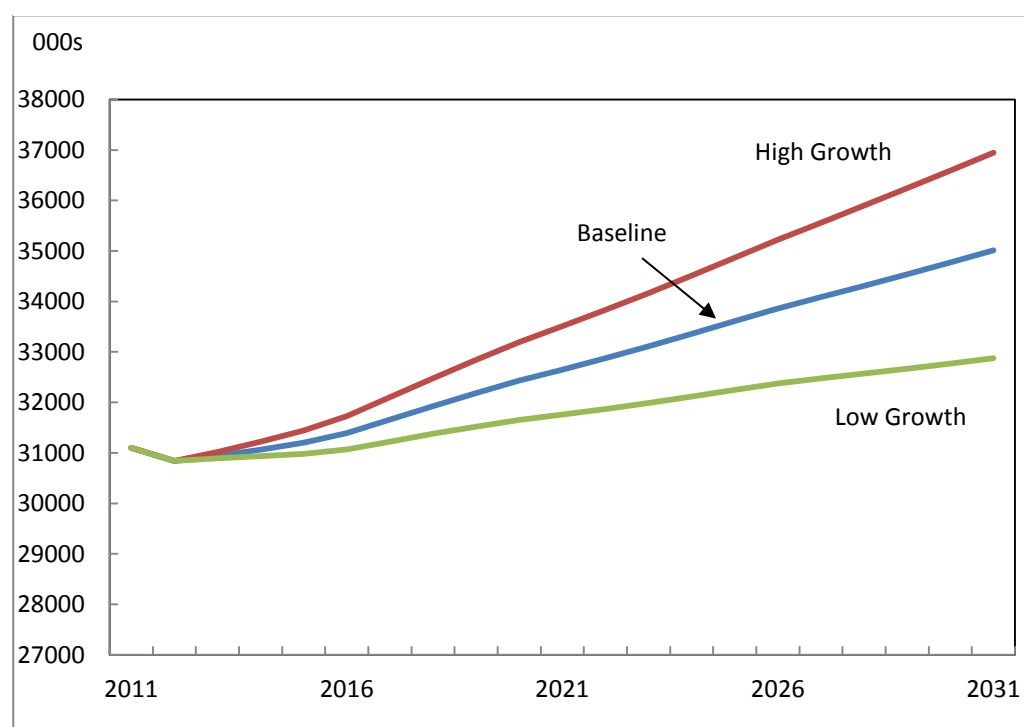
Table J.2: Employment projections by broad sector in the Baseline Scenario – UK

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	433.9	396.4	368.0	-37.5	-0.9	-28.3	-0.7
Mining & quarrying	56.1	47.2	40.9	-8.9	-1.7	-6.2	-1.4
Manufacturing	2,739.8	2,558.9	2,436.8	-180.9	-0.7	-122.1	-0.5
Electricity, gas & water	166.5	138.7	112.0	-27.8	-1.8	-26.7	-2.1
Construction	2,091.7	2,283.5	2,367.5	191.8	0.9	84.0	0.4
Distribution., hotels & catering	6,703.4	7081.2	7,357.3	377.8	0.6	276.1	0.4
Transport & communications	1,796.0	1868.5	1,961.4	72.5	0.4	92.8	0.5
Financial & business services	6,804.0	7,844.4	8,842.7	1040.4	1.4	998.3	1.2
Government & other services	10,310.4	10,431.7	11,528.8	121.3	0.1	1,097.1	1.0
Total	31,101.8	32,650.5	35,015.4	1,548.7	0.5	2,364.9	0.7

Source: Cambridge Econometrics, May 2012.

Table J.3: Employment projections by broad sector in the High Growth Scenario – UK

	2011	2021	2031	2011-21		2021-31	
	(000s)	(000s)	(000s)	(000s)	(% pa)	(000s)	(% pa)
Agriculture	433.9	403.4	386.6	-30.5	-0.7	-16.8	-0.4
Mining & quarrying	56.1	47.2	40.9	-8.9	-1.7	-6.2	-1.4
Manufacturing	2,739.8	2,664.5	2,628.6	-75.4	-0.3	-35.9	-0.1
Electricity, gas & water	166.5	140.3	116.1	-26.2	-1.7	-24.1	-1.9
Construction	2,091.7	2,375.9	2,566.9	284.2	1.3	191.0	0.8
Distribution., hotels & catering	6,703.4	7,296.0	7,783.4	592.6	0.9	487.4	0.6
Transport & communications	1,796.0	1,901.5	2,029.7	105.5	0.6	128.2	0.7
Financial & business services	6,804.0	8,068.9	9,449.1	1,264.9	1.7	1,380.2	1.6
Government & other services	10,310.4	10,610.8	11,947.8	300.5	0.3	1,336.9	1.2
Total	31,101.8	33,508.3	36,949.1	2,406.5	0.7	3,440.7	1.0

Source: Cambridge Econometrics, May 2012.

**Table J.4: Employment projections by broad sector in the Low Growth Scenario – UK**

	2011 (000s)	2021 (000s)	2031 (000s)	2011-21 (000s)	2011-21 (% pa)	2021-31 (000s)	2021-31 (% pa)
Agriculture	433.9	389.2	348.1	-44.7	-1.1	-41.1	-1.1
Mining & quarrying	56.1	47.2	40.9	-8.9	-1.7	-6.3	-1.4
Manufacturing	2,739.8	2,484.1	2,269.0	-255.7	-1.0	-215.2	-0.9
Electricity, gas & water	166.5	135.2	106.4	-31.3	-2.1	-28.8	-2.4
Construction	2,091.7	2,176.2	2,122.2	84.6	0.4	-54.0	-0.3
Distribution., hotels & catering	6,703.4	6,865.4	6,921.6	162.0	0.2	56.2	0.1
Transport & communications	1,796.0	1,835.8	1,886.4	39.8	0.2	50.6	0.3
Financial & business services	6,804.0	7,584.5	8,112.5	780.4	1.1	528.0	0.7
Government & other services	10,310.4	10,241.1	11,070.8	-69.3	-0.1	829.7	0.8
Total	31,101.8	31,758.7	32,877.8	656.9	0.2	1,119.1	0.3

Source: Cambridge Econometrics, May 2012.

Appendix K: Definitions

Table K.1: Cambridge Econometrics' Industries (41) Defined in Terms of SIC2003

Industry		SIC 2003
1	Agriculture etc	01, 02, 05
2	Coal	10
3	Oil & Gas etc	11, 12
4	Other Mining	13, 14
5	Food, Drink & Tobacco	15, 16
6	Textiles, Clothing & Leather	17, 18, 19
7	Wood & Paper	20, 21
8	Printing & Publishing	22
9	Manufactured Fuels	23
10	Chemicals	24.4
11	Rubber & Plastics	24 (ex24.4)
12	Non-Metallic Mineral Products	25
13	Basic Metals & Metal goods	26
14	Mechanical Engineering	27
15	Electronics, Electrical Engineering & Instruments	28
16	Motor Vehicles	29
17	Other Transport Equipment	30, 32
18	Other Manufacturing	31, 33
19	Electricity, Gas & Water	34
20	Construction	35
21	Distribution	36, 37
22	Retailing	40.1
23	Hotels & Catering	40.2, 40.3
24	Transport & Communications	41
25	Banking & Finance	45
26	Insurance	50, 51
27	Other Business Services	52
28	Public Administration & Defence	55
29	Education & Health	60, 63
30	Miscellaneous Services	61
31	Air Transport	62
32	Communications	64
33	Banking & Finance	65, 67
34	Insurance	66
35	Computing Services	72
36	Professional Services	70, 71, 73, 74.1-74.4
37	Other Business Services	74.5-74.8
38	Public Administration & Defence	75
39	Education	80
40	Health & Social Work	85
41	Miscellaneous Services	90 - 99
42	Unallocated	01, 02, 05

Table K.2: Cambridge Econometrics' Broad Sectors (9) Defined in Terms of SIC 2003

Sector		SIC20 03
1	Agriculture etc	1
2	Mining & Quarrying	2-4
3	Manufacturing	5-21
4	Electricity, Gas & Water	22-24
5	Construction	25
6	Distribution, Hotels & Catering	26-28
7	Transport & Communications	29-32
8	Financial & Business Services	33-37
9	Government & Other Services	38-41

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