

Review of Economic Forecasts for Cotswold District Council February 2016

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EXECUTIVE SUMMARY

1. This review presents an analysis of four economic forecasts commissioned by Cotswold District Council to inform the development of the Cotswold Local Plan and analysis by NMSS to identify the District's Objectively Assessed Housing Need (OAN). This report reviews forecasts prepared by Cambridge Econometrics (CE) and Oxford Economics (OE) in August 2014 and November 2015. The methodology is consistent with the approach adopted and endorsed by the Planning Inspector at the Stroud Local Plan examination and presented to the Forest of Dean Local Plan public examination.
2. Economic forecasts should not be used without careful sense-checking and adjustment for realism where appropriate. Forecasts are volatile and the scale of change within the same model over relatively short periods of time, or the scale of difference between different forecast models casts huge doubt on the ability simply to apply one or an average forecast figure. This report provides an informed review of the forecasts based on a realistic sector by sector assessment of the local economy. A detailed assessment of the Business and Industrial Trends in Cotswold is available in the Nupremis report dated November 2015.
3. The table below details the job growth forecasts reported by the four economic models.

Table 1: Forecast Job Growth, Oxford Economics and Cambridge Econometrics 2014 and 2015

	Net Jobs Growth			Average Annual Jobs Growth		
	2011-14	2011-31	2014-31	2011-14	2011-31	2014-31
CE 2014	3,700	8,700	5,000	1,200	400	300
CE 2015	7,200	11,900	4,700	2,400	600	300
OE 2014	3,000	7,800	4,800	1,000	400	300
OE 2015	4,500	10,500	6,000	1,500	500	350

Source: Cambridge Econometrics August 2014 and November 2015. Oxford Economics August 2014 and November 2015

4. A striking feature of the recent job growth reported in the OE and CE 2015 forecasts is the stark divergence between the two forecasters on the recent historical data for employment in the Cotswold between 2009 and 2014 and 2011 to 2014. At 2009, the two forecasts have a consistent view of the level of employment in Cotswold. However, the difference between the two employment estimates is substantial at 2014. CE details a stronger absolute and percentage increase in job growth than OE for the period 2011-14 (CE 7,200; OE 4,500). Given the divergence and volatility in the forecasts, it is recommended that the OAN assessment should focus on the economic forecasters' assessment of the likely changes once the economy has emerged from the economic downturn and after 2014.
5. The job growth forecasts reported by CE and OE November 2015 are 4,800 jobs and 6,000 jobs for the period 2014 to 2031. As a comparison, published Experian job forecasts in March 2015 report a total increase of 5,100 jobs over the same period.

6. Notably, CE has revised down its most recent job forecasts for 2014-31. CE projects that jobs will increase by 4,700 between 2014 and 2031 compared to its 2014 forecast of 5,000. The revised forecast is equivalent to a 9 percent increase in jobs – or 300 net additional jobs per year similar to CE’s own projection for UK growth.

7. OE2014 forecasts for 2014 to 2031 are marginally lower than the equivalent CE2014 forecasts. However, OE has revised up its most recent job forecasts for 2014-31 substantially. OE project that jobs will increase by 6,000 between 2014 and 2031 which is significantly higher than last year’s forecast of 4,800. The revised forecast is equivalent to a 12 percent increase in jobs – or 350 net additional jobs per year. This growth is higher than OE forecast job growth increase of 9 percent for the UK.

8. As national economic models can only take very limited account of local circumstances and become less and less reliable the smaller the geographic area to which they are disaggregated, it is important to assess the plausibility of the job changes projected for an area on a sector by sector basis. To test whether the job growth forecasts are reasonable and plausible, each sector is analysed to establish if the forecasts are consistent with recent national and /or local trends, correspond with the forecasts own assumptions for growth in that sector at county, regional and UK levels, are consistent with local policies and aspirations and are not anomalous. Where sectors appear inconsistent with these tests, an adjusted job growth scenario is provided. Following this assessment, the adjusted sectors are detailed below.

9. The CE 2015 forecast is adjusted as follows:

- a) The CE total number of jobs in agriculture at 2014 is adjusted from 3,100 to 2,300 jobs to address an apparent anomaly in the CE data. The CE assumption of -35 percent loss of jobs between 2014 and 2031 is applied to the new number of agriculture jobs at 2014. This equates to a total net decrease of - 805 jobs in agriculture (unadjusted is -1,100) between 2014 and 2031.
- b) CE job growth in Finance and Business Services is adjusted from 810 jobs to 1,200 to reflect stronger performance in this sector.
- c) CE job growth in Government Services is reduced to reflect CE own national assumptions on performance in this sector. The adjusted CE forecast represents a total of 569 jobs, in excess of the jobs growth forecast by OE for Government Services over the period 2014 to 2031.

10. The OE 2015 forecast is adjusted as follows:

- a) Employment growth in Distribution and Retail is adjusted to reflect OE’s equivalent performance for Gloucestershire (7 percent) which reflects Cotswold’s most recent performance in this sector, which is broadly aligned with the assumptions for the

South West and the UK. This adjustment would reduce the total net increase in OE figures from +930 to +553 jobs.

- b) Job Growth in Finance and Business Services is adjusted to reflect OE's own views on performance in Gloucestershire in Property Services, Business Administration and Finance. The adjustment results in a net job growth in this sector of 2,415 additional jobs.

11. The total of these adjusted forecasts report an increased total job growth of 5,000 for CE and a total job growth of 5,350 for OE forecasts for the period 2014 to 2031. The effect of these adjustments is to narrow the potential range of job growth to be considered in the OAN. Indeed, the adjusted forecasts are broadly aligned with the Experian Forecast for the same period.

Table 2: Baseline and Adjusted Forecast Job Growth, Oxford Economics and Cambridge Econometrics 2014 and 2015

	Net Jobs Growth			Average Annual Jobs Growth		
	2011-14	2011-31	2014-31	2011-14	2011-31	2014-31
CE 2014	3,700	8,700	5,000	1,200	400	300
CE 2015	7,200	11,900	4,700	2,400	600	300
OE 2014	3,000	7,800	4,800	1,000	400	300
OE 2015	4,500	10,500	6,000	1,500	500	400
CE2015 adjusted			5,000			300
OE 2015 adjusted			5,350			315

Source: Cambridge Econometrics August 2014 and November 2015. Oxford Economics August 2014 and November 2015, Nupremis

12. Both the OE and CE adjusted forecasts suggest that Cotswold will perform as well as the UK forecasts (9 percent) and better than the equivalent forecasts for Gloucestershire.

13. CE forecasts that the value of the Cotswold economy will increase from £1.86 billion in 2011 to £3.28 billion in 2031. OE forecasts lower values increasing from £1.69 billion in 2011 to £2.97 billion in 2031. CE projects that GVA in Cotswold will grow at an average annual rate of 2.3 percent per year – below its historic, pre-recession trend of 3.8 percent per year (1991-2008) but similar to UK average forecast growth of 2.2 percent per year. Likewise, OE projects that GVA in Cotswold will grow at an average annual rate of 2.4 percent per year – below its historic, pre-recession trend of 3.2 percent per year (1991-2008) but similar to UK average forecast growth of 2.3 percent per year.

14. The Strategic Economic Plan, published by GFirst, sets a very ambitious proposition to increase GVA by 4.8 percent, per annum by focussing on key interventions in target sectors and unlocking infrastructure constraints by 2025. Clearly, the GVA forecasts reported by CE and OE do not align with the Strategic Economic Plan GVA aspirations. However, it is important to note that there are several basic factors and processes which can lead to increased productivity and increased

GVA without a commensurate increase in job growth. These include investment in capital and innovation. The District Council should consider these interventions as part of the wider Local Plan policies and corporate interventions.

15. The Strategic Economic Plan also seeks to create 33,900 jobs across Gloucestershire and protect a further 2,125 jobs. This is equivalent to a job growth rate of 0.8 percent/annum. The job growth rates reported within the CE and OE forecasts for the period 2011 to 2031 represent a range of 1.0 percent to 1.2 percent per annum; the 2014 to 2031 forecasts represents a range of 0.7 percent to 1.0 percent per annum. Therefore the range of total jobs growth in the OE and CE 2015 forecasts are consistent and aligned with the Strategic Economic Plan.

16. Between 2010 and 2013, the number of total number of workforce jobs in Cotswold increased by 8,000 or 18.6 percent, while the number of employee jobs and self-employed people registered for VAT/PAYE increased by just 200 or 0.6 percent. This suggests that much of the strong jobs growth experienced between 2010 and 2013 has been concentrated among self-employed people. Notably, self-employment in people in the over 64 age group has increased by 2,300 over the same period - this represents 25 percent of all people who are self- employed.

17. Growth in self-employment and consequently total job growth in Cotswold will be affected by a number of factors and the continued high levels of growth in self-employment are uncertain. Indeed, OE 2015 forecast suggests that increases in self-employment will be much less significant in the future. Given the characteristics of self-employment in Cotswold, the Objectively Assessed Need for Housing should consider the impact of growth in self-employment and particularly growth in self-employment in the population over 64 years old which potentially represents a new and significant shift in the relationship between new housing demand and labour supply.

18. In view of the recent strong job growth performance in the District, albeit in self-employment rather than employee jobs, it is recommended that in reviewing the Objectively Assessed Need for Housing the baseline and adjusted forecasts are fully considered. It is important for the local authority to consider the full range of outputs from this review in the OAN and to monitor performance moving forward, particularly the trends in self-employment.

1. INTRODUCTION

1.1 This review presents an analysis of four economic forecasts commissioned by Cotswold District Council to inform the development of the Cotswold Local Plan and analysis by NMSS to identify the District's Objectively Assessed Housing Need (OAN). This report reviews forecasts prepared by Cambridge Econometrics (CE) and Oxford Economics (OE) in August 2014 and November 2015. The methodology is consistent with the approach adopted and endorsed by the Planning Inspector at the Stroud Local Plan examination and presented to the Forest of Dean Local Plan public examination.

1.2 This report assesses the forecasts against the District's historic and current economic performance and compares this to Gloucestershire, South West and England. A Business and Industrial Sector Assessment, November 2015, prepared by Nupremis Cambridge Limited, provides a detailed analysis of sector, business and employment growth in Cotswold.

1.3 The Council has the benefit of analysis included in the Objectively Assessed Housing Needs of Stroud, Forest of Dean and Cotswold October 2014 completed by NMSS (OAN). This report builds upon this work and develops a greater understanding of the economic forecasts and the extent to which they reflect local data, analysis, current policy and proposed development interventions.

1.4 The review will inform the Council's view on the appropriate input of the economic forecasts into the continued development of the Local Plan policies and provides a greater understanding of the scale of the potential economic policy and economic interventions required to support their delivery. There is a particular emphasis on providing:

- A sound statistical and evidenced based understanding of the robustness of the economic forecasts
- A sound evidence base for the development plan policies.

ECONOMIC FORECASTS MODELS REQUIRE ROBUST ASSESSMENT WHEN APPLIED LOCALLY

1.5 National Planning Policy Guidance (NPPG) on Housing and Economic Development Needs Assessments at paragraph 18 states: "Plan makers should make an assessment of the likely change in job numbers based on past trends and/or economic forecasts as appropriate".

1.6 Oxford Economics in its Briefing note published with the Gloucester, Cheltenham and Tewkesbury JCS Assessment of Updated Economic Forecasts April 2014 by Nathaniel Litchfield and Partners states: "The forecasting model should be viewed as one piece of evidence in making policy decisions and tracking economic and demographic change. It is not intended to be used on its own to set employment targets for local authority areas. Such targets will need to take account of local opportunities, constraints and community aspirations."

1.7 Oxford Economics go on to state: "As with all models it is subject to margins of error which increase as the level of geographical detail becomes smaller, and relies heavily upon published

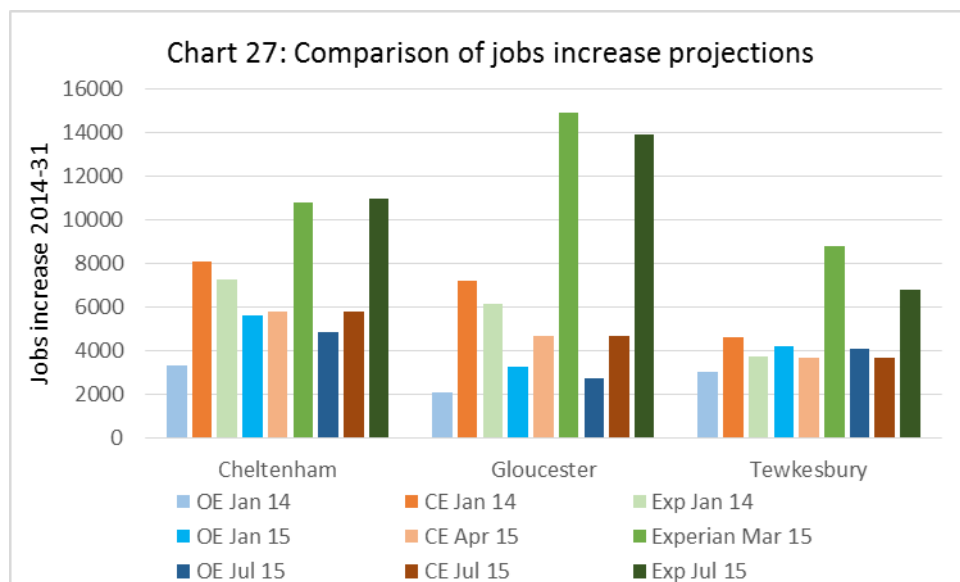
data.” As the data that is used in updating the forecasts, including the Business Register and Employment Survey is based upon sample surveys, it is subject to wide confidence limits at local authority level, and therefore the outputs must be carefully examined.

1.8 Cambridge Econometrics in advising in the use of forecast models state: “the forecasts are a tool to aid forecast analysis.....it does not remove the need for undertaking off-model analysis for the local economy.”

1.9 It is important to note that district authorities are the smallest administrative area for which the local forecast outputs are normally published. It is therefore essential that given the requirement of NPPG and as an individual district, where the margins of errors are likely to increase, Cotswold economic forecasts should be critically examined, tested and sensed checked for plausibility and robustness.

ECONOMIC FORECASTS ARE VOLATILE

1.10 Economic Forecasts are volatile and reflect macro-economic assumptions which have significant impacts on forecasts when applied locally. An Update Report for the JCS authorities of Cheltenham, Tewkesbury and Gloucester produced by NMSS in September 2015 summarises the net increase in jobs forecast by nine forecast model outputs for the three authorities over an 18 month period between January 2014 and July 2015. The substantive differences and volatility between the model outputs is clearly shown in Chart below. The Experian forecast for the JCS area as a whole increased by 85 percent between the 2014 and 2015 versions of the model and the most recent Cambridge Economics forecast has fallen by 29 percent.



Source: NMSS September 2015 Update Report for the JCS authorities

1.11 Therefore, economic forecasts should not be used without careful sense-checking and adjustment for realism where appropriate. Simply taking the net forecast or an arithmetic average

of disparate forecasts at a point in time is not an adequate substitute for an informed review of the forecasts based on a realistic assessment of the local economy.

IMPORTANT TO TEST THE PLAUSIBILITY OF FORECAST JOB CHANGES

1.12 Economic forecasts are useful in providing a range of scenarios that can inform but not determine the appropriate economic target and strategy for the Local Plan. The forecast models represent trend based growth, based upon a series of economic assumptions about the performance of the economy over time. Each is based upon a different methodology and there are also different ways in which the final employment data is calculated.

1.13 This Nupremis analysis explores a range of assumptions which reflect local economic performance and local economic analysis and provides recommendations on the appropriate range of job growth options to support the development of the Local Plan. The review is consistent with the methodology adopted in the Stroud and the Forest of Dean Local Plans.

2. HISTORIC JOBS PERFORMANCE 2000 TO 2014

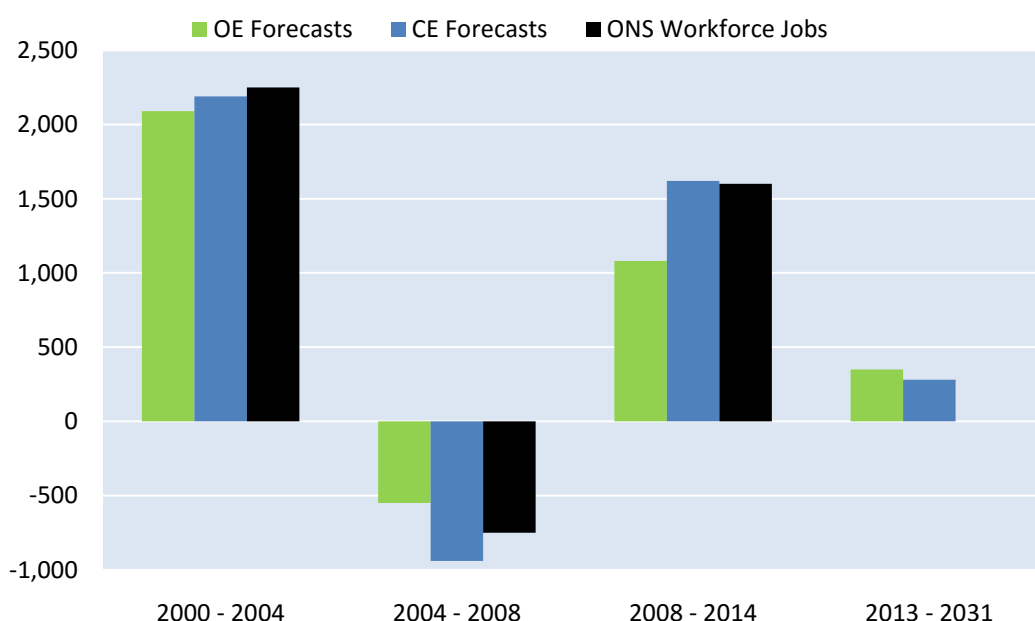
2.1 This section briefly examines the reported historical data within the forecasts to understand historic trends and the impact they might have on future performance. A detailed assessment of the Business and Industrial Trends in Cotswold is available in the Nupremis report, November 2015.

2.2 The Objectively Assessed Housing Needs of Stroud, Forest of Dean and Cotswold October 2014 completed by NMSS (the NMSS October 2014 Report) argues that, rather than using the two jobs forecasts for the full plan period (2011-31), a better approach when comparing the two forecasts should be to focus on the economic forecasters' assessments of the likely changes once the economy has emerged from the economic downturn, which is taken to mean 2014-31. This section evaluates that proposition.

COTSWOLD HAS HAD PERIODS OF STRONG JOB GROWTH AND PERIODS OF JOB LOSSES SINCE 2000

2.3 Chart 1 below shows the extent of the volatility in employment growth in Cotswold since 2000. ONS data and the historic data within the CE and OE 2015 forecasts report that there was strong job growth in Cotswold during 2000-04 and 2008-14, but a fall in jobs during 2004-08.

Chart 1: Annual Average Job Growth Trends – ONS workforce, Oxford Economic and Cambridge Econometrics 2015



Source: ONS Workforce Jobs, Cambridge Econometrics November 2015 and Oxford Economics November 2015

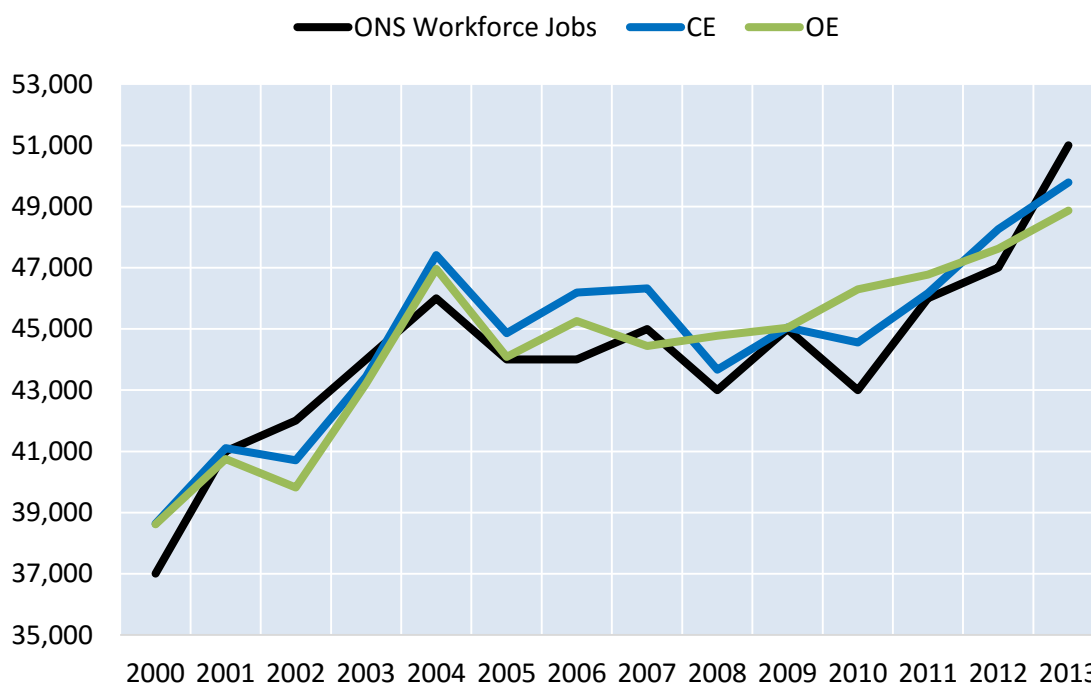
JOBS PERFORMANCE 2000 TO 2013

2.4 In 2013, ONS estimates that there were 51,000 jobs in Cotswold¹, while CE estimates 49,800 jobs and OE estimates 48,900 jobs. The ONS data includes a significant increase of 4,000 jobs in the final year to 2013 whereas both CE and OE report more moderate growth of 1,300 to 1,500 jobs in this year. ONS workforce data can become less reliable at a local scale and therefore both CE and OE forecasts have moderated ONS outputs to align with their own broader growth assumptions. Between 2000 and 2013:

- ONS estimates that jobs increased by 14,000, or 37.8 percent;
- CE estimates that jobs increased by 11,200, or 28.9 percent;
- OE estimates that jobs increased by 10,200, or 26.5 percent.

2.5 Chart 2 below illustrates CE2015 and OE2015 historic job growth and includes ONS data on workforce jobs. All datasets suggest that there has been a sharp increase in jobs in Cotswold since 2010. However, the CE trend more closely matches that from ONS than the OE data to 2013. This is particularly the case for 2009-2010, with ONS and CE suggesting that jobs in Cotswold fell in the midst of recession, whereas OE suggests that jobs continued to increase. However, CE suggests a more significant increase in 2012 than OE and ONS data.

Chart 2: Trend in jobs, 2000-2013



Source: Cambridge Econometrics November 2015, Oxford Economics November 2015, ONS Workforce Jobs

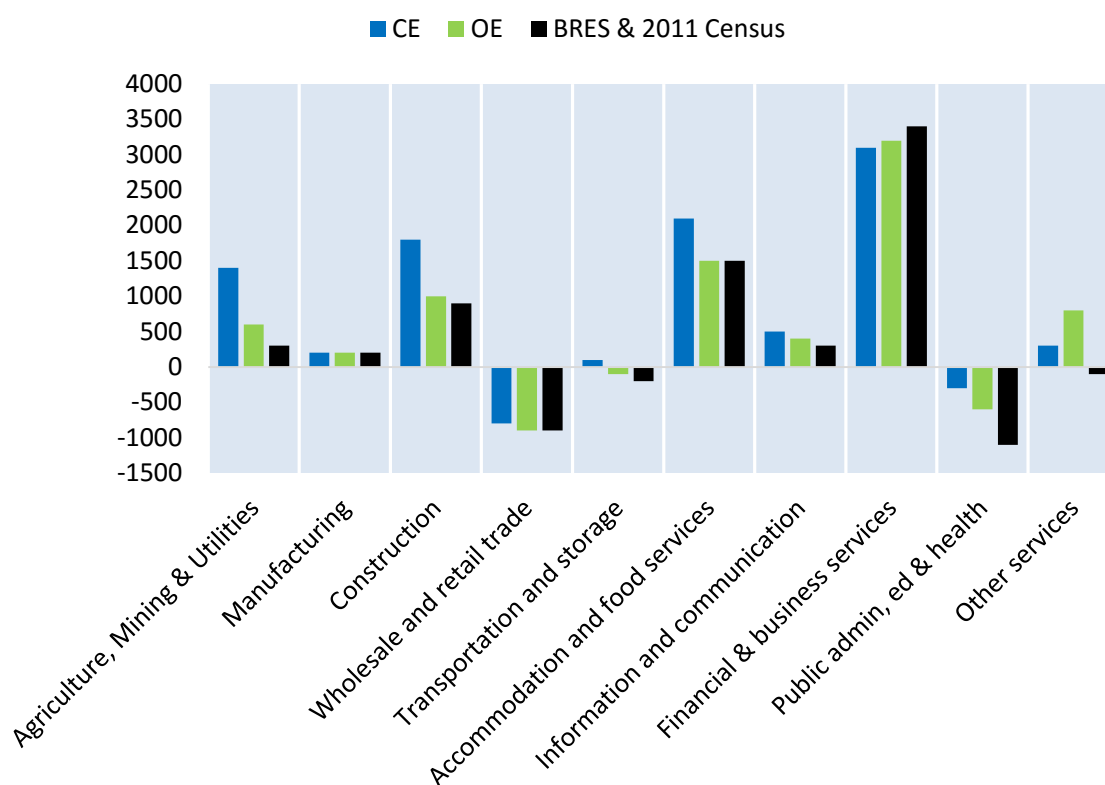
¹ Workforce Jobs comprises employees (from the Business Register and Employment Survey), self-employment jobs (from the Annual Population Survey), government-supported trainees (from DfES and DWP) and HM Forces (from MoD).

HISTORIC JOBS TRENDS BY INDUSTRY 2009 TO 2014

2.6 Data on the number of jobs by industry at district level is available from the ONS Business Register and Employment Survey for 2009-2014. However, this dataset excludes self-employed people not registered for VAT/PAYE, whereas these jobs are included in the CE and OE datasets. The Business and Industrial Trends Report 2015 highlights that much of the recent strong jobs growth experienced in the district has been concentrated among self-employed people not registered for VAT/PAYE. It is therefore important to ensure that this type of jobs growth is included in the analysis.

2.7 Data on the number of employees and self-employed people by industry is available from the 2011 Census – but just for 2011. However, using this data, it is possible to estimate the number of total jobs by industry in each year to 2014 if we assume that the share of employees and self-employed people by industry has remained the same each year. This is detailed below in Chart 3.

Chart 3: Change in jobs by sector, 2009-2014



Source: Cambridge Econometrics November 2015, Oxford Economics November 2015, BRES2014/Census 2011

2.8 At sector level, the extrapolated BRES/Census, CE and OE datasets are in broad agreement on which three sectors saw the largest increase in jobs between 2009 and 2014: Financial & Business Services, Accommodation & Food Services, and Construction. All are also in agreement that there was a significant fall in jobs in Wholesale & Retail and Public Administration, Education & Health.

2.9 The three datasets suggest different trends for two sectors:

- Other Services: extrapolated BRES/Census data suggests the number of jobs fell by 100, while CE and OE data suggest that jobs increased by 300 and 800 respectively;
- Transportation & Storage: extrapolated BRES/Census and OE data suggest that the number of jobs fell by 200 and 100 respectively while CE data suggests that jobs increased by 100.

2.10 In terms of the scale of job change between 2009 and 2014, all datasets have broadly consistent results on the degree of job change in the Manufacturing, Wholesale & Retail, Information & Communication, and Financial & Business Services sectors. However, there are some stark differences between datasets in the degree of jobs change in other sectors between 2009 and 2014.

- Comparing CE and OE data: CE estimates 800 more job gains in the Agriculture, Mining & Utilities sector than OE, 800 more job gains in Construction, 600 more job gains in Accommodation & Food Services, and 500 fewer job gains in Other Services.
- Comparing CE and BRES/Census data: CE estimates 1,100 more jobs gains in the Agriculture, Mining & Utilities sector than BRES/Census data, 900 more job gains in Construction, 600 more job gains in Accommodation & Food Services, and 800 fewer jobs losses in Public Administration, Education & Health.
- OE data is fairly consistent with BRES/Census data for most sectors apart from Other Services (800 job gains, compared to 100 job losses) and Public Administration, Education & Health (500 fewer job losses).

JOBS PERFORMANCE 2011 TO 2014

BOTH CE AND OE 2015 REPORT STRONG TOTAL GROWTH BETWEEN 2011 AND 2014 OF 4,500 TO 7,200 JOBS

2.11 Both CE's and OE's most recent data (2015) suggests stronger recent jobs growth in the period 2011-14 than estimates produced last year (2014). CE2015 shows the highest rates of growth 2011-14 with a net increase of 7,200 jobs (2,400 jobs per year). OE2015 shows slower, but significant growth of 4,500 net new jobs (1,500 jobs per year).

2.12 These differences are largely due to CE estimating much larger increases in Agriculture, Forestry & Fishing jobs during 2011-14 (CE 1,200; OE 200) and Construction jobs (CE 1,700; OE 600) and a smaller contraction in Government Services jobs (CE -500; OE -900).

2.13 In terms of similarities, both forecasters estimate that the strongest overall job growth occurred in Construction, Accommodation & Food Services and Financial & Business Services during this period. Both agree that jobs declined in the Utilities and Government Services sectors.

2.14 Both forecasters suggest that a very large proportion of job growth between 2011 and 2014 occurred in the three-year period 2011-14: CE 60 percent of total job growth; OE 43 percent of total job growth.

Table 3: Job Growth 2011-2014, CE and OE data

2011 to 2014	Net job change		Percentage job change	
	CE	OE	CE	OE
Agriculture, Forestry & Fishing	1,248	162	66%	7%
Mining & Quarrying	8	23	5%	11%
Manufacturing	302	253	9%	8%
Elec, gas, water	-215	-183	-51%	-48%
Construction	1,684	1,041	51%	30%
Distribution	177	99	2%	1%
Trans & Storage	217	115	20%	11%
Accom and Food	1,577	1,302	33%	28%
Info and Comms	-15	76	-1%	3%
Finance and Business	2,172	2,054	27%	24%
Govt Services	-513	-937	-5%	-10%
Other Services	561	464	17%	13%
Total	7,202	4,467	16%	10%

Source: Cambridge Econometrics November 2015 and Oxford Economics November 2015

2.15 The ONS data (calculated using employee data from BRES and shares of self-employed people by industry from the 2011 Census) suggests that jobs in Cotswold increased by 4,000 during 2011-14. This is closer to the OE estimate. OE industry-level jobs data is also more similar /closer to BRES/Census data for most sectors, apart from Wholesale & Retail and Financial & Business Services, as shown in Table 4.

Table 4: Job Growth 2011-2014, CE, OE and BRES/Census data

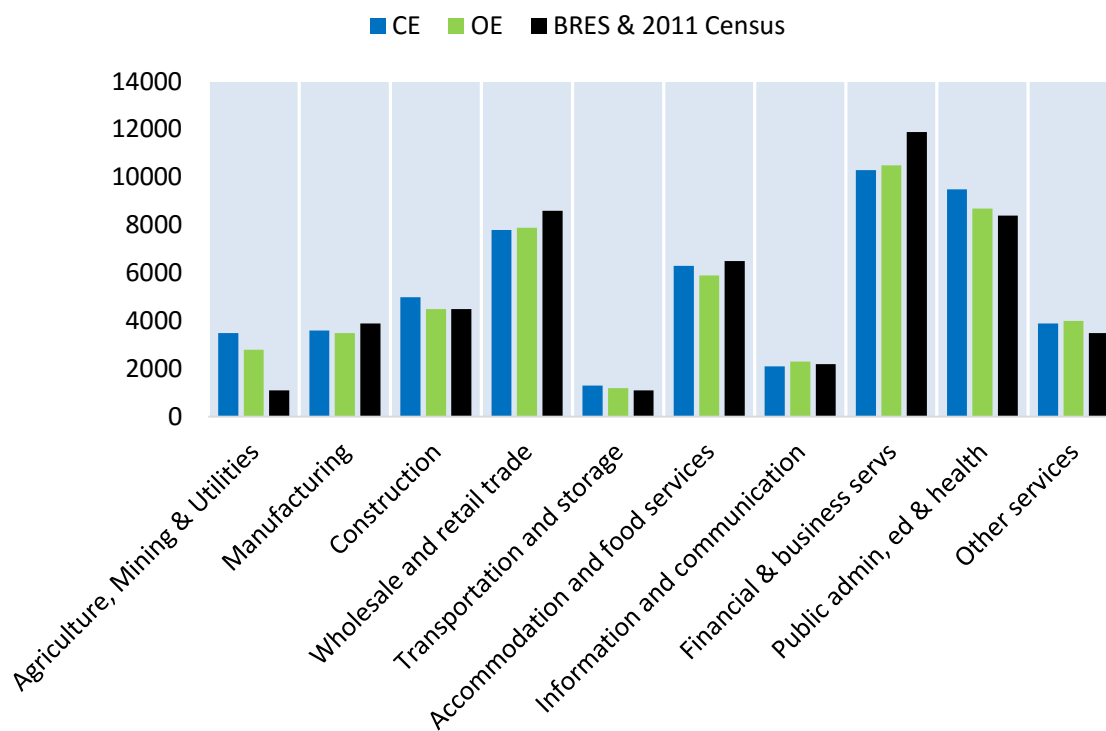
2011 to 2014	CE	OE	BRES /Census
Agriculture, Mining & Quarrying, & Utilities	1,041	2	-314
Manufacturing	302	253	251
Construction	1,684	1,041	1,185
Wholesale and retail	177	99	279
Transportation and storage	217	115	54
Accommodation and food services	1,577	1,302	1,277
Information and communication	-15	76	99
Fin. & business serv.	2,172	2,054	2,171
Public admin, ed & health	-513	-937	-1,265
Other services	561	464	255
Total	7,202	4,467	3,992

Source: BRES 2014, Census 2011, Cambridge Econometrics November 2015 and Oxford Economics November 2015

COMPARING NUMBER OF JOBS BY INDUSTRY AT 2014

2.16 The datasets suggest that there were around 51,000-53,000 jobs in Cotswold in 2014: estimated BRES/Census data 51,700 jobs; CE 53,400 jobs; OE 51,200 jobs. Chart 4 below details the outputs of the three datasets by industry.

Chart 4: Number of jobs by industry, 2014



Source: Cambridge Econometrics November 2015, Oxford Economics November 2015, Business Register and Employment Survey 2014, 2011 Census

2.17 The three datasets agree that the three largest employment sectors in Cotswold: Financial & Business Services, Public Administration, Education & Health, and Wholesale & Retail. However, there are stark differences between the datasets.

- CE estimates that there were 800 more jobs in Public Administration, Education & Health than OE, 700 more jobs in Agriculture, Mining & Utilities, 500 more jobs in Construction and 400 more jobs in Accommodation & Food Services.
- Comparing CE and OE to extrapolated BRES/Census data: both forecasts appear to detail significantly higher job numbers in Agriculture, Mining & Utilities and significantly less number of jobs in Financial & Business Services and Wholesale & Retail in Cotswold:
- Comparing CE to extrapolated BRES/Census data: CE estimates that there were 2,400 more Agriculture, Mining & Utilities jobs than BRES/Census data, 1,100 more jobs in Public

Administration, Education & Health, 1,600 fewer jobs in Financial & Business Services, and 800 fewer jobs in Wholesale & Retail;

- Comparing OE to extrapolated BRES/Census data: CE estimates that there were 1,700 more Agriculture, Mining & Utilities than BRES/Census data, 1,400 fewer jobs in Financial & Business Service, 700 fewer jobs in Wholesale & Retail, and 600 fewer jobs in Accommodation & Food Services.

SELF-EMPLOYMENT

THE IMPACT OF GROWTH IN SELF EMPLOYMENT AND PARTICULARLY GROWTH IN SELF EMPLOYMENT IN POPULATION OVER 64 YEARS OLD POTENTIALLY REPRESENTS A NEW AND SIGNIFICANT SHIFT IN THE RELATIONSHIP BETWEEN HOUSING DEMAND AND LABOUR SUPPLY

2.18 Despite indicating that job growth in Cotswold was relatively strong compared to the county and national averages, the BRES data presents a picture of weaker employee and VAT/PAYE registered self-employed jobs growth in Cotswold over recent years to 2013 than the workforce/total jobs dataset.

2.19 Since 2009 to 2014, the number of employee jobs in Cotswold has grown by 2,800 – or 7.7 percent. This total growth between 2009 and 2014 has been outstripped by growth in the number of self-employed people (both those registered and not registered for VAT/PAYE): +4,500, or 57.0 percent growth.

2.20 Between 2010 and 2013, the number of total number of workforce jobs in Cotswold increased by 8,000 or 18.6 percent, while the number of employee jobs and self-employed people registered for VAT/PAYE increased by just 200 or 0.6 percent. This suggests that much of the strong jobs growth experienced between 2010 and 2013 has been concentrated among self-employed people not registered for VAT/PAYE, government supported trainees and HM Forces

2.21 The data also shows that self-employment in people in the over 64 age group has increased by 2,300. At 2014, there are 3,200 self- employed people who are over 64 years in age. This represents 25 percent of all people who are self- employed.

2.22 ONS reports that nationally the number of people becoming self –employed has increased modestly since 1994, it is the dramatic drop in the numbers leaving self-employment that has been the main driver of growth since 2010. However, ONS also report that while growth in self-employment may have been accentuated by the recession, it is a trend that predates 2008.

2.23 There are a number of factors that will influence the self -employment profile including the economic cycle and the number job vacancies; technological changes which enable ‘freelance’ businesses; Government incentives to start businesses; changes in welfare policies; rising life expectancy and pension changes. Growth in self-employment and consequently total job growth in

Cotswold will be affected by these factors and the continued high levels of growth in self-employment are uncertain. Indeed, OE 2015 forecast suggests that increases in self-employment will be much less significant in the future. Given the characteristics of self-employment in Cotswold, the Objectively Assessed Need for Housing should consider the impact of growth in self-employment and particularly growth in self-employment in the population over 64 years old which potentially represents a new and significant shift in the relationship between housing demand and labour supply.

THE OAN ASSESSMENT SHOULD FOCUS ON THE ECONOMIC FORECASTERS' ASSESSMENTS OF THE LIKELY CHANGES AFTER 2014.

2.24 The Objectively Assessed Housing Needs of Stroud, Forest of Dean and Cotswold October 2014 completed by NMSS (OAN) argues that a better approach when comparing the two forecasts should be to focus on the economic forecasters' assessments of the likely changes once the economy has emerged from the economic downturn.

2.25 The most striking feature of the recent job growth is the stark divergence between the two forecasters on the recent historical data for employment in the Cotswold between 2009 and 2014 and 2011 to 2014. At 2009, the two forecasts have a consistent view of the level of employment in Cotswold. However, the difference between the two employment estimates is substantial at 2014: at over 2,200 jobs; it amounts to more than 45 percent of the job increase projected by CE2015.

2.26 Given the volatility in the forecast as detailed in this section, it is considered that the NMSS October 2014 Report proposition is a sound approach. The OAN assessment should focus on the economic forecasters' assessments of the likely changes once the economy has emerged from the economic downturn and after 2014.

3. JOB GROWTH - HEADLINE FORECASTS

3.1 Cotswold District Council commissioned Cambridge Econometrics (CE) and Oxford Economics (OE) forecasts in August 2014 and November 2015. Cambridge Econometrics' and Oxford Economics' most recent historic job growth and jobs forecasts for Cotswold together with data produced in 2014 are detailed in Table 5. The 2015 forecasts are informed by the more recent Business Register and Employment Survey Data from 2014.

Table 5: Forecast Job Growth, Oxford Economics and Cambridge Econometrics 2014 and 2015

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OE 2015	4,500	10,500	6,000	1,500	500	350

Source: Cambridge Econometrics August 2014 and November 2015. Oxford Economics August 2014 and November 2015

CE AND OE REPORT THAT TOTAL JOBS IN COTSWOLD WILL INCREASE BY 4,700 TO 6,000 JOBS BETWEEN 2014 AND 2031

3.2 After 2014, both CE2015 and OE2015 forecasts suggest that job growth will slow, with average annual growth rates between 300 and 400 jobs per year respectively. Significantly, CE has revised down its most recent job forecasts for 2014-31. CE projects that jobs will increase by 4,700 between 2014 and 2031 compared to its 2014 forecast of 5,000. The revised forecast is equivalent to a 9 percent increase in jobs – or 300 net additional jobs per year.

3.3 OE2014 forecasts for 2014 to 2031 are marginally lower than the equivalent CE2014 forecasts for the period 2014 to 2031. However, OE has revised up its most recent job forecasts for 2014-31 substantially. OE project that jobs will increase by 6,000 between 2014 and 2031 which is significantly higher than last year's forecast of 4,800. The revised forecast is equivalent to a 12 percent increase in jobs – or 350 net additional jobs per year.

EXPERIAN FORECASTS FOR COTSWOLD

3.4 As part of submissions to recent planning appeals and the public examination of the Joint Core Strategy for Cheltenham, Gloucester and Tewkesbury, alternative total job growth figures forecasts by Oxford Economics, Cambridge Econometrics and Experian are made available. Table 6 below reports that data.

Table 6: Forecast Job Growth, Experian 2015, Oxford Economics, Cambridge Econometrics 2014 and 2015

	Net Jobs Growth		Average Annual Jobs Growth	
	2011-31	2014-31	2011-31	2014-31
Experian March 2015	8,500	5,200	425	300
CE August 2014	8,700	5,000	400	300
CE January 2015		5,200		300
CE November 2015	11,900	4,700	600	300
OE August 2014	7,800	4,800	400	300
OE January 2015		4,200		250
OE November 2015	10,500	6,000	500	400
Average job growth	8,480	5,000	465	290

Source: Experian March 2015, Cambridge Econometrics August 2014, January 2015 and November 2015. Oxford Economics August 2014, January 2015 and November 2015

3.5 Analysis of the data suggests that the total jobs forecast for the five forecasts for the period 2011 to 2031 is 8,480 or an annual average of 470 jobs per annum. Using all available forecasts (7 forecasts) for the period 2014 to 2031, the average equates to a total jobs growth of 5,000 or an annual average of 290 jobs per annum.

3.6 It is also clear from the data that the most recent Oxford Economics forecast for the period 2014 to 2031 represents a significant shift from both its own assessment of job growth forecast in August 2014 and from the equivalent forecasts produced by Experian and Cambridge Econometrics in 2015. The 2015 Oxford Economics forecasts is 25 percent higher than its own 2014 forecasts and 17 percent higher than the average job growth figure for 2014 to 2031.

3.7 NPPG on Housing and Economic Development Needs Assessments states that makers should make an assessment of the likely change in job numbers based on past trends and/or economic forecasts as appropriate. Given the significant difference between the OE and CE forecasts this report seeks to narrow the range of plausible changes in job numbers by examining forecasts by sector.

4. JOBS FORECASTS BY SECTOR 2014-31

CE AND OE 2014 AND 2015 FORECASTS REPORT SIGNIFICANT DIFFERENCES IN SECTORAL JOB GROWTH BETWEEN 2014 AND 2031.

4.1 The following section compares the CE 2014 and 2015 and OE 2014 and 2015 forecasts and highlights the volatility in forecasts exhibited at a district scale between the same forecast methodologies. The report goes on to highlight the distinct difference in the type of economic growth and type of economy identified by each forecasts by comparing the sectoral forecasts by CE and OE between 2014 and 2031.

CAMBRIDGE ECONOMETRICS JOBS FORECASTS 2014 TO 2031

CE IS NOW PROJECTING LOWER JOB GROWTH FOR COTSWOLD THAN ONE YEAR AGO

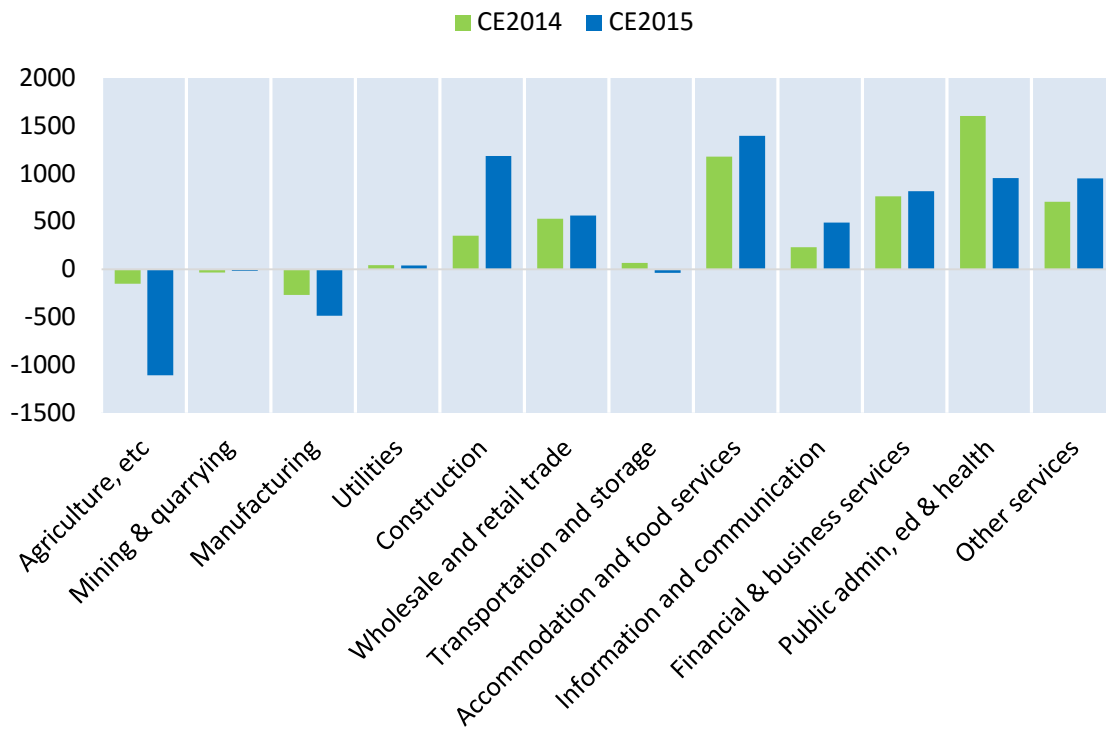
4.2 Between 2014 and 2031, the most recent CE2015 forecasts project that jobs in Cotswold will increase by 4,700 (or 9 percent) between 2014 and 2031. This is lower than the CE2014 projection of 5,000 net additional jobs (or 10 percent).

4.3 CE 2015 projects that the largest increase in jobs between 2014 and 2031 will be in Accommodation & Food Services (+1,400), Construction (+1,200), Government Services (+1,000) and Other Services (+1,000). CE 2015 projects that jobs will fall substantially in Agriculture, Forestry & Fishing (-1,100) and Manufacturing (-500).

4.4 In percentage terms, the sectors expected to experience the fastest rates of job growth are Construction (24 percent), Other Services (24 percent), Information & Communication (23 percent), Accommodation & Food Services (22 percent) and Utilities (20 percent).

4.5 There are some significant differences in job forecasts by industry between CE2015 and CE2014. CE now projects that there will be a much steeper decline in Agriculture, Forestry & Fishing jobs (1,000 more than CE2014), a much larger increase in Construction jobs (800 more than CE2014), and a much smaller increase in Government Services jobs (600 fewer than CE2014).

Chart 5: Forecast change in jobs by sector 2014-31, CE2014 and CE2015

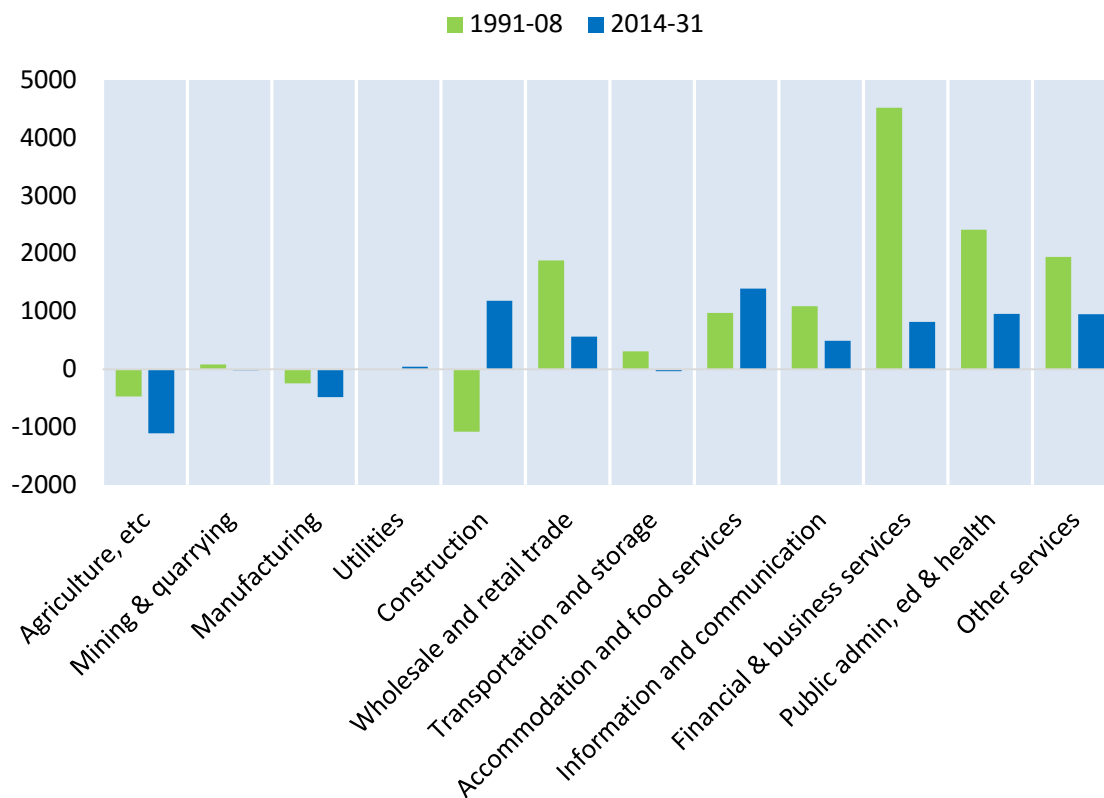


Source: Cambridge Econometrics, August 2014 and November 2015

JOBS ARE EXPECTED TO GROW AT A MUCH SLOWER RATE THAN HISTORICALLY

4.6 CE 2015 project that jobs in Cotswold will increase by 4,700 (or 9 percent) between 2014 and 2031 (a 17 year period). This is a significant slowdown on the historic, pre-recession, trend (+11,400 jobs, or +35 percent, between 1991 and 2008 – also a 17 year period). This is due to a projected slower rate of growth of Financial & Business services jobs, Government Services jobs, Wholesale & Retail jobs, and Other Services jobs. In contrast, CE 2015 projects a significant improvement in Construction industry job growth (+1,200 jobs between 2014 and 2031), compared to -1,100 jobs between 1991 and 2008.

Chart 6: CE historic and forecast change in jobs by sector



Source: Cambridge Econometrics 2015

TOTAL JOBS IN COTSWOLD ARE EXPECTED TO GROW AT THE SAME RATE AS CE NATIONAL RATES OF GROWTH. AT SECTOR LEVEL, JOB GROWTH IN UTILITIES, INFORMATION & COMMUNICATION, GOVERNMENT SERVICES AND OTHER SERVICES IS EXPECTED TO OUTSTRIP RATES ACROSS GLOUCESTERSHIRE, THE SOUTH WEST AND THE UK

4.7 Between 2014 and 2031, jobs in Cotswold are projected to grow by 9 percent – the same rate as the UK average, higher than the Gloucestershire average (6 percent) and slightly lower than the South West average (10 percent). Compared to all three areas, job growth by sector in Cotswold is expected to match the ‘direction of travel’ in all sectors, i.e. contraction in Agriculture, Forestry & Fishing, Mining & Quarrying, Manufacturing, and Transportation & Storage jobs, Government Services and job growth in all other sectors. Job growth in Utilities, Information & Communication and Other Services is also expected to outstrip rates in all three areas.

4.8 Comparing rates of job growth by sector to UK projections, Cotswold is expected to experience much faster rates of job growth in Other Services (24 percent, compared to 9 percent UK), Government Services (10 percent, compared to 6 percent UK) and Information & Communication (23 percent, compared to 16 percent UK). Cotswold is also projected to experience a smaller contraction in Manufacturing jobs (-13 percent, compared to -20 percent UK). However,

Cotswold is projected to experience much slower growth in Financial & Business Services jobs (8 percent, compared to 18 percent UK).

4.9 Job projections compare favourably to Gloucestershire averages for most sectors. In particular, Cotswold is expected to experience a much faster rate of Information and Communication job growth (23 percent, compared to 15 percent) and a slower rate of contraction in Manufacturing jobs (-13 percent, compared to -29 percent). Compared to South West averages, Cotswold is expected to experience much faster rates of growth in Information & Communication jobs (23 percent, compared to 13 percent) and Utilities jobs (20 percent, compared to 9 percent) but a much slower rate of growth in Construction jobs (24 percent, compared to 35 percent).

Chart 7: Cambridge Econometrics 2015 forecast percentage change in jobs, 2014-31



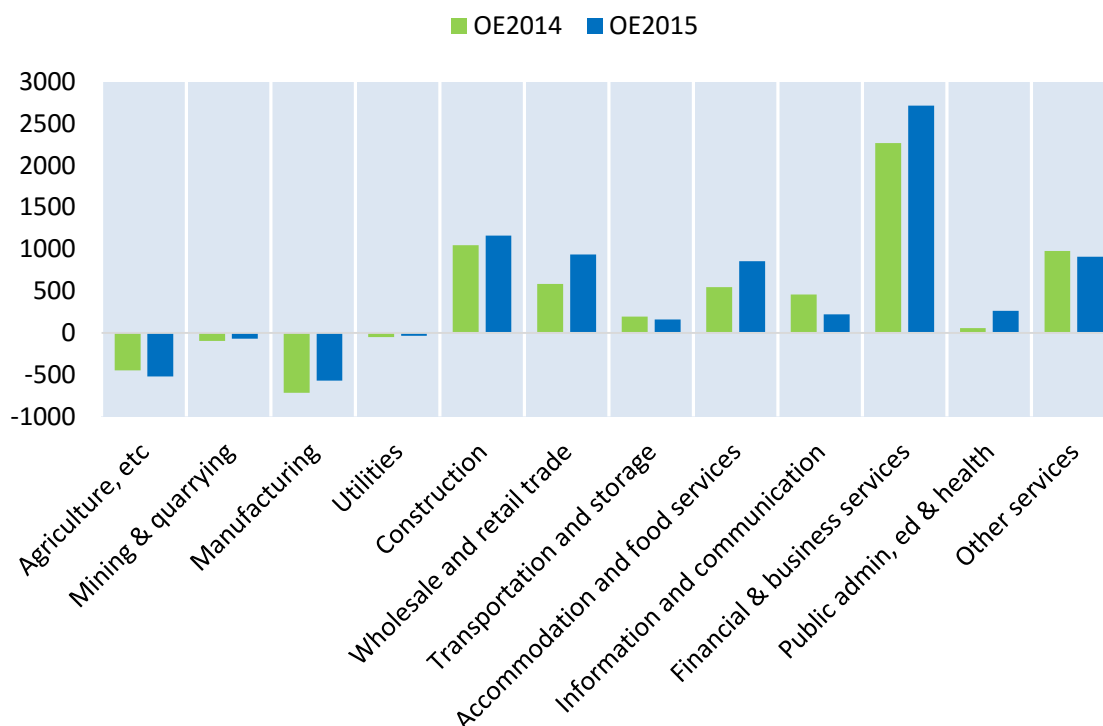
Source: Cambridge Econometrics November 2015 Oxford Economics jobs forecasts 2014 to 2031

OE IS PROJECTING MUCH HIGHER JOB GROWTH FOR COTSWOLD THAN ONE YEAR AGO WITH A TOTAL INCREASE OF 6,000 JOBS 2014 TO 2031

4.10 Between 2014 and 2031, the most recent OE2015 forecasts project that jobs in Cotswold will increase by 6,000 (or 12 percent) between 2014 and 2031. This is a significant (25 percent) uplift on the OE2014 projection of 4,800 net additional jobs (or 10 percent). OE2015 projects that the largest increase in jobs between 2014 and 2031 will be in Financial & Business Services (+2,700) representing 45 percent of the total growth, Construction (+1,200), Wholesale & Retail (+900) and Other Services (+900). OE2015 projects that job numbers will fall in Manufacturing (-600) and Agriculture, Forestry & Fishing (-500).

4.11 In percentage terms, the sectors expected to experience the fastest rates of job growth are Construction (26 percent), Financial & Business Services (26 percent) and Other Services (23 percent). There are some significant differences in job forecasts by industry between OE2015 and OE2014. OE now projects that there will be stronger growth in Financial & Business Services jobs (400 more than OE2014), stronger growth in Wholesale & Retail jobs (400 more than OE2014), stronger growth in Accommodation & Food Services jobs (300 more than OE2014) and weaker growth in Information & Communication jobs (200 fewer than OE2014).

Chart 8: Forecast change in jobs by sector 2014-31, OE2014 and OE2015

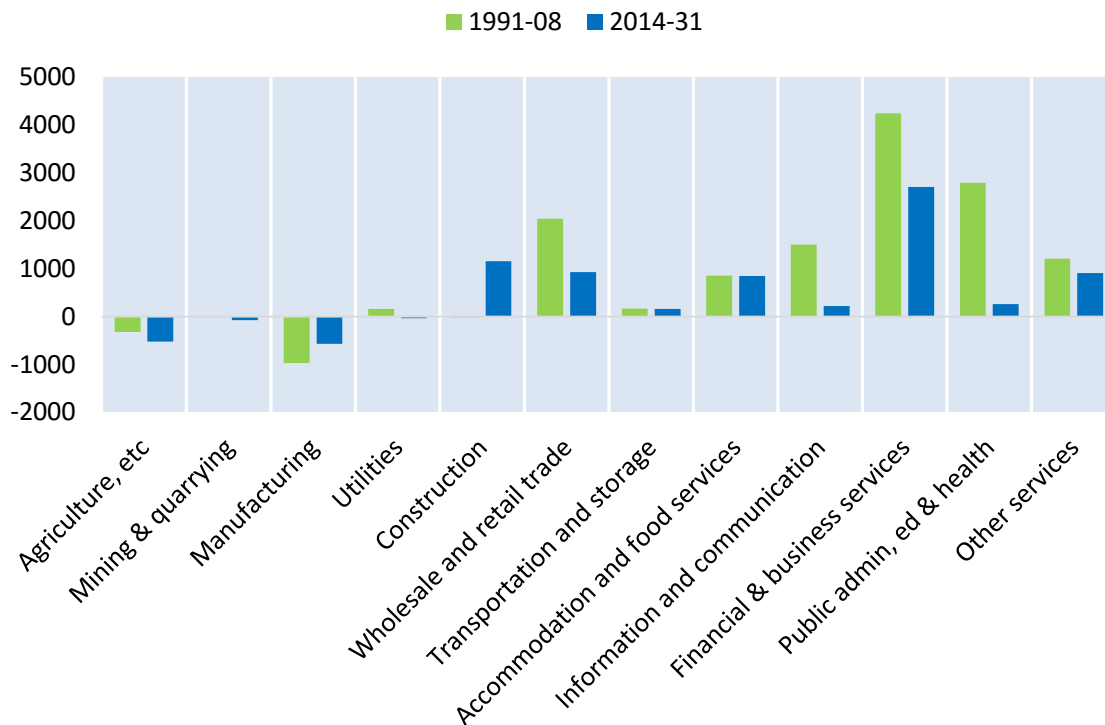


Source: Oxford Economics, August 2014 and November 2015

JOBS ARE EXPECTED TO GROW AT A MUCH SLOWER RATE THAN HISTORICALLY

4.12 OE2015 project that jobs in Cotswold will increase by 6,000 (or 12 percent) between 2014 and 2031. This is a significant slowdown on the historic, pre-recession, trend (+11,700 jobs, or +35 percent, between 1991 and 2008). This is due to a projected slowdown in growth of Government Services jobs, Financial & Business services jobs, Information & Communication jobs and Wholesale & Retail jobs. In contrast, CE2015 projects a significant improvement in Construction industry job growth (+1,200 jobs between 2014 and 2031, compared to -17 jobs between 1991 and 2008).

Chart 9: OE historic and forecast change in jobs by sector



Source: Oxford Economics 2015

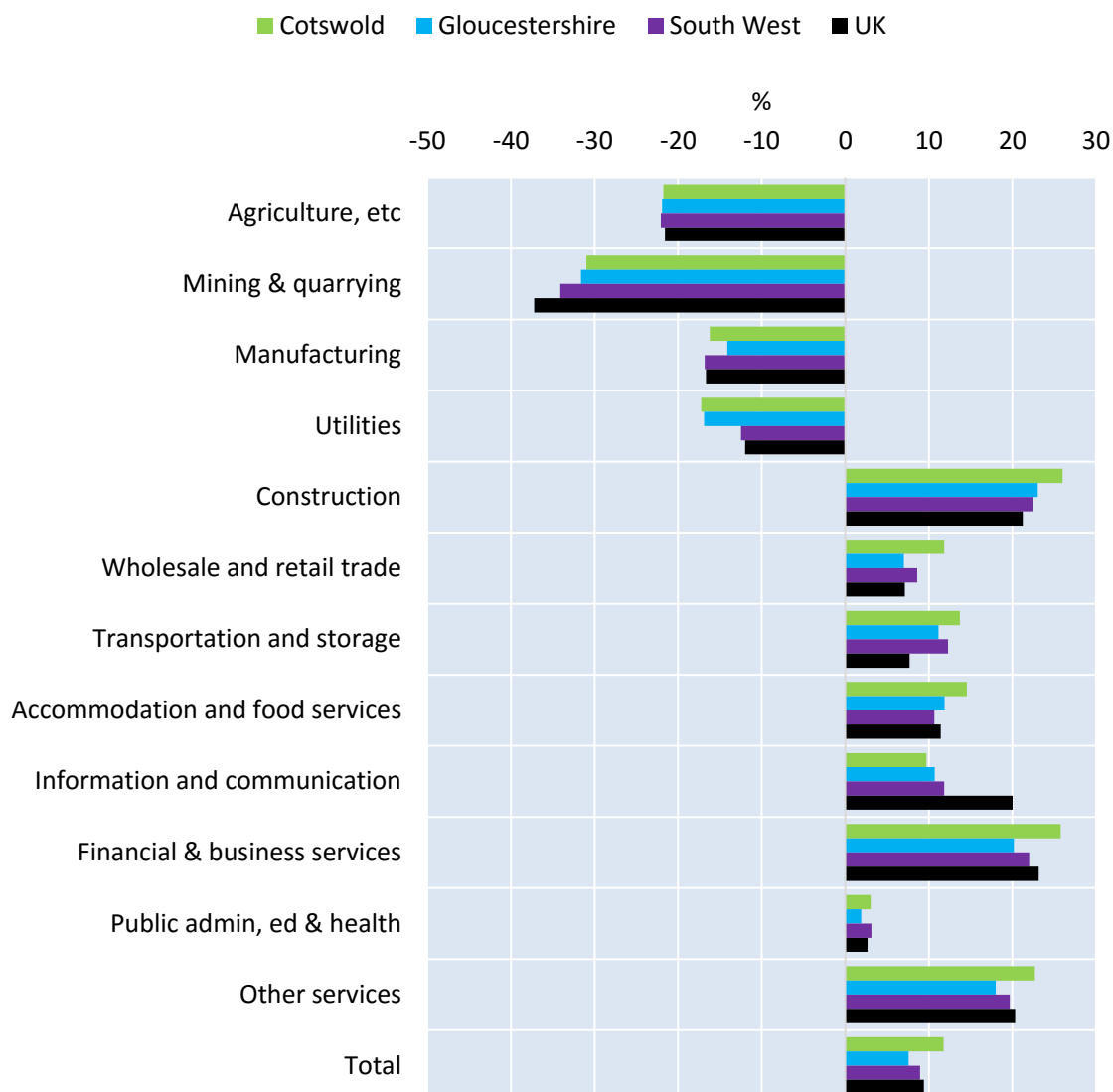
TOTAL JOB GROWTH IN COTSWOLD IS EXPECTED TO EXCEED GROWTH RATES ACROSS GLOUCESTERSHIRE, THE SOUTH WEST AND THE UK. AT SECTOR LEVEL, JOB GROWTH IN CONSTRUCTION, WHOLESALE & RETAIL, TRANSPORTATION & STORAGE, ACCOMMODATION & FOOD SERVICES, FINANCIAL & BUSINESS SERVICES, AND OTHER SERVICES IS EXPECTED TO OUTSTRIP COUNTY, REGIONAL AND NATIONAL RATES

4.13 Between 2014 and 2031, jobs in Cotswold are projected to grow by 12 percent – higher than the Gloucestershire, South West and UK averages (8 percent, 9 percent and 9 percent respectively). Job projections compare favourably to Gloucestershire, South West and UK averages for most sectors. In particular, Cotswold is expected to experience faster rates of job growth in Transportation & Storage (14 percent, compared to 8 percent UK), Construction (26 percent, compared to 21 percent UK), and Wholesale & Retail (12 percent, compared to 7 percent UK), and a smaller contraction in Mining & Quarrying jobs (-31 percent, compared to -37 percent UK). However,

Cotswold is also projected to experience much slower growth in Information & Communication jobs (10 percent, compared to 20 percent UK).

4.14 Job projections also compare favourably to Gloucestershire averages for most sectors. In particular, Cotswold is expected to experience faster rates of job growth in Financial & Business Services (26 percent, compared to 20 percent), Wholesale & Retail (12 percent, compared to 7 percent), and Other Services (23 percent, compared to 18 percent).

Chart 10: Oxford Economics 2015 forecast percentage change in jobs, 2014-31



Source: Oxford Economics November 2015

COMPARISON OF CAMBRIDGE ECONOMETRICS AND OXFORD ECONOMICS 2015 FORECASTS SUGGESTS SIGNIFICANT DIFFERENCES

4.15 While last year's CE and OE forecasts for 2014-31 were very similar, a substantial revision by OE means that both are now forecasting very different rates of job growth. OE is now forecasting much faster total job growth than CE.

4.16 This is largely due to OE forecasting much higher job growth in Financial & Business Services than CE (OE +2,700; CE +800), faster growth in Wholesale & Retail jobs (OE +900; CE+600) and a much smaller contraction in Agriculture, Forestry & Fishing Jobs (OE -500; CE -1,100). CE is forecasting much faster levels of job growth in Government Services (CE +1,000; OE +300), Accommodation & Food (CE +1,400; OE +900), and Information & Communication (CE +500; OE +200)

4.17 Significantly the OE forecast of +6,000 jobs between 2014 and 2031 represents a 12 percent increase compared to its national growth forecasts of 9 percent. CE forecasts rates for Cotswold are consistent with its net national forecast of 9 percent.

4.18 A detailed comparison of the differences and similarities between the OE and CE forecasts is included in Appendix A.

CE AND OE FORECASTS HAVE VERY DISTINCT AND DIFFERENT VIEWS ON THE SCALE AND TYPE OF EMPLOYMENT IN COTSWOLD TO 2031 AND FURTHER TESTING IS REQUIRED TO ASSESS THE ROBUSTNESS OF THE SECTORAL FORECASTS

4.19 The analysis above confirms that the CE and OE forecasts have very distinct and different views on the scale and type of employment in Cotswold to 2031. In view of these substantive differences the sectoral analysis in this report identifies the plausibility of the CE and OE job forecasts using the Business and Industry sector assessment and the historic forecast performance assessment with a view to providing guidance on the range of plausible changes in total job growth and job sectors.

5. GVA FORECASTS

OE AND CE FORECASTS AN ANNUAL GVA INCREASE OF BETWEEN 2.3 AND 2.4 PERCENT

5.1 OE forecasts that the value of the Cotswold economy will increase from £1.69 billion in 2011 to £2.97 billion in 2031. CE forecasts higher values increasing from £1.86 billion in 2011 to £3.28 billion in 2031. Both CE2015 and OE2015 project that economic growth in Cotswold will slow during 2014-31, compared to the historic trend.

5.2 CE projects that GVA in Cotswold will grow at an average annual rate of 2.3 percent per year – below the historic, pre-recession trend of 3.8 percent per year (1991-2008) but similar to UK average forecast growth of 2.2 percent per year.

5.3 Likewise, OE projects that GVA in Cotswold will grow at an average annual rate of 2.4 percent per year – below the historic, pre-recession trend of 3.2 percent per year (1991-2008) but similar to UK average forecast growth of 2.3 percent per year.

CE PROJECTS A SLOWDOWN IN GVA GROWTH IN ALL SECTORS APART FROM CONSTRUCTION

5.4 CE projects that the fastest growing sectors during 2014-2031 will be Information & Communication (3.7 percent per year), Construction (2.9 percent per year), and Other Services (2.5 percent per year). All sectors are expected to experience GVA growth apart from Mining & Quarrying (-2.6 percent per year) – mirroring the national forecast trend.

5.5 Compared to past trends, growth is expected to slow in all sectors apart from Construction – which is projected to experience growth of 2.9 percent per year 2014-31, compared to a decline of 0.7 percent per year 1991-2008. Nationally, growth is also expected to accelerate in the Construction sector, along with the Agriculture, Forestry & Fishing and Manufacturing sectors.

5.6 The sectors expected to experience the largest slowdown in growth in Cotswold are Mining & Quarrying (-2.6 percent, compared to +5.6 percent 1991-2008), Information & Communication (3.7 percent per year, compared to 9.8 percent per year 1991-2008), and Financial & Business Services (1.9 percent per year, compared to 7.1 percent per year 1991-2008).

5.7 Compared to UK averages, growth in Cotswold is expected to exceed the UK average in Other Services, Manufacturing, Transportation & Storage, Information & Communication, Construction, and Accommodation & Food Services. Growth is forecast to be below average in Utilities and Agriculture, Forestry & Fishing, while Cotswold is expected to experience a slightly bigger contraction in Mining & Quarrying GVA.

OE PROJECTS A SLOWDOWN IN GVA GROWTH IN ALL SECTORS APART FROM CONSTRUCTION AND ACCOMMODATION & FOOD SERVICES

5.8 OE projects that the fastest growing sectors during 2014-2031 will be Information & Communication (3.3 percent per year), Financial & Business Services (3.2 percent per year), and Wholesale & Retail (2.9 percent per year). All sectors are expected to experience growth, mirroring the national forecast trend.

5.9 Compared to past trends, growth is expected to slow in all sectors apart from Construction and Accommodation & Food Services. Construction is projected to experience growth of 2.5 percent per year 2014-31, compared to a decline of 0.3 percent per year 1991-2008, while Accommodation & Food is projected to experience growth of 2.7 percent per year, compared to 2.2 percent per year 1991-2008. Nationally, growth is also expected to accelerate in the Construction and Accommodation & Food Services sectors, along with Agriculture, Forestry & Fishing.

5.10 The sectors expected to experience the largest slowdown in growth in Cotswold are Mining & Quarrying (0.8 percent, compared to 12.4 percent 1991-2008), Information & Communication (3.3 percent per year, compared to 13.4 percent per year 1991-2008), and Utilities (2.2 percent per year, compared to 7.7 percent per year 1991-2008). Compared to UK averages, growth in Cotswold is expected to exceed or mirror the UK average in all sectors apart from Information & Communication.

SIMILARITIES BETWEEN CE AND OE GVA FORECASTS

- CE and OE are forecasting very similar rates of total GVA growth in Cotswold between 2014 and 2031: CE 2.3 percent per year and OE 2.4 percent per year;
- Both are forecasting that average annual GVA growth in Cotswold will be one tenth of a percentage point higher than UK average growth;
- Both are forecasting similar growth rates (differences of less than 0.5 percentage points) for the Utilities, Construction, Transportation & Storage, Accommodation & Food Services, and Information & Communication sectors;
- Both are forecasting an acceleration in Construction GVA;
- Both project that Information & Communication will be Cotswold's fastest growing sector.

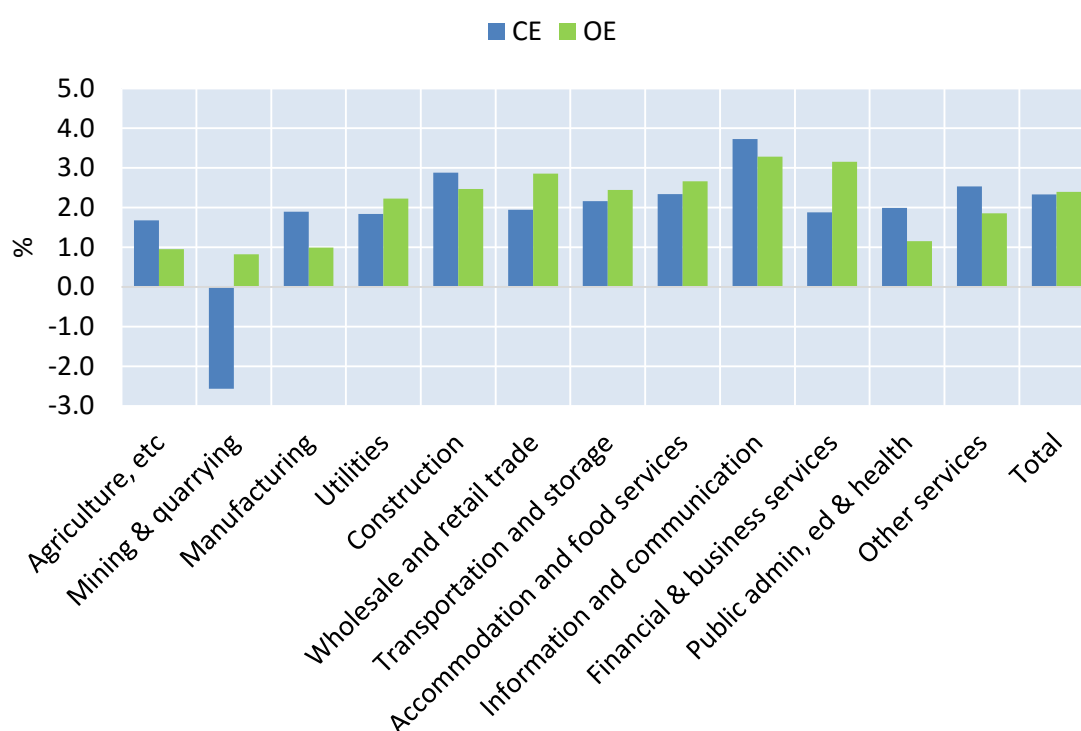
DIFFERENCES BETWEEN CE AND OE GVA FORECASTS

- CE projects that Information & Communication, Construction & Other Services will be Cotswold's fastest growing sectors, while OE projects that Information & Communication, Financial & Business Services and Wholesale & Retail will be the fastest growing;
- OE is much more optimistic with regards to growth in Cotswold's Mining & Quarrying sector. OE projects that Mining & Quarrying GVA will grow by 0.8 percent per year, while CE projects that Mining & Quarrying GVA will contract by 2.6 percent per year. This is due to different national assumptions about the likely performance of the sector, with OE projecting slight growth UK-wide and CE projecting a contraction;
- OE is also much more optimistic to growth in Cotswold's Financial & Business Services sector. OE projects that Financial & Business Services GVA will grow by 3.2 percent per year,

while CE projects that the sector will grow by 1.9 percent per year. OE is also more optimistic about growth in the sector nationwide;

- OE is also more optimistic about growth in the Wholesale & Retail sector: OE 2.9 percent per year; CE 1.9 percent per year. Again, OE is also more optimistic about growth in the sector nationwide;
- CE is more optimistic about growth in Agriculture, Forestry & Fishing, Manufacturing, Government Services, and Other Services (differences in annual average growth rates of 0.7-0.9 percentage points). CE is also more optimistic than OE about UK-wide growth in Agriculture, Forestry & Fishing, Manufacturing, and Government Services GVA, but less optimistic than OE about UK-wide growth in Other Services GVA.

Chart 11: Forecast annual average growth rates by industry in Cotswold, 2014-31



Source: Cambridge Econometrics November 2015 and Oxford Economics November 2015

STRATEGIC ECONOMIC PLAN

5.11 The Strategic Economic Plan for Gloucestershire sets out ambitious plans to accelerate economic growth by focusing on key drivers of productivity and supporting growth in high value sectors. It identifies a number of sector specialisms with high growth potential, where there are strengths on which to build or opportunities to exploit. The Strategic Economic Plan has identified its key growth sectors with key priority interventions along the M5 corridor Growth Zone, a growth hub, enablers of Growth including the A417 link and support for Green Technology.

5.12 The Strategic Economic Plan sets a very ambitious proposition to increase GVA by 4.8 percent, per annum by focussing and making key interventions in target sectors and unlocking infrastructure constraints by 2025. The GVA forecasts for Cotswold represent an increase of 2.3 percent to 2.4 percent per annum. Clearly, the GVA forecasts reported by CE and OE do not meet the highly aspirational Strategic Economic Plan target. However, it is important to note that GVA is not dependent upon jobs growth alone and indeed in economic terms, there are several basic factors and processes which can lead to economic growth. The Council should consider these factors both as part of the Local Plan and other Corporate interventions.

- Entrepreneurship – increase in business formation and business activities
- Comparative advantage – can provide better value, quality, sophistication of goods and services compared to other areas
- Factor inputs – labour and capital
- Labour inputs refer to the units of labour and the skills of labour which are used for production
- Capital inputs refer to equipment, land or premises which are used for production
- Capital formation – investment in human (skills) and physical (land, premises, infrastructure, equipment) capital
- Innovation – devising new and improved products, processes and services which are more productive, efficient or effective in delivering output, meeting market demand, or open up new markets

5.13 The Strategic Economic Plan also states that the Enterprise Partnership would have achieved its ambitions by creating 33,900 jobs across Gloucestershire and protecting a further 2,125 jobs equivalent to a growth rate of 0.8 percent/annum. The job growth rates reported within the Cambridge Econometrics and Oxford Econometrics forecasts for the period 2011 to 2031 represent a range of 1.0 percent to 1.2 percent per annum; the per annum growth rate forecasts represents a range of 0.7 percent to 1.0 percent per annum for the period 2014 to 2031.

THE RANGE OF CE AND OE JOB GROWTH FORECASTS BROADLY ALIGN WITH THE ANNUAL AVERAGE INCREASE JOB GROWTH PROMOTED IN GFIRST'S STRATEGIC ECONOMIC PLAN

5.14 Importantly, the Strategic Economic Plan focusses growth upon the M5 corridor and its other interventions are not primarily focussed upon Cotswold District. The Growth Hub, Growth Accelerator and interventions such as the A419 transport link will increase the potential to deliver the jobs forecasts. Indeed the Local plan should provide the flexibility to provide and facilitate additional job growth should that arise in the earlier part of the plan period. It will be important for the Council to monitor the impact of any interventions and the progress of employment growth throughout the plan.

6. SECTORAL ANALYSIS AND PROSPECTS

6.1 The CE and OE forecasts have very distinct and different views on the scale and type of employment growth in Cotswold to 2031.

6.2 The sectoral analysis in this chapter identifies the plausibility of the CE and OE job forecasts with a view to providing guidance on a range of total job growth by job sectors. Where an anomaly is found in the data or the job growth is inconsistent with local analysis and performance and therefore implausible or unrealistic, the analysis identifies an alternative job growth scenario.

AGRICULTURE

6.3 Both CE and OE forecast significant job losses in agriculture 2014 to 2031. However, each forecast has a distinct view on the scale of that loss. The difference between the OE forecast loss and CE forecast loss amounts to a difference of almost 600 jobs.

6.4 CE forecast a very significant loss of 1,100 jobs in agriculture from 2014 to 2031 (-35 percent), double the total loss of jobs in agriculture detailed by OE. The CE forecast in this sector represents a significantly higher percentage loss than the CE equivalent South West forecast loss (-28 percent) but broadly in line with CE forecasts for agriculture in Gloucestershire.

6.5 OE forecast losses in this sector amount to a total job loss of -520 jobs or -22 percent. This scale of loss reflects OE's percentage change for Gloucestershire and South West.

6.6 BRES 2014 data suggests that employment in agriculture grew positively between 2009 to 2014. However, Cotswold saw a smaller percentage increase than Gloucestershire. Between 2013 and 2014 BRES data 2014 reports that employment growth increased by 100 jobs.

6.7 The reason for the difference in the two forecasts can be partly explained by the level of employment detailed in agriculture by OE and CE at 2014. CE 2015 reports employment in agriculture increasing from 1,900 to 3,100 between 2013 and 2014; an annual increase of 1,200 jobs or a 63 percent increase. OE 2015 forecast reports employment increasing from 2,000 to 2,400 over the same year. However, at 2031 employment in agriculture for both forecasts is reported at 1,900 and 2,000 jobs.

6.8 The CE employment increase of 1,100 jobs between 2013 and 2014 seems implausible, even given recent positive trends detailed by BRES 2009 to 2014. However, the absolute decrease in the CE forecast in this sector is significant and would appear to reflect an anomaly (an over-estimate of the number of people employed in agriculture at 2014 by CE).

In terms of net jobs growth from 2014 to 2031, the loss of 1,100 agricultural jobs in the 2015 CE forecasts has a significant impact upon the net job increase on which the OAN is calculated.

The CE forecast for agriculture in the alternative scenario is amended to assume:

- a) **the CE 2015 total number of jobs in agriculture at 2014 is adjusted from 3,100 to 2,300 jobs. This assumes that the annual increase between 2013 and 2014 is +400 jobs, which is consistent with the OE assumptions of job growth 2013 to 2014 (and higher than the job growth detailed by BRES 2014).**
- b) **the CE percentage decrease assumption of -35 percent is applied to the adjusted agriculture employment figure of 2,300 which equates to a total net decrease of - 805 jobs (unadjusted is -1,100).**

MINING AND QUARRYING

6.9 Both CE and OE forecast a decline in Mining and Quarrying Employment between 2014 to 2031. This reflects a decline seen in the district BRES employment data from 2011. This is in contrast to positive growth seen in the forecasts for this period from 2011 to 2014 for Gloucestershire. CE forecast a loss of -11 percent to 2031 whereas OE forecasts a loss of -31 percent. Although this percentage difference is significant, the total difference is 50 jobs.

Both forecasts detail a decline in mining and quarrying jobs. The absolute net job difference between the two forecasts is not statistically significant and therefore the forecasts should remain unadjusted.

MANUFACTURING

6.10 CE forecasts a modest increase in manufacturing jobs from 2014 to 2021, followed by a steady decline in manufacturing employment to 2031 with a net total change of -480 jobs (-13 percent). The percentage decrease aligns with CE forecasts for the South West. Gloucestershire is forecast to decline more significantly.

6.11 OE forecasts a greater decline in employment of - 570 jobs which represents a decrease of - 16 percent. This is aligned with its forecasts for South West and UK whilst OE forecasts for suggest that manufacturing will decrease by 2 percentage points less in Gloucestershire.

6.12 The decline in manufacturing jobs to 2031 reflects national perspectives on the manufacturing sector. The latest GVA data published in January 2016 shows four consecutive periods of negative growth with a fall in output of 0.8 percent over the year. EEF, the Industry body for Engineering and Manufacturing employers, formerly Engineering Employers Federation have published their latest EEF Q3 report. It shows decreasing confidence in the manufacturing sector. It states ' the balance of manufacturers reporting output growth has dipped to its lowest level since 2009 q4 and at -2 percent, the outturn was considerable weaker than last quarter's expectation.' The CBI rehearses the negative perspective on manufacturing outlook.

In the light of the latest GVA data published in January 2016, with four consecutive quarters in declining output, the Manufacturing sector can be considered to be in recession and therefore a negative growth forecast at this point is consistent with national outlooks. The difference

between the forecasts represents a total of 90 jobs. Given the ambiguity and uncertainty in manufacturing sector this reflects a fair and pragmatic view of the likely net job change.

UTILITIES

6.13 Both OE and CE forecasts show that employment in electricity, gas and water sectors amounts to a total workforce of approximately 200 jobs. Although the percentage decrease anticipated by the forecasts is CE at 20 percent and OE at 27 percent, the difference between the two forecasts amounts to a total of no more than 10 jobs.

The absolute net job difference is not statistically significant and therefore the forecasts should remain unadjusted.

CONSTRUCTION

6.14 Both forecasts show very significant growth in the construction sector with a net increase of between 1,160 jobs (OE) and 1,180 jobs (CE).

6.15 CE has significantly increased the forecast level of growth in this sector between its 2014 and 2015 outputs. The CE 2014 forecasts detailed a 9 percent increase in construction jobs which is now forecast to increase by 24 percent in the 2015 forecasts. This represents a net increase of 830 jobs between the two CE forecast periods. OE has maintained a broadly similar assumption between its 2014 and 2015 forecasts with a net increase percentage of 24 percent in 2014 and 26 percent in 2015.

6.16 Both forecasts show a greater percentage increase in Cotswold than the growth assumptions in this sector for Gloucestershire and the UK. CE details a more significant increase of 35 percent for 2014 to 2031 for South West region.

6.17 BRES data suggests that employment in construction grew by 400 jobs or 18 percent in Cotswold between 2011 and 2014 compared to growth in Gloucestershire of 12 percent and 4 percent in South West region. Over the same period, extrapolated BRES and Census data suggests that employment in construction has increased by 36 percent in Cotswold, 21 percent in Gloucestershire and 10 percent in South West.

6.18 CE 2015 forecast details significant growth in employment of 1,000 jobs or 30 percent between 2011 and 2014 whilst OE 2015 details a growth of 1,680 or 51 percent. If the forecasts assumptions and the extrapolation of BRES / Census 2011 data for growth in the construction sector between 2011 and 2014 are correct, this would suggest that 600 to 1,200 jobs are not recorded in BRES because the additional workforce is self-employed and not registered for VAT or PAYE.

6.19 In the Business and Industrial Trends report, Nupremis highlight the high share of employment in the construction sector in Cotswold. Self-employment rates in Cotswold are highest among Construction industry workers. In 2011, almost half (46.4 percent) of all Construction workers living in Cotswold were self-employed.

6.20 The forecasts are clear that growth in Construction sector will represent a significant part of the growth in jobs to 2031. However, it would also suggest that the workforce will continue to be self-employed.

The OE and CE jobs forecasts are broadly consistent: the scale of that growth will amount to in excess of 1,100 jobs, reflects recent increases in this sector and therefore the total jobs growth should remain unchanged.

WHOLESALE AND RETAIL

6.21 Cotswold employment in retail, detailed in BRES 2014 data, has declined faster than the South West and Gloucestershire. Cotswold declined by -11 percent, Gloucestershire by -7 percent and South West by -8 percent between 2011 and 2014.

6.22 However, extrapolated BRES / Census 2011 data (which includes assumptions of self-employment) suggests that between 2011 and 2014 employment in Wholesale and Retail grew by 3 percent consistent with growth in Gloucestershire and greater than the south west increase of 1 percent.

6.23 OE forecasts detail a recent decline in wholesale and retail employment since 2009 to 2014 although employment increased by +200 jobs in this sector since 2013. OE's own forecasts for 2009 to 2014 show similar assumptions to the BRES 2014 data. In the OE forecasts employment growth in Cotswold's wholesale and retail sector declined by -11 percent compared to a more modest decline of -5 percent in Gloucestershire, -6 percent in the South West and a stable position across the UK. Between 2011 and 2014 Cotswold employment growth in this sector was comparable to the equivalent UK data in the OE forecasts.

6.24 The OE forecast report an absolute net increase of 930 jobs between 2014 to 2031. This represents a 12 percent increase. This is higher than the Gloucestershire percentage increase of 7 percent, South West increase of 9 percent and UK increase of 7 percent.

6.25 CE detail an absolute increase of 560 increase in jobs, representing a 7 percent increase which is similar to its percentage increase for Gloucestershire (6 percent), South west (7 percent) and UK (9 percent).

6.26 The forecasts broadly reflect anticipated consumer spending allocated to the local area. OE forecasts represent an optimistic view of the Cotswold whole and retail economy, 5 percentage points higher than its Gloucestershire and UK forecasts. Its recent performance between 2009 and 2014 suggests a poorer performance than the Gloucestershire, South West and UK.

The OE forecasts for employment growth in Wholesale and Retail should be adjusted to align with its equivalent assumptions for Gloucestershire (7 percent) which reflects Cotswold's most recent performance and is broadly aligned with the assumptions for the South West and the UK.

This adjustment would reduce the total net increase in OE net jobs increase from +930 to +553 jobs in this sector.

TRANSPORTATION AND STORAGE

6.27 The forecasts have distinct and different views on the performance of Transportation and Storage employment in Cotswold.

6.28 CE forecast a decline in this sector of 40 jobs (-3 percent) between 2014 to 2031. This is consistent with their view of a declining sector for Gloucestershire, South West and UK. OE forecast a significant percentage increase of 14 percent or 160 jobs. OE also forecast a net increase for Gloucestershire, South West and the UK. The net difference is 200 jobs between the two forecasts.

The net increase in jobs identified by OE is not individually significant and therefore no adjustment is made. However, this sector should be closely monitored as BRES data for 2009 to 2014 and 2011 to 2014 show a decline in jobs.

ACCOMMODATION AND FOOD

6.29 Both forecasts report strong employment growth in the accommodation and food sector, between 2009 and 2014. OE 2015 details growth of 1,540 jobs (net annual average increase of 308 jobs and total increase of 35 percent). CE detail even stronger growth during this period with an increase in employment of 2,100 jobs (net annual average increase of 400 jobs and total increase of 49 percent).

6.30 This difference can partly be explained by OE and CE assumptions about the increase in jobs in the year 2013 to 2014. OE detail job growth of 1,100 jobs in this single year, with employment increasing from 4,800 in 2013 to 5,900 jobs at 2014. CE details job growth of 1,500 jobs between 2013 and 2014 with employment rising from 4,800 to 6,300 during this single year.

6.31 The source of this uplift is likely to be BRES data 2014 which details job growth in food and accommodation sector of 1,300 between 2013 and 2014. BRES data 2014 also illustrates that growth in Cotswold in accommodation and food is stronger than in Gloucestershire and the South West region. Between 2009 and 2014 BRES data shows that employment growth in food and accommodation increased by 1,200 (net annual average increase of 240 jobs and total increase of representing an increase of 28 percent). Cotswold has outperformed the county and regional growth in this sector (13 percent in Gloucestershire and 6 percent in south west 2009 to 2014).

6.32 For the period 2014 to 2031, CE forecasts similar growth in food and accommodation in both its 2014 to 2015 forecasts. The CE 2014 forecasts detail growth of 1,180 jobs (24 percent) whilst the CE 2015 forecasts detail growth of 1,390 jobs (an increase of 22 percent). The level of growth compares to county wide growth of 17 percent, south west growth of 27 percent and UK growth of 24 percent. CE 2015 details stronger growth in the region and UK in contrast to recent higher

growth in the District. The CE forecasts that 29 percent of all employment growth will be in Food and Accommodation, the greatest number in any one sector.

6.33 OE 2015 forecasts 50 percent higher rates of employment growth in Food and Accommodation than detailed in its 2014 forecasts results. OE 2015 details a total increase in employment of 850 jobs (an increase of 15 percent) compared to its earlier forecasts of 550 jobs (10 percent increase). The OE 2015 forecasts detail that Cotswold will outperform the growth forecast for Gloucestershire (12 percent), South West (11 percent) and UK (11 percent).

6.34 The CE forecast is 7 percentage points higher than OE, which equates to a difference of approximately 550 jobs between 2014 and 2031. CE details growth that is below its South West average but substantially higher than any OE percentage increase forecast. Both forecasts represent high and ambitious employment growth in Cotswold to 2031. However, Cotswold is an area where the district has a distinct competitive advantage and has successfully increased its economic value and employment in this sector. Tourism Partnerships are also seeking to make interventions to actively increase this sector in the district.

In view of the recent levels of employment growth OE reflects an increase of 15 percent, above the broader total OE growth trend for Gloucestershire, South West and UK. CE reflects its assumptions that this is a key growth sector with the highest absolute increase in number of jobs. It reflects CE assumptions that the district has a distinct competitive advantage. It is recommended that the sector is monitored closely to understand the extent of continued growth and the impact of interventions to support Tourism in Cotswold.

INFORMATION AND COMMUNICATIONS

6.35 The forecasts for the period 2011 to 2014 are distinct and different: CE details positive growth of 80 jobs and OE details a fall of 20 jobs over the same period. However, both OE and CE forecasts detail a similar increase in employment growth between 2009 and 2014. OE detail 420 jobs growth and CE detail 490 job growth a difference of 70 jobs (16 percent).

6.36 BRES 2014 data shows more positive growth in Cotswold between 2009 to 2014 with an increase of 13 percent compared to a fall in jobs in Gloucestershire of -3 percent and modest growth in South West (4 percent).

6.37 The CE forecasts for 2014 to 2031 differ significantly between the 2014 and 2015 production of the forecasts. In 2014 CE details total employment growth in Information and Communication as a net increase of 230 jobs (11 percent). The 2015 forecasts detail a net jobs increase of 490 jobs (23 percent). This is significantly higher than the forecasts for Gloucestershire at 15 percent, South West at 13 percent and UK increase of 16 percent.

6.38 OE forecasts have reduced their forecasts in this sector between the production of the 2014 and 2015 forecasts. In 2014 forecasts, OE detail job growth of 460 additional jobs (22 percent) which is reduced in the 2015 forecasts by more than half to a total increase of 220 jobs (10 percent).

This reflects a more moderate view of growth in this sector in Gloucestershire (11 percent), South West (12 percent) and UK (+20 percent).

The percentage differences are significant although the absolute differences represent a total of 70 jobs over the 17 year period. In view of the limited absolute difference no adjustment is made.

FINANCE AND BUSINESS SERVICES

6.39 Finance and Business Services is the largest employment sector in Cotswold with approximately 20 percent of all jobs. It has seen consistent increases in employment since 1991 with jobs in the Finance and Business sector representing 36 percent of total net increase in job growth between 1991 to 2008 and 51 percent between 2009 to 2014.

6.40 OE 2015 and CE 2015 forecasts detail growth from 2009 to 2014 which is consistent with the BRES data 2014 for Cotswold with growth increases of 3,200 (44 percent) and 3,100 (42 percent) respectively.

6.41 However, the two forecasts have distinctly different views on the future growth performance in this sector between 2014 to 2031. CE forecasts growth of 810 jobs (8 percent) which is lower than its equivalent forecasts for Gloucestershire (12 percent) and South west (14 percent). Finance and Business Services represents 17 percent of CE total employment growth 2014 to 2031.

6.42 The CE forecasts suggest that the performance in Financial and Business Services will perform at least 4 percentage points below the Gloucestershire percentage increase, 6 points below its growth forecasts for South West in this sector and 10 percentage points below the UK forecasts.

6.43 In view of the strength in this sector in Cotswold, the CE forecasts should be realigned with at least the Gloucestershire percentage increase of 12 percent to reflect a more plausible forecast of future employment growth in Finance and Business sector.

By adjusting the forecasts to reflect CE's own views on performance in Gloucestershire, results in an increase in net job growth in this sector from 810 to 1,200 additional jobs.

6.44 OE forecasts high levels of growth amounting to a total increase of 2,710 additional jobs (26 percent increase). Significantly, this is an additional 500 jobs in excess of its OE 2014 forecasts. The total jobs growth represents 45 percent of the total employment growth forecast by OE 2014 to 2031. OE provides a breakdown of jobs in this sector.

Financial and insurance	200 jobs
Real estate activities	400 jobs
Professional, scientific and technical	1,500 jobs
Administrative and support	600 jobs

6.45 Professional, Scientific and Technical activities are forecast to increase by 1,500 jobs (28 percent) which is higher than the Gloucestershire forecast increase of 23 percent and comparable to the increase detailed in South West (28 percent). OE forecasts that business administration will increase by 600 additional jobs 2014 to 2031 representing a 26 percent increase (Gloucestershire 23 percent). OE forecasts Gloucestershire with an increase of 23 percent growth. OE forecasts employment in Real Estate Activities to increase by 400 jobs, an increase of 15 percent which is higher than the equivalent Gloucestershire figure (4 percent) and south west (2 percent).

6.46 Given the scale of growth in Financial and business services 2009 to 2014, driven by Professional and Technical services there is no reason to believe that this sector will perform less well than the county and regional averages. In all respects, the OE forecasts detail growth which is equivalent to or greater than its county and South West percentage increase.

6.47 OE detail robust jobs growth in the Financial and Business Service sector. Indeed the 2015 forecasts report that this sector will contribute 45 percent of all forecast job growth. This represents a greater share of the total employment growth seen in the period 1991 to 2008. When examining the sector in detail, BRES data reports that key areas of the broader Finance and Business Sector has performed less well than Gloucestershire averages. The property sector in Cotswold has not performed as well as Gloucestershire between 2009 to 2014 or 2011 to 2014. Therefore it is appropriate to reduce the percentage increase from 26 percent increase to 21 percent to reflect broader growth forecasts in Gloucestershire. Similarly, business administration has underperformed compared to growth in Gloucestershire and therefore growth should be adjusted in this sector to reflect the Gloucestershire growth assumptions. (26 percent to 23 percent). The OE forecasts for Finance and Insurance report that the growth in this sector will be almost four times the Gloucestershire growth rates and almost eight times the south west growth rates. The proposed adjustment realigns the percentage increase from 15 percent to 4 percent to reflect the Gloucestershire average.

Adjusting the forecasts to reflect OE's own views on performance in Gloucestershire in Property Services, Business Administration and Finance and Insurance, results in a net job growth in this sector of 2,415 additional jobs.

GOVERNMENT SERVICES

6.48 Employment in Government Services has fallen significantly since 2009. Both forecasts and BRES data suggests that Cotswold has declined faster than equivalent employment in county, regional and UK. BRES data suggests that employment in health is positive with an increase of 3 percent whilst still being significantly lower than Gloucestershire (+13 percent) and South West (+12 percent) 2011 to 2014.

6.49 The forecasts show the same direction of travel whilst detailing different views on the scale of employment loss between 2011 to 2014. OE assume a loss of -9 percent (-900 jobs) and CE assume a smaller decrease of -5 percent (-510 jobs).

6.50 CE forecasts an increase of 10 percent (950 jobs) in Government Services jobs between 2014 and 2031. This is significantly higher than CE 2015 own forecasts for the UK (6 percent). OE forecast more moderate growth in Government Services to 2031 with increases of 3 percent (260 jobs) compared to its 2014 forecast increase of 630 jobs.

6.51 It is appropriate to adjust the percentage increase in Government Services for Cambridge Econometrics from 10 percent to 6 percent to reflect Cambridge Econometrics own views on the national percentage increase in employment forecast in the Government Services Sector. The Government's current spending plans and particularly those announced by The Chancellor in his Productivity Plan: "Fixing the Foundations – Creating a more prosperous nation" are challenging conditions for the creation and support of 950 public sector jobs in Cotswold.

A job growth increase in line with its own CE national assumptions is a realistic assumption and would bring CE job growth forecasts to an increase of 569 jobs, in excess of the jobs growth forecast by OE for Government Services over the period 2014 to 2031.

OTHER SERVICES

6.52 Both OE and CE forecasts have a consistent view of the number of jobs in Other Services at 2014 at 3,900 to 4,000 jobs. Although both forecasts detail positive growth since 2009, OE details significantly higher rates of growth at +800 compared to CE estimates of +300 over the period 2009 to 2014.

6.53 Both OE and CE forecasts have broadly consistent views on the scale and percentage increase of growth in Other services 2014 to 2031. CE 2015 forecast a net increase of 950 jobs (24 percent increase) whilst OE 2015 forecast a net increase of 910 jobs (23 percent increase). Both CE and OE forecasts for Other Services detail growth in Cotswold outstripping the growth forecasts for Gloucestershire, South West and UK.

The forecasts are broadly aligned and reflect positive growth in this sector. The difference between the forecasts is not statistically significant and therefore no adjustment is made.

CONCLUSIONS

6.54 The table below sets out the adjusted position for each of the sectors in each of the OE and CE forecasts that is discussed and analysed in the sector prospects above. A detailed table is set out at Appendix B. The total of the CE adjustments amounts to an increase of jobs to 5,042 for the period 2014 to 2031. The total of the OE adjustments amounts to a reduction in jobs to 5,342 for the period 2014 to 2031. The adjusted forecasts provide a range of possible options / scenarios rather than new forecasts to test as options in the Objectively Assessed Need for Housing. Both the OE and CE Adjusted forecasts suggest that Cotswold will perform as well as the UK forecasts (9 percent) and better than the equivalent forecasts for Gloucestershire.

Table 7: Baseline and adjusted Forecast Job Growth, Oxford Economics and Cambridge Econometrics 2014 and 2015

	Net Jobs Growth			Average Annual Jobs Growth		
	2011-14	2011-31	2014-31	2011-14	2011-31	2014-31
CE 2014	3,700	8,700	5,000	1,200	400	300
CE 2015	7,200	11,900	4,700	2,400	600	300
OE 2014	3,000	7,800	4,800	1,000	400	300
OE 2015	4,500	10,500	6,000	1,500	500	400
Experian 2015			5,100			300
CE2015 adjusted			5,000			300
OE 2015 adjusted			5,350			315

Source: Cambridge Econometrics August 2014 and November 2015. Oxford Economics August 2014 and November 2015 and Experian 2015

6.55 In view of the recent strong job growth performance in the District, albeit in self-employment rather than employee jobs, it is recommended that in reviewing the Objectively Assessed Need for Housing the baseline and adjusted forecasts are fully considered. It is important for the local authority to consider the full range of outputs from this review in the OAN and to monitor performance moving forward, particularly the trends in self-employment.

7. CONCLUSIONS

7.1 A robust and detailed analysis of the sectoral forecasts is completed to inform the development of the Cotswold Local Plan and analysis by NMSS to identify the District's Objectively Assessed Housing Need (OAN). This methodology is consistent with the approach adopted and endorsed by the Planning Inspector at the Stroud Local Plan examination and presented to the Forest of Dean Local Plan.

7.2 A striking feature of the recent job growth reported in the OE and CE 2015 forecasts is the stark divergence between the two forecasters on the recent historical data for employment in the Cotswold between 2009 and 2014 and 2011 to 2014. At 2009, the two forecasts have a consistent view of the level of employment in Cotswold. However, the difference between the two employment estimates is substantial at 2014: at over 2,200 jobs; it amounts to more than 45 percent of the job increase projected by CE2015. Given the volatility in the forecasts it is recommended the OAN assessment should focus on the economic forecasters' assessments of the likely changes once the economy has emerged from the economic downturn and after 2014.

7.3 The job growth forecasts reported by CE and OE are 4,800 jobs and 6,000 jobs for the period 2014 to 2031. Published Experian job forecasts report a total increase of 5,100 jobs over the same period.

7.4 As national models can only take very limited account of local circumstances and become less and less reliable the smaller the geographic area to which they are disaggregated, it is important to assess the plausibility of the job changes projected for an area on a sector by sector basis. The review of economic forecasts critically examines the reported economic forecasts by OE and CE 2014 and OE and CE 2015.

7.5 To test whether the job growth forecasts are reasonable and plausible, each sector is analysed to establish if the forecasts are consistent with recent national and /or local trends, corresponds with the forecasts own assumptions for growth in that sector at county, regional and UK levels, or if there is an apparent anomaly. Where sectors appear inconsistent with these tests, an adjusted scenario is provided.

7.6 The CE 2015 forecast is adjusted as follows:

- a) The CE total number of jobs in agriculture at 2014 is adjusted from 3,100 to 2,300 jobs to address an apparent anomaly in the CE data. The CE assumption of -35 percent loss of jobs between 2014 and 2031 is applied to the new number of agriculture jobs at 2014. This equates to a total net decrease of - 805 jobs in agriculture (unadjusted is -1,100) between 2014 and 2031.
- b) CE job growth in Finance and Business Services is adjusted from 810 jobs to 1,200 to reflect stronger performance in this sector.

- c) CE job growth in Government Services is reduced to reflect CE own national assumptions on performance in this sector. The adjusted CE forecast represents a total of 569 jobs, in excess of the jobs growth forecast by OE for Government Services over the period 2014 to 2031.

7.7 The OE 2015 forecast is adjusted as follows:

- a) Employment growth in Wholesale and Retail is adjusted to reflect OE's equivalent performance for Gloucestershire (7 percent) which reflects Cotswold's most recent performance in this sector, which is broadly aligned with the assumptions for the South west and the UK. This adjustment would reduce the total net increase in OE figures from +930 to +553 jobs.
- b) Job Growth in Finance and Business Services is adjusted to reflect OE's own views on performance in Gloucestershire in Property Services, Business Administration and Finance and Insurance. The adjustment results in a net job growth in this sector of 2,415 additional jobs.

7.8 The total of these adjusted forecasts report an increased total job growth of 5,000 for CE and a total job growth of 5,350 for OE forecasts for the period 2014 to 2031. The effect of these adjustments is to narrow the potential range of job growth to be considered in the OAN. Indeed, the adjusted forecasts are broadly aligned with the Experian Forecast for the same period. Both the OE and CE Adjusted forecasts suggest that Cotswold will perform as well as the UK forecasts (9 percent) and better than the equivalent forecasts for Gloucestershire.

7.9 The Strategic Economic Plan, published by GFirst, seeks to create 33,900 jobs and protect a further 2,125 jobs equivalent to a growth rate of 0.8 percent/annum. The job growth rates reported within the CE and OE forecasts for the period 2011 to 2031 represent a range of 1.0 percent to 1.2 percent per annum; the 2014 to 2031 per annum growth rate forecasts represents a range of 0.7 percent to 1.0 percent per annum. Therefore the range of total jobs growth in the OE and CE 2015 forecasts are consistent and aligned with the Strategic Economic Plan.

7.10 Much of the strong jobs growth experienced between 2010 and 2013 has been concentrated among self-employed people not registered for VAT/PAYE. Notably, self-employment in people in the over 64 age group has increased by 2,300 over the same period - this represents 25 percent of all people who are self-employed.

7.11 The continued high levels of growth in self-employment are uncertain. Indeed, OE 2015 forecast suggests that increases in self-employment will be much less significant in the future. The Objectively Assessed Need for Housing should consider the impact of growth in self-employment and particularly growth in self-employment in the population over 64 years old which potentially represents a new and significant shift in the relationship between housing demand and labour supply.

7.12 It is important that the Council fulfils the test of soundness by considering the most appropriate strategy when considered against the reasonable alternative. The Oxford Economic 2015 forecast is significantly higher than its equivalent Experian and CE forecasts and its own 2014 forecasts. However, in view of the recent strong job growth performance in the District, albeit in self-employment rather than employee jobs, it is recommended that in reviewing the Objectively Assessed Need for Housing the baseline and adjusted forecasts are fully considered. It is important for the local authority to consider the full range of outputs from this review in the OAN and to monitor performance moving forward, particularly the trends in self-employment.

APPENDIX A

COMPARISON OF CAMBRIDGE ECONOMETRICS AND OXFORD ECONOMICS 2015 FORECASTS SUGGESTS SIGNIFICANT DIFFERENCES

SIMILARITIES

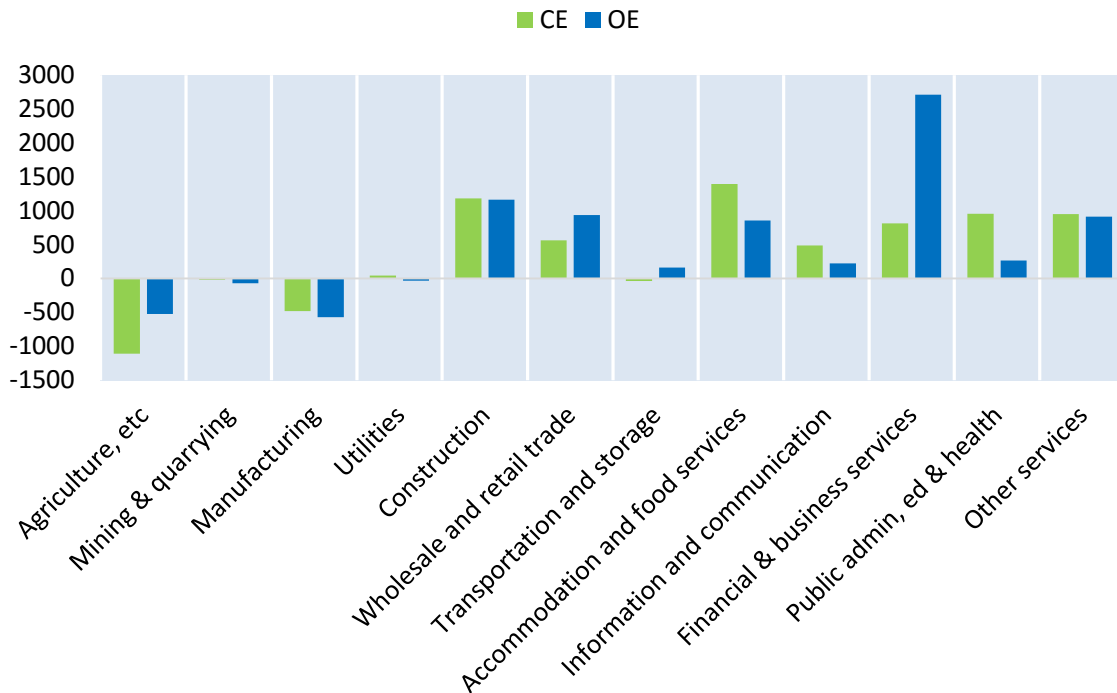
- Both are forecasting a significant slowdown in growth compared to historic trends:
 - CE: +11,400 jobs 1991-08 vs +4,700 jobs 2014-31
 - OE: +11,700 jobs 1991-08 vs +6,000 jobs 2014-31
 - CE: +35 percent 1991-08 vs +9 percent 2014-31
 - OE: +35 percent 1991-08 vs +12 percent 2014-31
- Both are forecasting a significant slowdown from historic levels in job growth in Financial & Business Services, Government Services and Wholesale & Retail. Both are also projecting a significant improvement in Construction sector job growth.
- Both are forecasting UK job growth of 9 percent during 2014-31 and a similar rate of growth for the South West (CE 10 percent; OE 9 percent)
- Both are forecasting a contraction in jobs in Agriculture, Forestry & Fishing, Mining & Quarrying, and Manufacturing
- Both are forecasting job growth in Construction, Wholesale & Retail, Accommodation & Food Services, Information & Communication, Financial & Business Services, Government Services, and Other Services
- Both are forecasting similar levels of job growth in Construction and Other Services, and similar levels of contraction in Mining & Quarrying and Manufacturing
- Both agree on four of the five fastest growing sectors: Construction, Accommodation & Food Services, Financial & Business Services and Other Services

DIFFERENCES

- CE is forecasting slightly slower job growth than a year ago while OE is forecasting much stronger job growth:
 - CE2015 +4,700 jobs 2014-31 vs CE2014 +5,000 jobs
 - OE2015 +6,000 jobs 2014-31 vs OE2014 +4,800 jobs
 - CE2015 9 percent 2014-31 vs CE2014 10 percent
 - OE2015 12 percent 2014-31 vs OE2014 10 percent

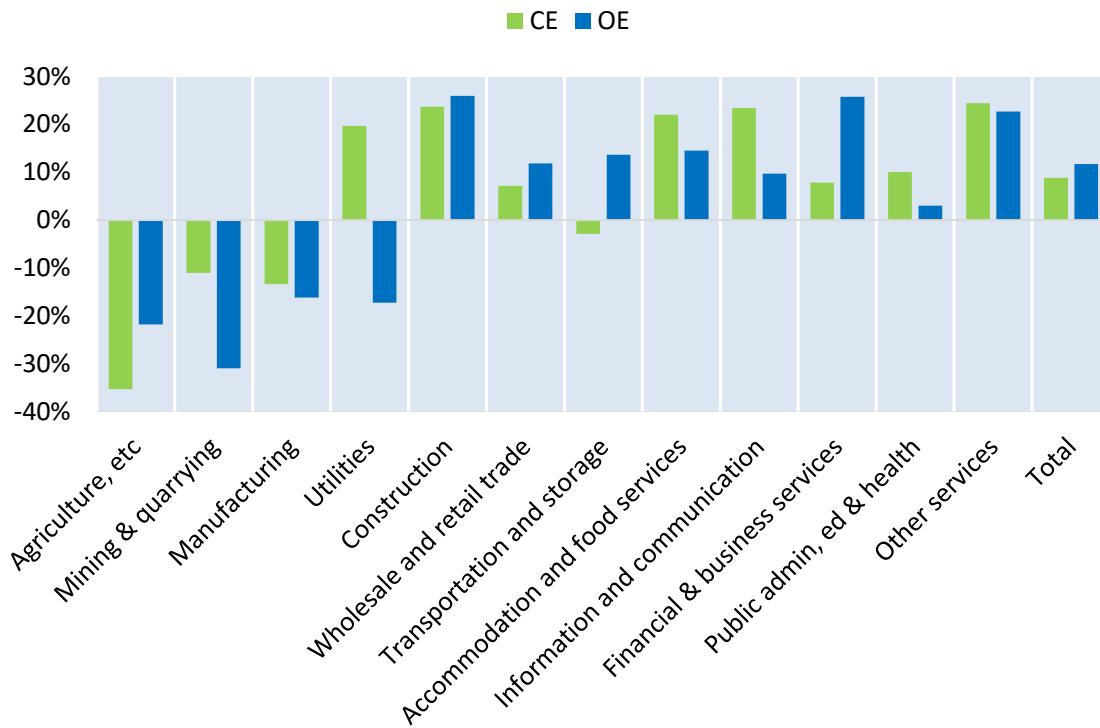
- While last year’s CE and OE forecasts for 2014-31 were very similar, a substantial revision by OE means that both are now forecasting very different rates of job growth. OE is now forecasting much faster total job growth than CE (+6,000 jobs vs +4,700 jobs, or +12 percent vs +9 percent). This is largely due to OE forecasting much higher job growth in Financial & Business Services than CE (OE +2,700; CE +800), faster growth in Wholesale & Retail jobs (OE +900; CE+600) and a much smaller contraction in Agriculture, Forestry & Fishing Jobs (OE - 500; CE -1,100)
- On the other hand, CE is forecasting much faster levels of job growth in Government Services (CE +1,000; OE +300), Accommodation & Food (CE +1,400; OE +900), and Information & Communication (CE +500; OE +200)
- CE is forecasting slight growth in Utilities jobs while OE is forecasting a slight contraction
- CE is forecasting a slight contraction in Transportation & Storage jobs while OE is forecasting an increase in jobs
- Government Services is among CE’s five fastest growing sectors – unlike OE, while Wholesale & Retail is among OE’s five fastest growing sectors – unlike CE

Chart 1: Net Job Change 2014-31 - Oxford Economics and Cambridge Econometrics 2015



Source: Cambridge Econometrics November 2015 and Oxford Economics November 2015

Table 8: Percentage Job Growth 2014-31 - Oxford Economics and Cambridge Econometrics 2015



Source: Cambridge Econometrics November 2015 and Oxford Economics November 2015

APPENDIX B

Table 9: Net Job Growth and Percentage Change and adjusted/ tests - Oxford Economics and Cambridge Econometrics 2015

Job change	CE 2014 Change 2014 - 2031	CE 2014 % change 2014- 2031	CE 2015 change 2014 - 2031	CE 2015 % change 2014-31	OE 2014 Change 2014 - 2031	OE 2014 % change 2014- 2031	OE 2015 Change 2014 - 2031	OE 2015 % change 2014- 2031	CE 2015 Adjusted 2014 - 2031	CE 2015 % adjusted 2014- 2031	OE 2015 Adjusted 2014 - 2031	OE 2015 % adjusted 2014- 2031
Agriculture	-151	-7%	-1108	-35%	-447	-18%	-523	-22%	-805	(-35%)	-523	-22%
Mining & quarrying	-35	-19%	-19	-11%	-95	-43%	-70	-31%	-19	-11%	-70	-31%
Manufacturing	-267	-7%	-484	-13%	-714	-20%	-570	-16%	-484	-13%	-570	-16%
Elec, gas, water	44	11%	41	20%	-53	-15%	-34	-17%	41	20%	-34	-17%
Construction	350	9%	1183	24%	1047	24%	1162	26%	1183	24%	1162	26%
Distribution	528	6%	562	7%	582	7%	935	12%	562	7%	553	7%
Trans & storage	66	5%	-37	-3%	193	16%	159	14%	-37	-3%	159	14%
Accom and Food	1177	24%	1394	22%	546	10%	855	15%	1394	22%	855	15%
Info and Comms	230	11%	488	23%	457	22%	221	10%	488	23%	221	10%
Finance and Business	761	9%	814	8%	2267	26%	2713	26%	1200	12%	2415	23%
Govt Services	1602	16%	954	10%	58	1%	264	3%	569	6%	264	3%
Other Services	706	16%	950	24%	976	20%	910	23%	950	24%	910	23%
Total	5011	10%	4737	9%	4815	10%	6023	12%	5042	9%	5342	9%

Source: Cambridge Econometrics August 2014 and November 2015. Oxford Economics August 2014 and November 2015, Nupremis 2016



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