

An Economic Census of the Cambridgeshire and Peterborough Region

Opportunities and Challenges

We carry out an annual draw of all companies based within the Cambridgeshire and Peterborough Combined Authority area and/or within the Cambridge City Region (20-mile radius of Cambridge). The database contains over 90,000 active and inactive companies and limited partnerships (LLPs), whilst it excludes sole proprietorships and other forms of unincorporated businesses. This year's annual draw gathered data for twelve years from 2010-11 to 2021-22. The latest year includes company data for accounting year ends between 6th April 2021 and 5th April 2022 (the median year end is early December 2021).

Besides being the source of detailed analyses of employment and turnover of locally based companies, the database provides the sampling frame for the regular updates of employment changes in the Greater Cambridge area. Since we need to wait until most companies have filed their accounts at Companies House, this gold standard work does suffer from being less timely. For example, the 2021-22 annual draw has early December 2021 as the median year end, compared with early March 2022 for the October 2022 Update. However, the annual draw is comprehensive and examines company births and deaths along with company location changes. Its geographical coverage is also wider, as it includes the wider Cambridgeshire and Peterborough region and not only Greater Cambridge.

The underlying core corporate database has been established and maintained with the ongoing support of Cambridge Ahead, and is currently sponsored by Arm, Cambridgeshire and Peterborough Combined Authority, Greater Cambridge Partnership, Marshall of Cambridge and Mills & Reeve.

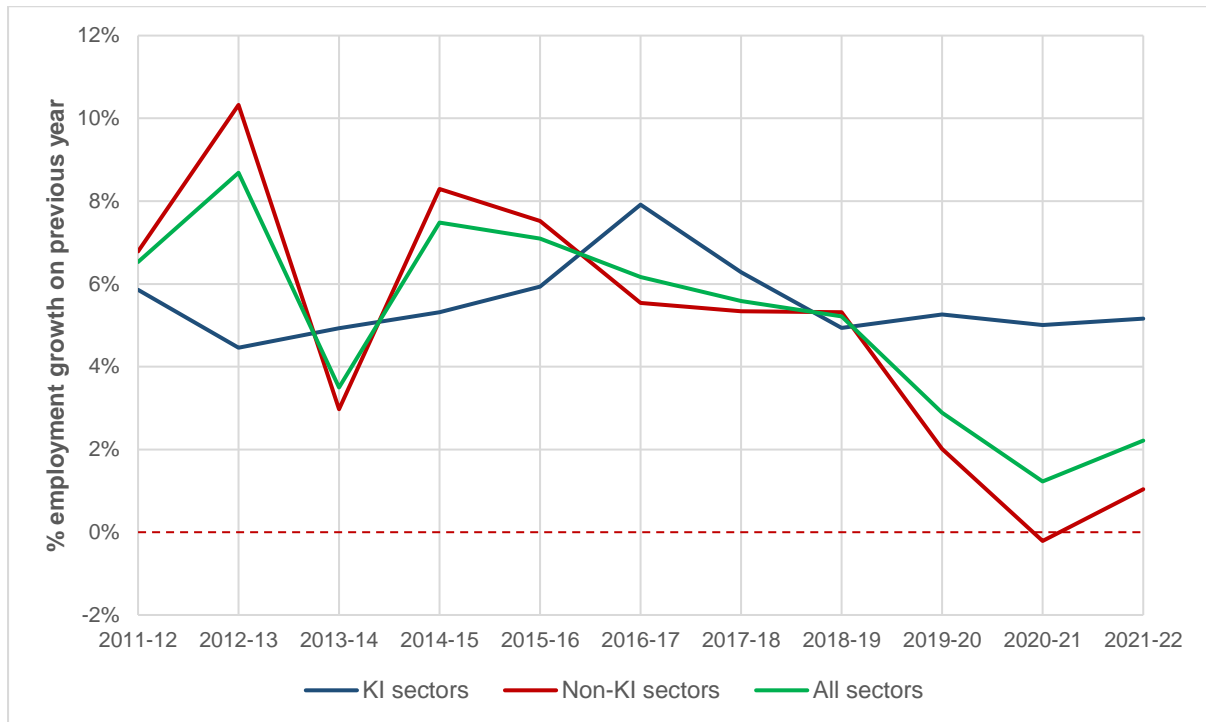
In our presentation today, we will discuss the results of our latest economic census of the Cambridgeshire and Peterborough region by exploring three main areas:

1. Long-term growth of the corporate sector;
2. The impact of Covid;
3. Comparison with ONS BRES.

1. Long-term growth of the corporate sector

Figure 1.1 shows employment growth in the Cambridgeshire and Peterborough region over the past decade.

Figure 1.1 Employment growth pa 2011-12 to 2021-22 in the Cambridgeshire and Peterborough region



Note: The latest year covered by the annual draw, 2021-22, includes accounting years ending between 6th April 2021 and 5th April 2022 (the median year end is early December 2021).

Source: Cosh & Caselli, CBR.

The corporate sector in the Cambridgeshire and Peterborough region saw strong employment growth over the last decade.

Employment grew by about 6% pa up to 2018-19, before slowing down in 2019-20 largely as a result of the collapse of Peterborough-based Thomas Cook (an equivalent version of this chart and the next excluding Thomas Cook is available in the appendix).

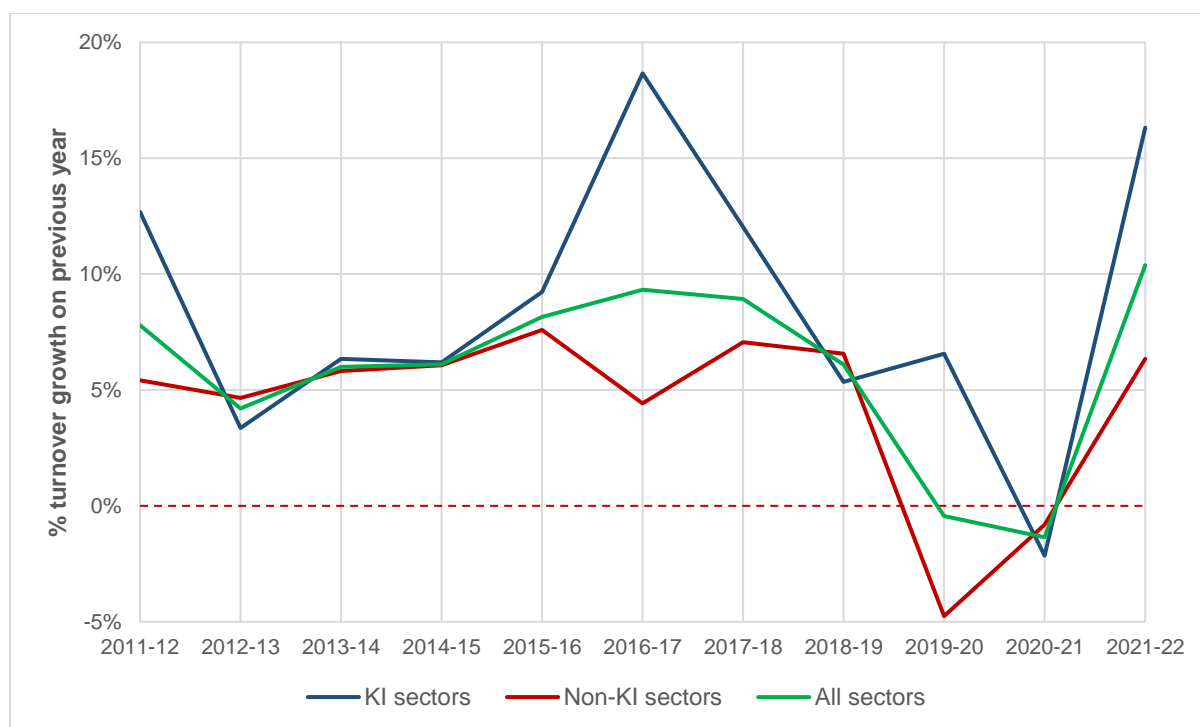
Employment growth was the lowest during 2020-21, a year that includes the bulk of the Covid impact. Nonetheless, growth remained positive despite the onset of the pandemic, pointing to the important role of the furlough scheme (see **Figure 2.1**).

KI sectors outperformed non-KI sectors and held up overall employment growth in the Cambridgeshire and Peterborough region, particularly in the period when the pandemic struck.

Overall, the chart suggests an exceptional corporate performance, with some evidence that the buoyancy of KI sectors – particularly in Greater Cambridge – might have also benefited the performance of non-KI sectors. Section 3 will explore this issue further by comparing the performance of the region against the national average (see **Figure 3.1**).

Figure 1.2 provides an equivalent analysis for turnover growth.

Figure 1.2 Turnover growth pa 2011-12 to 2021-22 in the Cambridgeshire and Peterborough region



Note: The latest year covered by the annual draw, 2021-22, includes accounting years ending between 6th April 2021 and 5th April 2022 (the median year end is early December 2021).

Source: Cosh & Caselli, CBR.

Our finding of a strong performance of the Cambridgeshire and Peterborough corporate sector over the last decade is reinforced by the picture for turnover.

Turnover growth was generally higher than employment growth until 2019-20 (about 7% pa compared with 6% pa for employment). Turnover growth (6.2%) would have been higher than employment growth (4.1%) also in 2019-20 if it was not for the collapse of Thomas Cook, which caused a 0.4% fall in turnover.

The performance of KI sectors outstripped the performance of other sectors in the Cambridgeshire and Peterborough region. Turnover growth in KI sectors spiked in 2016-17, reflecting large increases in turnover by some of the most dynamic KI companies in the region (e.g. Illumina, Qualcomm and Arm).

Turnover dropped in both KI and non-KI sectors in the aftermath of the pandemic, but bounced back when lockdowns and other Covid-related restrictions were lifted (see **Figure 2.2**).

Turnover growth appears to have been more adversely hit by Covid than employment growth, confirming the important role played the furlough scheme in protecting employment (see **Figures 2.1** and **2.2**).

Table 1.1 presents a comparison of long-term growth across districts, distinguishing between KI and non-KI sectors.

Table 1.1 Employment growth pa 2011-12 to 2021-22 by district: KI vs non-KI sectors

District	% KI	Empl change 2010-22	6yrs 2016-22			12yrs 2010-22		
			KI	Non-KI	All	KI	Non-KI	All
Cambridge	49%	19,128	11.9%	1.7%	5.9%	10.3%	3.2%	6.0%
South Cambs	51%	29,409	5.6%	4.1%	4.8%	5.7%	5.4%	5.5%
Greater Cambridge	50%	48,537	7.6%	3.1%	5.2%	7.1%	4.5%	5.7%
East Cambs	12%	14,061	3.7%	5.3%	5.1%	5.6%	6.4%	6.3%
Hunts	14%	15,886	2.7%	1.4%	1.6%	3.6%	3.7%	3.7%
Peterborough	20%	22,232	0.9%	3.8%	3.2%	1.3%	5.7%	4.6%
Fenland	6%	8,678	5.3%	3.1%	3.2%	4.9%	6.1%	6.0%
Combined Authority	29%	109,394	5.8%	3.1%	3.9%	5.5%	4.9%	5.1%

Note: % KI is the ratio of KI employment to total employment in the district in 2021-22.

Source: Cosh & Caselli, CBR.

The district comparison reveals that the Greater Cambridge corporate economy was a key driver behind the strong performance of the Cambridgeshire and Peterborough region.

Greater Cambridge stands out for its knowledge intensity. About half of its employment is in KI sectors, against an average of 29% for the wider Combined Authority area.

Whilst non-KI employment in Greater Cambridge grew over the entire period at a rate similar to the whole Combined Authority area (see **Figure 1.5**), KI employment growth in Greater Cambridge was considerably faster than in any other parts of the region (see **Figure 1.4**).

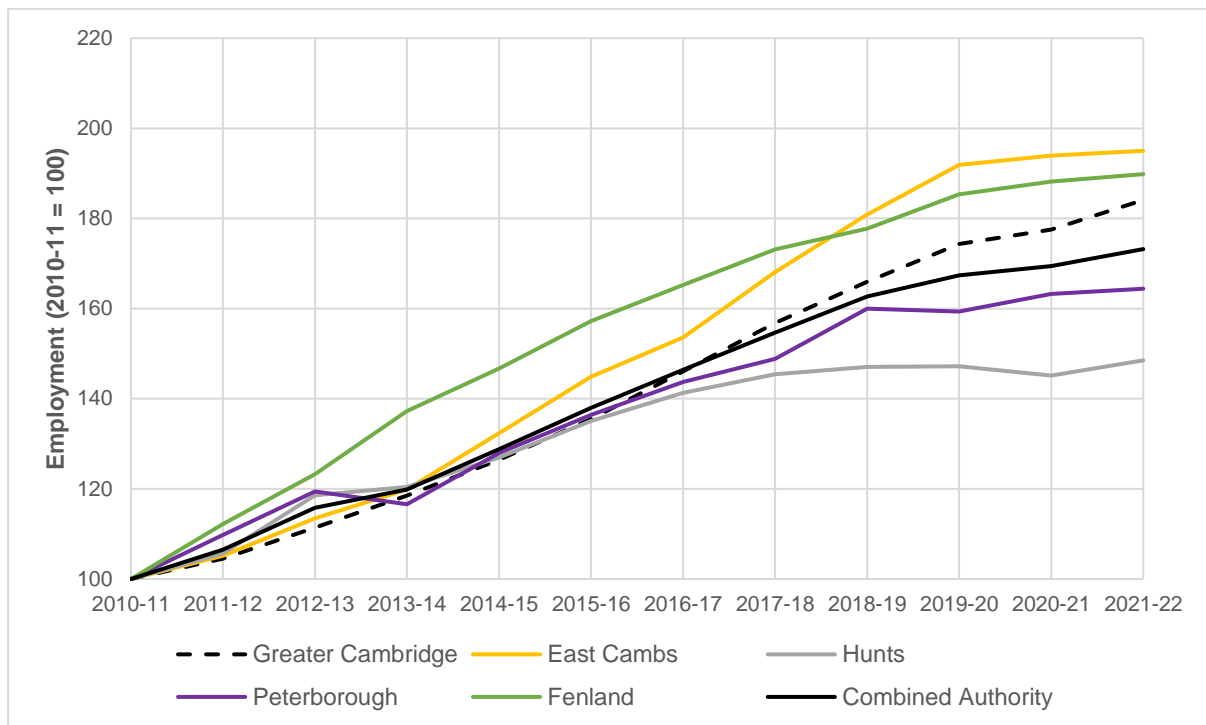
It may appear that KI sectors performed strongly also in East Cambs and Fenland. However, KI employment in these districts is rather small, as we can see from the proximity of non-KI growth to total growth.

There was a lower performance of non-KI sectors during the last six years (see **Figure 1.5**), whereas employment in KI sectors continued to grow at pace (see **Figure 1.4**). As a result, the gap between KI and non-KI employment growth has widened over time, particularly in Greater Cambridge.

The results illustrate the importance of KI sectors to the Cambridgeshire and Peterborough region and to Greater Cambridge in particular.

We now turn to a more detailed analysis of annual employment growth by district over the past decade, starting from all sectors combined.

Figure 1.3 Employment growth 2011-12 to 2021-22 by district: all sectors



Source: Cosh & Caselli, CBR.

The chart further illustrates the important differences in employment growth that exist across districts. Greater Cambridge, East Cambs and Fenland performed better than the Combined Authority average, whereas Hunts and Peterborough lagged somewhat behind.

The corporate sector in the Greater Cambridge area grew in line with the regional average up to 2016-17. Since then, employment growth in Greater Cambridge exceeded growth in the wider Cambridgeshire and Peterborough region (see **Table 1.1**).

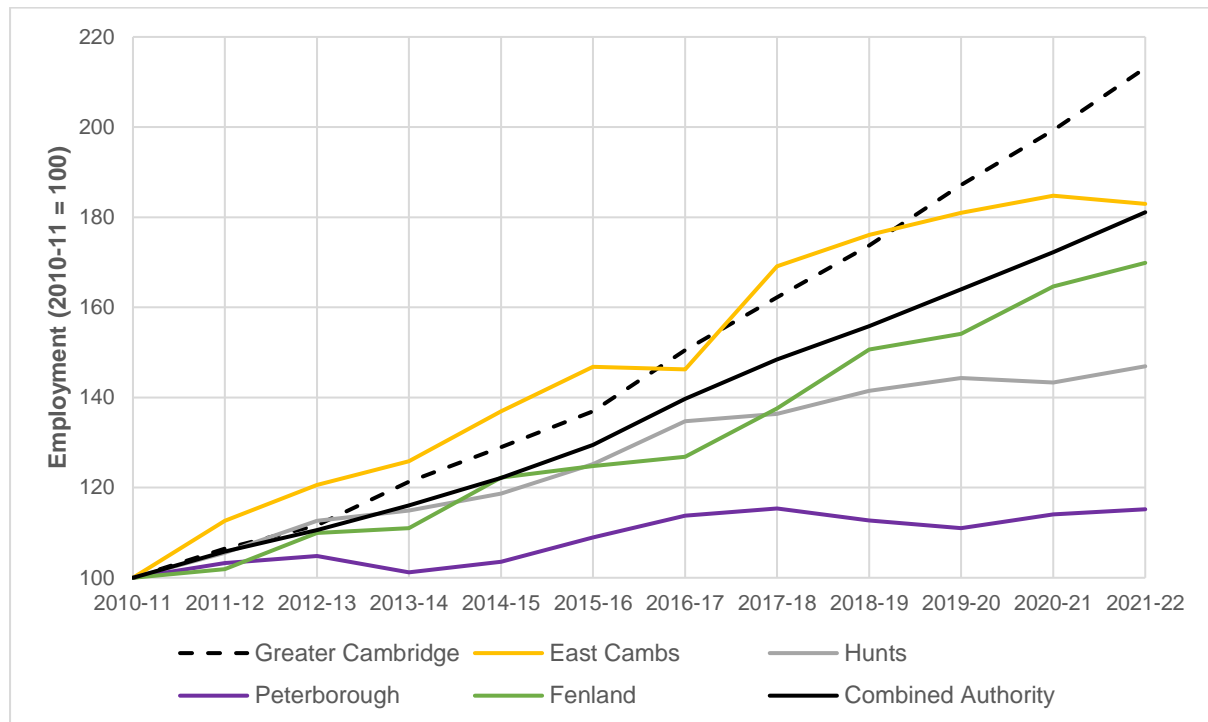
East Cambs and Fenland outperformed Greater Cambridge over the entire period, although total employment in these districts is substantially lower than Greater Cambridge employment. Employment growth in East Cambs and Fenland slowed down during the last six years and was below that of Greater Cambridge (see **Table 1.1**).

Employment growth in Hunts and Peterborough mirrored the trend for the wider Combined Authority area up to 2015-16 but slowed down thereafter. Nonetheless, overall employment in these districts was much higher in 2021-22 than it was at the start of the period.

If we were to consider the annual change in employment rather than the index, Greater Cambridge would dominate (see **Table 1.1**).

Figure 1.4 focuses on employment growth by district for KI sectors.

Figure 1.4 Employment growth 2011-12 to 2021-22 by district: KI sectors



Source: Cosh & Caselli, CBR.

The superior performance of KI sectors in Greater Cambridge becomes evident when examined through an index.

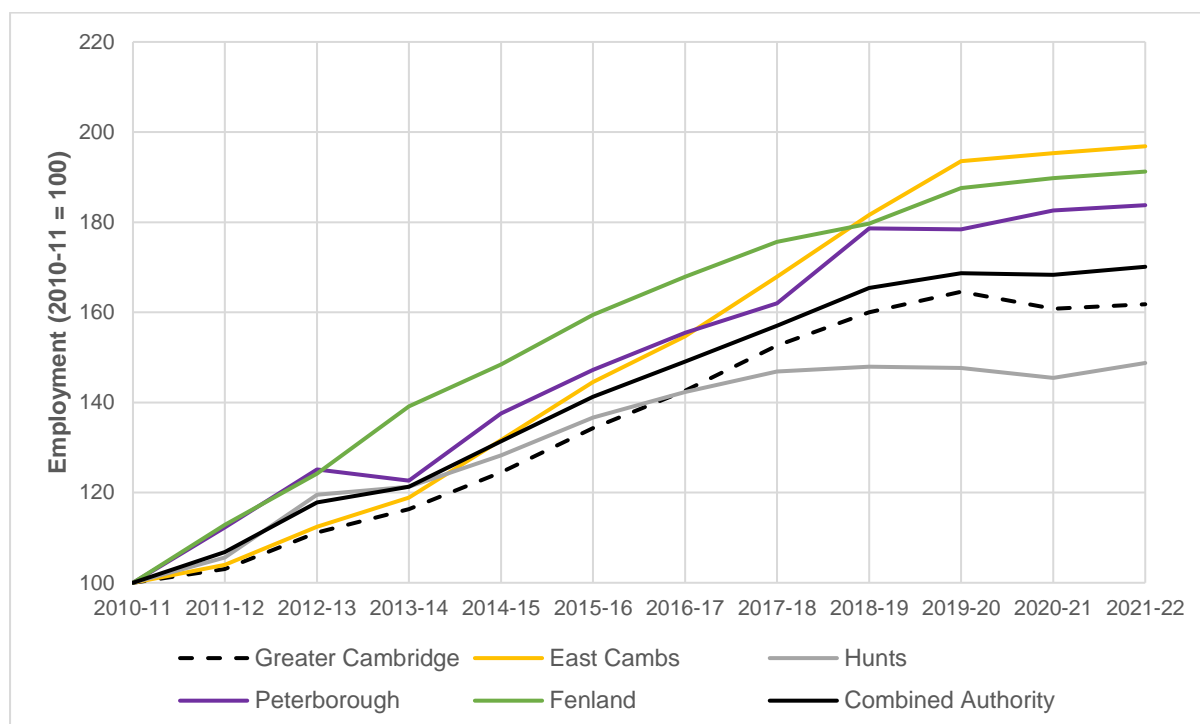
KI employment in Greater Cambridge increased significantly faster and had a more stable growth than in any other districts making up the Cambridgeshire and Peterborough Combined Authority.

There was a strong upward trend also in East Cambs and Fenland, although we must remember that KI employment in these districts is rather small (see **Table 1.1**).

KI sectors showed a weaker performance in Hunts and Peterborough. KI employment in these districts was still higher in 2021-22 than it was in 2010-11, but it grew well below the average for the Cambridgeshire and Peterborough region.

Figure 1.5 provides a similar analysis, this time considering non-KI sectors.

Figure 1.5 Employment growth 2011-12 to 2021-22 by district: non-KI sectors



Source: Cosh & Caselli, CBR.

The picture for non-KI sectors looks rather different from the picture for KI sectors (see **Figure 1.4**).

East Cambs, Fenland and Peterborough (despite the loss of Thomas Cook) outperformed other parts of the Cambridgeshire and Peterborough region.

Non-KI employment growth in Greater Cambridge followed the pattern for the wider region, yet it slowed down more markedly during the last two years. This slowdown is partly due to some schools in the Greater Cambridge area being transferred to educational trusts outside the area (but within the wider Cambridgeshire and Peterborough region).

Employment growth in non-KI sectors was more modest in Hunts, particularly towards the latter part of the period.

If the performance of KI sectors in Greater Cambridge is indeed holding up the performance of non-KI sectors (see **Figure 1.1**), the chart seems to suggest that this influence might also extend to other districts within the Cambridgeshire and Peterborough region (see **Figure 3.1**).

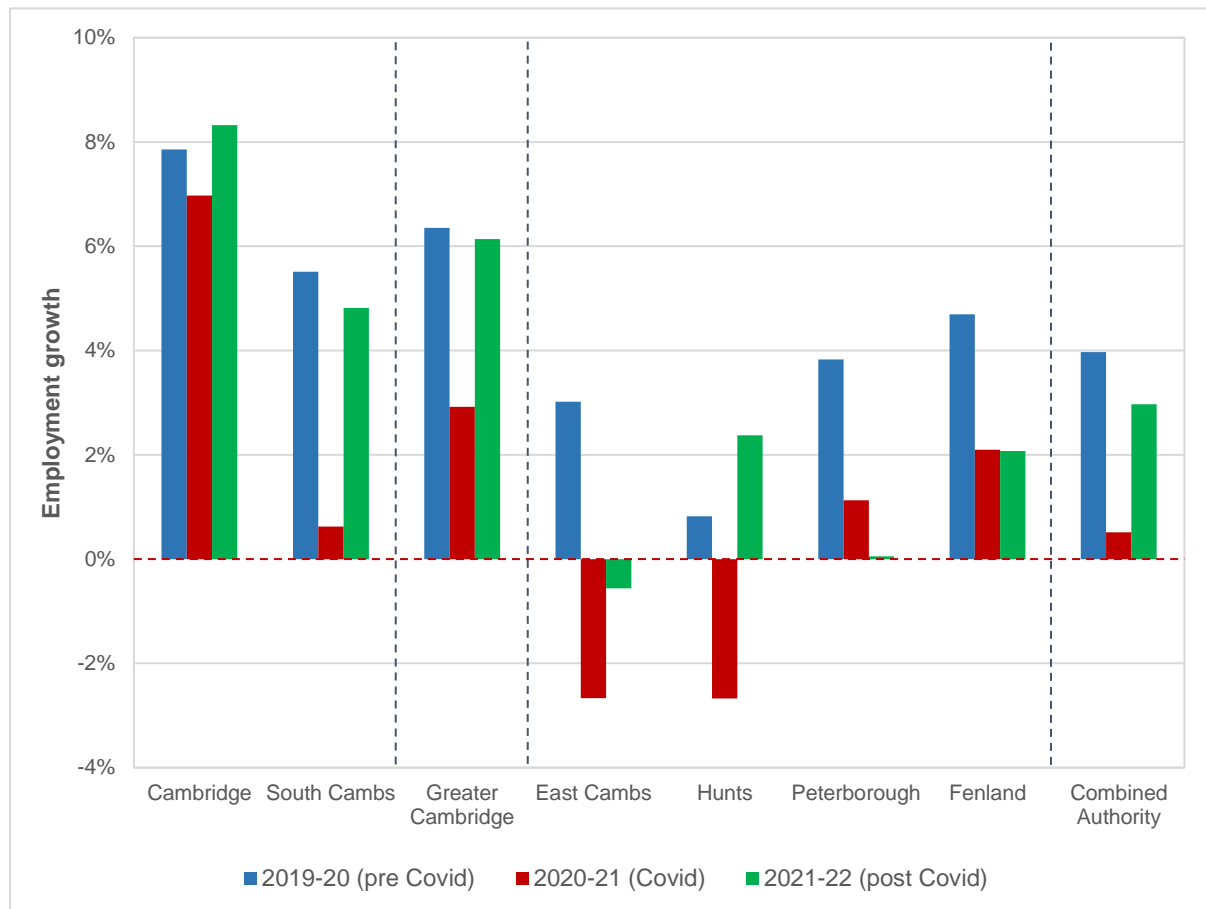
2. The impact of Covid

This chart and the next examine the impact of Covid on the Cambridgeshire and Peterborough economy. They are drawn from a large sample of companies based in the region with accounts for the years ending between December 2021 and April 2022.

This approach enables us to compare more neatly the following three years: 2019-20 (pre Covid) largely predates Covid; 2020-21 (Covid) covers all three Covid lockdowns; and 2021-22 (post Covid) examines corporate performance post lockdowns.

Figure 2.1 shows the picture for employment.

Figure 2.1 Employment growth by district before, during and after Covid



Source: Cosh & Caselli, CBR.

Employment growth in the Cambridgeshire and Peterborough region slowed down from 4.0% in 2019-20 to 0.5% in 2020-21, showing the impact of the Covid lockdowns. Employment increased by 3.0% in 2021-22, suggesting that businesses discovered how to live with Covid.

We find a similar picture for Greater Cambridge, yet with some noticeable differences. Employment growth of Greater Cambridge-based companies remained strong through Covid and returned to its pre-pandemic levels during the recovery period.

Employment growth in Cambridge, which has a high presence of Life Science and ICT companies, was only slowed down marginally by Covid and was even stronger post lockdowns.

South Cambs saw a more marked slowdown in employment growth during Covid but resumed strong growth as we came out of lockdowns.

Within this sample of companies, the pandemic appears to have had a larger impact on East Cambs- and Hunts-based companies. However, these results must be interpreted with caution, as they might be due to the sample not being representative.

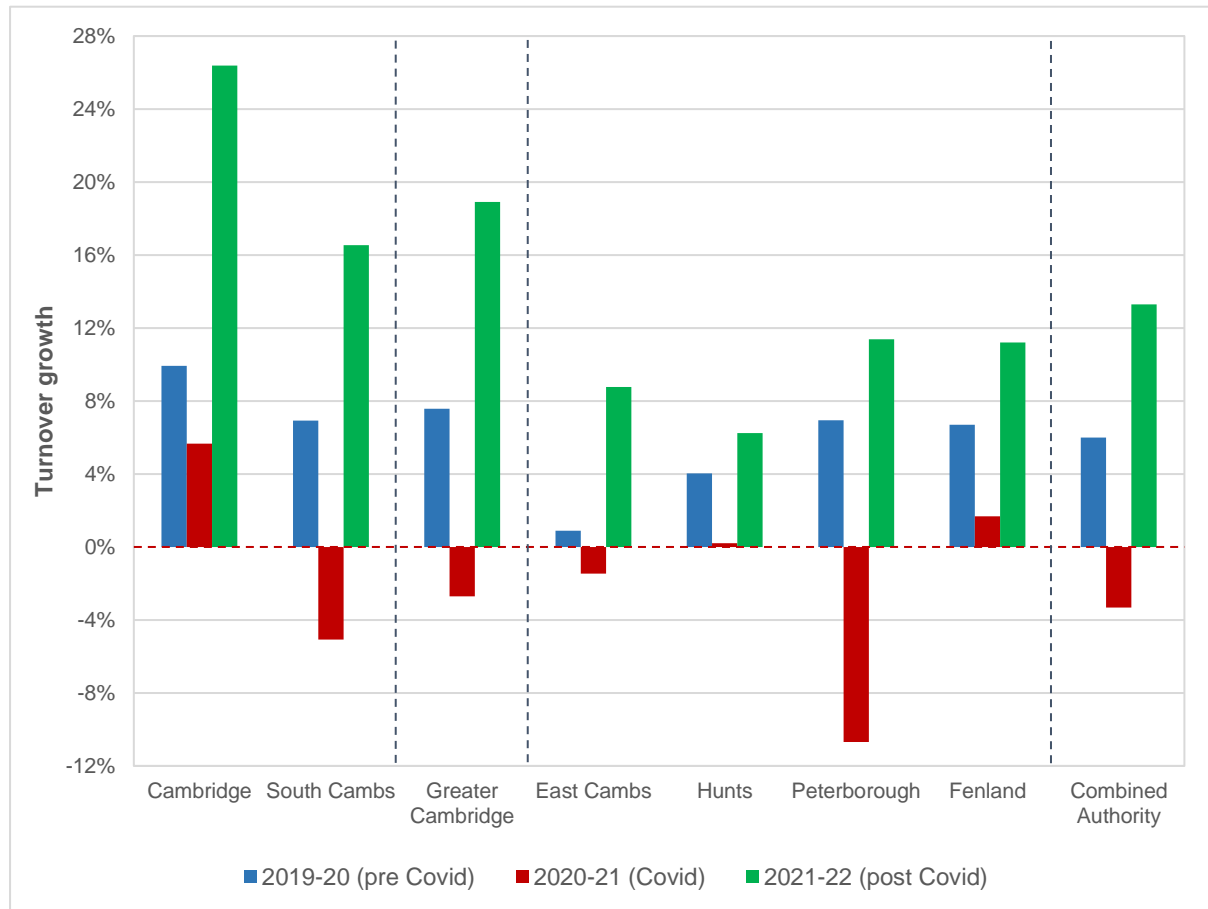
A case in point is East Cambs, where J.B Shropshire & Sons, one of the largest employers in the district with steady growth in employment over time, is not included in this analysis sample because its latest accounting year end did not fall within the period December 2021-April 2022. The exclusion of J.B Shropshire & Sons from the sample might have exaggerated the impact

of Covid on East Cambs employment. However, it is possible that the picture might not have changed with J.B Shropshire & Sons, since many agricultural workers are employed temporarily from overseas and may not have fully benefited from furlough.

Overall, the results for this sample of companies indicate that employment growth across the Cambridgeshire and Peterborough region has started to recover from the worst effects of the pandemic. Except for East Cambs and Hunts, employment in all areas is now above its pre-pandemic levels.

Figure 2.2 qualifies the results for employment by examining what happened to turnover.

Figure 2.2 Turnover growth by district before, during and after Covid



Source: Cosh & Caselli, CBR.

Turnover growth of Combined Authority-based companies fell from 6.0% in 2019-20 to -3.3% in 2020-21. The finding that turnover suffered larger falls than employment during Covid testifies to the important role played by the furlough scheme in holding up employment. Turnover growth was positive and much stronger during the recovery period (13.3%).

The pandemic had a similar impact on the turnover growth of Greater Cambridge-based companies, which dropped by 2.7% in 2020-21. Compared with the wider region, these companies exhibited faster turnover growth after lockdowns were lifted, primarily reflecting a vibrant performance of KI sectors.

The other districts making up the Combined Authority showed a similar pattern. Turnover growth slowed down during Covid, whilst it bounced back at faster rates than before Covid as the economy recovered from the worst impacts of the pandemic.

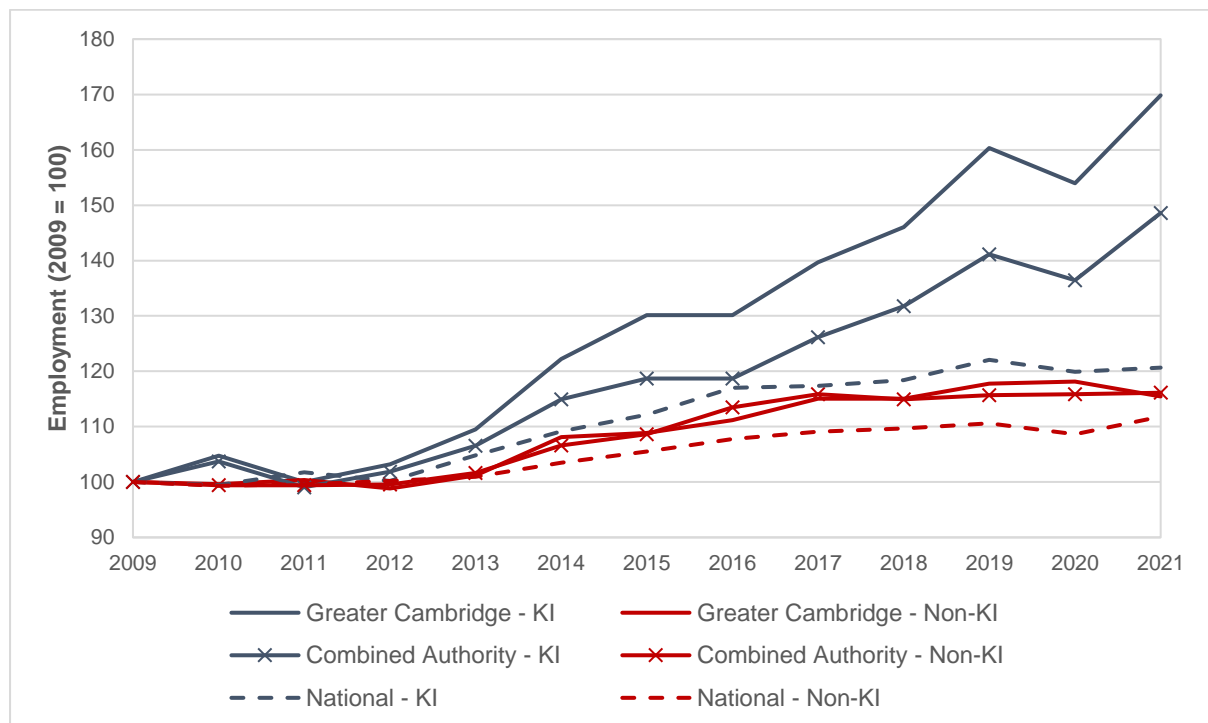
Some of the relatively large changes in turnover (e.g. Peterborough during Covid) must be interpreted with caution, since they may reflect some peculiarities of the sample.

3. Comparison with ONS BRES

It is instructive to analyse the latest corporate and non-corporate employment data from the Business Register and Employment Survey (BRES) carried out by ONS. The 2021 BRES results ('provisional results 2021, revised results 2020') cover the growth period from September 2020 to September 2021 and are therefore broadly comparable with ours.

We start with a comparison of employment growth in Greater Cambridge and in the wider Cambridgeshire and Peterborough Combined Authority area against the country. This comparison is based entirely on BRES data.

Figure 3.1 BRES employment growth: Greater Cambridge and Combined Authority vs national



Source: CBR's calculations based on data from BRES (Nomis).

The exceptional performance of KI sectors in the Cambridgeshire and Peterborough region (see **Figure 1.1** and **Table 1.1**) is strongly confirmed by BRES data. KI employment in the region grew much faster than the national average, although further analysis shows that the exceptional performance of KI sectors is driven by Greater Cambridge.

It would appear that KI activity in Greater Cambridge has also pulled the performance of non-KI sectors both in Greater Cambridge and in other parts of the Cambridgeshire and Peterborough region above the national average, reinforcing our findings for the corporate sector (see **Figures 1.1** and **1.5**).

Further analysis of BRES data reveals that KI sectors in the other four districts making up the Combined Authority are performing slightly below the national average, whilst the opposite

holds true for non-KI sectors. Given the dominance of non-KI employment, these four districts generally outperformed the country over the past decade.

The gap between KI and non-KI sectors has become more accentuated in the last few years. However, we are cautious about the results for the most recent year, as BRES figures may be subject to revision when data for next year are released.

The BRES analysis revealed that Greater Cambridge and the wider Cambridgeshire and Peterborough region outperformed the country (see **Figure 3.1**). We now examine whether the picture would change if we take into account our corporate data alongside BRES.

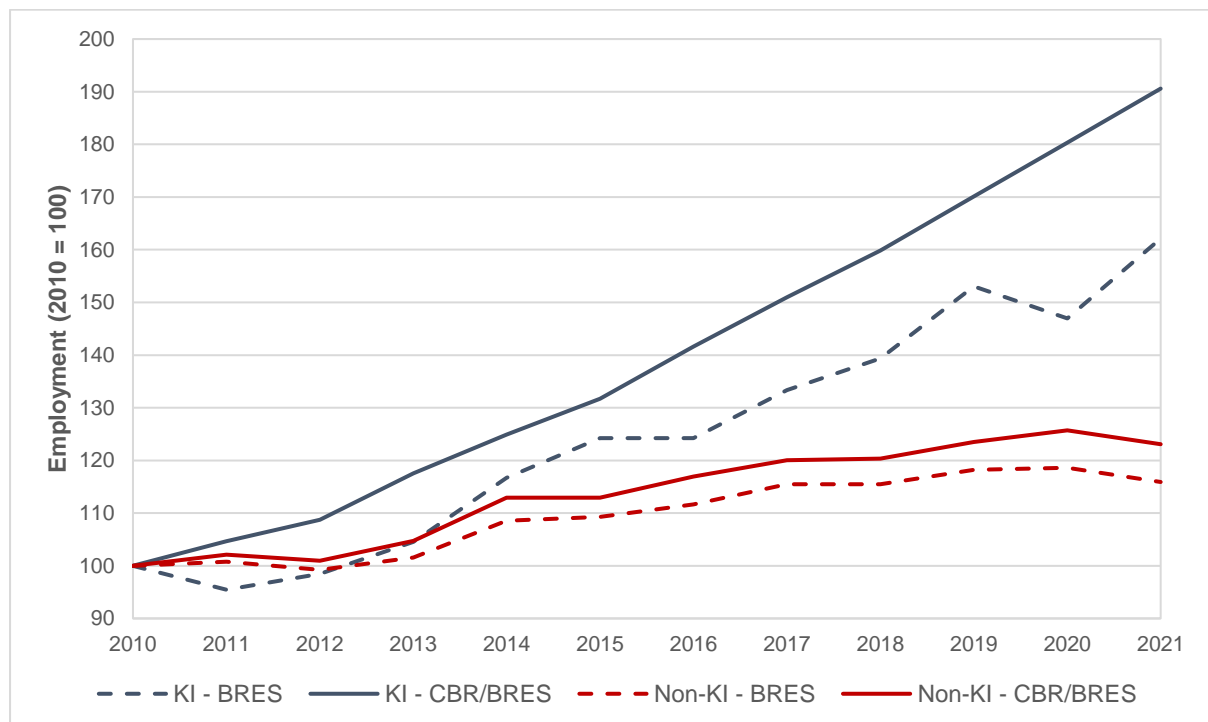
Our local knowledge and close monitoring of the corporate sector make us confident about its growth rate. For this reason, we take the growth rates from the CBR corporate database for the five KI sectors and the first five non-KI sectors, where corporate employment dominates.

On the other hand, BRES has some advantage in identifying growth for the last ten non-KI sectors, which tend to have a significant proportion of non-corporate employment. We use BRES growth rates for these last ten non-KI sectors.

Therefore, the differences between CBR and BRES reflect different views about the first ten and last ten sectors.

Figure 3.2 compares employment growth from BRES and CBR/BRES in the Greater Cambridge area.

Figure 3.2 BRES vs CBR/BRES employment growth in Greater Cambridge



Source: CBR's calculations based on data from BRES (Nomis).

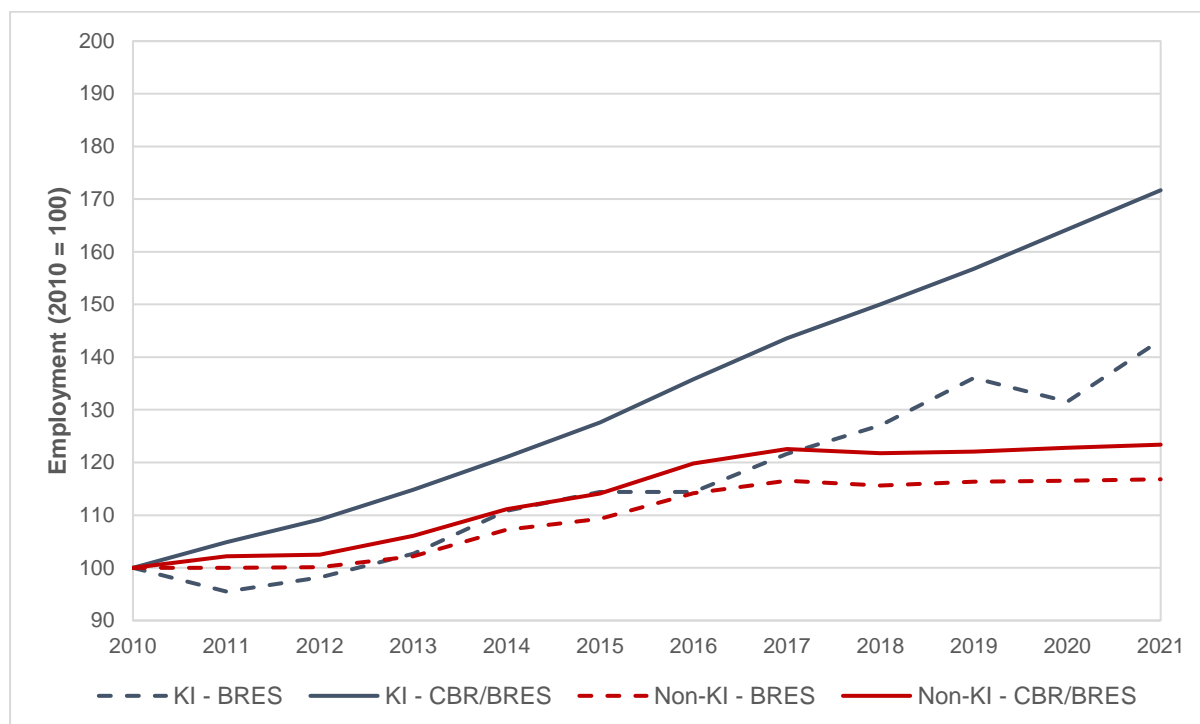
The chart shows that the performance of KI and non-KI sectors in Greater Cambridge is even stronger when CBR data are combined with BRES data.

The gap between BRES and CBR/BRES is larger amongst KI sectors. CBR/BRES also shows a much more stable trend for KI sectors compared with BRES.

BRES appears to be under-recording the growth of KI sectors in Greater Cambridge, possibly because of the limitations associated with the SIC-based classification.

Figure 3.3 provides a comparison for the wider Combined Authority area.

Figure 3.3 BRES vs CBR/BRES employment growth in the Combined Authority



Source: CBR's calculations based on data from BRES (Nomis).

The picture for the Cambridgeshire and Peterborough region largely mirrors the picture for the Greater Cambridge area (see **Figure 3.2**).

The CBR/BRES estimates point to higher employment growth in the Combined Authority area than BRES, particularly amongst KI sectors.

Table 3.1 offers a more detailed comparison of annual employment growth between BRES and CBR/BRES across districts.

Table 3.1 BRES vs CBR/BRES employment growth pa 2010 to 2021 by district: KI vs non-KI sectors

District	KI sectors		Non-KI sectors		All sectors	
	BRES	CBR/BRES	BRES	CBR/BRES	BRES	CBR/BRES
Cambridge	4.9%	6.9%	1.5%	1.6%	2.1%	2.6%
South Cambs	4.2%	5.4%	1.0%	2.4%	2.0%	3.5%
Greater Cambridge	4.5%	6.0%	1.3%	1.9%	2.0%	3.0%
East Cambs	4.0%	5.5%	2.4%	2.9%	2.5%	3.2%
Hunts	0.5%	3.6%	0.9%	1.1%	0.9%	1.3%
Peterborough	1.3%	1.4%	1.6%	1.8%	1.6%	1.8%
Fenland	1.4%	4.6%	1.6%	2.7%	1.7%	2.7%
Combined Authority	3.3%	5.0%	1.4%	1.9%	1.7%	2.4%

Source: CBR's calculations based on data from BRES (Nomis).

The district comparison shows that CBR/BRES data reports a higher rate of growth than BRES also for the four districts outside Greater Cambridge (further analysis for these four districts is presented in the appendix).

The largest discrepancy between BRES and CBR/BRES lies in KI sectors, where local knowledge and word searches to identify KI companies across a variety of SICs when producing CBR data make us extremely confident about our coverage of the KI economy.

The difference in employment growth rates between BRES and CBR/BRES, albeit less extreme than it used to be, still remains.

Nonetheless, our analysis shows that employment growth in the Cambridgeshire and Peterborough region is large and outperforms the rest of the country (see **Figure 3.1**).

4. Concluding remarks

- Our economic census points to prolonged growth of the Cambridgeshire and Peterborough region.
- Employment growth has been particularly strong for KI sectors, but non-KI sectors have also grown in every year apart from one (Covid) during the last 12 years.
- Turnover growth shows a similar picture, although it was more strongly affected by Covid than was employment. This result testifies to the important role played by the furlough scheme in holding up employment.
- Greater Cambridge, with its high proportion of KI companies, emerges as a key contributor to overall employment growth in the region. Greater Cambridge has seen exceptional growth in KI employment over the last 12 years.
- Our results suggest that the buoyancy of the Greater Cambridge KI economy has also held up the performance of non-KI sectors across the wider region.
- KI employment growth in Greater Cambridge remained strong during the last 6 years despite Covid. Non-KI employment growth in the whole Cambridgeshire and Peterborough region fell back but was still significant.
- Overall, employment growth across the Cambridgeshire and Peterborough region has started to recover from the worst effects of the pandemic. Except for East Cambs and Hunts, employment in all areas is now above its pre-pandemic levels.
- A comparison against the country using ONS and not CBR data shows that the region has outgrown the national average by a significant margin, driven by the exceptional performance of KI sectors in Greater Cambridge.
- ONS data appears to reinforce our finding that KI activity in Greater Cambridge has pulled the performance of non-KI sectors across the Cambridgeshire and Peterborough region above the national average.
- When CBR corporate data are combined with ONS data, employment growth in the Cambridgeshire and Peterborough region and in Greater Cambridge in particular is even stronger. This higher growth comes primarily from CBR data showing greater KI growth across all districts within the region.

Andy Cosh

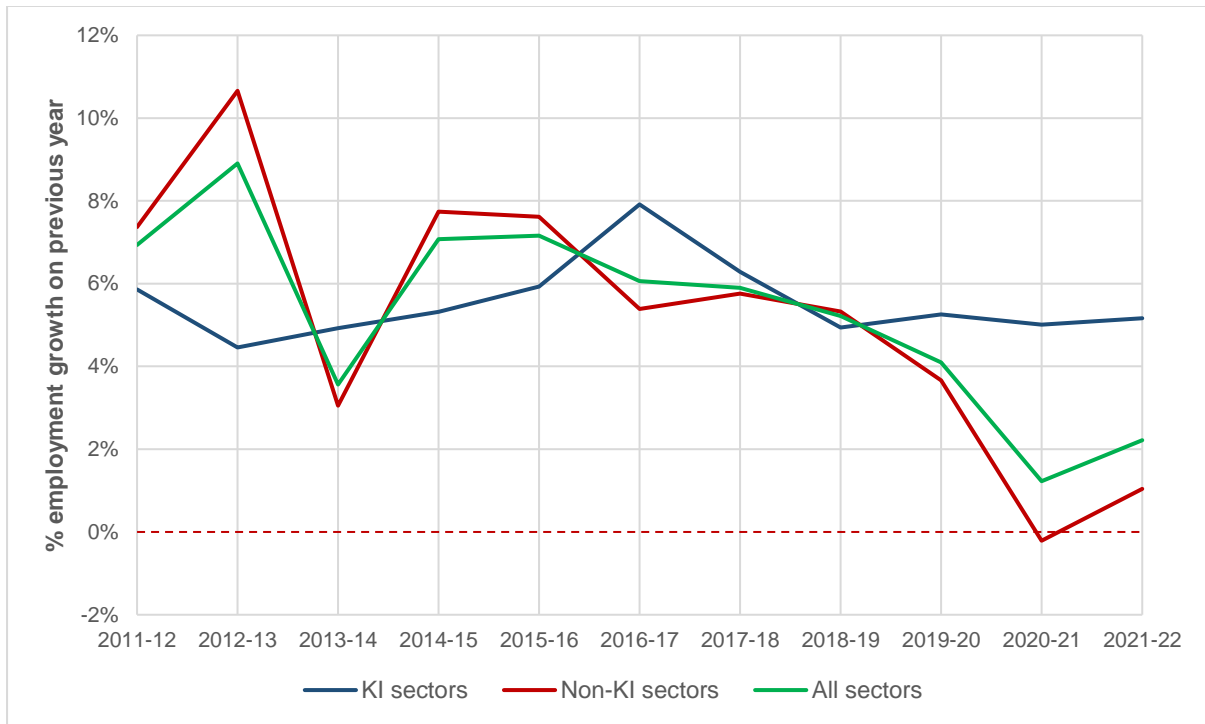
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March 2023

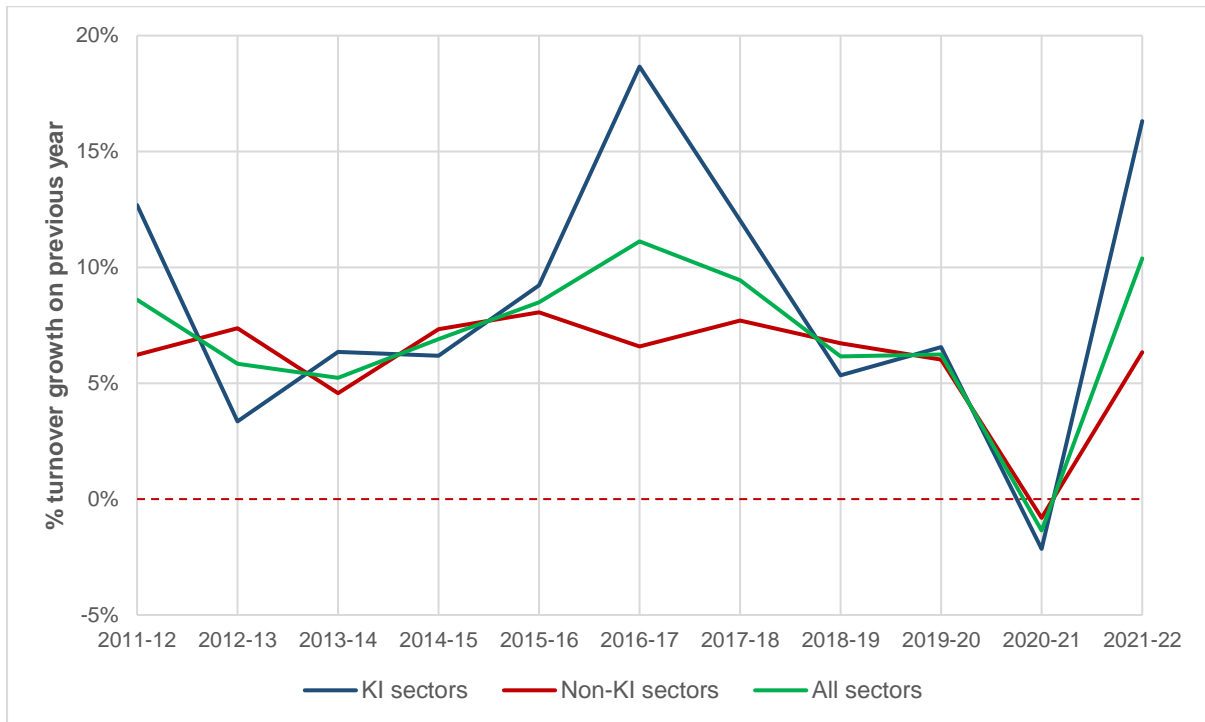
Appendix

Figure A1 Employment growth pa 2011-12 to 2021-22 in the Cambridgeshire and Peterborough region (excluding Thomas Cook)



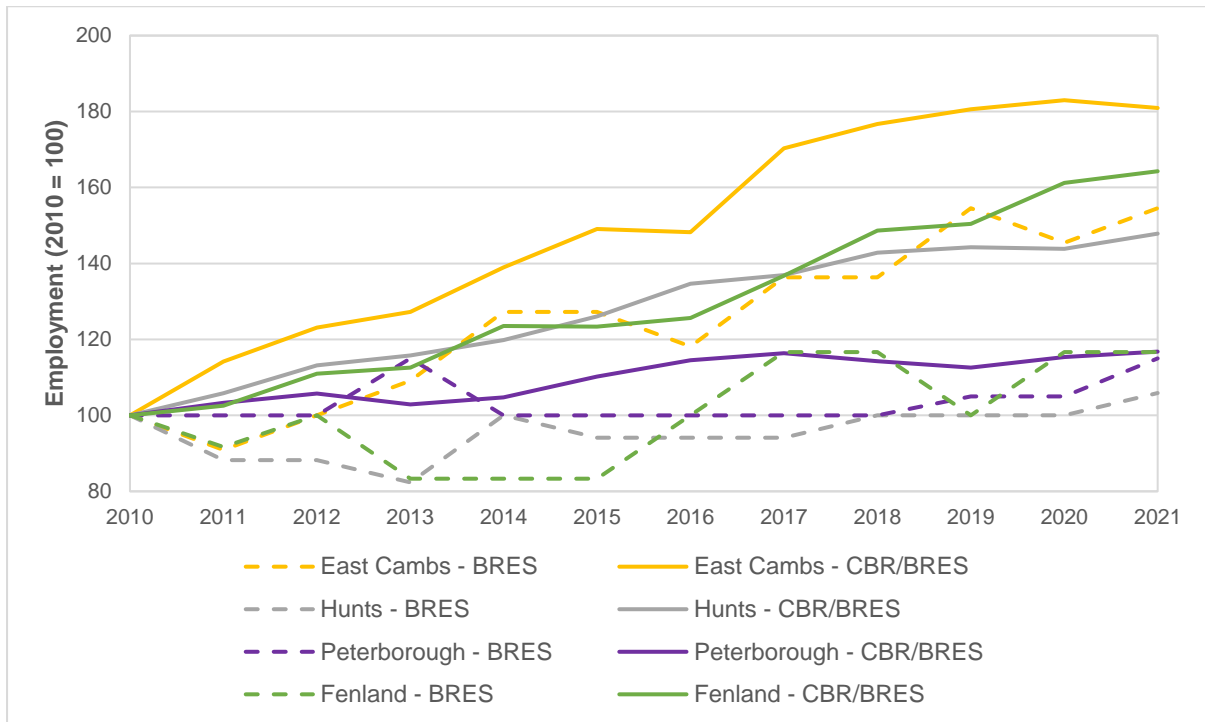
Source: Cosh & Caselli, CBR.

Figure A2 Turnover growth pa 2011-12 to 2021-22 in the Cambridgeshire and Peterborough region (excluding Thomas Cook)



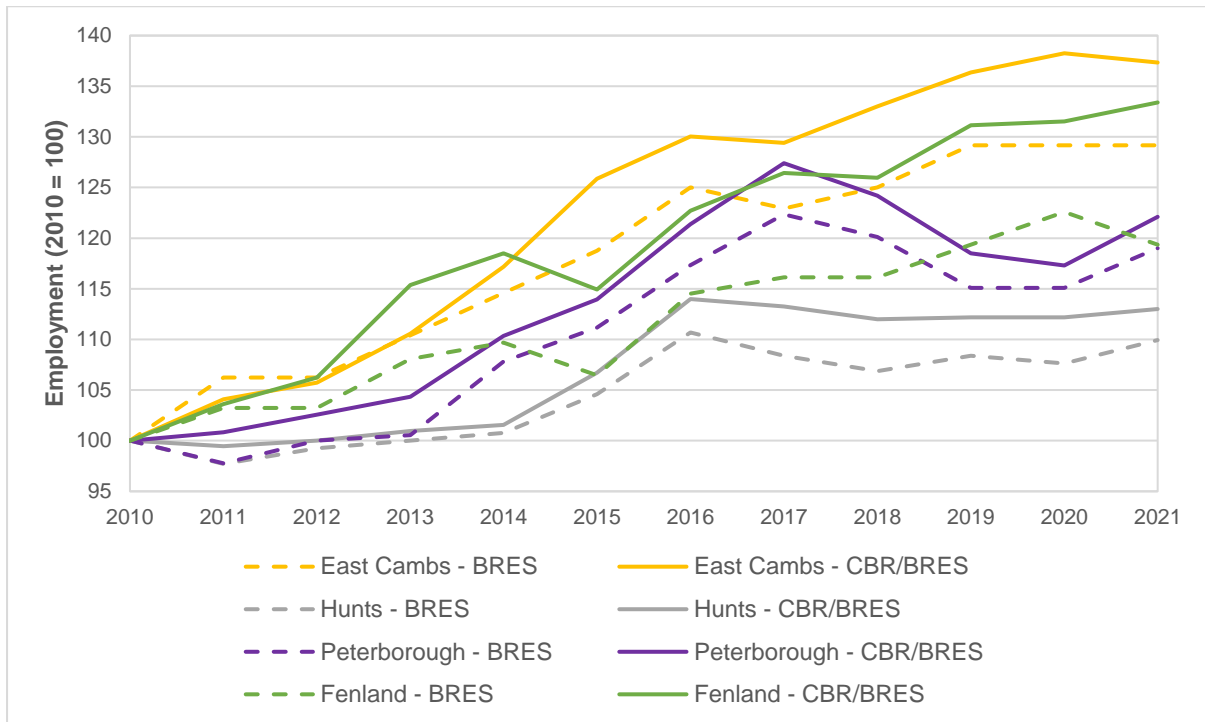
Source: Cosh & Caselli, CBR.

Figure A3 BRES vs CBR/BRES employment growth in the other districts within the Cambridgeshire and Peterborough region: KI sectors



Source: CBR's calculations based on data from BRES (Nomis).

Figure A4 BRES vs CBR/BRES employment growth in the other districts within the Cambridgeshire and Peterborough region: non-KI sectors



Source: CBR's calculations based on data from BRES (Nomis).