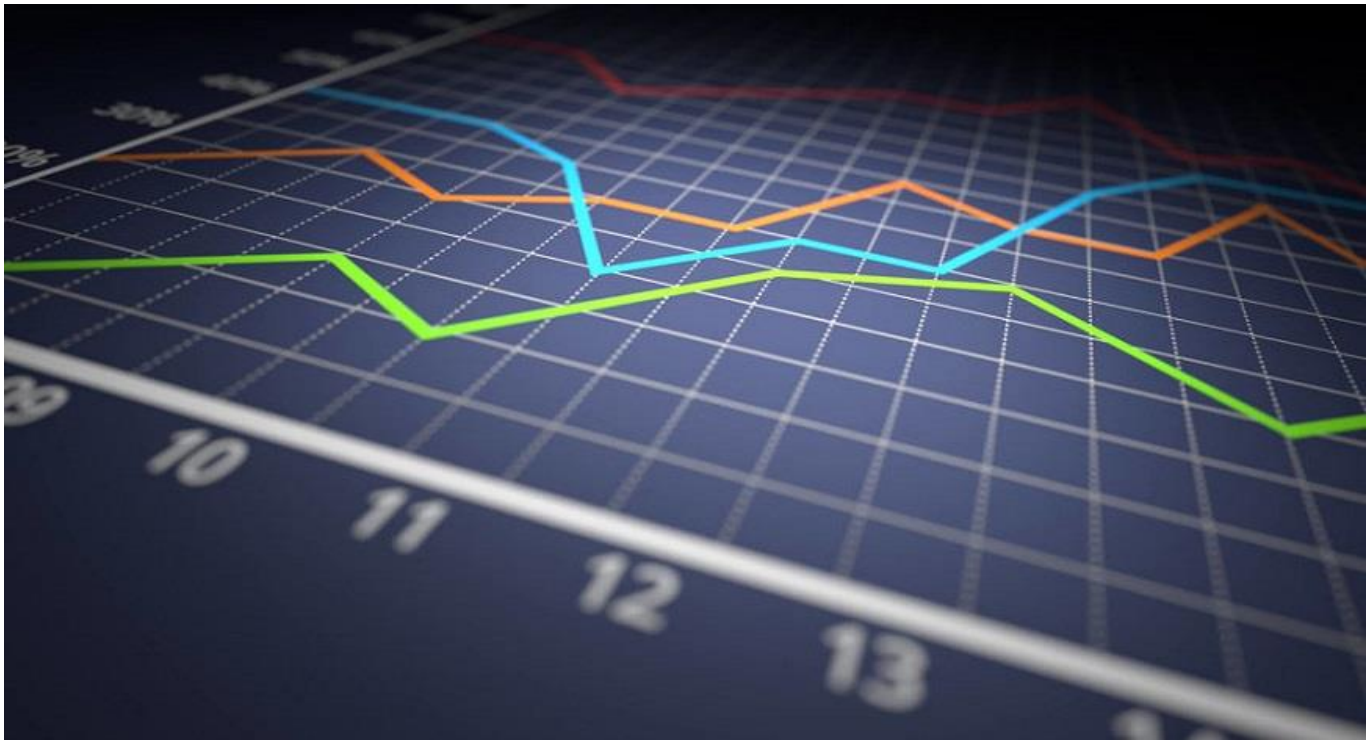
An Addendum Report
28 April 2021

Oxfordshire's Economic Recovery Plan: Structural Impacts Addendum



OxLEP
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1 Introduction

Headline messages

- This Addendum has been produced to support the Oxfordshire Economic Renewal Plan (ERP) - originally published in December 2020 - with updated econometric forecasts to better understand and quantify the impacts and recovery from the COVID-19 Pandemic for Oxfordshire, its sectors, and places
- Utilising a framework and approach consistent with the original ERP, it presents and analyses Cambridge Econometrics latest econometric forecasts for local areas, derived from its Local Economy Forecasting Model (LEFM) in March 2021
- In contrast to the original ERP, these updated forecasts incorporate almost 12 months of Pandemic-related economic data, as well as the emergence of recent policy trends and changes (such as Brexit, vaccine rollout and the timetable for the economy reopening)
- This Addendum starts with a pre-COVID-19 outlook, with a focus on past and present trends at the sectoral and local level in Oxfordshire, before considering the position with COVID-19, and associated implications and conclusions

Context

1.1 In July 2020, Oxfordshire convened proactively a Task Group, comprised of public sector partners (OxLEP, the County Council, and area local authorities), to oversee the development of a County-wide COVID-19 Economic Renewal Plan (ERP).

1.2 The Task Group commissioned Steer-ED and Cambridge Econometrics (CE) to lead the six-month study and its action plan development. In reporting the work, two documents were prepared:

- Volume 1, which this Addendum is appended to, presents the socio-economic data and forecasts for Oxfordshire and its districts, pre-and post-COVID-19. As such, it provides the authoritative and independent assessment of how, and where, the Pandemic has affected the economy, and what has been 'lost' to the County and its places as a consequence of the crisis; and
- A companion document, Volume 2, takes the evidence base and then uses this as the foundation to develop a formal and proactive plan of economic renewal for the County and its districts.

1.3 To better understand the likely longer-term impact of the COVID-19 pandemic on the Oxfordshire economy, CE worked with Steer-ED to develop a series of credible econometric forecasts for the County and its constituent local authority areas, presented within Volume 1 of the original ERP.

1.4 CE presented these econometric forecasts for Oxfordshire, which outlined and quantified the potential impacts and recovery from the COVID-19 Pandemic for Oxfordshire, its sectors, and places. These forecasts were derived from extensive research and modelling undertaken by CE up to July 2020.

1.5 In March 2021, CE revised its econometric forecasts, to incorporate both the availability of almost 12 months of Pandemic-related economic data (such as that relating to economic output, employment, investment and trade), as well as the emergence of recent policy trends and changes (e.g. such as Brexit-related developments, the quicker than expected availability of a vaccine, and the associated timetable for the end of lockdown and reopening of the economy.)

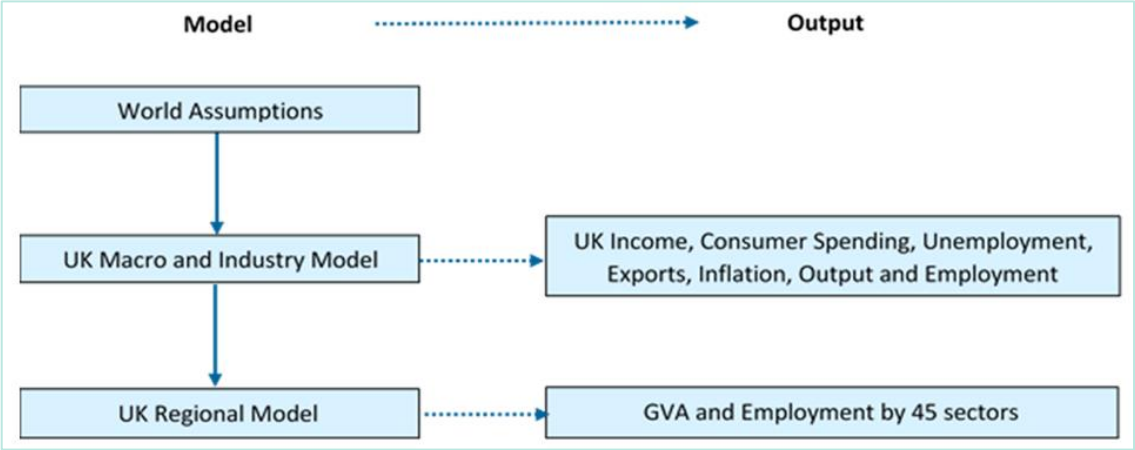
1.6 This document, acting as a stand-alone Addendum to the original ERP, presents these revised forecasts, which provide the latest expectations for the Oxfordshire economy and its recovery from the COVID-19 Pandemic, whilst reconsidering the true scale and impact of the economic shock during 2020.

1.7 This report does not seek to replace or counteract the original forecasts presented in the original ERP, which were sound and correct at the time of publication, and is instead a supplement and comparator to these original findings.

Methodology underpinning this Addendum

1.1 A consistent methodology and modelling approach has been undertaken during the development of the revised forecasts. As with the original ERP forecasts, to produce the revised local area forecasts, CE has utilised the bespoke Local Economy Forecasting Model (LEFM) component of its macroeconomic Multi-Sectoral Dynamic Model (MDM-E3)[1] of the UK economy. As a consequence, the local area forecasts for Oxfordshire are consistent with CE's macroeconomic forecasts for the UK economy as a whole.

Figure 1-1: Links between Cambridge Econometrics' suite of models



Source: Cambridge Econometrics, 2020

1.2 As emphasised in the original ERP, an important feature of this modelling approach is the link to CE's wider modelling suite, ensuring any local area forecasts are consistent with CE's world, UK national and UK regional forecasts and assumptions, as Figure 1-1 demonstrates.

[1]The MDM-E3 is used to provide forecasts for 45 UK sectors, and is typically updated twice annually; the most recent update, in March 2021, incorporates the impact of both the COVID-19 pandemic around the world (so includes potential related impacts to trade and migration), and the UK's departure from the European single market (and the end of the transition period in January 2021).

1.3 CE's headline UK forecasts have been developed within the context of its position within global trade networks, the worldwide impact of COVID, and the changing nature of the UK's trading relationship with the European Union. These national level impacts are then systematically distributed to regions and local areas, based on historic sectoral relationships.

1.4 The regional and local impact depends, therefore, on the historic precedent of how local sectors have historically performed relative to their national or regional equivalents, thereby capturing the differing intrinsic resilience of local sectors to national economic shocks.

1.5 For example, if the Professional Services sector in Oxfordshire has historically been impacted less hard, and/or recovered more rapidly from past shocks, than the UK Professional Services sector as a whole, then this will be reflected in the local forecasts.

1.6 For the revised Oxfordshire results, the most up-to-date additional data have been incorporated into the forecasts, specifically for the year 2020, for which almost 12 months of Pandemic-related data is now available.

1.7 By also utilising the 'live' indicators collected by Steer-ED, for instance Job Retention Scheme ('furlough') data, it has also been possible to enhance the quality of the local forecasts in the very short term whilst ensuring alignment between the two workstreams.

Therefore, in contrast to the original ERP forecasts, the revised ERP forecasts draw on up to 12 months of additional data for national and regional indicators such as:

- Output (GDP, GVA) and productivity
- Income and earnings
- Employment and unemployment
- Trade and exports
- Inflation and consumer spending
- Government-support schemes (furlough, self-employment support etc.)

1.8 It should be emphasised that even with this more extensive evidence base, any efforts to determine the quantitative implications of COVID-19 on national and local economies are still highly uncertain and indicative at this early stage of the Pandemic.

1.9 And even when accounting for this, as with all kinds of forecasting, there are margins of error associated with the results which tend to widen over time. Furthermore, it should also be noted that the quality and reliability of data decreases at more detailed levels of geography.

1.10 Whilst CE's/Steer-ED's approach incorporates a wide number of factors, including global, national and local interrelationships and detailed sectoral impacts, there are factors it cannot account for, including any long-term behavioural changes due to the pandemic, or large and unanticipated policy changes at the local or national level.

Structure of this Addendum

1.11 This report is structured with the following sections, each beginning with their headline messages, before presenting the evidence and analysis:

- Section 2, **Oxfordshire - The Pre-COVID-19 Outlook,** provides analysis of the Oxfordshire economic position and outlook pre-COVID-19, with a focus on past and present trends at the sectoral and local level;

- Section 3, **Oxfordshire - The Position With COVID-19,** sets out the results of econometric forecasting, providing insights into the post-COVID-19 projections for Oxfordshire's areas and sectors, and the growth consequences resulting;
- Finally, Section 4, **Conclusion and Implications** draws together the key themes from the preceding evidence and analyses, and considers the implications for the Oxfordshire economy.

Making contact

1.12 Further detail regarding the Oxfordshire ERP and its ongoing development are available from **Ahmed Goga, Director of Strategy, OxLEP, ahmed.goga@oxfordshirelep.com**.

2 Oxfordshire – The Pre-COVID-19 Outlook

Headline messages

- Pre-COVID-19, the Oxfordshire economy contributed an estimated £21.7 billion to the UK economy, supported some 437,000 highly skilled jobs, and was home to 32,250 active businesses
- Economic growth had been robust over the past decade, with the Oxfordshire economy emerging as one of the fastest growing in the country, whilst more jobs were created relative to any other period in the last 50 years
- Pre-COVID-19 forecasts expected this impressive rate of growth to be maintained moving forwards, with performance set to exceed peer areas and the national average. By 2030, the Oxfordshire economy could have been £4.6 billion larger under a pre-COVID-19 trajectory
- This was expected to be driven by Oxfordshire's diverse sectoral base, with particularly robust growth forecast for Professional and Business Services, Health and Science, and Manufacturing. Spatially, this was to be well balanced across Oxfordshire's local authorities, led by the Vale of White Horse and Oxford

Purpose of this Section

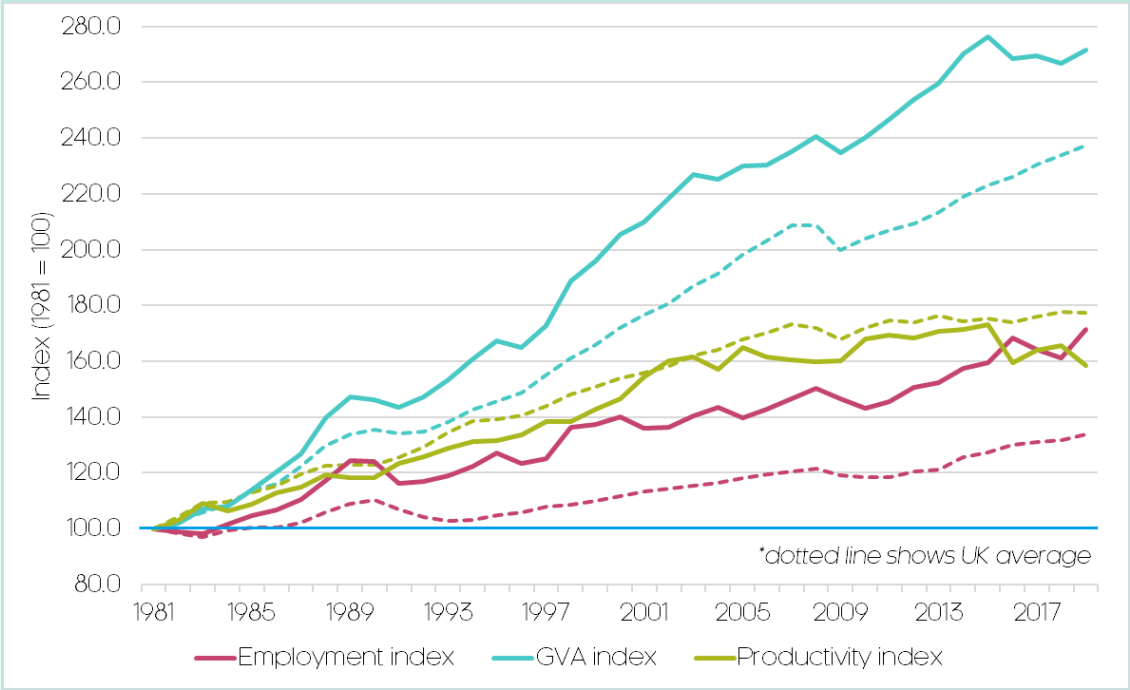
2.1 This section sets out the baseline for the Addendum, providing an overview of the economic situation in Oxfordshire pre-COVID-19, both absolutely and relative to the UK. This includes an assessment of headline economic performance in Oxfordshire, its sectors and places to March 2020, and the outlook for growth under a pre-COVID-19 trajectory. This provides a foundation for analysis in later Sections to gauge the scale of COVID-19 impact, and the potential shortfall relative to a pre-COVID-19 outlook.

Pre-COVID-19 trends and expectations

2.2 In the year preceding COVID-19 Pandemic, the Oxfordshire economy contributed an estimated £21.7 billion to the UK economy, supported some 437,000 highly skilled jobs, and was home to 32,250 active businesses.

2.3 Since 1981, the Oxfordshire economy (as measured by Gross Value added – GVA – in real terms) has consistently grown faster than the UK average. As Figure 2-1 shows, this has been driven by stronger employment growth rather than productivity growth, which has more closely tracked average UK growth.

Figure 2-1: Performance of the Oxfordshire economy since 1981 (note: dotted line shows UK average)



Source: Cambridge Econometrics, 2021

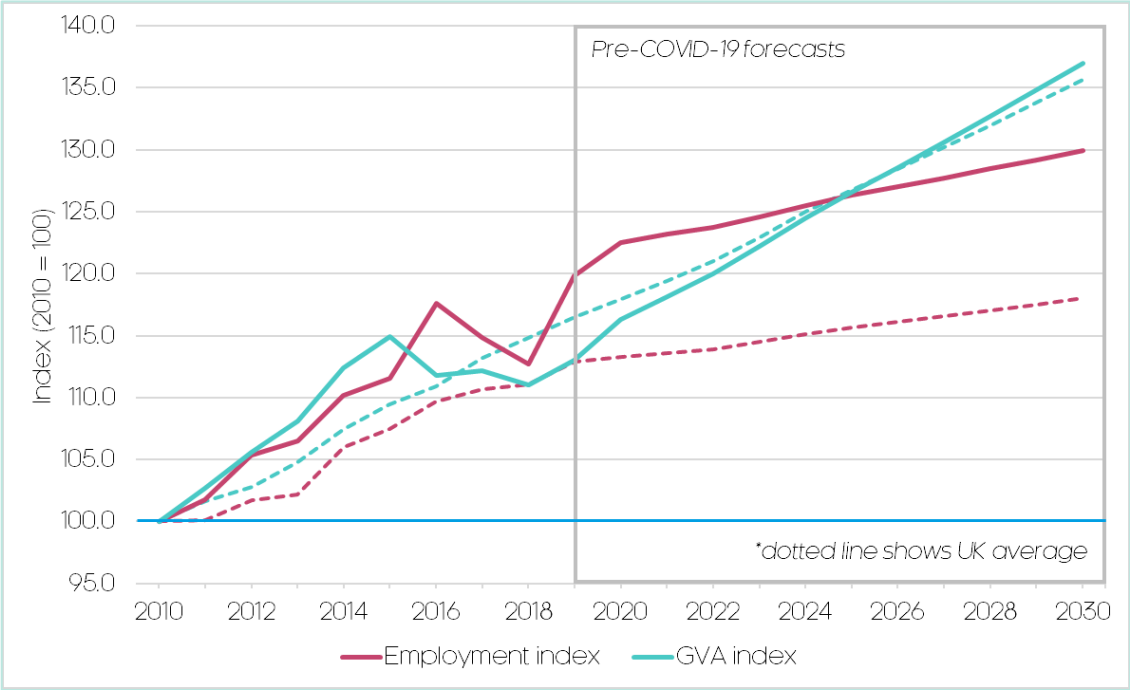
2.4 The Oxfordshire economy has performed particularly well over the past decade, emerging as one of the fastest growing in the country following the 2008-09 recession, ranking third of 38 LEP areas for growth. Between 2010-19, employment (jobs) in Oxfordshire has grown on average by 2.0% per annum, relative to a UK average of 1.4%. Oxfordshire has delivered significant and sustained growth.

2.5 In fact, since 2010, on average more jobs were created in Oxfordshire than any other equivalent period in the last 50 years. And over this 50-year period, Oxfordshire created jobs at a rate over twice that of the UK average. Resultantly, at the start of 2020, Oxfordshire had the highest employment rate in the country, with 82.8% of working age residents in work, exceeding the UK average of 75.5%.

2.6 Looking ahead, under a pre-COVID-19 trajectory, Oxfordshire was expected to maintain a robust pattern of growth. As Figure 2-2 and Table 2-1 show, across key measures of economic performance (Employment, Output – or GVA – and Productivity. Charts are indexed to 100 in 2010 to highlight the relative change between areas), central forecasts suggest the Oxfordshire economy would continue to outpace the rest of the country.

2.7 Employment growth was expected to be particularly strong, with a pre-COVID-19 potential for 36,700 net additional jobs to be created in the county by 2030, equivalent to an increase of 3,300 per annum. This would have resulted in a total of 472,800 jobs in the County by 2030, an 8.4% increase on current levels, almost twice the expected increase of the UK average (4.5%).

Figure 2-2: Forecast performance of the Oxfordshire economy under a pre-COVID-19 trajectory (note: dotted line shows UK average)



Source: Cambridge Econometrics, 2021

Table 2-1: Forecast performance of the Oxfordshire economy under a pre-COVID-19 trajectory

	2019 (forecast baseline)	2025	2030	Growth, 2019-30	% growth, 2019-30
Employment (jobs)	436,100	459,600	472,800	36,700	8.4%
GVA (£2018, bn)	£21.7	£24.3	£26.3	£4.6	21.2%
Productivity (£2018)	£49,800	£52,900	£55,600	£5,900	11.8%

Source: Cambridge Econometrics, 2021

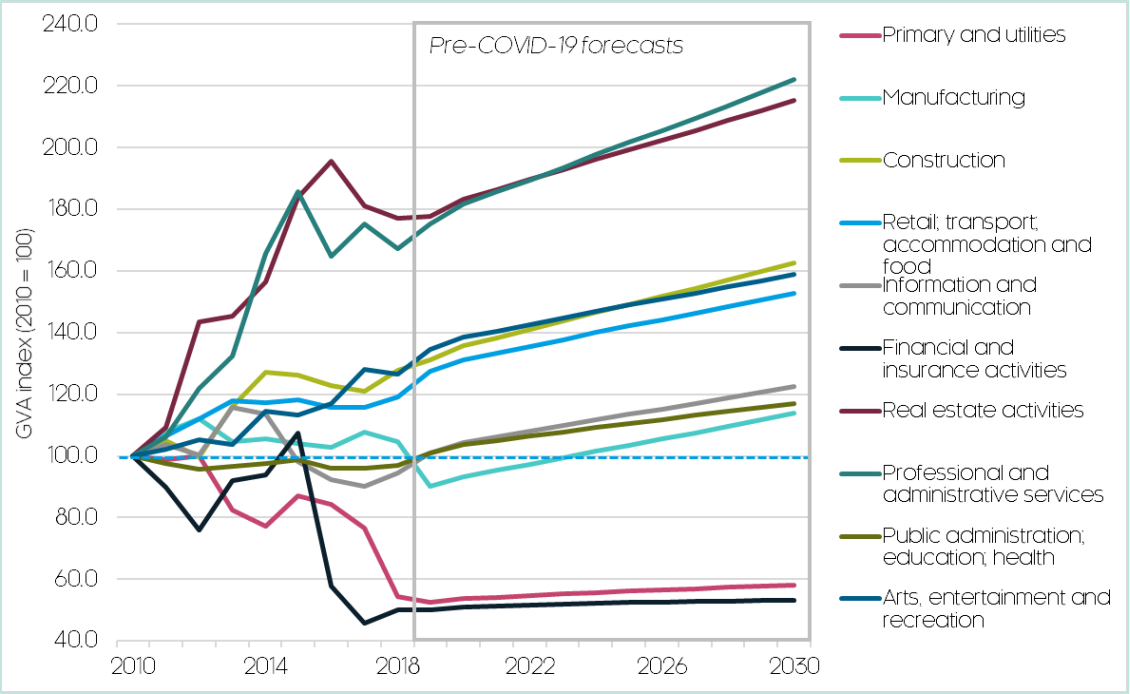
2.8 As a consequence, the size of Oxfordshire's economy was also expected to increase, being worth a potential £26.3 billion by 2030, almost £5 billion more than it is worth currently. As with employment, the 21.2% increase in GVA would outpace the UK average (16.4%).

2.9 Oxfordshire's subdued productivity growth was expected to continue though, with the 11.8% improvement to 2030 only tracking the UK average. This 'productivity puzzle' is already estimated to have cost the Oxfordshire an estimated £3.7 billion in 'lost output' (i.e. the additional growth if it had followed its pre-crisis trend) and is being keenly felt in a number of industries, largely service-based.

Sectoral expectations

2.10 Figure 2-3 and Table 2-2 consider the high-level sectoral composition of growth under the pre-COVID-19 trajectory (graphs are indexed to 100 in 2010 to highlight the relative change between sectors). Given Oxfordshire's increasing strength and ambition in the sector, Professional and Administrative Services (which includes Research and Scientific Activities) was expected to see the highest overall employment and GVA growth, with potential for some 10,600 additional jobs to 2030.

Figure 2-3: Forecast GVA performance of Oxfordshire's sectors under a pre-COVID-19 trajectory



Source: Cambridge Econometrics, 2021. Note: indices for some smaller sectors (e.g. real estate) can be volatile

2.11 The Public Administration; Education; Health sector was also expected to continue being a significant growth generator in the County, accounting for a quarter of additional economic activity by 2030, reflecting increased demand in the Health (aging population) and Education -- particularly Higher Education - sectors (given the increase demand for high-level and technical skills).

2.12 Given strong projected economic and household growth in Oxfordshire as well as an increasing tourism offer, the demand for Consumer Services (Retail; Transport; Accommodation and Food) was also expected to increase, and as such its employment and GVA would continue to grow strongly.

2.13 Automation, digitisation and outsourcing would contribute to robust GVA growth in Manufacturing, driven by rapid productivity improvements underpinned by the adoption of frontier technologies, the flipside of this being the continued longer-term downward trend in Oxfordshire's manufacturing employment demand, albeit marginal.

2.14 Continued economic growth alongside ambitious policy aspirations around housing delivery, infrastructure and commercial space resulted in an expectation that Oxfordshire's Construction (and related Real Estate) sectors would also grow strongly, in both employment and GVA terms.

Table 2-2: Forecast performance of Oxfordshire's sectors under a pre-COVID-19 trajectory

	Employment (jobs) growth, 2019-30	Employment (jobs)% growth, 2019-30	GVA growth £m, 2019-30	GVA% growth, 2019-30
Primary and Utilities	-200	-3.0%	£50	11.0%
Manufacturing	-200	-0.8%	£605	26.5%
Construction	3,300	10.7%	£314	23.9%
Retail; Transport; Accommodation and Food	9,600	9.5%	£653	19.9%
Information and Communication	2,100	9.5%	£342	21.2%
Financial and Insurance Activities	-200	-3.0%	£7	6.3%
Real Estate Activities	800	10.7%	£177	21.2%
Professional and Administrative Services	10,600	13.1%	£766	26.6%
Public Administration; Education; Health	9,200	7.1%	£836	16.0%
Arts, Entertainment and Recreation	1,800	7.7%	£198	18.2%

Source: Cambridge Econometrics, 2021

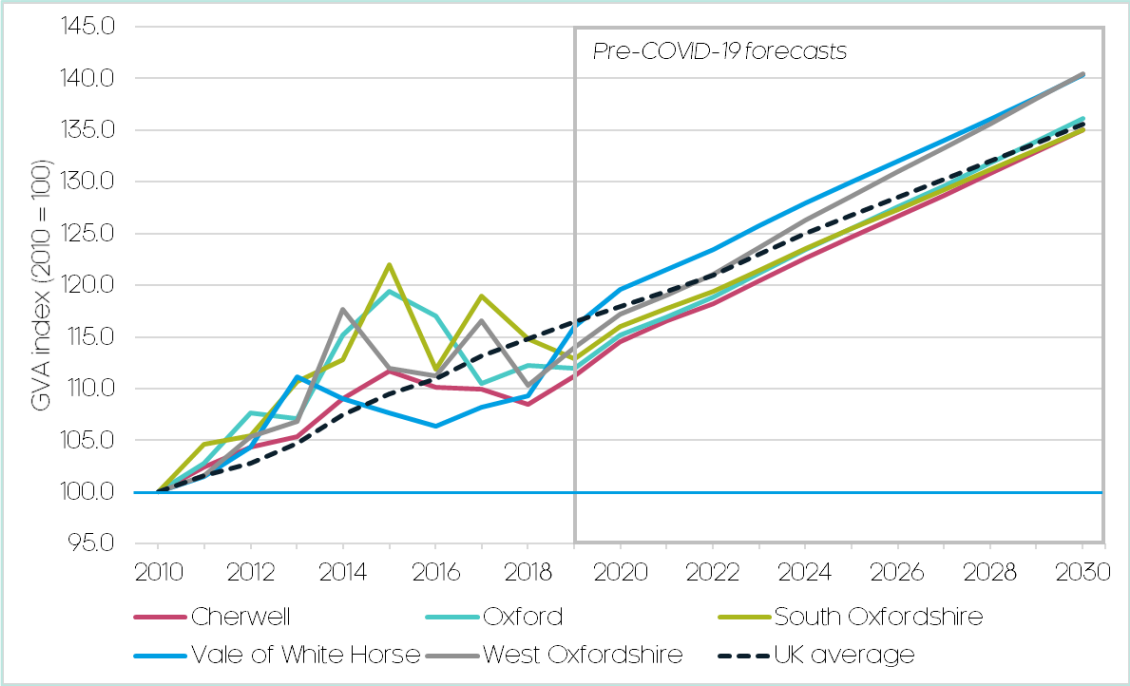
District expectations

2.15 Figure 2-4 and Table 2-3 summarise the expected spatial pattern of growth across the County under the pre-COVID-19 trajectory (graphs are indexed to 100 in 2010 to highlight the relative change between areas). A robust growth picture was expected to emerge, with local growth rates all expected to continue outpacing the UK average (16.4%).

2.16 Reflecting the favourable sectoral structure of the area (including advanced Manufacturing, Professional and IT Services), stronger growth was expected to continue along the 'Knowledge Spine', particularly around Abingdon (Vale of White Horse) and Didcot (South Oxfordshire) to the south, through to Oxford City, and up to Bicester (Cherwell) in the north. Potential productivity growth was however expected to remain subdued in most parts.

2.17 Robust growth was also expected in West Oxfordshire, in and around the market towns such as Witney and Carterton. Reflecting its size and concentration of high-growth service sectors, Oxford City was expected to remain the main driver of growth though, accounting for almost a third of additional economic activity to 2030, equating to 10,900 additional jobs and £1.3 billion of GVA.

Figure 2-4: Forecast GVA performance of Oxfordshire's districts under a pre-COVID-19 trajectory



Source: Cambridge Econometrics, 2021. Note: indices for some individual local authority areas can be volatile

Table 2-3: Forecast performance of Oxfordshire's districts under a pre-COVID-19 trajectory

	Employment (jobs) growth, 2019-30	Employment (jobs)% growth, 2019-30	GVA growth £m, 2019-30	GVA% growth, 2019-30
Cherwell	7,400	8.0%	£1,052	21.4%
Oxford	10,900	7.8%	£1,288	21.6%
South Oxfordshire	6,500	8.7%	£772	19.6%
Vale of White Horse	7,700	9.9%	£914	21.0%
West Oxfordshire	4,200	8.0%	£585	23.2%

Source: Cambridge Econometrics, 2021

3 Oxfordshire - The Position With COVID-19

Headline messages

- Updated forecasts incorporating the impact of the COVID-19 Pandemic indicate a comparatively short, but unprecedented, impact to economic activity in Oxfordshire. At its peak, up to 4,200 jobs could be lost, whilst output could contract by 7%
- Though Oxfordshire will recover faster than other areas, relative to a pre-COVID-19 trajectory, the Oxfordshire economy could still expect to have in the region of 9,300 fewer jobs and output £1.1 billion lower by 2030
- Sectors such as Retail, Tourism and Food will bear the brunt of the impact, particularly short-term. But some of Oxfordshire's breakthrough industries, such as Professional Services, IT and Health and Science could emerge strongly and lead the economic recovery
- Within Oxfordshire, Cherwell, Oxford and West Oxfordshire are set to face the biggest shock to economic activity – reflecting their higher incidence of highly-impacted industries, such as Retail and Tourism - with Vale of the White Horse the least impacted

Purpose of this Section

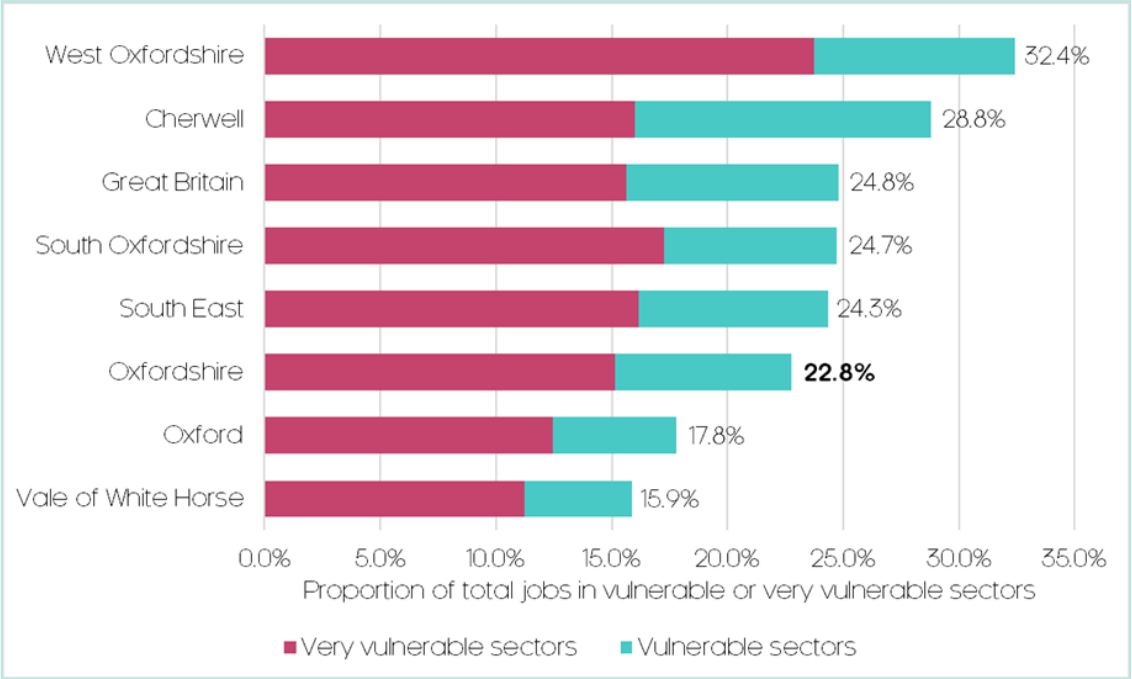
3.1 This section, building on the extensive quantitative and qualitative insights presented in the original ERP, draws on econometric modelling to gain a better understanding of the headline economic impacts of the COVID-19 Pandemic in Oxfordshire, its sectors and places. This includes detailed analysis of the prospects for recovery, the potential growth shortfall longer-term, and how the resilience and recovery of the Oxfordshire economy compares to the wider UK and South East region.

Oxfordshire's economic structure and COVID-19

3.2 Given the nature of the shock associated with the COVID-19 Pandemic and the accompanying local area modelling assumptions (see earlier *Methodology underpinning this Addendum*), the response of local areas will largely be determined by their sectoral structure. Areas overrepresented with industries most strongly impacted by the Pandemic and associated restrictions (e.g. retail, accommodation, food) for instance will likely experience a greater shock to economic activity.

3.3 Analysis by the Centre for Cities (adapted in Figure 3-1) shows the Oxfordshire economy has a notably lower incidence of jobs in 'vulnerable' and 'very vulnerable' sectors - these are activities that are expected to experience a discernible and lasting impact from the Pandemic, such as Tourism (i.e. Accommodation and Food), Transport (notably Automotive and Aviation), Recreation and Leisure, and some Retail.

Figure 3-1: Proportion of pre-COVID-19 jobs (2019) in 'very vulnerable' or 'vulnerable' sectors



Source: Centre for Cities, Cambridge Econometrics, 2021

3.4 In fact, the Centre ranked Oxford as having the lowest share of such jobs in the country, and resultantly is "expected to bounce back more quickly". It is, therefore, reasonable to expect Oxfordshire will experience a gentler impact to economic activity than the UK average, and potentially even more so depending on the relative historical resilience and recovery of these sectors.

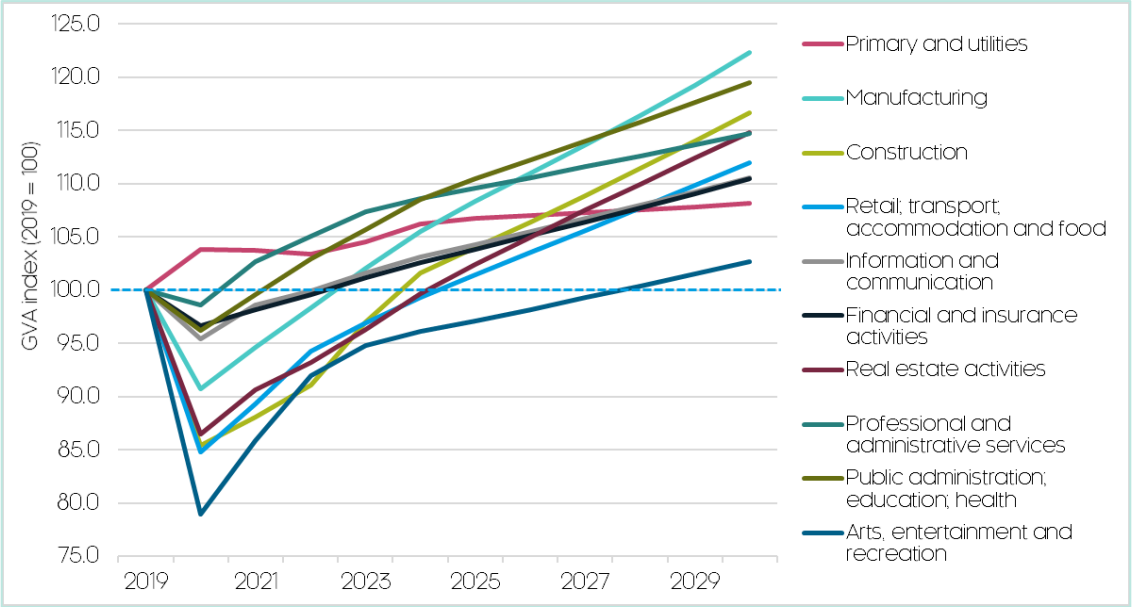
3.5 These proportions still equate to a significant number of jobs though, some 85,800 in Oxfordshire. Short-term, such sectors have been highly reliant on furlough and related support. Longer-term though there is an increased risk of job losses and business dissolutions, particularly with the reduction or winding down of any support.

3.6 And, with greater spatial detail, the magnitude of these effects will increase, reflecting greater sectoral diversity; for instance, Cherwell's sectoral structure differs from Vale of White Horse's (almost twice as many jobs in Cherwell are in 'vulnerable' or 'very vulnerable' sectors), and so will their impacts.

Sectoral expectations

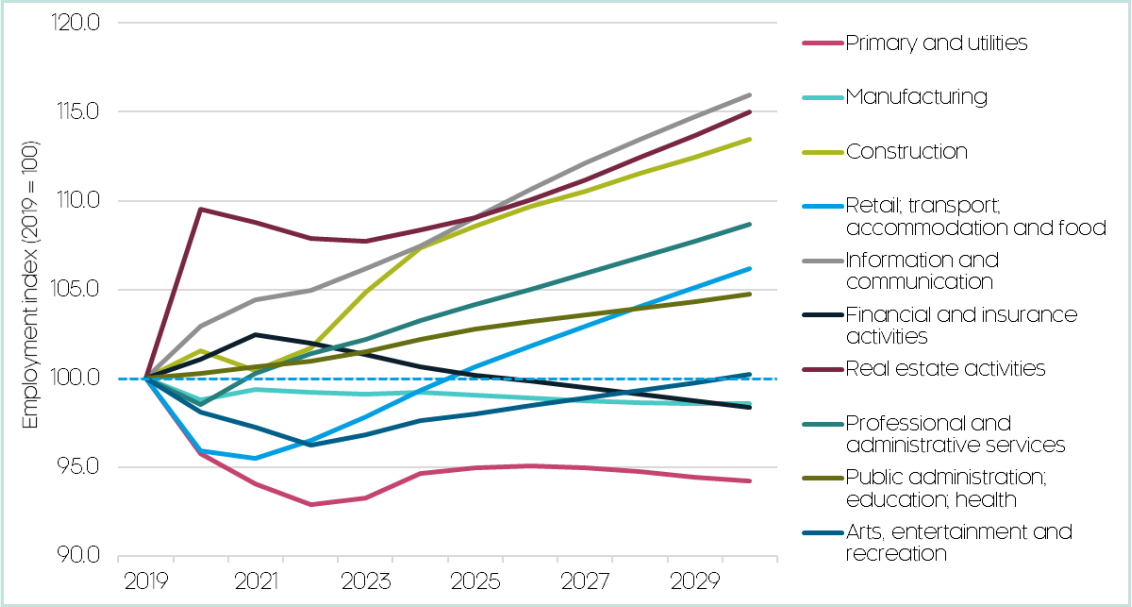
3.7 With these observations in mind, Figure 3-2 , Figure 3-3 and Table 3-1 considers the impact of the COVID-19 Pandemic on Oxfordshire's sectoral growth trajectories, in terms of both output (GVA) and employment (this distinction is important, given Government support and policy interventions have been focussed on employment retention and support e.g. the *furlough scheme*. Graphs are indexed to 100 in 2019 to highlight the relative impact across sectors).

Figure 3-2: Forecast impact of the COVID-19 Pandemic on sectoral GVA in Oxfordshire



Source: Cambridge Econometrics, 2021 Note: indices for some smaller sectors (e.g. real estate) can be volatile.

Figure 3-3: Forecast impact of the COVID-19 Pandemic on sectoral employment (jobs) in Oxfordshire



Source: Cambridge Econometrics, 2021. Note: indices for some smaller sectors (e.g. real estate) can be volatile

Table 3-1: Forecast impact of the COVID-19 Pandemic on sectoral performance in Oxfordshire, relative to a pre-COVID-19 trajectory

	Employment (jobs) growth, 2019-30 relative to pre-COVID-19	Employment (jobs)% growth, 2019-30 relative to pre-COVID-19	GVA growth £m, 2019-30 relative to pre-COVID-19	GVA% growth, 2019-30 relative to pre-COVID-19
Primary and Utilities	-200	-2.8%	-£13	-2.8%
Manufacturing	-200	-0.6%	-£95	-4.2%
Construction	900	2.8%	-£95	-7.3%
Retail; Transport; Accommodation and Food	-3,300	-3.3%	-£259	-7.9%
Information and Communication	1,400	6.5%	-£172	-10.7%
Financial and Insurance Activities	100	1.4%	£5	4.2%
Real Estate Activities	300	4.3%	-£53	-6.4%
Professional and Administrative Services	-3,600	-4.4%	-£342	-11.9%
Public Administration; Education; Health	-3,100	-2.4%	£180	3.5%
Arts, Entertainment and Recreation	-1,800	-7.4%	-£168	-15.5%

Source: Cambridge Econometrics, 2021

3.8 Naturally, the magnitude of the expected impact varies greatly across and even within sectors in Oxfordshire, as summarised by the following sectoral profiles.

- **Primary and Utilities:** output proves relatively resilient during the Pandemic, despite the general deterioration in economic conditions and decreased demand from restriction impacted industries. The recovery however could be slow and uncertain, particularly as the decade progresses. Employment also contracts whilst employment growth remains subdued, continuing along its long-term trend. *Relative to a pre-COVID-19 trajectory: 200 fewer jobs and £13 million lower output.*

- **Manufacturing:** a short, sharp contraction in output is expected given the deterioration in wider economic conditions and decreased demand from restriction impacted industries, though performance varies between sub-sectors: e.g. pharmaceuticals and health could be buoyant, whilst automotive and aviation face substantial pressures. There is the potential for a robust recovery in the latter half of the 2020's, driven by strong productivity growth as businesses re-establish and exploit their comparative advantage, though this will not be enough to re-establish its pre-COVID-19 trajectory. Employment continues along its long-term decline, as automation, digitisation and outsourcing could be accelerated. *Relative to a pre-COVID-19 trajectory: 200 fewer jobs and £95 million lower output.*

- **Construction:** a relatively deep and protracted contraction in output is expected, given reduced demand and activity as a result of lockdown, though growth could accelerate

strongly 2022-onwards. As with manufacturing though, this recovery will not be enough to recover its pre-COVID-19 trajectory. *Furlough* and related employment support will dampen the employment impact, whilst the adaptable nature of the sectors labour market could see a rapid return to growth to oversee increased demand. *Relative to a pre-COVID-19 trajectory: 900 more jobs but £95 million lower output.*

- **Retail; Transport; Accommodation and Food**: the impact of social distancing measures and related restrictions in Oxfordshire will be most keenly felt in these industries. Resultantly, output is expected to contract sharply, by approx. -15% in 2020. Naturally, given its diversity performance varies within sector; wholesale, some retail (particularly online) and non-passenger transport (particularly logistics and distribution related) will prove resilient and may benefit from increased demand.

  Accommodation and food, encompassing tourism and leisure related industries, will face the brunt of impact. Once a recovery is underway though, the sector has the potential to recover rapidly, though this will not be enough to establish its pre-COVID-19 trajectory. *Furlough* and related employment support will dampen the employment impact, though job losses could continue into 2021, disproportionately impacting the young, low-paid and those on flexible contracts. *Relative to a pre-COVID-19 trajectory: 3,300 fewer jobs and £259 million lower output.*

- **Information and Communication:** underpinned by a strong research base and skilled workforce in Oxfordshire, the sector could prove resilient and adaptable. An accelerated recovery is likely after a brief output hit, driven by post-COVID-19 demand for innovative digital services e.g. around cloud computing, e-commerce, streaming and conference services. Employment could prove resilient, aided by *furlough* and high homeworking uptake, with the potential for robust growth 2021-onwards as businesses seek post-COVID-19 expansion, though productivity growth will remain disappointing. *Relative to a pre-COVID-19 trajectory: 1,400 additional jobs but £172 million lower output.*

- **Financial and Insurance Activities:** a small contraction in output will be followed by a quick recovery, as the sector proves resilient to the Pandemic headwinds, and increases activity in some business areas e.g. fintech. Employment will continue to decline though, driven largely by automation, digitisation and out-sourcing, though the sector is a comparatively small part of the Oxfordshire economy. *Relative to a pre-COVID-19 trajectory: 100 additional jobs and £5 million additional output.*

- **Real Estate Activities:** after a relatively sharp contraction due to reduced activity and sales over 2020, output could accelerate strongly in the latter half of the 2020's, given Oxfordshire's potential to attract additional residential and commercial demand from less-sought after and expensive urban agglomerations in a post-COVID-19 world. Employment could also grow given the need to expand to manage and oversee a potential increase in demand. *Relative to a pre-COVID-19 trajectory: 300 additional jobs but £53 million lower output.*

- **Professional and Administrative Services:** Oxfordshire has shaped a strong comparative advantage in this sector, which covers a diverse scope of activities ranging from R&D, and the legal profession, to temp agencies and commercial cleaners. The impact of the

Pandemic could still be significant, particularly on the business service and administrative side. After a small output hit, largely due to reduced demand and uncertainty, the recovery will be subdued compared to pre-COVID-19 trends. Despite a skilled workforce, the sector will not be immune to the worst of the Pandemics labour market effects, with administrative and business service roles (e.g. security guards, cleaners, temps, telesales) particularly susceptible to losses. The size of the sector in Oxfordshire means the scale of such losses could be significant. *Relative to a pre-COVID-19 trajectory: 3,600 fewer jobs and £342 million lower output.*

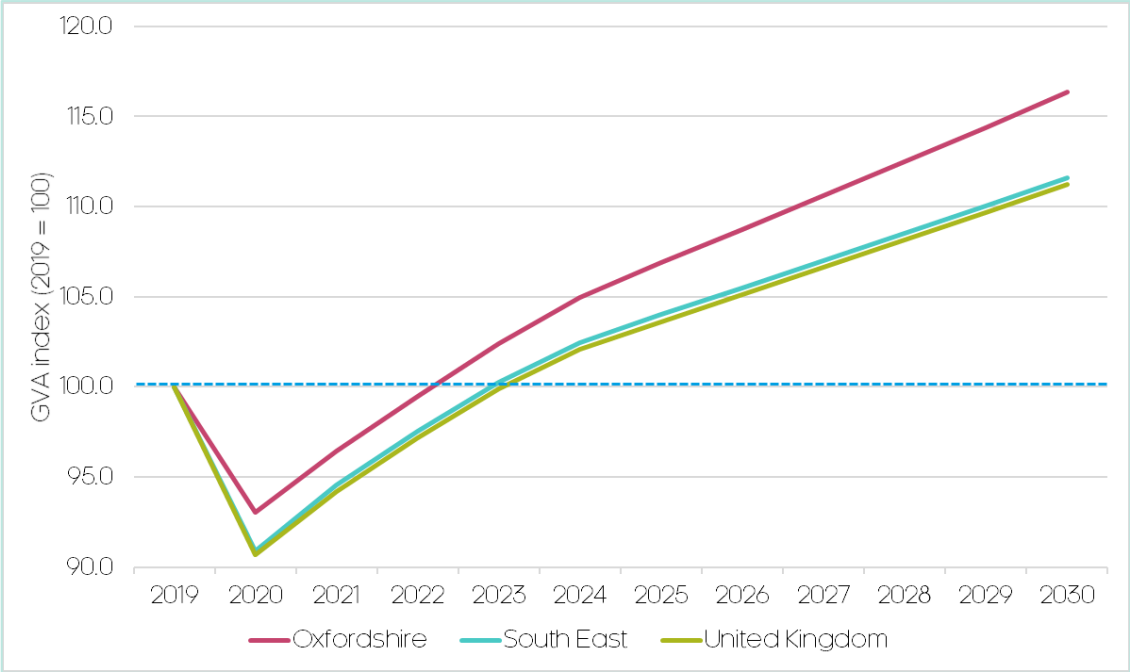
- **Public Administration; Education and Health:** given the COVID-19 Pandemic is a public health problem, demand is expected to increase and remain high (given the need to manage the demand backlog) as Oxfordshire leads the global pursuit for a resolution to the virus. Employment growth is expected to be subdued though, largely driven by reduced activity in Oxfordshire's international-facing education sector, and a shifting health workforce. Given these industries have largely continued to consistently operate even during strict restrictions, output losses are expected to be minimal, with the potential for further investment-derived growth to manage and oversee increased demand for health and related services. *Relative to a pre-COVID-19 trajectory: 3,100 fewer jobs but £180 million additional output.*

- **Arts, Entertainment and Recreation:** broadly covering non-accommodation tourism, hospitality and leisure, this sector will be amongst the worst-affected by social distancing measures and related restrictions. The sectors labour-intensive nature and consumer-facing dependency means it will be even more susceptible to employment losses and a slower recovery, despite *furlough* and related support. The sector could experience the greatest contraction in output (-20% over 2020), whilst job losses could continue into 2021, disproportionately impacting the young, low-paid and those on flexible contracts. Once restrictions are lifted, the recovery could be strong, but it could be 5-6 years to recover the Pandemic's losses. *Relative to a pre-COVID-19 trajectory: 1,800 fewer jobs and £168 million lower output.*

Oxfordshire - the headline impacts

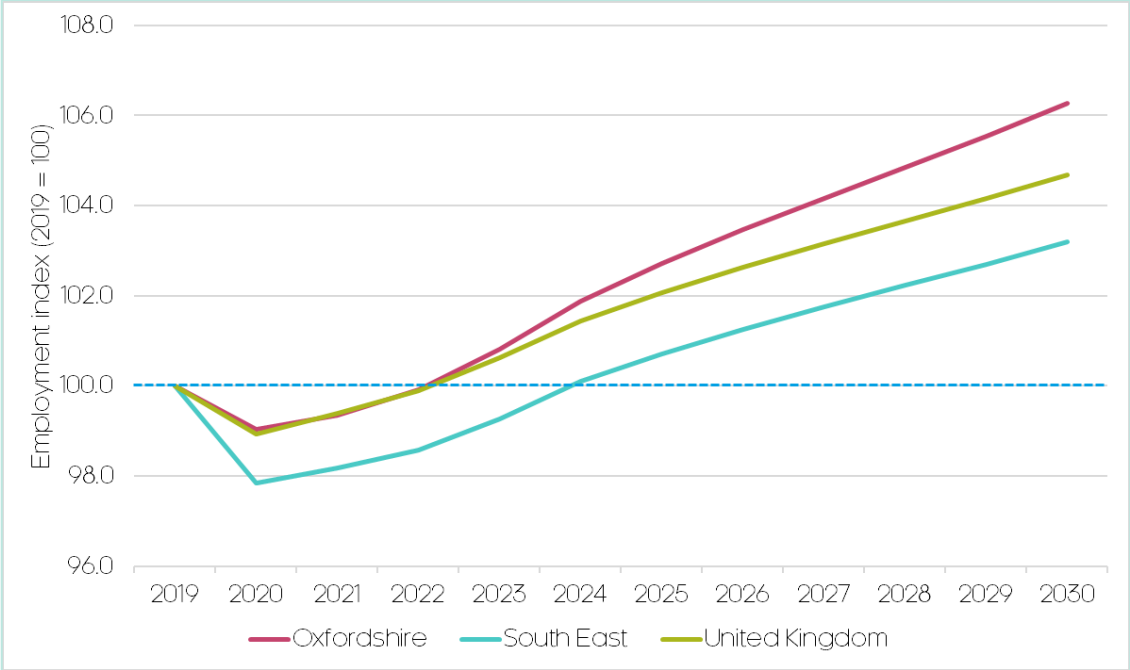
3.9 Given these sectoral observations, Figure 3-4, Figure 3-5 and Table 3-2 summarise the potential Oxfordshire-wide impacts of the COVID-19 Pandemic on economic activity (as before, graphs are indexed to 100 in 2019 to reflect the changes across area). As expected, compared with regional and national comparators, the Oxfordshire economy will likely experience a much gentler, though still significant, contraction to economic activity, but most importantly is expected to undergo a much stronger recovery.

Figure 3-4: Forecast impact of the COVID-19 Pandemic on GVA in Oxfordshire relative to the South East and UK



Source: Cambridge Econometrics, 2021

Figure 3-5: Forecast impact of the COVID-19 Pandemic on employment (jobs) in Oxfordshire relative to the South East and UK



Source: Cambridge Econometrics, 2021

Table 3-2: Forecast impact of the COVID-19 Pandemic on economic performance in Oxfordshire, and relative to a pre-COVID-19 trajectory

	2019 (forecast baseline)	2025	2030	Growth, 2019-30	% growth, 2019-30
Employment (jobs)	436,100	448,000	463,500	27,300	6.3%
relative to pre-COVID-19	-	*-11,700*	*-9,300*	*-9,300*	*-2.1%*
GVA (£2018, bn)	£21.7	£23.2	£25.2	£3.5	16.3%
relative to pre-COVID-19	-	*-£1.1*	*-£1.1*	*-£1.1*	*-4.9%*
Productivity (£2018)	£49,800	£51,800	£54,500	£4,700	9.5%
relative to pre-COVID-19	-	*-£1,100*	*-£1,200*	*-£1,200*	*-2.3%*

Source: Cambridge Econometrics, 2021

3.10 Given the *furlough* scheme and related employment support, alongside the desires of firms to retain staff in spite of falls in output, employment is expected to contract much less than output (approx. -1% rather than -7%). However, this also leads to a delayed recovery in employment, with job losses potentially continuing into 2021, before starting to recover rapidly in 2022.

3.11 Output, meanwhile, is expected to recover quickly following a sharp bottoming-out in 2020. Given lower *furlough* uptake in Oxfordshire and a more resilient labour market, output only declines by 7% rather than the UK average of 9%. And by 2030, Oxfordshire could open up a 5% gap relative to the UK recovery.

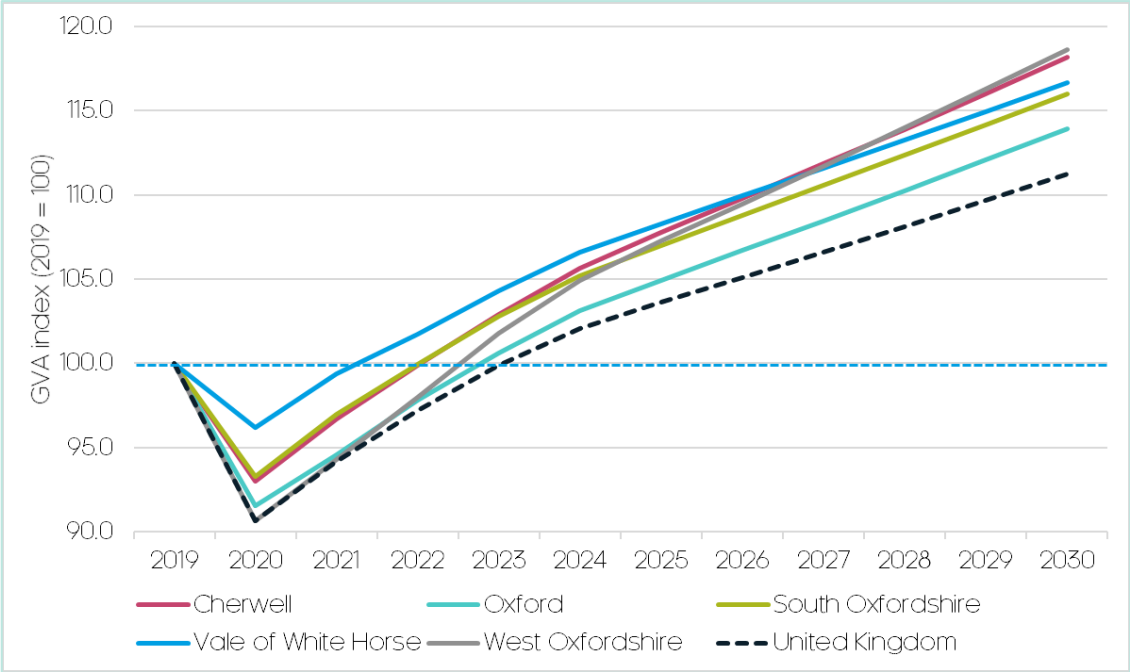
3.12 Given the contrasting response of output and employment, productivity consequently undergoes a sharp drop in 2021 and could recover only slowly, given a jobs-led recovery, further exacerbating Oxfordshire's 'productivity puzzle'.

3.13 Relative to a pre-COVID-19 trajectory, these preliminary forecasts show that by 2030, as a legacy of the Pandemic, the Oxfordshire economy could expect to have in the region of 9,300 fewer jobs, output £1.1 billion lower, and a workforce £1,200 per annum less productive.

District expectations

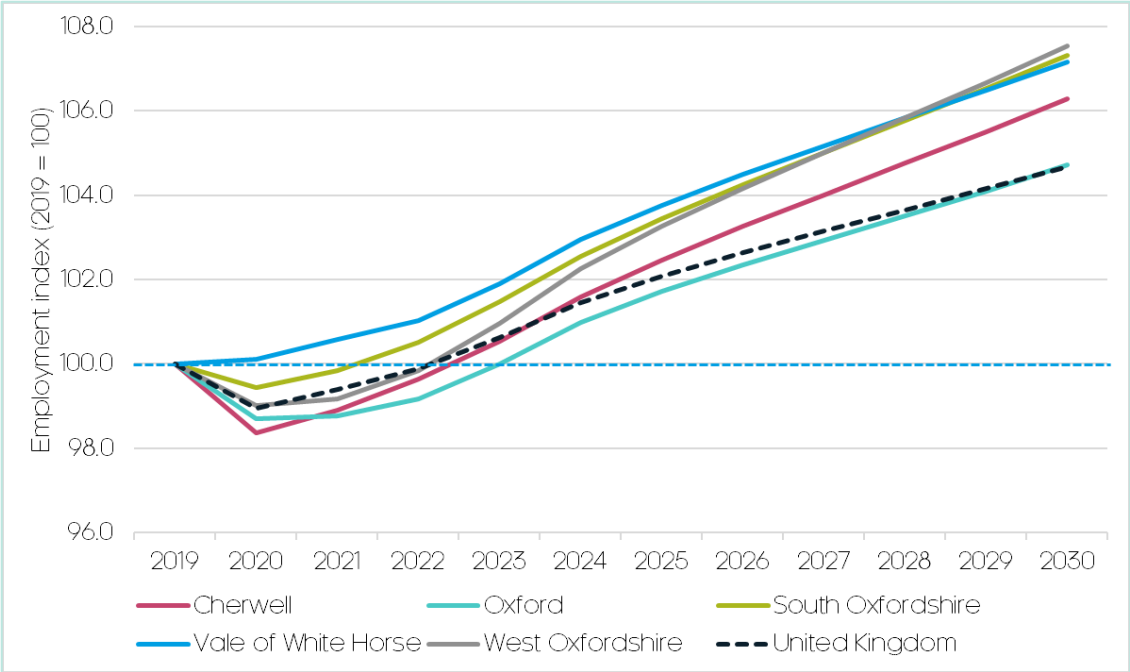
3.14 The expected impact at district level depends on an area's sectoral composition and history of performance during previous recessions and recoveries. Figure 3-6, Figure 3-7 and Table 3-3 consider the impact of the COVID-19 Pandemic on local economic activity in Oxfordshire (graphs are indexed to 100 in 2019, to highlight the relative impacts experienced by different areas).

Figure 3-6: Forecast impact of the COVID-19 Pandemic on GVA in Oxfordshire's districts



Source: Cambridge Econometrics, 2021. Note: indices for some individual local authority areas can be volatile

Figure 3-7: Forecast impact of the COVID-19 Pandemic on employment (jobs) in Oxfordshire's districts



Source: Cambridge Econometrics, 2021. Note: indices for some individual local authority areas can be volatile

Table 3-3: Forecast impact of the COVID-19 Pandemic on the economic performance of Oxfordshire's districts, relative to a pre-COVID-19 trajectory

	Employment growth, 2019-30 relative to pre-COVID-19	Employment% growth, 2019-30 relative to pre-COVID-19	GVA growth £m, 2019-30 relative to pre-COVID-19	GVA% growth, 2019-30 relative to pre-COVID-19
Cherwell	-1,600	-1.7%	-£160	-3.2%
Oxford	-4,300	-3.1%	-£457	-7.6%
South Oxfordshire	-1,100	-1.4%	-£142	-3.6%
Vale of White Horse	-2,100	-2.8%	-£190	-4.4%
West Oxfordshire	-300	-0.5%	-£116	-4.6%

Source: Cambridge Econometrics, 2021

3.15 In terms of output, Oxford and West Oxfordshire are initially the worst affected within the County; however, this is still around, rather than significantly below, the UK average. The Vale of White Horse is the least severely impacted, reflecting its favourable sectoral structure and historical resilience. All areas are fully recovered by 2023 and are all projected to outperform the UK recovery from 2023 onwards.

3.16 As noted previously, the picture for employment is subtly different. Here, Cherwell and Oxford, with their concentration of labour-intensive, restriction-impacted industries such as Retail, Accommodation and Food, and Recreation (i.e. Tourism), track marginally below the UK average, yet as with output, all areas are projected to return to 2019 employment levels by 2023, and to see higher year-on-year employment growth than the UK average from 2023 onwards.

3.17 Oxford is expected to experience the greatest shock relative to its pre-COVID-19 trajectory, with an employment shortfall of -4,100 by 2030. The GVA shortfall is also expected to be greatest in Oxford, some £457 million lower by 2030, highlighting the longer-term legacy of the Pandemic's 'lost output' for some industries, particularly those in urban areas, where the impacts have been greatest.

4 Conclusions and Implications

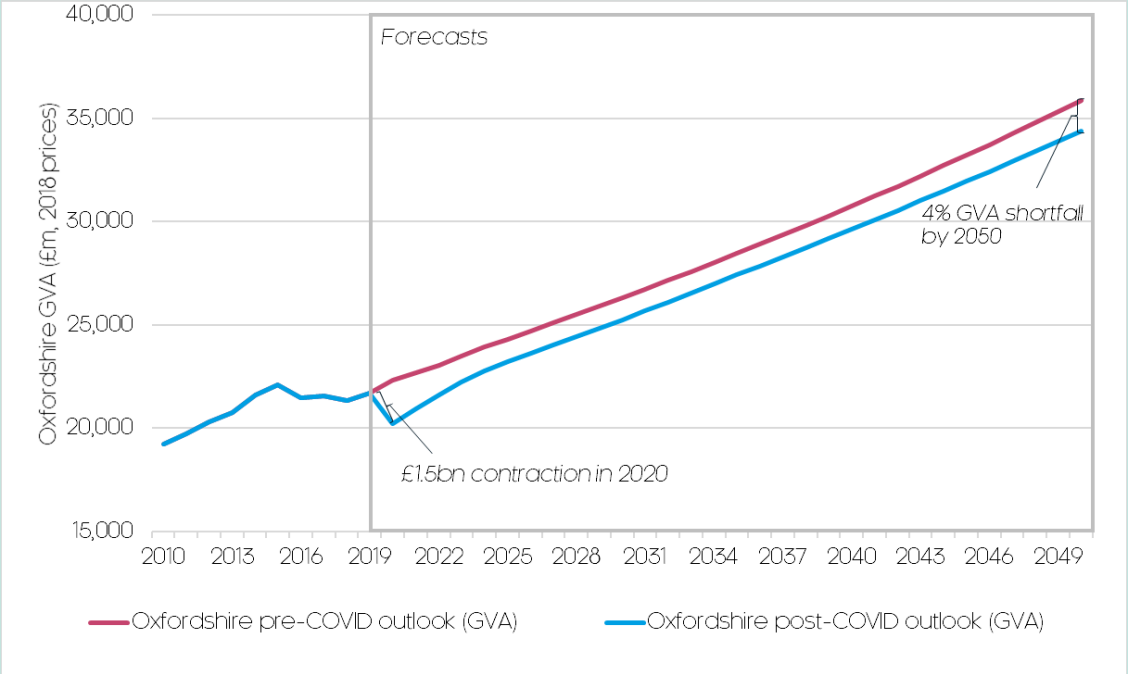
Headline messages

- The short-run impact from the Pandemic is expected to be less pronounced than elsewhere in the country reflecting the intrinsic resilience and adaptability of the Oxfordshire economy
- Following every recession over the past 50 years, the Oxfordshire economy has recovered more strongly than the UK average, and it is expected to do so again during the recovery from the COVID-19 Pandemic, opening up a 5% performance gap relative to the UK average by 2030
- Importantly, over a longer timeframe, this results in a smaller relative 'lost growth' shortfall for the Oxfordshire economy. This will enable Oxfordshire to establish and maintain a strong performance advantage relative to the rest of the country, as it did after the 2008 Global Financial Crisis

The legacy of the Pandemic

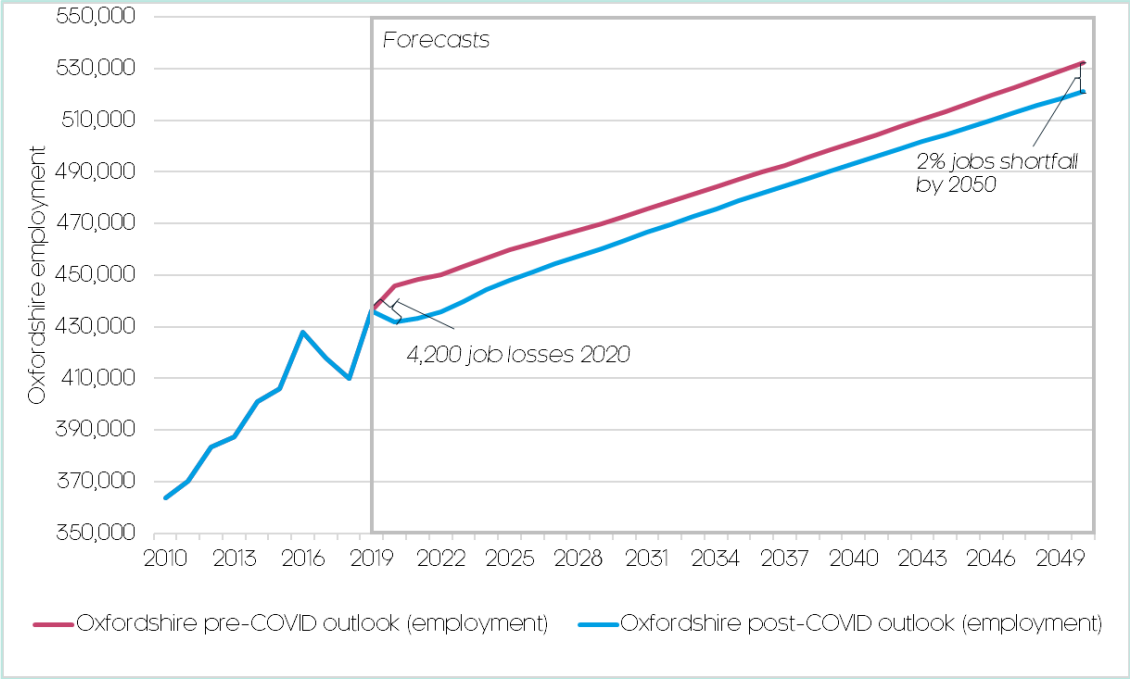
4.1 Even after an extended period of recovery and growth, it is likely that the legacy of the Pandemic's impact on the Oxfordshire economy will continue to be evident in terms of a 'lost growth' shortfall, as Figure 4-1 demonstrates (for both employment and output). This highlights the longer-term scarring effect of the recession, as well as the fundamental changes the Pandemic will bring for Oxfordshire's industries and businesses.

Figure 4-1: Comparison of Oxfordshire's GVA outlook pre- and post-COVID-19



Source: Cambridge Econometrics, 2021

Figure 4-2: Comparison of Oxfordshire's employment (jobs) outlook pre- and post-COVID-19



Source: Cambridge Econometrics, 2021

Conclusions and implications

4.2 However, it is important to set these trends within the wider national context; as Table 4-1 shows, not only is the short-run impact expected to be less pronounced in Oxfordshire (see column 1), but Oxfordshire's recovery will also outperform the UK average (column 2), resulting in a smaller relative 'lost growth' shortfall over the longer timeframe (column 3).

Table 4-1: Response of the Oxfordshire economy to the COVID-19 Pandemic relative to the UK

Geography	GVA impact, 2020 (relative to 2019)	GVA recovery per annum, 2021-30	GVA shortfall relative to pre-COVID-19, 2050
Oxfordshire	-7.0%	2.1%	-4.2%
UK	-9.3%	1.9%	-4.7%

Source: Cambridge Econometrics, 2021

4.3 This can be attributed to the intrinsic resilience and adaptability of the Oxfordshire economy and its sectors to national economic shocks, as Table 4-2 summarises. It shows that Oxfordshire's resistance to economic shocks (as seen in columns 1, 3, 5 and 7) has generally been stronger than the wider UK economy, although there are some exceptions (e.g. 1974-75 and 1990-91 recessions).

Table 4-2: Oxfordshire's past response and recovery from economic shocks, ratio relative to the UK average (as measured by GVA)

	Actual data								*COVID-19 forecast*	
	1974-75	**1975-79**	**1979-81**	**1981-90**	**1990-91**	**1991-07**	**2007-09**	**2009-19**	***2019-20***	***2020-30***
	Recession	**Recovery**	**Recession**	**Recovery**	**Recession**	**Recovery**	**Recession**	**Recovery**	***Recession***	***Recovery***

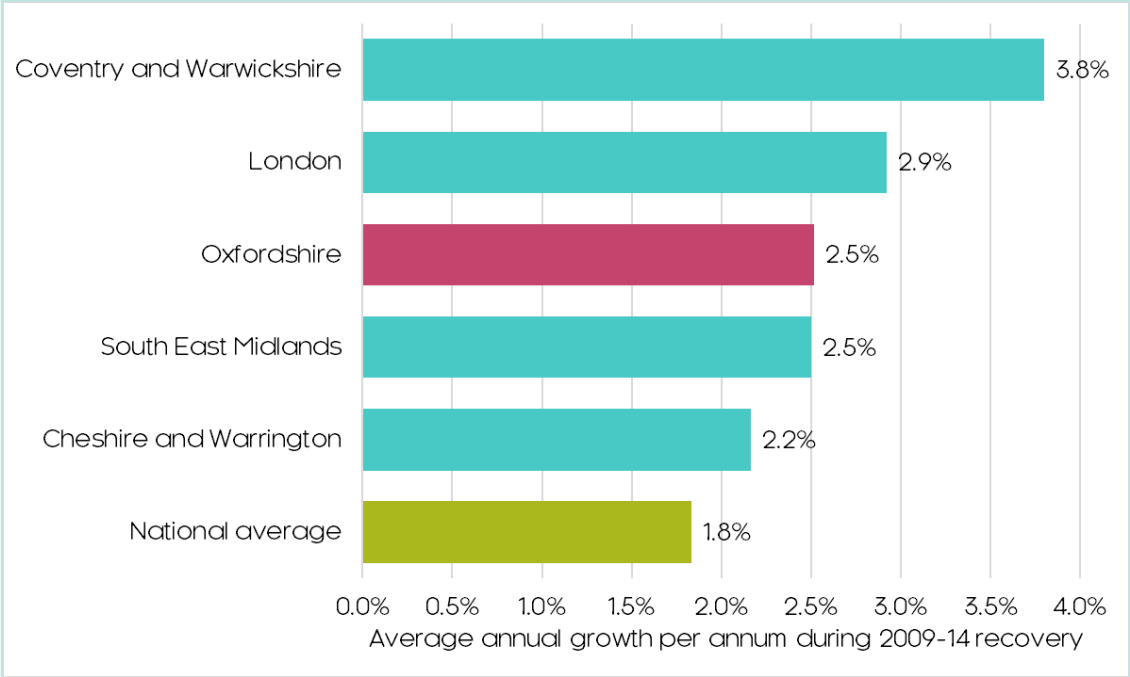
Oxfordshire relative to UK	-5.8	0.1	0.3	0.3	-1.5	0.2	1.0	0.2	*0.3*	*0.4*

Source: Cambridge Econometrics, 2021

4.4 As observed previously, it is expected that the Oxfordshire economy will show greater resilience to the shock of the COVID-19 Pandemic (Column 10) relative to the wider UK economy, although this will not be to the extent of its resilience to the 2007-09 Global Financial shock.

4.5 Of particular interest, though, is the ability of the Oxfordshire economy to rapidly recover, stabilise, and return to long-term trends following an economic shock. In fact, following every recession over the past 50 years, the Oxfordshire economy has recovered more strongly than the UK average, and is expected to do so again following the COVID-19 crisis.

Figure 4-3: Fastest recovering LEP areas from the 2008 Global Financial Crisis



Source: Cambridge Econometrics, 2021

4.6 This has enabled Oxfordshire to establish and maintain a strong performance advantage relative to the rest of the country. In fact, as Figure 4-3 shows throughout the recovery period following the 2007-09 recession – the deepest economic contraction in the county since the 1970s - Oxfordshire emerged as the third fastest growing economy in the country (ranked out of 38 LEP areas).

4.7 The prospects for the Oxfordshire economy moving forward will therefore depend on whether it is able to exploit this performance advantage in a post-COVID-19 world, drawing on its favourable sectoral composition, established knowledge assets, and skilled and resilient workforce.

4.8 As with previous recessions and economic crises, Oxfordshire has the potential to kick-start and lead the UK's recovery from the COVID-19 pandemic.