

WESTERN SYDNEY
UNIVERSITY



FUTURE DIRECTIONS

**WAYS FORWARD FOR THE ECONOMIES OF
BLACKTOWN, CUMBERLAND, PARRAMATTA AND
THE HILLS – THE CENTRAL CITY DISTRICT OF SYDNEY**

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The authors acknowledge the country of the Darug People of the Darug Nation and acknowledge their ancestors who have been traditional owners of this country for thousands of years. The authors acknowledge and pay their respect to the Darug People's Elders past and present.

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Glossary and Acronyms

GLOSSARY

Central City District – The Central City District is the middle portion of the three planning districts of the Greater City Commission. It comprises the local government areas of Blacktown, Cumberland, Parramatta and The Hills.

Higher-order centre – A concentration of business, commerce and civic activity serving a reasonably-sized hinterland.

Lead firms – The businesses, institutions and agencies that are significantly larger than their sectoral peers and act as frontrunners in stretching market reach, building supply chains, and driving rates and direction of innovation.

Linkages – Businesses connections, which might be backward to suppliers, or forward to purchasers or consumers.

Strategic centres – The higher-order central centres where enterprises, institutions and agencies assemble in ways that maximise the benefits of attachment to a local economy's flows and connections and minimise their costs.

Strategic coupling – The partnerships and alliances that are forged, usually by way of considered tactical action, in order to advance the power of an enterprise or group of enterprises in a competitive market situation.

Value chains – The transactional links to other firms, institutions and agencies that enable efficient procurement of inputs and distribution of outputs, steer access to value-enhancing partnerships, capture innovation opportunities, and power-up influence over the regulatory environment.

ACRONYMS

CBD – Central business district

CCD – Central City District

FY – Financial year, for example FY2020-21 is the year commencing July 1 2020.

GRP – Gross regional product

GSC – Greater Sydney Commission

LGA – Local government area

NIEIR – National Institute of Economic and Industry Research

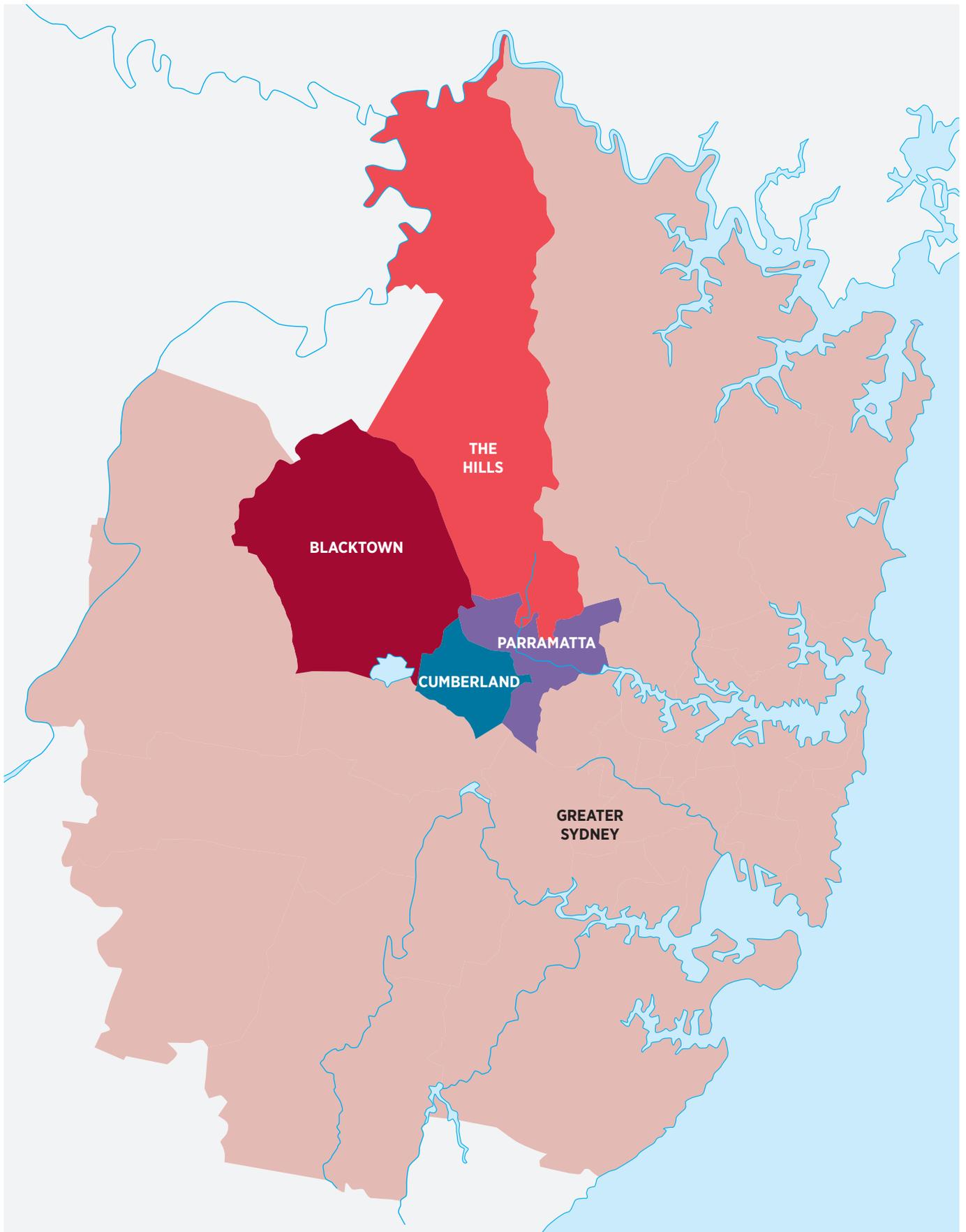
Q1 – First quarter of a calendar year, January to March. The subsequent quarters are Q2, Q3 and Q4.

RBA – Reserve Bank of Australia

Key to figures

FIGURE	INDUSTRY
1	Agriculture, forestry and fishing
2	Mining
3	Manufacturing
4	Electricity, gas, water and waste services
5	Construction
6	Wholesale trade
7	Retail trade
8	Accommodation and food services
9	Transport, postal and warehousing
10	Information media and telecommunications
11	Financial and insurance services
12	Rental, hiring and real estate services
13	Professional, scientific and technical services
14	Administrative and support services
15	Public administration and safety
16	Education and training
17	Health care and social assistance
18	Arts and recreation services
19	Other services

The Central City District



Executive Summary

This report responds to a brief that asked what would be the likely effects of the COVID-19 pandemic on the economy of the Central City over the next ten years? The brief also asked for information and insights to assist in planning an effective response to the pandemic. In so doing, the report aspires to be an important aid to leadership by local government and local business communities in forging a successful recovery pathway.

The report takes a three dimensional approach. The first dimension is the recent past, where the strengths and weaknesses of the CCD economies can be observed. The second is the period when COVID-19 impacted the CCD economies. The third dimension is the ten-year horizon, the period when a new set of economic relations and attributes are put in place.

The reader can take a number of pathways through the report. A speedy read might start with this executive summary and then follow the highlights boxes at the commencement of each section. An in-depth read might tackle each section in turn and thereby be exposed to the process by which the report has been compiled, one of the three dimensions at a time. An alternative reading approach is to pick and choose from among the sections, with each one giving separate insight into the CCD economies. On top, and irrespective of the reading strategy, the images throughout the report provide insightful summaries of the data collected, as well as provocative ways of thinking about the economies under investigation.

The report starts by positioning the pandemic in the context of the CCD local economies. By 2020, these economies were cresting an exceptional growth surge. In the period 2013-19 total jobs growth in the CCD exceeded 20%, led by extraordinary growth in the 'construction' and 'health care and social assistance' sectors. Analysis of the growth surge provides a valuable opportunity to assess the strengths and weaknesses of the CCD economies at a time when macro-economic conditions were at their best.

Section 2 identifies the growth surge as having come from three sources: population growth, public spending, especially on infrastructure, and growth impulses from the high-growth Sydney metropolitan economy. A finding here, however, is that, as welcome as the jobs surge 2013-19 was, the size and nature of the surge was inadequate in addressing the historical labour market problems of the CCD economies, namely: above-average unemployment, chronic youth disengagement, low labour force participation rates among women, and poor local jobs provision for graduate-trained workers.

Section 3 shows how the impacts of COVID-19 on the CCD economies correlated closely with the directions of the CCD economies pre-pandemic. Unemployment rates climbed quickly to recession levels. Because population growth stalled, population-related sectors stuttered and shifted. Yet downturns were moderated by prompt stimulus measures especially from federal government sources. Nevertheless, economic activity fell significantly in the CCD's construction, manufacturing, accommodation, real estate, and arts and recreation sectors. While recovery in these sectors is now underway it is at a restrained pace.

The report aspires to be an important aid to leadership by local government and local business communities in forging a successful recovery pathway.

The retailing sector also experienced immediate fall-off in activity, although recovery here has been swift, except in those segments affected by what appears to be an enduring shift to online purchasing.

Yet, a number of sectors in the CCD economies experienced only mild or zero impact from COVID-19. These sectors are 'health care and social assistance', 'education and training', the utilities, and 'transport, postal and warehousing'. In some cases, notably 'health care and social assistance', long term growth trends were barely dented by the pandemic.

Section 4 evaluates the likely 'influencers' on the CCD economies, post-COVID-19. Our analysis sees immigration levels, people movements, the visitor economy, and remote working as domains where local actions might positively influence economic directions over the ten-year horizon. Also important, while not readily controllable at the local scale, are household and business debt levels, shifting employment patterns, and housing demand and affordability.

Sections 5, 6 and 7 take on the task of discerning what clever actions – things we call manoeuvres – might encourage and shift elements of the CCD economies to generate local advantage, post-COVID-19. The analysis zeros in on three fundamental economic questions:

- What enterprises and agencies make the economic decisions that are critical to the CCD economies?
- How do enterprises in the CCD economies interact to generate and distribute raised economic value?
- How can the geographical assets of a particular location be built and mobilised to make a genuine difference to value creation?

Answering these questions involved investigation of three well-known economic forces: lead firms (including institutions and agencies), value chains, and higher-order or strategic centres. These forces frame the remaining sections of the report.

In section 6, our analysis of the tradeables sectors in the local economies identifies the key sectors where value creation is realised in the metropolitan economy by enterprises with presence in the CCD economies. Consistently, we find major contributions in this regard by the manufacturing, utilities and construction sectors. We also find significant, though modest, involvement in the metropolitan-wide economy by the 'transport, postage and warehousing', 'education and training', 'health care and social assistance', and 'public administration and safety' sectors. Importantly, value returns in this second group seem to come when there are enhancements that elevate sector activity in competitive ways, such as has occurred for the health sector in the Westmead precinct, electricity distribution in Blacktown, home décor retailing in Castle Hill and waste services across the Cumberland LGA.

In section 7, our next set of analysis seeks to identify sectors that intensify value circulation, where other local enterprises and agencies are drawn into supply chains, co-production arrangements and downstream relations. Manufacturing is the standout sector for value generation in respect to value sourced from the metropolitan domain, while the construction sector consistently drives multiplier effects in value chains in the local economies. A surprise finding in section 7 was the performance of the utilities sector in value creation and circulation, indicating an area where further value creation opportunities might be explored.

In contrast to these well-performing sectors, sector 8 finds sectors with modest or disappointing results. The logistics sectors underperform in local value circulation commensurate to their prominence in property investment. The education and health sectors record low multiplier effects, except where enhanced roles and investments are in play. Public administration activity, especially involving NSW government office functions, record similarly low multiplier impacts, a surprise given the high profile given to the decentralisation of government departments in NSW government actions to support the CCD economies.

Section 9 then seeks out the lead firms, institutions and agencies that are important in the CCD economies; hence likely to lead transformative change towards the ten-year horizon. The section explores the importance of lead firms and institutions, their embeddedness in their local economies to varying degrees, and the substantial value-generating opportunities that might come from elevating this level of embeddedness. The section also provides snapshots of key lead firms and institutions in the CCD economies, namely Endeavour Energy in the Blacktown LGA, Sydney Water and NSW Corrective Services in the Parramatta LGA, and the cluster of waste corporations, including SUEZ, operating in the Cumberland LGA. These case studies show how lead firms can drive value creation and capture through genuinely higher-order metropolitan roles alongside strong connections to local labour markets and proximate enterprises.

Section 10 explores these connections through analysis of the importance of spatially concentrated and aligned value chains. The construction sector is examined in detail as an example of the ways a leading sector recruits local contractors and workers into value generating activities. The section also explores ways of enhancing the participatory thickness and enduring yield of value chains for the benefit of local economies.

Acknowledging the geography of all this, section 11 exposes the need for simultaneity between an economy's higher-order economic activities and an area's higher-order central places. This classical understanding of the ingredients of a well-composed spatial economy is explained as the reason for the need to build robust, value-generating strategic centres in the CCD local economies. Yet, the report finds insufficient attention is being given to these centres, in particular through planning activities of the Greater Sydney Commission. Initial prominence afforded strategic centres in GSC planning documents has not been developed as promised, while NSW government resourcing of the strategic centres is weak. This planning gap has been exposed by well-researched, independent advice via the Committee for Sydney, which section 11 reviews.

Two additional sections take the opportunity to tease out key issues that became apparent during investigations and analysis. One, covered in section 8, is the deficit in degreed jobs that has emerged in the CCD economies. The four LGAs are found to exhibit large degreed-jobs deficits compared to Sydney's metropolitan averages. The exception is Parramatta; however, even this centre under-performs its status as Sydney's second CBD. In total, the report estimates for the key services sectors that the CCD economies have a degreed-jobs deficit of nearly 5,000 jobs, based on data from the last census. This is an extraordinary jobs gap given the importance of advanced qualifications and jobs in the 21st century economy.

The second specialist section, section 12, explores the issue of remote working, post-COVID-19. Here we find that working from home was an immediate response to the outbreak of COVID-19. Yet favourable assessments of worker productivity and technological capability have since seen hybrid working arrangements gain widespread acceptance. The section reports that a possible consequence of hybrid and remote working is the permanent re-location of CBD work to both home and suburban nodal locations. This may well create the opportunity for strategic centres in the CCD local economies to grow local concentrations of professional services functions, and for local workers to reduce the frequency of long distance commutes.

In its conclusion, the report assesses its contribution to knowledge and understanding in the post-pandemic CCD economies. In particular, this final section notes the importance of recognising the strengths and weaknesses of the CCD economies prior to the pandemic, especially given that the pre-pandemic conditions were characterised by high growth in output and jobs. The conclusion stresses the importance of having a systematic understanding of how regenerative efforts might steer the CCD economies toward a ten-year horizon. Three elements of the local economies are emphasised as focal points for the CCD economies' future directions, namely, the lead firms and institutions, the local value chains and the district's key strategic centres. Their alignment is crucial.

Introduction

The brief for this study opened with this statement:

PROJECT PURPOSE

There is sufficient evidence from government agencies and research bodies, indicating that the future socio-economic environment across Australia will change as a result of the current COVID-19 pandemic.

The damage caused by the pandemic will ripple down through the national and state economies and have the greatest impact at the local level. As a result, the Central City District councils (Blacktown City, Cumberland City, City of Parramatta and The Hills Shire), and our local business communities need to start planning for the post-pandemic environment in our region.

As part of this planning approach, the Central City District councils are looking to engage a research entity that will identify the likely effects of the pandemic on our district economy over the forthcoming ten-year horizon. Such a study will be published and communicated to our local business communities.

The results of the study will:

- help the business community, within the Central City District, plan for the post-pandemic environment and make whatever necessary changes they need to make to their business activities and direction, for their future prosperity
- assist the partner councils in the future planning and delivery of services to their communities.

The brief was issued in August 2020. The CCD economies had been jolted by the pandemic and the national economy was officially in recession, its first since the early 1990s. Critically, no one knew the eventual severity of the recession, how it would be experienced in the CCD economies, how long it would last, and what a recovery might look like.

Some things are now clearer. We know that Australia was able to contain the worst effects of the pandemic, unlike most other nations around the world. We also know that the economic downturn wasn't as severe as many had expected, and that recovery is underway at a handsome pace. Government stimulus and assistance measures have helped considerably, although the legacy of public debt will be burdensome.

This study has been able to make some sense of what has happened to the CCD economies. That said, there is little official data beyond the end of calendar year 2020 that tells us precisely what has happened, leaving much opportunity for others to write about the impact of the virus as more information becomes available. A positive from this deficiency of data, however, is that it creates the opportunity for this report to directly address the aspiration in the brief for insight into the directions of the CCD economies over 'the forthcoming ten-year horizon'.

Our interpretation of this aspiration has three dimensions. First, whatever might happen in the next ten years will have roots in what has happened in the last decade. Modern economic theory calls this pathway dependence – simply, that local economic players have no choice other than to play on the turf they have. As it happens, the pathway of the CCD economies to the present, as we show in the first two sections of this report, has involved an experience of growth in output and employment unrivalled for decades. We call this period the 'growth surge', and we examine it in detail to establish the assets that the CCD can bring to the ten years forthcoming.

Whether the growth surge would have ended around 2020, as some signs indicated, or whether COVID-19 brought it to its knees, we will never know for sure. Still, and this is our second dimension, 2020 became a bookend, an end to an extraordinary growth cycle, leaving the opportunity to reflect on the strengths and weaknesses of the CCD economies. Perversely, COVID-19 delivered a real-time moment for an audit of the CCD economies, and provides better knowledge of how they are situated for the decade ahead.

And so the third dimension is recognition that the economy isn't something that arrives from places unknown, or forces outside our control. To some extent – large and small, it varies – the economy is forged by local agents and assets.

TO FORGE (*verb, transitive*)

To shape by heating in a forge and hammering; to beat into shape; to bring into shape, fashion completely, make ready.

OED Online. March 2021. Oxford University Press.

This means that the 'forthcoming ten-year horizon' for the CCD economies is something that is 'created by', not a thing that 'happens to'. With the agents and assets available, a ten-year horizon is an opportunity to seek prosperity, but in a format that is just and sustainable.

The brief for this study emphasises the need for practicality at the local level. We interpret this as meaning that there is a need to create real value, meaning value that is realisable at the local level, value that can be locally claimed and distributed, and then reproduced again and again into the future. With this interpretation, our report looks back, our first dimension, at how value has been created in the CCD economies. Then it looks at what was exposed at the end of the growth surge, our second dimension, with the arrival of COVID-19. Then it looks forward, our third dimension, at what is possible post-COVID-19, not only in a recovery phase but in a next-forging of the CCD economies.

The brief tells us these are the desired outcomes of this project.

PROJECT OUTCOMES

- Inform the Central City District business communities of the likely economic options emerging in the period ahead.
- Provide industries with the insights to review their business strategies and plan the future direction for their operations.
- Guide the Central City District councils in strategic planning for their communities and the future delivery of services.
- Promote the sense that the Central City District councils and corporate sponsors are providing key leadership and direction for our local economies.

This report is one tool for delivery of these outcomes. We hope it contributes significantly to the information, insights, guidance and leadership that the brief identifies in the outcomes list.

Importantly, we see this report as part of the important discussions among the actors and agencies that will forge the CCD economies into the future. Accordingly, we encourage use of its findings and ideas in these discussions. As well, we welcome direct feedback on its contents, which can be relayed to the report's lead author via email to p.oneill@westernsydney.edu.au.

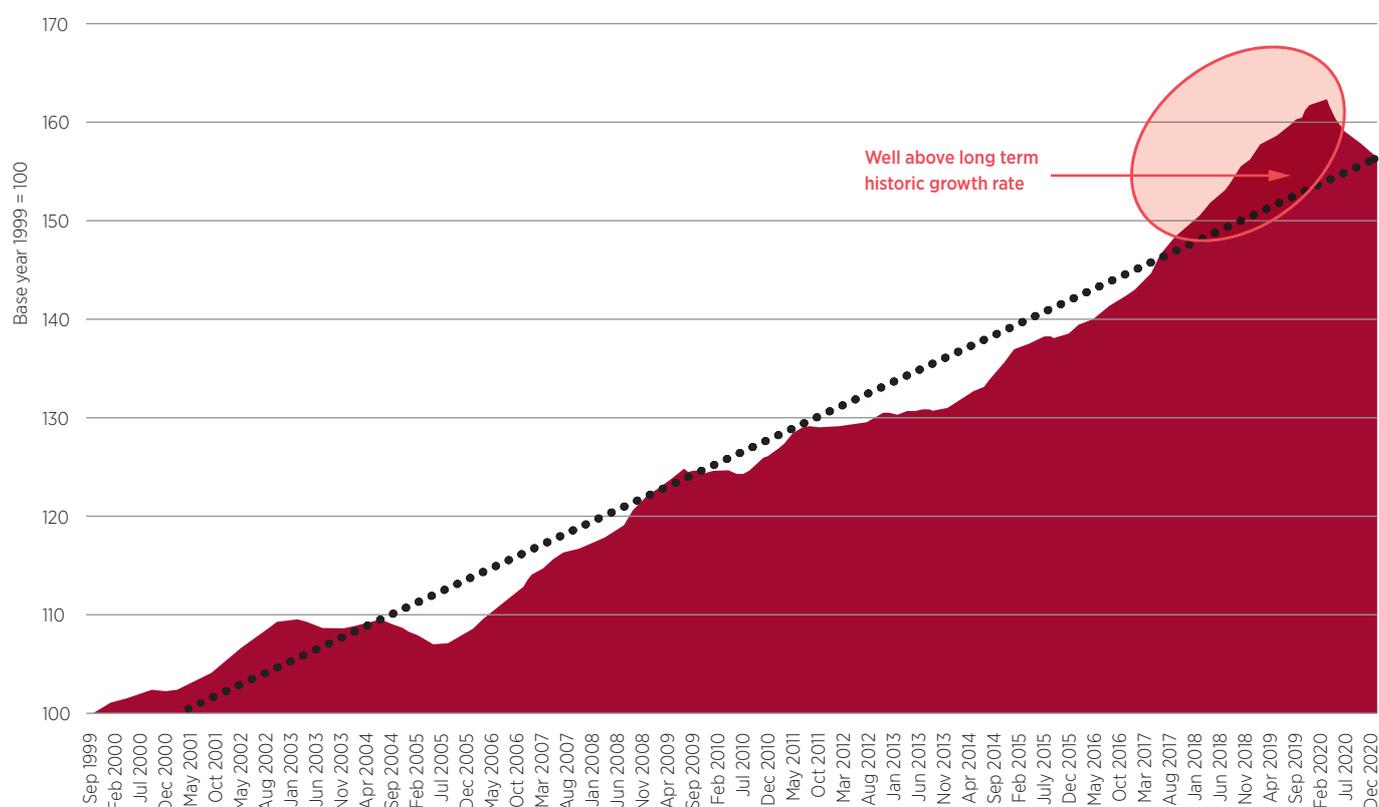
1. The growth setting

- Prior to the COVID-19 recession, the Central City District (CCD) experienced an extraordinary period of economic growth. Jobs growth was at record levels.
- Yet longstanding economic problems in the CCD persisted throughout this growth surge.
- The task ahead for the CCD is not only the generation of a post-COVID-19 bounce-back, but also the redress of longstanding weaknesses in the CCD local economies.

The COVID-19 recession coincided with a decade-long boom period for western Sydney and the three Central City District (CCD) labour force regions. Figure 1 shows this extraordinary growth period.¹

Figure 1 Employment level in the CCD, 1999 to 2020

Source: Calculated from data available at economy.id.com.au



Dissecting this growth surge provides insight into the structure, weaknesses, strengths and outlook for the CCD economy and its four LGA economies. Figure 2 shows employment growth for CCD industry sectors between 2012-13 and 2019-20.

Key insights from the figure are:

- Two sectors, 'construction' and 'health care and social assistance' were highly significant drivers of growth.
- The distribution sectors, 'retail trade' and 'transport, postal and warehousing' were also major jobs generators.
- The most significant services sectors for jobs growth, other than these distribution sectors, were 'professional, scientific and technical services' and 'public administration and safety'.
- There was jobs growth in the manufacturing sector, a bounce not seen for some time in the CCD.

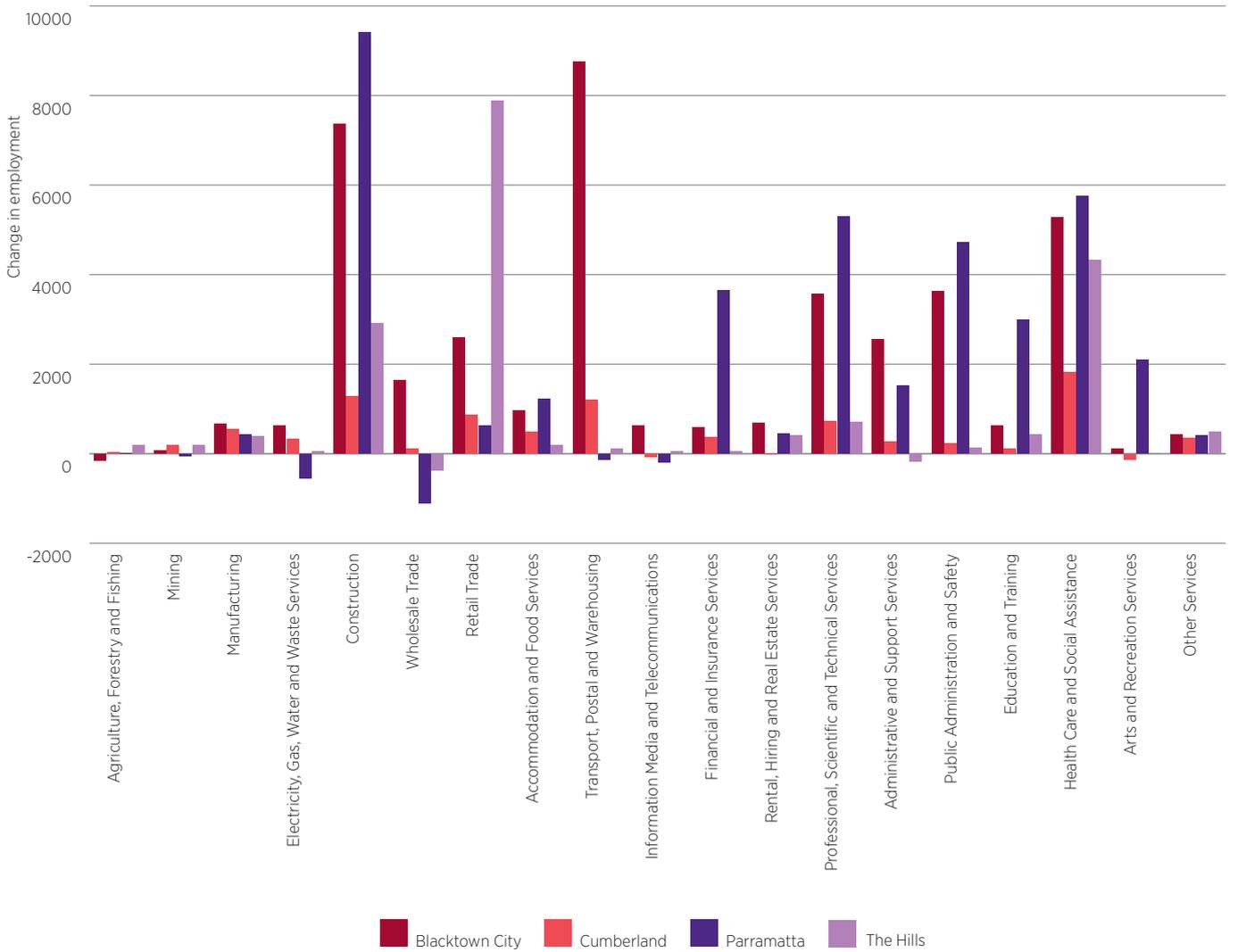
These broad trends are also observable at the level of the four LGAs:

- For Blacktown and Cumberland, industry sectors experiencing strongest employment growth in this period closely followed the CCD industry trends.
- For Parramatta, the CCD industry trends were also manifest although Parramatta experienced higher growth in the 'financial and insurance services', 'professional, scientific and technical services' and 'public administration and safety' sectors.
- For The Hills, like for the CCD as a whole, there was very strong growth in the 'construction' and 'health care and social assistance' sectors, but less vigorous growth among the non-distribution sectors notably 'financial and insurance services' and 'professional, scientific and technical services'. Instead, The Hills experienced remarkable growth in the 'retail trade' sector.

¹ Figure 1 is an aggregation of the 3 ABS labour force districts: Baulkham Hills and Hawkesbury, Blacktown and Parramatta. While these districts do not match the four CCD LGAs precisely, they are a useful lesson in providing both up-to-date and historical estimates.

Figure 2 Employment growth CCD LGAs, 2012-13 to 2019-20

Source: Calculated from data available at economy.id.com.au



In short, the record jobs surge failed, first, to generate enough jobs for the growing CCD workforce and, second, to generate sufficient jobs for degreed-workers, the region’s fastest growing labour force segment.

An important question arises from this analysis: Did the growth surge, pre-COVID-19, set the CCD economies onto a long-term, sustainable growth pathway with the potential of resolving the district's long-standing jobs problem? This jobs problem is well understood and has three major elements:

- Long-term decline of jobs in manufacturing, western Sydney's post-war economic spine.
- Growing undersupply of local jobs for western Sydney's rising number of graduates.
- Persistent undersupply of entry-level jobs for poorly qualified workers.²

In the pages ahead we explore the question of the adequacy of the CCD economic pathway. We examine the underlying causes of the pre-COVID-19 growth surge, focusing in particular on the stimulus coming from population growth and infrastructure spending, alongside the geographic advantages of a suburban location nested inside one of the world's most successful 21st century cities.

For now, we note that the growth surge insufficiently addressed the jobs problem within the CCD, given that poor labour market outcomes persisted throughout the growth period. We note, too, that the growth surge was weakening in the year prior to the onset of the COVID-19 recession. Two observations can be made. The first is that labour market outcomes of the growth surge proved to be disappointing given the record-breaking level of growth experienced.³ The unemployment rate in the Blacktown labour force at the end of 2019 region was still elevated at 5.5%, and in the Parramatta labour force region (which covers most of the Parramatta and Cumberland LGAs) it was 6.5%. For youth, unemployment rates in the Blacktown and Parramatta labour force regions were 14.3% and 12.1% respectively. These rates are far higher than what successful metropolitan regions would expect during boom times.

We need to explore how different economic pathways can be travelled in order to better meet economic expectations post-COVID-19.

The second observation is that the rate of growth in jobs in the CCD for workers with advanced skills during the growth surge proved to be insufficient. Information here comes from O'Neill's *Where are the jobs?* report which calculated a jobs deficit for 2016 of 54,000 for western Sydney workers with either bachelor or postgraduate degree qualifications.⁴ That report noted that 'professionals' had by 2016 become western Sydney's largest occupational category; and yet the jobs deficit for this group actually widened during the jobs surge. In short, the record jobs surge failed, first, to generate enough jobs for the growing CCD workforce and, second, to generate sufficient jobs for degree-workers, the region's fastest growing labour force segment.

The major lesson from this analysis is that the CCD economy, going into the COVID-19 crisis, was not structured in a way that generated adequate jobs outcomes, even though growth rates were at record levels. The implication of this finding is that we need to explore how different economic pathways can be travelled in order to better meet economic expectations post-COVID-19. Much of this report discusses what these pathways might look like.

2 For details see O'Neill, P., 2020a, *Where are the jobs? Part 1: Western Sydney's Short-lived Jobs Boom*, Centre for Western Sydney, Western Sydney University, Parramatta <https://apo.org.au/node/306541>

3 Analysis here uses data sourced from the NSW parliament site, 'Regional labour force trends and NSW electorates (January 2021)' <https://www.parliament.nsw.gov.au/researchpapers/Pages/NSW-regional-labour-force-data---interactive-portal.aspx#Interactive%20charts> accessed 16 March 2021.

4 O'Neill, P., 2020b, *Where are the jobs? Part 2: The geography of western Sydney's jobs deficit*, Centre for Western Sydney, Western Sydney University, Parramatta, esp. p.23 <https://apo.org.au/node/306544>

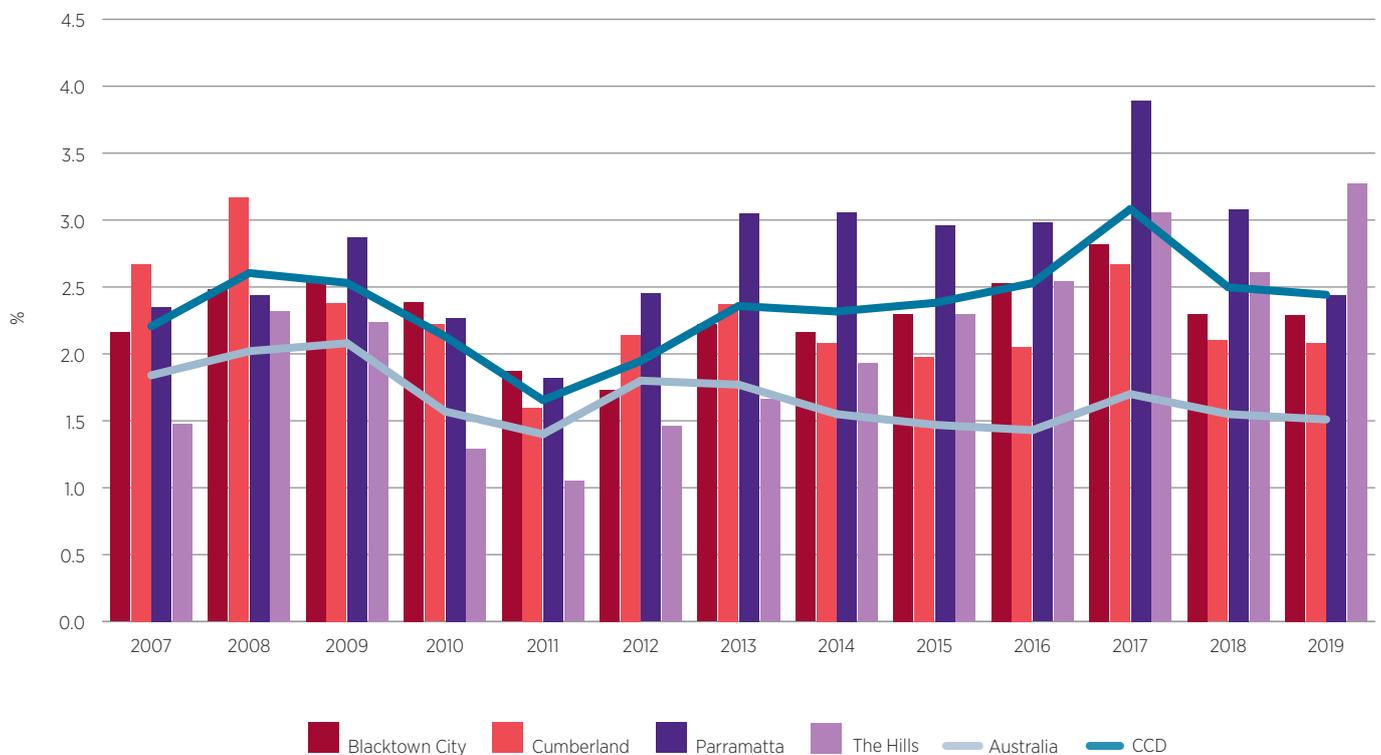
2. The growth surge

- The pre-COVID-19 growth surge in the CCD was driven by:
 - record population growth
 - record infrastructure spending
 - flow-effects of growth in the wider metropolitan economy.
- The construction sectors thus became a primary driver of growth in the CCD.
- COVID-19 coincided with the end of the surge.

A major reason for the economic surge in the CCD was population growth. Figure 3 shows that, while national population growth rates were tracking at 1.6% p.a. for the period 2007 to 2019, the CCD averaged 2.6% p.a. for this period. The equivalent rate for Blacktown was 2.5%, Cumberland 2.5%, Parramatta 3.0% and The Hills 2.3%. These well-above national rates were major drivers of growth in the CCD local economies, especially in the population-linked economic sectors identified in figure 2 in the previous section.

Figure 3 Annual population growth, Australia, CCD and LGAs, 2007 to 2019

Source: Calculated from data available at economy.id.com.au



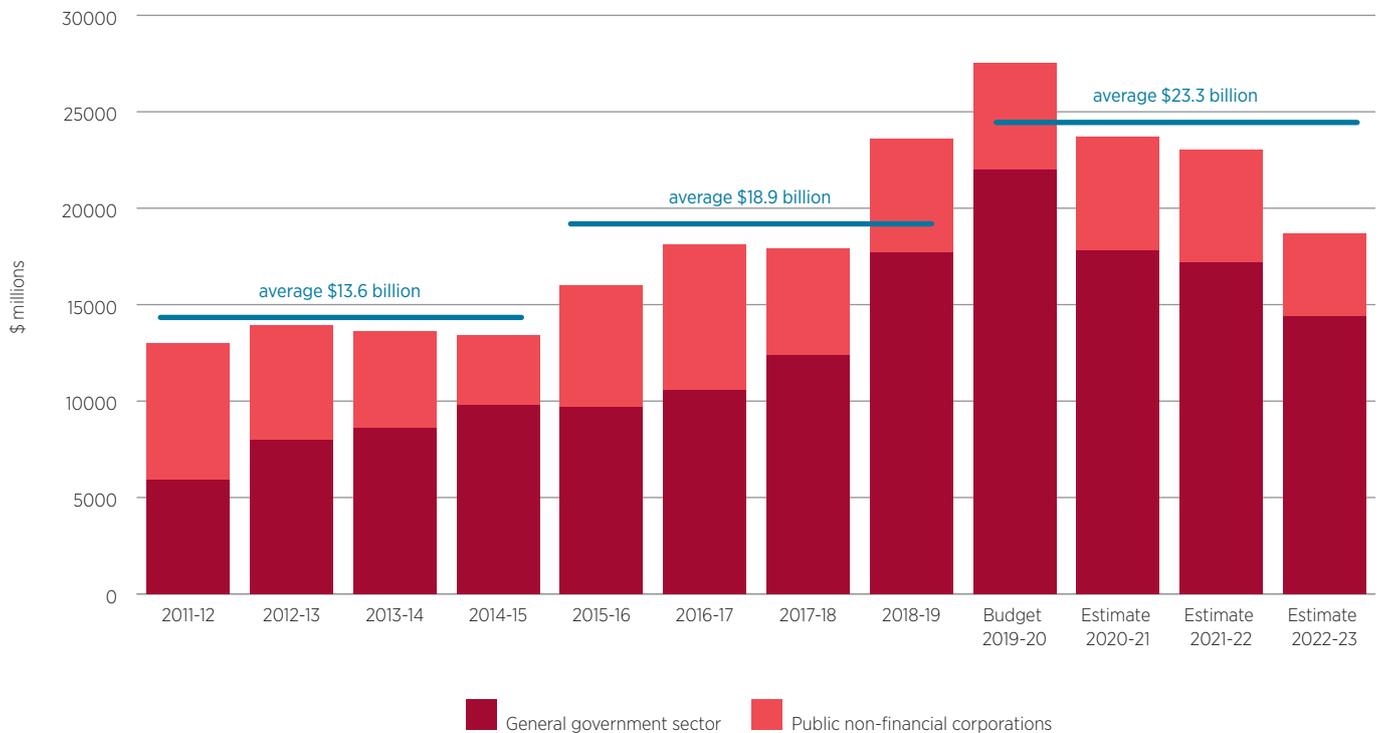
A second reason for the growth surge was the increase in NSW government spending on infrastructure. The CCD local economies benefited from improved transport and other efficiencies flowing from better infrastructure. The CCD also benefited because local companies and workers were directly involved in the delivery of this infrastructure.

Figure 4 shows the raised level of infrastructure by the NSW government during the growth surge period. This followed depressed infrastructure spending by previous state and federal governments in the post-Sydney Olympics period. Infrastructure spending which directly impacted the CCD economies included expenditure on the North West Metro (opened May 2019), Western Sydney Stadium (opened April 2019) and the western Sydney elements of WestConnex (opened 2019). Raised capital works spending on education and health infrastructure was also significant for the CCD economies with raised employment outcomes and productivity levels in these community services sectors as a direct consequence.

The CCD's construction sector, in particular, was a major beneficiary of raised infrastructure spending. As we see in section 7 below, the construction sector generates thick local supply chains – materials suppliers, contractors, engineers, project finance and so on. This means the sector generates handsome flow-on benefits for local business and workers, which we call 'local multiplier effects'. A further benefit of raised activity in the construction sector is the generation of employment among lesser-skilled workers. This is a segment of the labour market in western Sydney where high unemployment is chronic, with poor access to jobs exacerbated by automation and rationalisation especially in the manufacturing, wholesaling and, increasingly, retailing sectors. However, a booming construction sector during the growth surge provided significant employment opportunities for lesser-skilled workers.

Figure 4 NSW government infrastructure spending, 2011-12 to 2022-23

Source: Adapted from NSW Government 2019, Budget Paper 2, Infrastructure Statement



A third source of the growth surge in the CCD economies was the flow-on effects from growth in the greater Sydney metropolitan economy. In greater Sydney, during the surge, the overall number of businesses grew by 15%, from 471,789 in 2014 to 544,143 in 2018. In ‘financial services’, the number of businesses in greater Sydney grew in this period by 21% to 54,878, while the number of ‘professional services’ firms grew by 14% to 82,773. Clearly, the growth of income, jobs and wealth in the 21st century Sydney metropolitan economy was spearheaded by growth in finance and professional services, especially via their CBD concentrations. For the CCD economies, an expanded metropolitan economy generated substantial growth in the CCD resident population, and the pace of construction – especially dwellings and infrastructure – accelerated as a consequence. Thereafter, population-dependent sectors – like transport and warehousing, retailing, education and health – also grew. In brief, in the CCD, there was a 19% growth in the overall number of businesses between 2017 and 2020, led by growth in the ‘transport, postal and warehousing’ (up by a whopping 52%) and ‘construction’ (up by 14%) sectors.¹

For the CCD economies, an expanded metropolitan economy generated substantial growth in the CCD resident population, and the pace of construction – especially dwellings and infrastructure – accelerated as a consequence.

In the next section we examine the impacts of COVID-19 on the growth surge, paying particular regard to changes in the outlook for population growth as well as a wider examination of the economic effects of the pandemic on the CCD economies.

¹ Data in this paragraph were calculated from ABS cat. 8165.0, various years.

3. The impacts of COVID-19

- The dramatic closure of the nation’s borders has had an immediate effect on population growth rates in the CCD localities.
- Unemployment in the CCD in 2020 reached levels not experienced since the early-1990s recession, although recent data suggest a significant labour market bounce back. However, youth unemployment rates persist at alarming levels.
- Annual growth in regional product for the CCD for FY2019-20 was its lowest since 2014, with total production levels actually falling in both The Hills and Cumberland.
- The sectors most affected by COVID-19 across the CCD economies have been ‘construction’, ‘manufacturing’ and ‘accommodation and food services’.

In this section we examine the impacts of COVID-19 on the CCD economies. We commence with an assessment of impacts on population levels, economic activity and employment. Then we make a detailed examination of the impacts of the pandemic on the economic sectors in the CCD. Finally, we assess the impacts on the four LGAs.

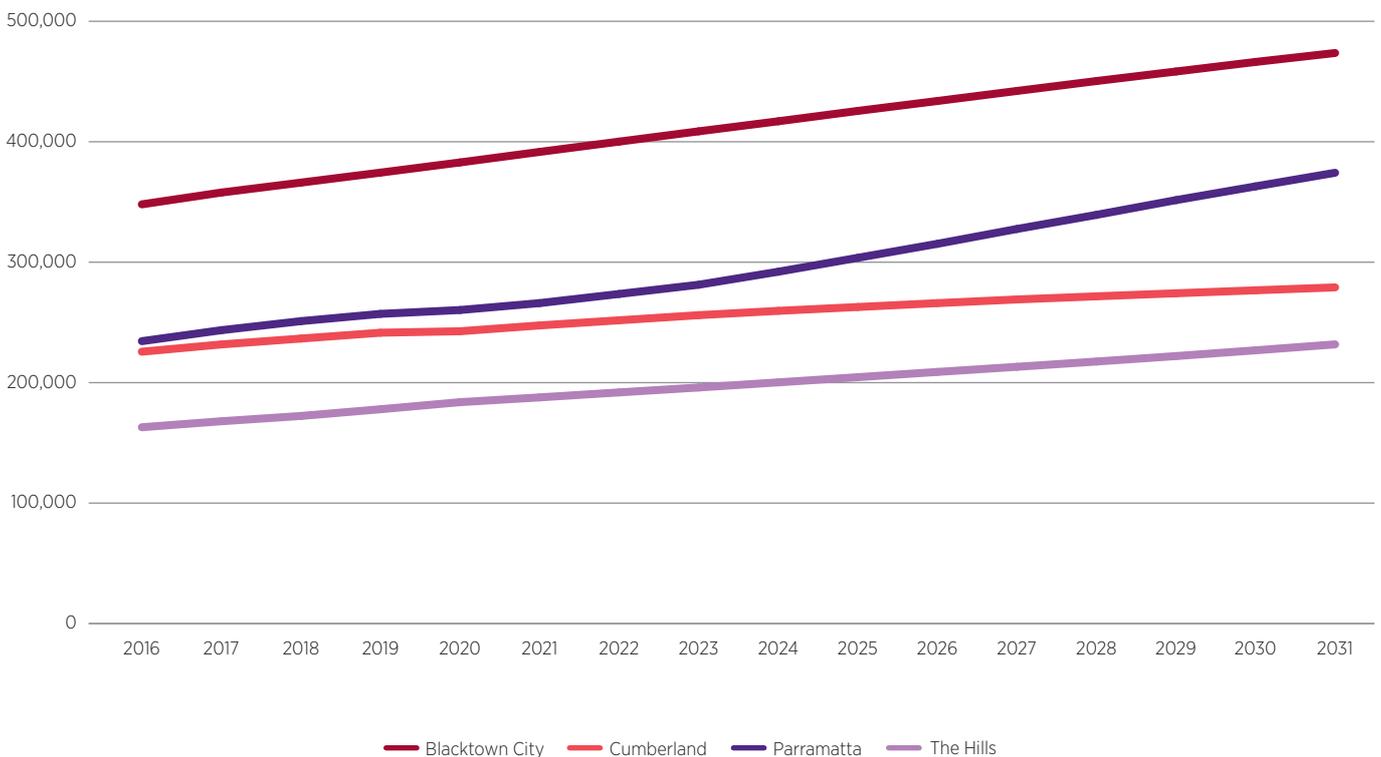
While the discussion is informed with the most recent data and information, we note the unavoidable lag in the flow of data about specific impacts of COVID-19, especially at the scale of CCD economies. This means some of our observations are incomplete and some are quite general. Nevertheless, we supplement available data with insights from interviews conducted for the project with respondents from the CCD business and general community.¹ In this way we are confident of making informed comments about the substantial range of impacts of the virus on the CCD economies.

POPULATION

While Australia’s (estimated) resident population growth continued to rise in Q2 2020, the growth rate for the quarter was only 0.1%. This was the slowest quarterly increase since estimates began in 1981. The slowdown was due to the sudden fall in net overseas migration, a major outcome of travel and visa restrictions. Over the last decade, on average, net overseas migration contributed around 0.9 percentage points a year to Australia’s average annual population growth of 1.6%, with the younger profile of migrants leading also to higher birth rates. COVID-19 halted these population drivers. Moreover, near-zero population growth rates are expected to continue into 2021.

Figure 5 Estimated resident population, CCD LGAs, 2016-2031

Source: Calculated from ABS cat. 3218.0, various years



¹ Information about the impacts of COVID-19 came from 58 respondents. Information was provided by direct interview or through online survey. Respondents came from the full range of economic sectors and from across the four CCD LGAs.

According to the most recent *Population Report*,² Australia's population is still projected to grow at around 1.1% p.a. on average to 2031; but at only 0.2% in 2020-21 and 0.4% in 2021-22. Growth is then projected to rise to 1.3% in 2023-24 before declining slightly (due to ageing) to 1.2% by 2029-30.

As discussed in the previous section, there has been a close relationship this century between population trends nationally and those observable in the CCD. CCD population trends post-COVID-19 are likely to continue to mimic the national pattern, such that when immigration rates rise once more the CCD will again experience significant population growth. Going forward, therefore, it is reasonable to expect slower population growth in the CCD's LGAs in the immediate future but then a return to the growth rates that would have occurred in the absence of COVID-19 (figure 5). A guide here is that population growth for the CCD in the period 2017 to 2031 was projected, pre-COVID-19, to be 2.8% p.a. – more than twice the rate projected for Australia as a whole. Such a growth rate would increase the CCD's share of the population of NSW from 12.6% in 2016 to almost 16% in 2031.

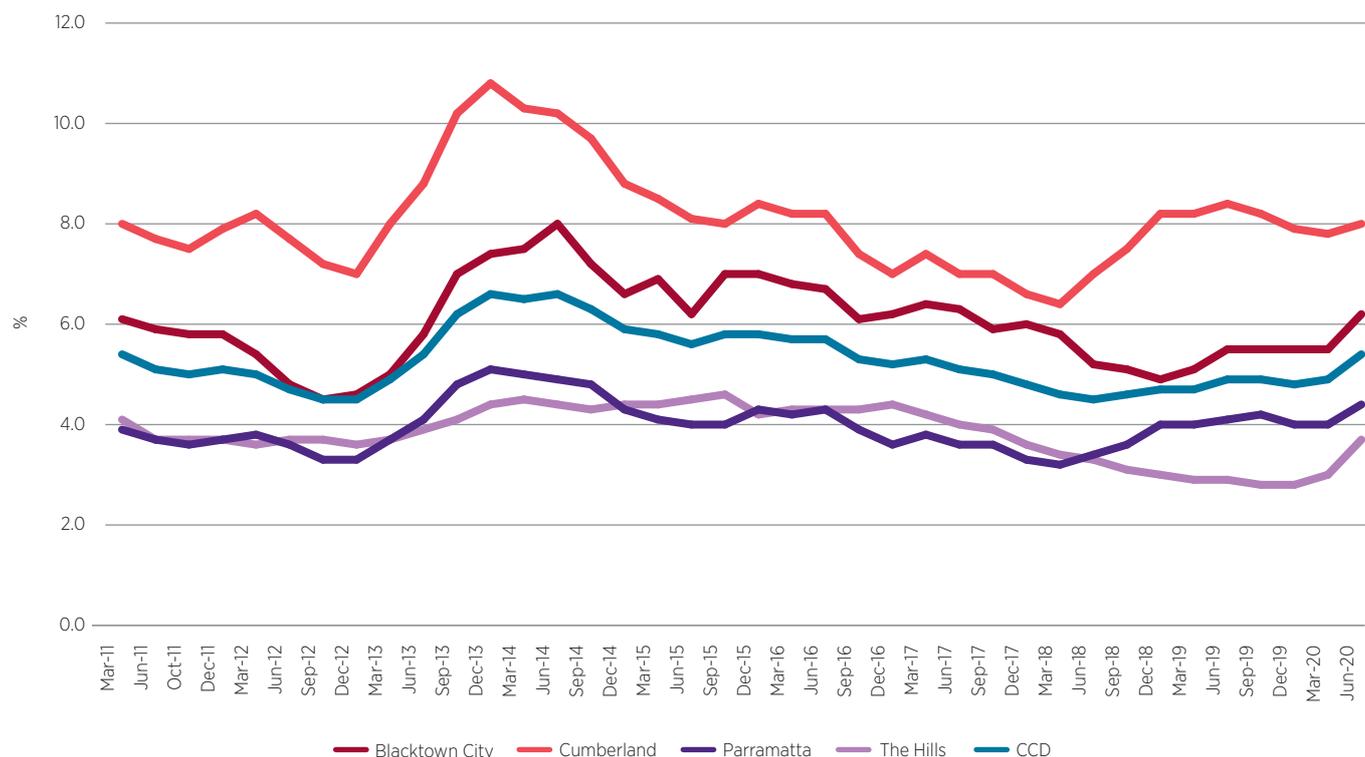
UNEMPLOYMENT

COVID-19 saw immediate increases in unemployment in March 2020, although high rates did not continue, which was unexpected. The national rate of unemployment rose from 5.2% in March 2020 to 7.5% by July 2020 and then fell to 6.6% in December 2020. Intriguingly, the national rate of *underemployment* actually fell from 8.5% in January 2020 to 8.1% in January 2021. For youth and young adults (aged 15-24 years), however, high rates of unemployment pre-COVID-19 persisted throughout 2020, with rates in western Sydney among the worst in all metropolitan Australia. For Q4 2020, when the youth unemployment rate for greater Sydney was 13.9%, the rate for the Blacktown labour force region was 17.4%, for Parramatta 18.3%, and for Baulkham Hills and Hawkesbury 15.1%.³

For the CCD as a whole, unemployment increased from 4.9% in March 2020 to 5.4% in June 2020, the highest rate since June 2016. All four LGAs experienced rising unemployment in this period with rates above the CCD level in Cumberland and Blacktown but lower in Parramatta and The Hills (figure 6). By the end of 2020, the unemployment rate for the Blacktown labour force region was 7.5%, Parramatta 8.5% and for Baulkham Hills and Hawkesbury 6.9%.⁴

Figure 6 Unemployment rates, CCD and LGAs, 2010-2020

Source: Compiled by <http://www.id.com.au>



2 Australian Government 2020, *Population Statement*, from <https://population.gov.au/publications/> accessed 16 March 2021
 3 Rates are for SA4 labour force regions. See <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6291.0.55.001Apr%202020?OpenDocument> accessed 11 April 2021
 4 See <https://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6291.0.55.001Apr%202020?OpenDocument> accessed 11 April 2021.

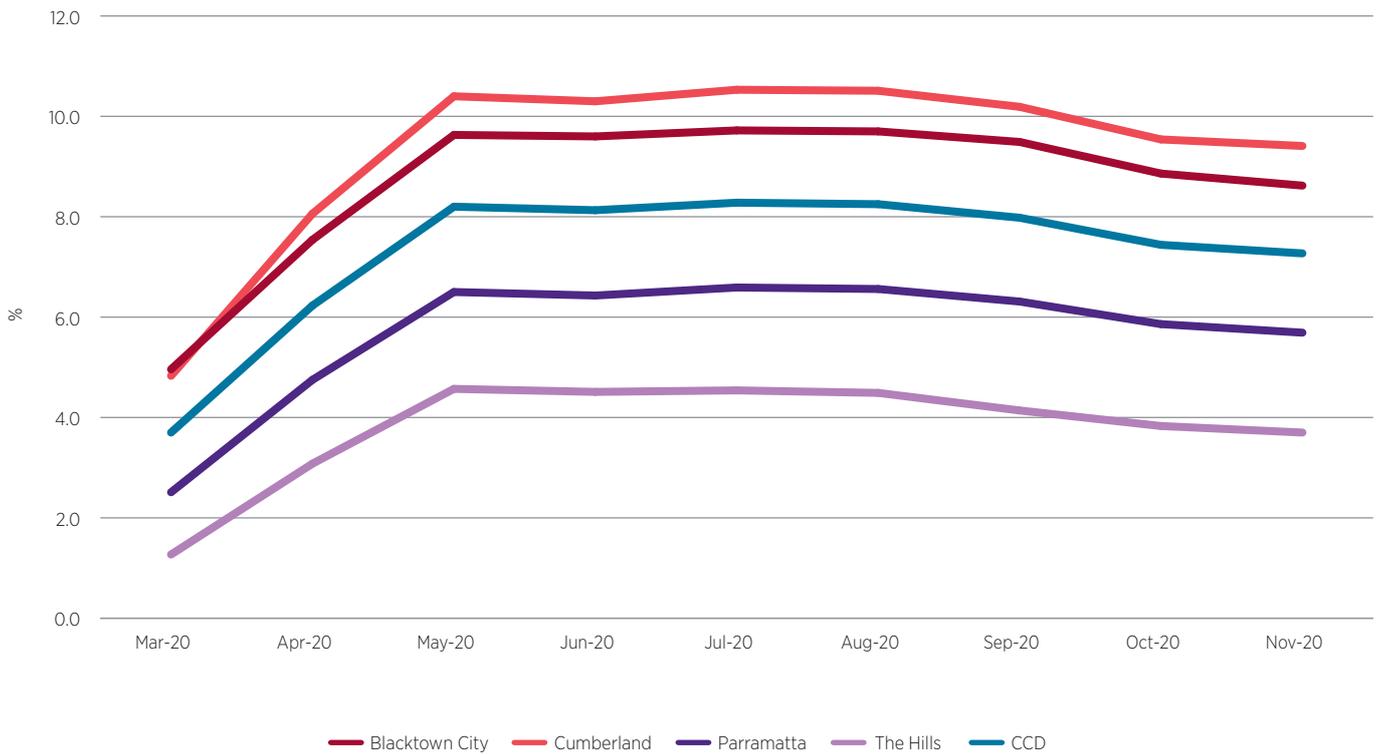
JOBSEEKER

In March 2020, when it was first introduced, the proportion of the national labour force⁵ receiving the JobSeeker allowance was 3.7%. The rate then increased sharply to a peak in May of 8.2%, slightly higher than the greater Sydney rate of 7.9%. The JobSeeker rate then fell, with the November rate for the CCD at 7.3%. By March 2021, however, high JobSeeker rates persisted in the Blacktown LGA, at 8.3% (up from 5.0%

in March 2020), and in the Cumberland LGA at 9.1% (up from 4.8%). Such rates are typical of national unemployment rates experienced during the early 1990s recession. While lower JobSeeker rates prevailed in March 2021 in Parramatta at 5.3% (up from 2.5%) and The Hills at 3.3% (up from 1.3%), these LGAs also experienced increases from March 2020 (figure 7).

Figure 7 JobSeeker payment rates, percent of 15-64 years population, 2019-2020

Source: Compiled by <http://www.id.com.au>



⁵ Those in the labour force aged 15-64 years, inclusive of youth allowance recipients.

OUTPUT AND EMPLOYMENT IN THE CCD ECONOMIES

In FY2019-20, the CCD economies produced \$156.5 billion in outputs, being the total value of goods and services created. Around one third of production in CCD in FY2019-20 came from the combined contribution of the ‘construction’ and ‘manufacturing’ sectors. Parramatta City contributed 40% of all output in the CCD in FY2019-20, followed by Blacktown (29%), Cumberland (17%) and The Hills (15%). Reflecting the

onset of COVID-19, annual growth in gross regional product (GRP) in the CCD for FY2019-20, at only 1.1%, was the CCD’s lowest growth since 2014 (figure 8). When this rate is disaggregated, however, we find GRP in Blacktown and Parramatta grew in FY2019-20 at annual rates of 2.6% and 2.5% respectively, but GRP fell in both The Hills and Cumberland, with rates of -1.8% and -2.3%.

Figure 8 Annual growth in gross regional product, CCD and LGAs, 2012 to 2020

Source: Compiled by <http://www.id.com.au>



The experience of the COVID-19 slowdown was different across key industrial sectors, as we now observe. We then follow this sectoral analysis with summary reports for each of the CCD LGAs.

CONSTRUCTION

The largest fall in output in the CCD economies occurred in the ‘construction’ sector, down by \$2.3 billion in FY2019-20. This plunge followed record growth in the half decade previously, as discussed in section 2 above. While activity in the sector had already slowed during 2019, COVID-19 presented unusual impediments to business activity, including supply chain disruptions, the loss of temporary visa workers, and uncertainty in what had been steady demand for new projects from both public and private sector clients. Hardest-hit categories of construction activity have been accommodation, entertainment and recreation, retail and wholesale trade, and education.

Nationally, industry activity in this sector is forecast to decrease 11% in 2021 before recovering in subsequent years, with industry projections of 1.3% annually until 2025-26 (Kelly, 2020b). Stimulus measures likely to have positive impacts on the construction sector in the CCD include:

- Stimulus measures involving urban infrastructure upgrades.⁶
- Ongoing construction at the Western Sydney Airport site.⁷
- Connecting infrastructure for the Western Sydney Airport.⁸
- Home buyer, construction and renovation assistance schemes.⁹

The largest fall in output in the CCD economies occurred in the ‘construction’ sector, down by \$2.3 billion in FY2019-20.

6 Australian Construction Industry Forum, see <https://www.acif.com.au/documents/item/930> accessed 20 February 2021.
 7 O’Sullivan, M. 2020, Construction of new Sydney airport terminal due to start next year. *Sydney Morning Herald* 8 September
 8 Gorrey, M. 2020, Homes make way for \$8b Western Sydney Airport metro rail line. *Sydney Morning Herald* 21 October
 9 For overview of assistance schemes and their impacts see <https://hia.com.au/business-information/economic-information/housing-forecasts>.

MANUFACTURING

The second largest fall in output in the CCD due to COVID-19 occurred in the 'manufacturing' sector, down by \$1.6 billion in FY2019-20. For manufacturing, the regional growth surge prior to COVID-19 had seen welcome reprieve from long term decline in manufacturing jobs in the CCD. However, the sector was negatively impacted by COVID-19 with over 56,000 manufacturing jobs lost nationwide in Q2 2020. Manufacturing jobs loss in the CCD economies was most severe in Blacktown, where manufacturing jobs (excluding those on JobKeeper) fell by 1,397 between September 2019 and September 2020, and in Cumberland where the equivalent fall was 1,108 jobs.¹⁰ On a positive note, the most recent outlook indices (March 2021) from the Australian Industry Group indicate the manufacturing sector is expecting recovery from the COVID-19 recession during 2021, although it is uncertain as to whether upturn in output will involve an upswing in employment.¹¹

RETAIL TRADE

The 'retail trade' sector in NSW experienced consumer spending growth of 11.6% during the September quarter of 2020, the result of eased restrictions and release of pent up demand.¹² However, a fall of 5% in spending followed in the December quarter as movement restrictions were reimposed in parts of Sydney.¹³ Cyclical trends aside, spending levels varied markedly within the sector during 2020. Spending in department stores, and on fuel and recreational goods, fell across 2020¹⁴, while spending on foodstuffs and clothing showed resilience with growth expected in 2021. The standout retail segment during 2020 was electronic goods and media services where spending rose as consumers turned to digital platforms for entertainment and work needs.¹⁵

Of special significance has been the role of COVID-19 in accelerating a global shift to online retailing. In September 2020, online retailing in Australia had increased by \$10 billion year on year, five times the average annual growth rate of recent years.¹⁶ In conjunction:

- Bricks-and-mortar stores in direct competition with online retailers were severely hit by COVID-19.
- Supply chains, warehousing and courier services were exposed as requiring expanded capacity to deal with the growth in demand online.
- Investment in supply chain management including automation and digitisation has subsequently accelerated.¹⁷

Shifts in the retailing sector are found to different degrees within the CCD economies. For bricks-and-mortar retailing, according to Google's mobility reports, retail and recreation activity in the CCD economies in April 2020 – during the NSW lockdown – bottomed out at over 50%

of February levels, with the fall in essential retailing activity bottoming in April 2020 at a loss of 20% of February levels. Thereafter, essential retailing activity in the CCD economies returned quickly to 2019 levels, with retail and recreation activity experiencing a delayed but steady recovery, reaching 2019 levels late in 2020. This pattern of recovery stands in contrast to Sydney's CBD retailing which continues to experience depressed activity.¹⁸

A final note in respect to retailing is that, as hosts of Sydney's major sites for warehousing and logistics, the CCD districts are beneficiaries of the shift to online retailing with reports of accelerated property investments especially along the M4 and M7 logistics corridors.¹⁹

Of special significance has been the role of COVID-19 in accelerating a global shift to online retailing.

ACCOMMODATION AND FOOD SERVICES

Nationally, the 'accommodation and food services' sector recorded a 17.4% decrease in payroll jobs from March to October 2020, the largest recorded by any industry sector.²⁰ Spending in hotels, catering services and social clubs all declined markedly in this period.²¹

However, there are mixed reports about spending patterns in this sector in the CCD economies. Respondents to our survey reported stable revenue levels as patrons continued to support local outlets throughout 2020. Yet NIEIR estimates that for the CCD:

- Output in the sector fell by \$1.0 billion during FY2019-20.
- The number of jobs (other than JobKeeper-supported jobs) in the sector fell by 7,383 between September 2019 and September 2020.²²
- Jobs loss in the sector was higher than any other sector in Blacktown, Cumberland and Parramatta and second highest in The Hills.

Nevertheless, recovery in the sector is underway given the rise in consumer confidence and public mobility.

TRANSPORT, POSTAL AND WAREHOUSING

The 'transport, postal and warehousing' sector was largely shielded from downturn in 2020, while maintaining growth in its property footprint, as noted in the comments on 'retail trade' above. Of the two million square metres of additional industrial space leased nationally in the first nine months of 2020, 28% was taken up by 'transport, postal and warehousing' services.²³ Western Sydney shared in this

10 Data sourced from NIEIR 2021 via <https://economy.id.com.au/> accessed 30 April 2021.

11 See https://cdn.aigroup.com.au/Economic_Indicators/PSI/2021/PSI_Mar_2021_17761k.pdf accessed 11 April 2021.

12 Deloitte Access Economics. <https://www2.deloitte.com/au/en/pages/media-releases/articles/retail-forecasts.html> accessed 20 February 2021

13 ABS Retail Trade, Australia cat. no. 8501.0.

14 Ireland, J., Mannion, C., Pasfield, D., & Flannery, T. 2020, in *Retail. COVID-19 special edition*. McGrath Nicol.

15 Harrison, L. 2020, Video game, DVD and recorded music retailing in Australia (ANZSIC G4242), *IBISWorld*.

16 Mitchell, S. 2020, Online sales growth slowed in September, *Australian Financial Review*. November 2

17 PricewaterhouseCooper. 2020, <https://www.pwc.com.au/financial-services/pdf/pwc-where-next-for-retail-and-consumer.pdf> accessed 20 February 2021

18 Data for each LGA at <https://www.google.com/covid19/mobility/> accessed 30 April 2021.

19 For example <https://www.theaustralian.com.au/business/property/amazons-oakdale-west-warehouse-home-to-1600-robots-and-1500-jobs/news-story/4a2da3e5e7d017772caccefa0e48bab> and <https://www.afr.com/property/commercial/e-commerce-growth-to-drive-another-record-year-for-industrial-property-20210127-p56x4p>

20 Gilfillan, G. 2020, COVID-19: Labour market impacts on key demographic groups, industries and regions. *Australia Department of Parliamentary Services*.

21 IBISWorld, *ANZSIC Reports*, various.

22 Data sourced from NIEIR 2021 via <https://economy.id.com.au/> accessed 30 April 2021.

23 Schlesinger, L. 2020, Online shopping drives record warehouse take-up. *Australian Financial Review*, 18 November.

warehousing boom with Blacktown, Cumberland and Canterbury-Bankstown LGAs approving development plans of \$640 million, \$166 million and \$93 million, respectively.²⁴ We discuss the importance of this sector to the CCD economies in a number of sections to follow.

RENTAL, HIRING AND REAL ESTATE SERVICES

The Sydney real estate market is now experiencing increased turnover as a consequence of an apparent end to lockdowns, further falls in mortgage interest rates, access to superannuation savings, and home purchase and renovation incentive schemes. However, western Sydney real estate markets have a mixed experience of the greater Sydney recovery. Industry indicators certainly show heightened demand for quality detached dwellings – where working from home creates demand for larger premises – but market demand seems obstinately weak for investment properties, especially older apartment stock in the CCD's traditional centres.²⁵

HEALTH CARE AND SOCIAL ASSISTANCE

In contrast to other sectors, the 'health care and social assistance' sector experienced significant growth in output for FY2019-20, up by approximately \$1 billion in the CCD as a whole.²⁶ While some of this increase can be attributed to COVID-19 stimulus measures, a large proportion of the growth seems to be a continuation of longer-term trends in the sector. The 'health care and social assistance' sector is Australia's largest employment sector, comprising 12% of the nation's workforce. This reflects ongoing public and private investment not only in health services but in the three major care sub-sectors: aged care, disability support and child care. As substantial population centres, the CCD LGAs are major recipients of this state- and federal-sourced expenditure.

EDUCATION AND TRAINING

The value of output in 'education and training services' in the CCD economies increased by \$200 million across FY2019-20, which is a modest change compared to the 'health care and social assistance' sector. Half of all CCD growth occurred in the Parramatta LGA, reflecting ongoing investment in a vertical campus on the combined Parramatta Public School and Arthur Phillip High School sites.²⁷ In general, the stability of output and employment in 'education and training services' gives resilience to the sector, especially to its pre-school, primary and secondary segments. At tertiary level, the campuses of CCD-located universities experienced only minor enrolment effects from COVID-19 in 2020 given their relatively low exposure to the international student market.

The 'arts and recreation services' sector was severely affected by the closure of non-essential businesses, government restrictions on venue operation, and cut-backs in household discretionary spending.

ARTS AND RECREATION SERVICES

The 'arts and recreation services' sector was severely affected by the closure of non-essential businesses, government restrictions on venue operation, and cut-backs in household discretionary spending. For The Hills Shire, for example, a 2.7% fall in employment occurred in this sector between March and December 2020, the largest proportional employment decrease for any sector in this LGA.²⁸ For Parramatta, the sector was the third highest impacted in terms of jobs loss, as we reveal below.

ELECTRICITY, GAS, WATER AND WASTE

The 'electricity, gas, water and waste' sector in the CCD had estimated output of \$6,437 million in FY2019-20. Blacktown accounted for 51% of this output, with significant contribution by electricity supplier Endeavour Energy. In FY2019-20, there were 3,850 individuals employed in the 'electricity, gas, water and waste' sector in Blacktown with the largest employing sub-sector being electricity supply, again due to the presence of Endeavour Energy. In Parramatta, output in the sector is similarly boosted by the presence of Sydney Water. We profile these utilities in section 9 below.

For the CCD as a whole, NIER estimates only a very small decrease in output in the sector in the September quarter 2020 compared to 2019. Like for the 'education and training services' sector, this shows the inelasticity of demand for utility services even in the face of an economic downturn as momentous as that generated by COVID-19.

We now turn to a summary analysis of the impacts of COVID-19 on each of the CCD LGAs.

24 9News, 19 August 2020, <https://www.9news.com.au/national/coronavirus-business-development-delivery-sector-booming-warehouses-sydney/e5849527-44d7-42b6-8830-4d3aabb4498d>

25 See <https://www.savills.com.au/blog/article/198762/australia-articles/nsw-2020-wrap-up-and-predictions-for-2021.aspx> accessed 30 April 2021.

26 Data sourced from NIEIR 2021 via <https://economy.id.com.au/> accessed 30 April 2021.

27 Skyscrapers conference (2018), 7 Vertical schools proving Australia's education system is on the way up (24 April 2018, <https://www.skyscrapersconference.com.au/news-detail:89f73245-6886-45b7-7894-5d491d6fc984.html>).

28 Remplan, 2021, <https://app.remplan.com.au/public/covid-impacts;m=11;s=0> accessed 20 February 2021.

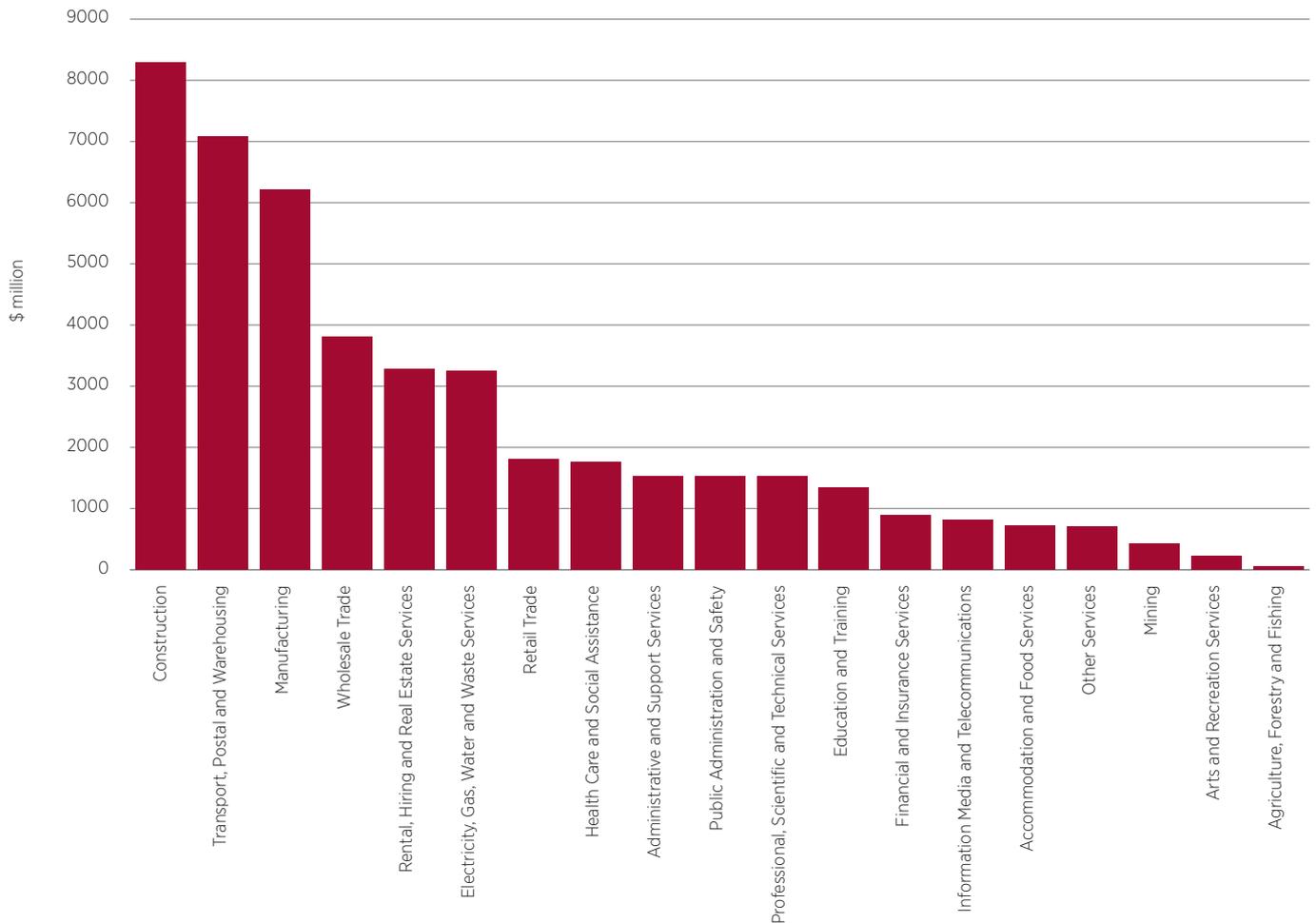
IMPACTS OF COVID-19 ON BLACKTOWN

The value of output for FY2019-20 in Blacktown City was \$45.3 billion (figure 9) and 152,928 persons were employed. Almost half of Blacktown output was produced by three sectors. 'construction' (\$8.3 billion),

'transport, postal and warehousing' (\$7.1 billion) and 'manufacturing' (\$6.2 billion). 'Construction' employed 19,446 persons in FY2019-20, while 'transport, postal and warehousing' employed 20,682 persons, and 'manufacturing' 16,030 persons.

Figure 9 Output by industry sector, Blacktown LGA, 2019-2020

Source: NIEIR 2021. Compiled by <http://www.id.com.au>



Based on NIEIR data,²⁹ the local Blacktown economy shifted in the following ways between September quarter 2019 and September quarter 2020:

- Gross regional product fell by 3.2% (compared to a fall of 3.9% for NSW), the second largest impact among the four LGAs.
- Local jobs fell by 2.2%, and would have fallen by 3.0% without JobKeeper. This is the second largest jobs impact among the four LGAs,
- Employment level of Blacktown workers fell by 3.9%, and would have fallen by 4.0% without JobKeeper.

The sectors in Blacktown experiencing major jobs loss (excluding JobKeeper) across the quarters were:

- Accommodation and food services (-2,095 local jobs).
- Manufacturing (-1,397 local jobs).
- Construction (-887 local jobs).

These were also the three sectors most affected by falls in total output across the September 2019 to September 2020 period.

²⁹ Data sourced from NIEIR 2021 via <https://economy.id.com.au/> accessed 30 April 2021.

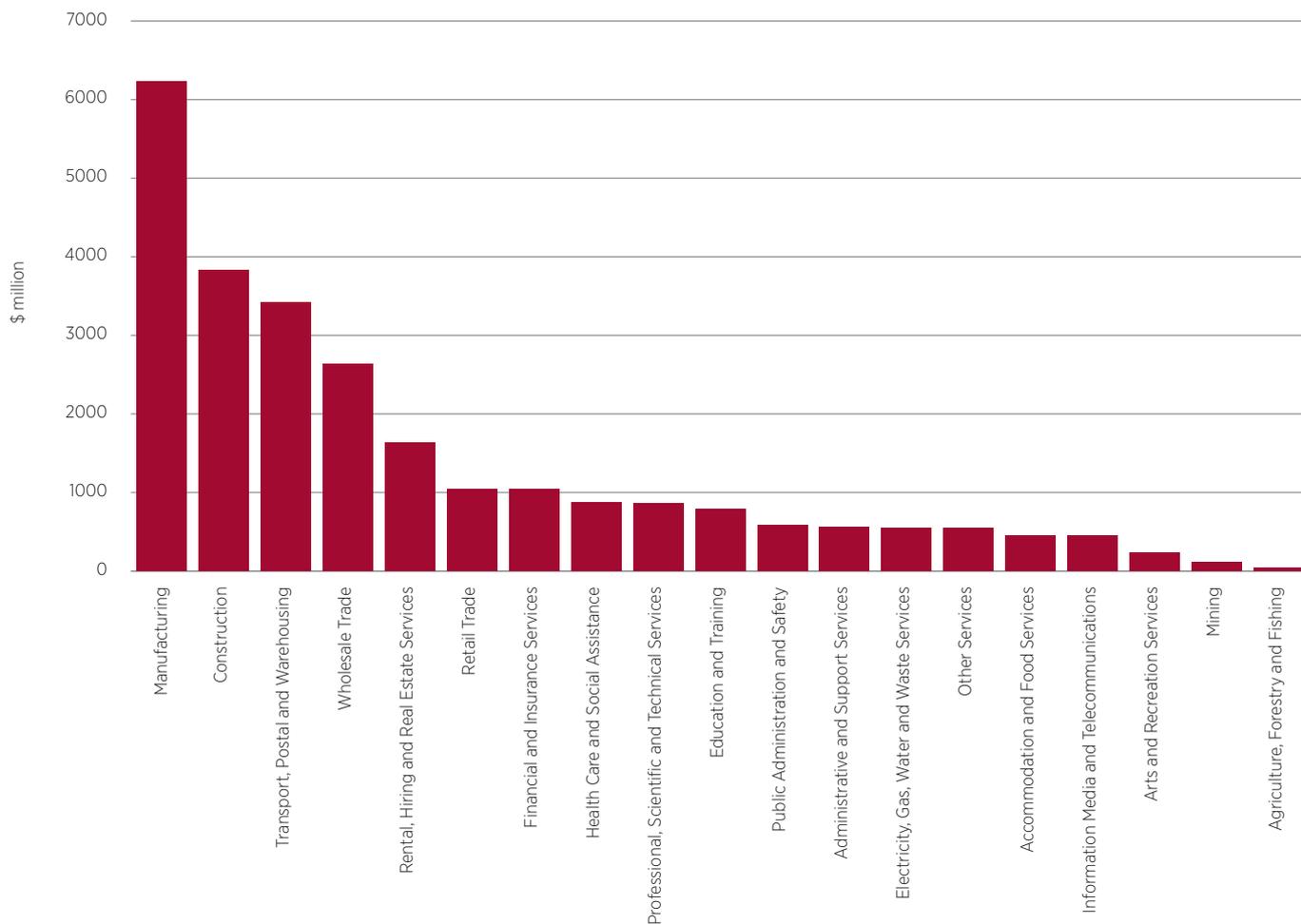
IMPACTS OF COVID-19 ON CUMBERLAND

Total output for FY2019-20 in the Cumberland local economy was \$25.9 billion (figure 10) with total employment of 88,563 persons. Two-thirds of output in 2019-20 was generated by four industries: ‘manufacturing’ (\$6.2 billion), ‘construction’ (\$3.8 billion), ‘transport, postal and

warehousing’ (\$3.4 billion), and ‘wholesale trade’ (\$2.6 billion). The most significant employment sectors in 2019-20 were ‘manufacturing’ with 15,742 employees, ‘construction’ with 9,534, ‘transport, postal and warehousing’ with 10,408, and ‘wholesale trade’ with 7,225.

Figure 10 Output by industry sector, Cumberland LGA, 2019-2020

Source: NIEIR 2021. Compiled by <http://www.id.com.au>



Based on NIEIR data, the local Cumberland economy shifted in the following ways between September quarter 2019 and September quarter 2020:

- Gross regional product fell by 5.3% (compared to a fall of 3.9% for NSW). This was the highest fall of any of the four LGAs.
- Local jobs fell by 3.6%, and would have fallen by 4.0% without JobKeeper. This was the highest jobs loss of any of the four LGAs.
- Employment level of Cumberland workers fell by 5.2%, and would have fallen by 5.4% without JobKeeper.

The sectors in Cumberland experiencing major jobs loss (excluding JobKeeper) were:

- Accommodation and food services (-1,305 local jobs).
- Manufacturing (-1,108 local jobs).
- Transport, postal and warehousing (-614 local jobs).

These were also the three sectors most affected by falls in total output across the September 2019 to September 2020 period.

Employment level of Cumberland workers fell by 5.2%, and would have fallen by 5.4% without JobKeeper.

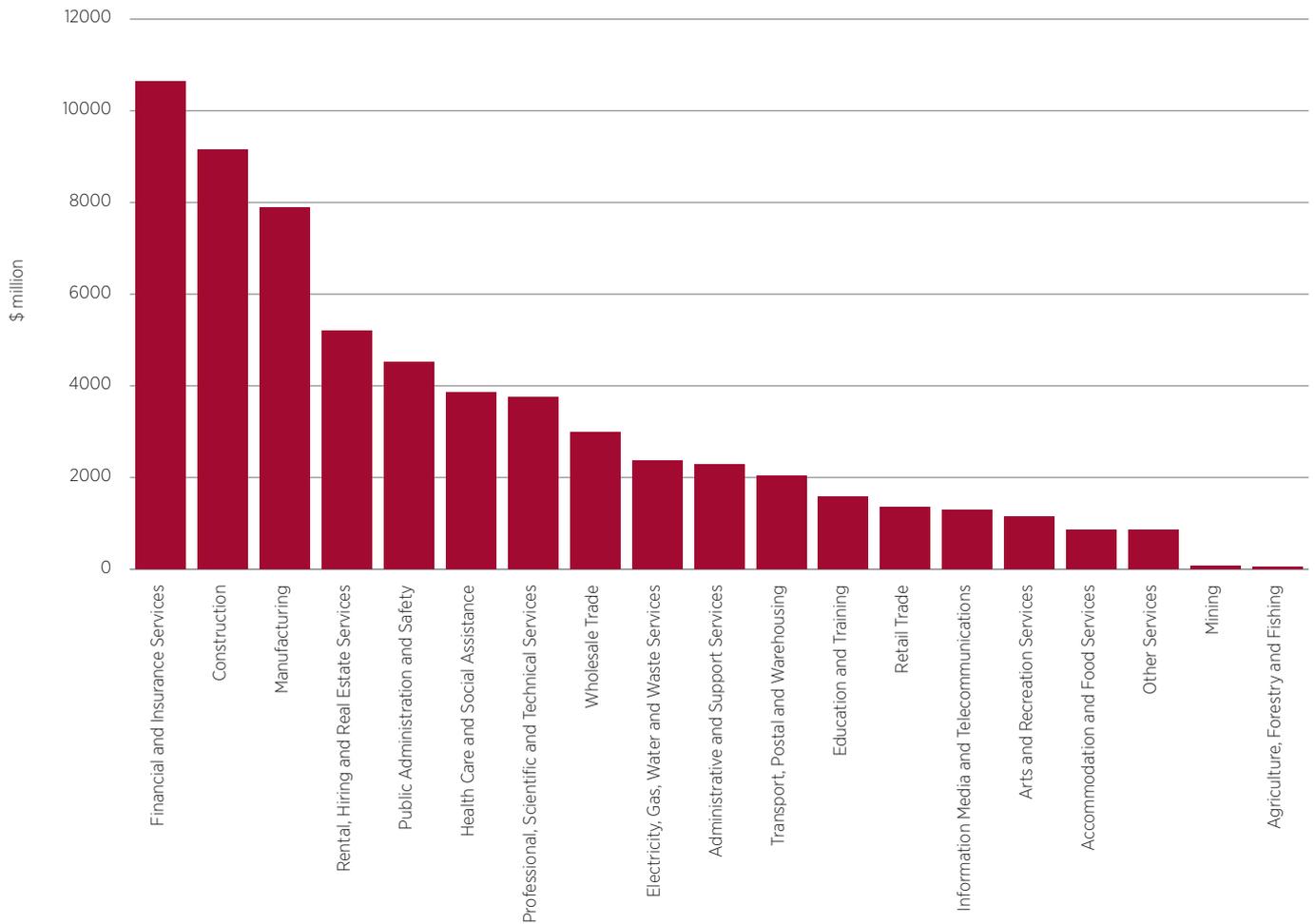
IMPACTS OF COVID-19 ON PARRAMATTA

The City of Parramatta economy in FY2019-20 generated \$61.9 billion (figure 11) in output and 192,988 jobs. Highest output came from the ‘financial and insurance services’ sector with \$10.6 billion (17% of total). There were 19,021 employed in this industry. The next largest sector

was ‘construction’ with output of \$9.2 billion (15% of total) and 22,268 employees. Then followed ‘manufacturing’ which contributed \$7.9 billion in output and employed 16,511 persons; and ‘health care and social assistances’ with \$3.9 billion in output and 27,567 employees.

Figure 11 Output by industry sector, Parramatta LGA, 2019-2020

Source: NIEIR 2021. Compiled by <http://www.id.com.au>



Based on NIEIR data, the local Parramatta economy shifted in the following ways between September quarter 2019 and September quarter 2020:

- Gross regional product fell by 2.2% (compared to a fall of 3.9% for NSW). This was the second lowest fall among the four LGAs.
- Local jobs fell by 2.5%, and would have fallen by 3.5% without JobKeeper. Parramatta and The Hills experienced the lowest jobs fall of the four LGAs.
- Employment level of Parramatta workers fell by 4.8%, and would have fallen by 5.0% without JobKeeper.

The sectors in Parramatta experiencing major jobs loss (excluding JobKeeper) were:

- Accommodation and food services (-2,501 local jobs).
- Construction (-1,976 local jobs).
- Arts and recreation services (-1,332 local jobs).

The three sectors most affected by falls in total output across the September 2019 to September 2020 period were, in order of most affected, ‘construction’, ‘manufacturing’ and ‘accommodation and food services’.

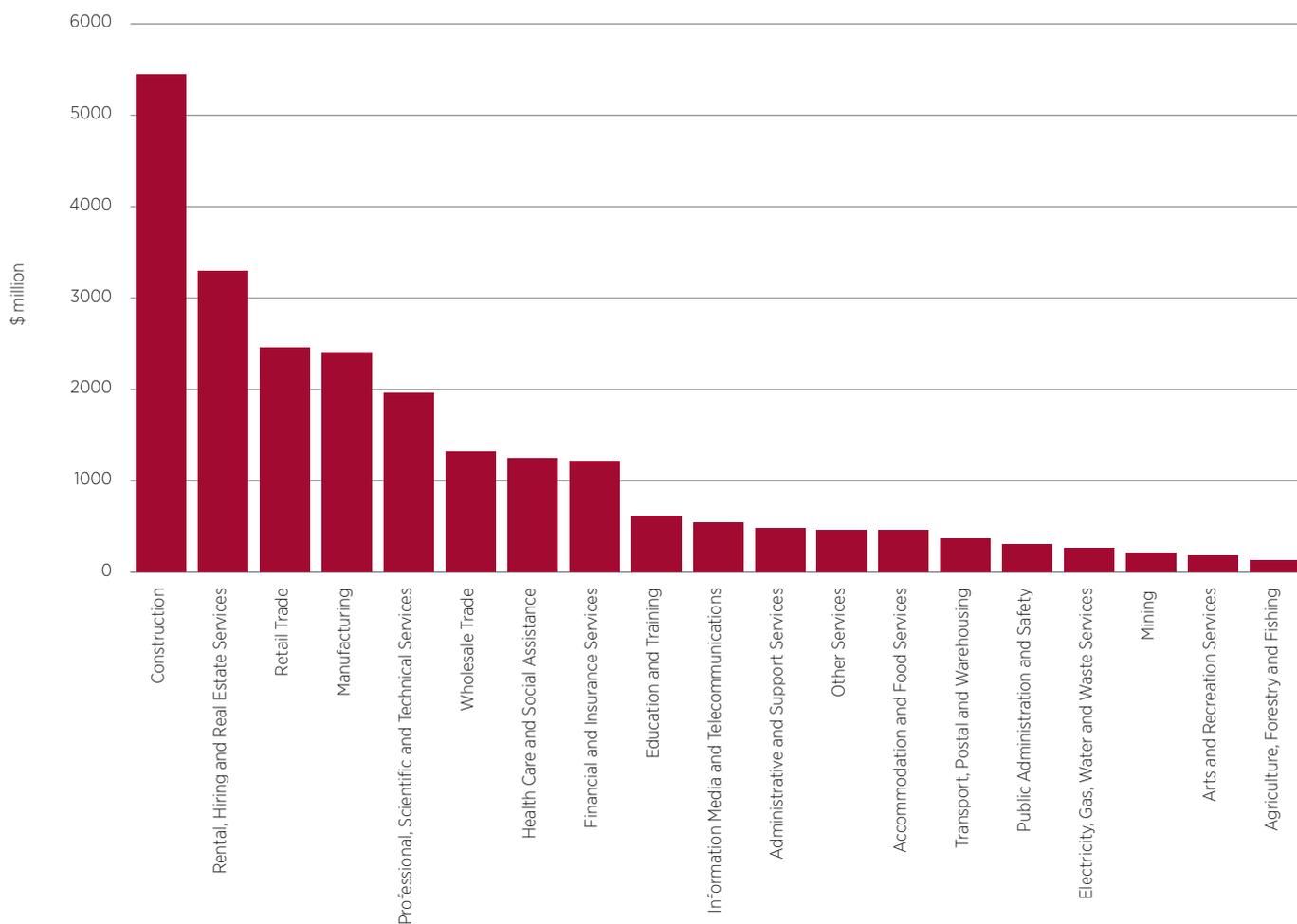
IMPACTS OF COVID-19 ON THE HILLS

The value of total output in The Hills local economy in FY2019-20 was \$23.4 billion (figure 12) with total employment of 85,064 persons. Almost 40% of all output was generated by ‘construction’ (\$5.4 billion) and ‘rental, hiring and real estate services’ (\$3.3 billion). The four largest

employment sectors were ‘construction industry’, which employed 11,438 persons, ‘rental, hiring and real estate services’ with 1,667, ‘retail trade’ with 20,356, and ‘manufacturing’ which employed 5,421 persons.

Figure 12 Output by industry sector, The Hills LGA, 2019-2020

Source: NIEIR 2021. Compiled by <http://www.id.com.au>



The Hills local economy seems to have experienced the smallest negative impacts from COVID-19 compared to the other LGAs in the CCD. Based on NIEIR data, The Hills economy shifted in the following ways between September quarter 2019 and September quarter 2020:

- Gross regional product fell by 1.7% (compared to a fall of 3.9% for NSW). This was the lowest fall of any of the four LGAs.
- Local jobs fell by 2.4%, and would have fallen by 3.5% without JobKeeper. As noted above, The Hills and Parramatta experienced the lowest jobs fall of the four LGAs.
- Employment level of The Hills workers fell only by 0.9%, and would have fallen by 2.2% without JobKeeper.

The sectors in The Hills experiencing major jobs loss (excluding JobKeeper) were:

- Construction (-1,934 local jobs).
- Accommodation and food services (-1,482 local jobs).
- Retail trade (-899 local jobs).

The four sectors most affected by falls in total output across the September 2019 to September 2020 period were, in order of most affected, ‘construction’, ‘real estate’, ‘retail trade’ and ‘manufacturing’.

The Hills and Parramatta experienced the lowest jobs fall of the four LGAs.

CONCLUDING COMMENT

As we noted in the introduction to this section, analysing the impact of COVID-19 is difficult for three reasons. First, the presence of COVID-19 is ongoing. There is great uncertainty about the degree to which the virus will affect human life into the future. The economic outlook of all economies is highly uncertain. Second, information from official data agencies takes time to emerge. At the time of writing (May 2021), the complete story of 2020 has not been revealed by, say, ABS labour force and ATO business data. Third, there are limited data sets for revealing the impact of COVID-19 at fine geographical scales. The overview of the impacts of COVID-19 provided in this section attempts to piece together an impact statement from available data. Yet future information flows need to be monitored closely so as to adjust our understanding of the impacts of COVID-19.

In the next section of this report we seek to understand the forces that influence the way COVID-19 is impacting the CCD economies, including those likely to remain influential into the future.

4. Key influencers

- The impact of COVID-19 on the CCD economies has been mediated by state and federal government actions, including restrictions on people movements as well as targeted fiscal measures.
- What happens to immigration controls in the near future will be an important consideration for the CCD economies.
- There are likely to be qualitative shifts in housing demand in response to COVID-19, especially in response to remote working opportunities.
- There are opportunities for advantageous local interventions but these need to be cleverly targeted and enacted by appropriate tools.

Eight influencers were identified in the study brief as having the potential to sway the size and nature of the impact of COVID-19 on the CCD economies. These influencers were explored by direct interviews with businesses and institutions across the CCD during November and December 2020 and by a questionnaire online. This section summarises and interprets the responses.

THE LIKELY FUTURE POLICY AND REGULATORY DIRECTION OF NSW AND AUSTRALIAN GOVERNMENTS

Government responses to COVID-19 at the state and national levels have been highly volatile. The pandemic saw a range of measures implemented by governments to address economic, health and border concerns. Varying levels of restrictions were imposed on both international and interstate travel and local and regional travel, with the timing of restrictions inconsistent and unpredictable. Restrictions were also placed on private social interaction and on attendance at events and hospitality venues. While fiscal assistance to affected households and businesses was prompt and considerable, the timing and duration of assistance were seen as too hard to predict. A particular issue was the absence of geographical targeting in assistance measures, with a prevailing (though questionable) assumption that nation- and state-wide schemes would filter automatically to needy regions and districts. For the CCD, a total of 4,666 jobs were assisted by JobKeeper schemes in September 2020 with the 'health care and social assistance' and 'accommodation and food services' sectors most impacted.

Government responses to COVID-19 at the state and national levels have been highly volatile.

FUTURE LEVELS OF IMMIGRATION

For FY2019-20, Australia's net overseas migration was 184,200 people, a decrease by 57,200 people (23.7%) since the previous year, reflecting the early impact of COVID-19 on Australia's migration intake. We discussed this slowdown in the previous section. International visitor arrivals for study, holiday or other reasons also fell markedly with only 7,570 arrivals for short-term trips (less than one year) recorded in November 2020, a drop of 99.1% compared to November 2019. Net overseas migration is expected to fall to around zero for 2020-21 due to international travel restrictions.

The fall in overseas migration has direct effects on Australia's population growth, as discussed in section 3. Respondents to the survey noted the ongoing negative impact of reduced migration on the CCD economies, especially on population-dependent sectors including housing, hospitality and tourism. On the other hand, respondents were optimistic that in the medium to longer term, from 2024 onwards, migration would return to levels similar to pre-COVID-19.

Net overseas migration is expected to fall to around zero for 2020-21 due to international travel restrictions.

HOUSEHOLD AND BUSINESS DEBT LEVELS

Unlike during previous recessions in Australia, interest rates and, therefore, the cost of debt, have fallen during the COVID-19 recession. However, this fall has been slight, given the historic low borrowing costs in Australia in the years since the global financial crisis. Our respondents hold expectations that low interest rates will continue for both households and businesses for the next three to five years.

In parallel, households became more cautious with spending during the downturn, which has translated into increased savings rates (especially via accelerated payment of mortgage debt). Rates of debt distress and default have declined. This positive outlook for household finances is expected to continue even as household consumption increases in line with the easing of COVID-19 restrictions.

Accordingly, the risk to financial stability from household debt is assessed as low by the RBA, largely due to moderate loan-to-valuation ratios on residential mortgages. The servicing of household debt in Australia is at its most comfortable since 1999 due to low borrowing rates, while the ratio of mortgage interest payment to disposable income was a low 6.4% in June 2020, down from a high of 13.3% in 2008.¹ There is nothing to suggest that the debt experience of households in the CCD economies differs from the national picture.

In the business sector, falling revenues have forced businesses to draw down on liquidity while deferring investment expenditure and debt-raising, especially in a climate where lenders have been cautious in extending credit.²

¹ Lawless, T. 2020, Could household debt levels be a trigger for another round of credit tightening? CoreLogic, <https://www.corelogic.com.au/news/could-household-debt-levels-be-trigger-another-round-credit-tightening> accessed 2 January 2021

² Edwards, J. 2020, *The costs of COVID: Australia's economic prospects in a wounded world*, Lowy Institute.

EMPLOYMENT IMPACTS AND PATTERNS

The economic impact of COVID-19 was first manifest in jobs loss – measured by both number of jobs and hours worked – which was driven by rapid falls in business revenue. Payroll numbers in NSW fell by 5.8% between March 2020 and January 2021, with male jobs falling by 8.7% and female jobs by 5.1%. Industry sectors experiencing most payroll jobs loss in NSW in this period were ‘construction’, ‘accommodation and food services’ and ‘information, media and telecommunications’. In contrast, payroll jobs increased in this period in ‘public administration and safety’, ‘electricity, gas water and waste services’ and ‘mining’ sectors, an indication of the extent to which revenue streams for these sectors have been immune from demand-side impacts of the pandemic.³

As we note in the section above, an outcome of social distancing and the shift to working from home during COVID-19 has been the increase in e-commerce and online shopping, which in turn has stimulated operations in transport, logistics and warehousing. Employment has no doubt increased in online-related retailing businesses.

As discussed in section 3 above, recovery in employment levels in the CCD economies depends heavily on how quickly the national economy recovers, with concerns about enduring impacts on local unemployment levels as direct assistance measures, especially JobKeeper, are removed. Further negative effects on local labour markets could arise from new rounds of locally-based infection, such as the outbreak on Sydney’s northern beaches in December 2020 and January 2021.

Meanwhile, remote working and working from home look likely to become a permanent feature of Australian urban employment to some degree, with employees and employers showing willingness to explore new models of work and worker location. We discuss this trend in more detail below and in section 12.

HOUSING DEMAND AND AFFORDABILITY

Towards the end of 2020, housing demand in Australian cities, including Sydney, was anticipated to decline over the next five years with commentators citing slower rates of population growth, fewer international visitors, lower household formation rates, and constrained foreign investment activity as the primary causes of a depressed housing market. As a consequence, one study concluded that the demand for housing in Australia could be cut by between 129,000 and 232,000 dwellings in 2021 to 2023.⁴ A further dampening influence on housing demand was seen to be a weakened economy, coupled with rising unemployment rates, with the dwelling purchase options of young people most affected. One government agency estimate (in May 2020) was that more than 300,000 young Australians had relocated to their parents’ house due largely to lost income and diminished housing access.⁵

Yet persistent low mortgage borrowing rates and government-led recovery measures generated positive impacts on housing demand from Q4 2020.⁶ A depressed housing market may well have been averted. This is positive news for the CCD economies where the construction sector played a major role in the growth surge, pre-

COVID-19. That said, anecdotal evidence suggests a positive re-evaluation of the attractions of detached suburban dwellings, especially for young families seeking private outdoors recreation spaces and dedicated work-at-home office space. In conjunction, however, there is evidence of dampened demand for suburban apartments as a consequence of this demand shift.

In terms of the residential rental market, a brake on rapid population growth in a context of recent record supply of new dwellings puts downward pressure on rents. A softer rental market is anticipated to continue for the next couple of years until at least mid-2023.⁷

PEOPLE MOVEMENT

A combination of official restrictions, social anxiety, concern over COVID-19 safety on public transport, the accessibility of online retailing, and opportunities to work from home, has changed the pattern and intensity of people movement across Sydney. Decreased foot traffic in commercial centres has seen lower revenues for many walk-in, face-to-face businesses. At the same time, the localisation of people movements has seen rising business activity for many convenience, supermarket, petrol and takeaway food services. Some of these reactive forces, positive and negative, may convert to long-term consumer habits, especially a propensity for online retailing and working away from centralised offices, at least to some degree. We discuss the possibilities for remote working in particular in detail in section 12.

In respect to vehicular traffic, the motorway operator Transurban reports falls in car traffic flows on its M4 and M7 motorways by between 20% and 30% in the second half of 2020, but recovery to pre-COVID-19 levels by year’s end. Truck flows, by contrast, were barely affected by the COVID-19 downturn, with trucking of containers in particular maintained by relatively buoyant levels of consumer demand, especially for electronic and other household goods.⁸

A combination of official restrictions, social anxiety, concern over COVID-19 safety on public transport, the accessibility of online retailing, and opportunities to work from home, has changed the pattern and intensity of people movement across Sydney.

VISITORS TO THE REGION

With international travel halted, some respondents reported modest increase in local holiday traffic and attendance at local events, although in limited circumstances. More commonly, the lack of public confidence in the safety of large public and indoor gatherings was noted as an obstacle to recovery for businesses in the tourism and hospitality industries.

In the immediate future, any increase in visitor traffic to the CCD economies is anticipated to be restricted to households from the

³ ABS 2021, Weekly Payroll Jobs and Wages cat. 6160.0.55.001, 19 January.

⁴ National Housing Finance and Investment Corporation (2020), State of the Nation’s Housing 2020, <https://www.nhfc.gov.au/media/1581/nhfc-state-of-the-nations-housing-report-2020.pdf> accessed 15 January 2021.

⁵ Ibid

⁶ National Housing Finance and Investment Corporation, 2020.

⁷ Ibid

⁸ Transurban 2020. Transurban Overview. <https://www.transurban.com/content/dam/investor-centre/toolkit/transurban-overview-FY20.pdf> Accessed 12 January 2021

Sydney area, and from elsewhere in NSW to a limited degree. This subdued demand is likely to persist until freer movement is normalised and international travel resumed at pre-COVID-19 levels. The ‘visiting friends and relatives’ (VFR) specialisation of the CCD economies will be particularly affected.

REMOTE WORKING AND DEMAND FOR COMMERCIAL OFFICE SPACE

Remote working, including working from home, is anticipated to continue into the future as workers and employers persist with practices adopted since March 2020, although to varying degrees. An overwhelming majority of respondents to our survey highlighted working from home as one of the most significant responses to the pandemic. Many businesses reported making substantial shifts in their internal operations – both procedurally and technically – to accommodate remote working. Coupled with this rise of working from home, demand for commercial space has softened. Increased vacancy rates for office buildings and retail spaces have occurred across the CCD economies. While some businesses reported resumption of in-person work to some degree by Q3 2020, many continue to allow remote working practices in response to worker demand. As such, respondents

did not anticipate an increase in demand for commercial premises in the near future. Additionally, there is expectation that residential dwelling configurations will increasingly incorporate dedicated work spaces to support remote working. Further discussion of remote working is contained in section 12 below.

An overwhelming majority of respondents to our survey highlighted working from home as one of the most significant responses to the pandemic.

SENSITIVITY TO INFLUENCERS

In this part we assess the changing sensitivity of the CCD economies to the influencers. Figure 13 shows the sensitivity of the CCD economies to the influencers in the pre-COVID-19 period, focusing on the growth surge 2013-2019, and compares this to the sensitivity of the influencers in the post-COVID-19 period. These assessments, before and after COVID-19, draw on responses to our survey responses and interviews.

Figure 13 Sensitivity to influencers 2013-19 and post-COVID-19

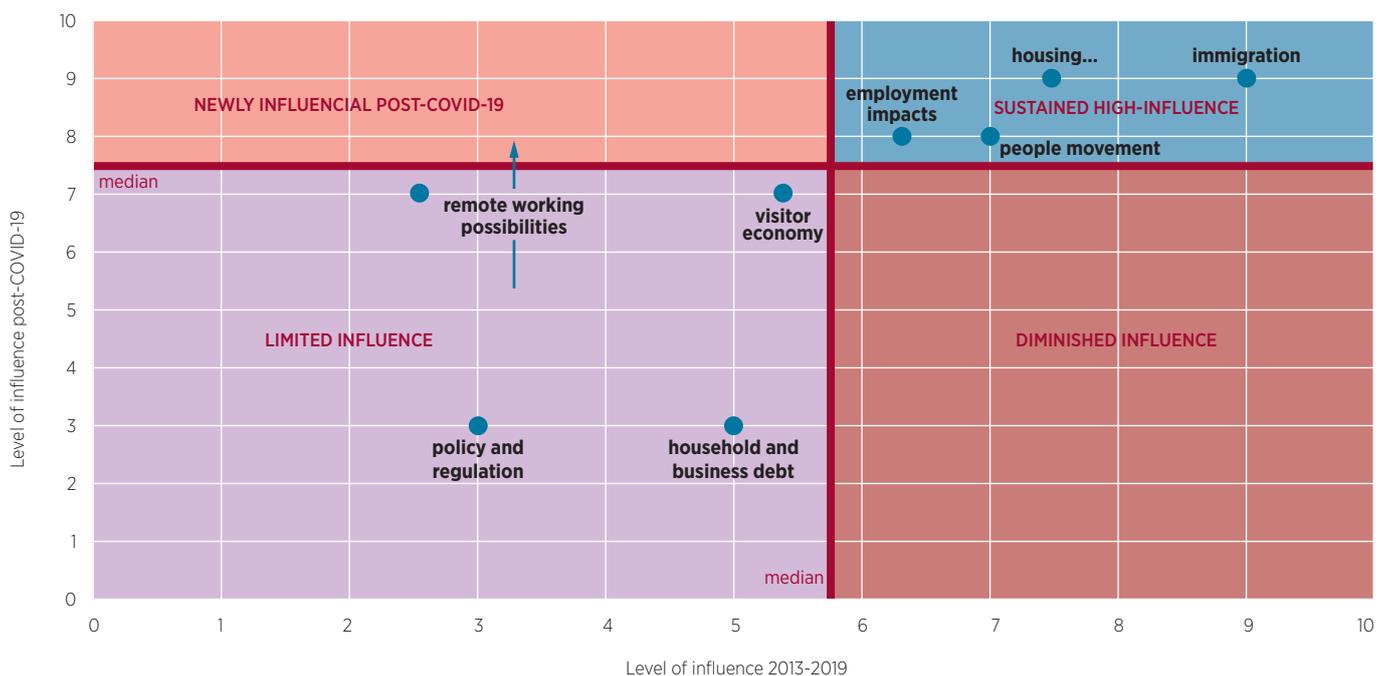
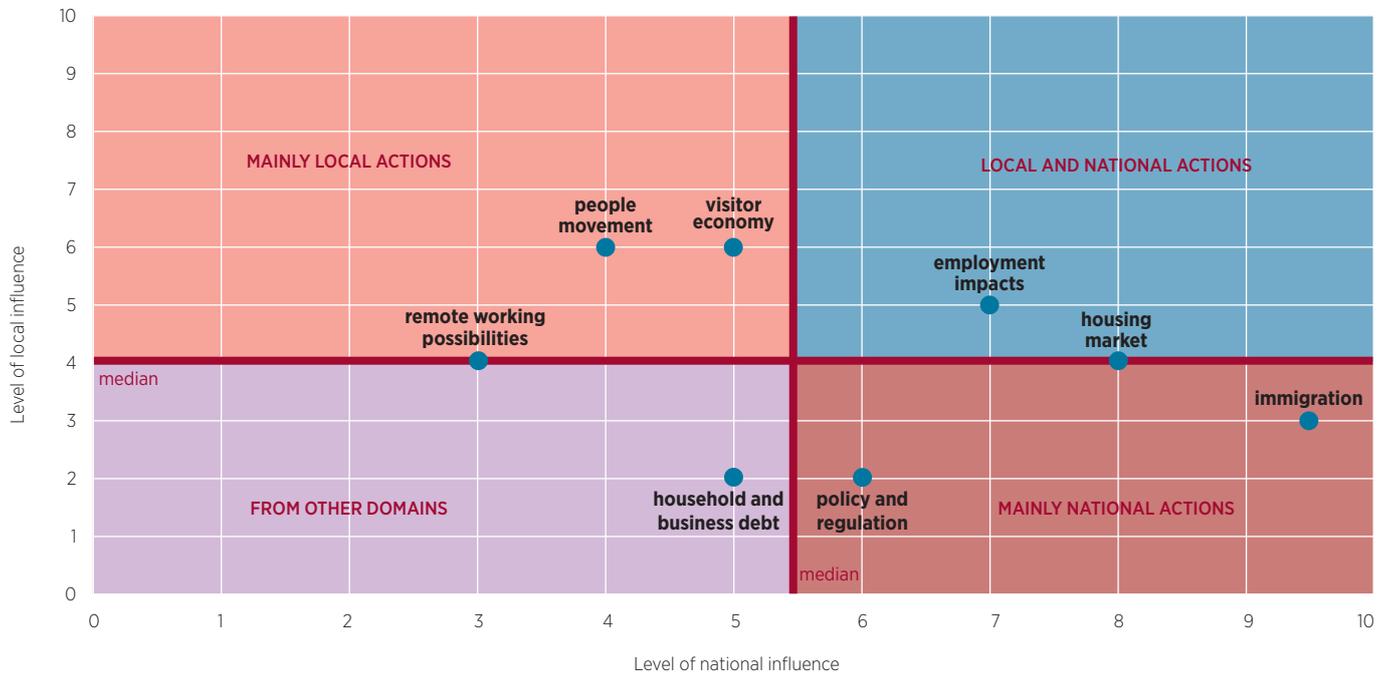


Figure 13 is divided into quadrants. The lower right quadrant (‘diminished influence’) is where we would have positioned influencers that had lost influence over the CCD local economies post-COVID-19 – but we found no instances of this. The lower left quadrant (‘limited influence’) shows influencers that became marginally more influential post-COVID-19. These are ‘policy and regulation’ and ‘household and business debt’. In the upper right quadrant (‘sustained high influence’) we situate influencers that maintained their demonstrated hold on the directions of the CCD economies during the growth surge and

post-COVID-19. Influencers in this quadrant are ‘housing market’, ‘immigration’ and ‘people movement’. Finally, in the upper left quadrant (‘newly influential post-COVID-19’), we track the influencers which respondents identified as having enhanced impact on the CCD economies in a post-COVID-19 period. These influencers are ‘visitor economy’, ‘employment impacts’ and ‘remote working possibilities’.

A key question arising from the composition of the quadrant graph is: How can the influencers be managed or manipulated so as to advantage the CCD economies? Figure 14 appraises the potential for interventions.

Figure 14 Managing the influencers



The figure is divided into quadrants in an attempt to focus on opportunities for intervention. First, as we observe in the lower right quadrant ('mainly national actions'), there are opportunities for intervention which arise at the national level, notably 'policy and regulation' and 'immigration'. In respect to 'immigration', we see from figure 13 that respondents rated the CCD economies as being highly sensitive to this influencer. Yet figure 14 shows that there is little opportunity at the local scale to manage this influencer to any significant degree. By contrast, in the upper left quadrant ('mainly local actions'), we situate influencers where local actions have potential to generate favourable outcomes. Here the influencers are 'people movement', 'remote working possibilities' and 'visitor economy'. In the upper right quadrant ('local and national actions'), we find that a combination of local and national interventions can be effective. Influencers in this quadrant are 'employment impacts' and the 'housing market'. Finally, in the lower left quadrant ('from other domains'), we find for the influencer 'household and business debt' that fluctuations are not readily manageable at either local or national scales, at least in relation to current fiscal and monetary settings. The ready availability of

credit – to businesses and households – has been central to economic management strategies worldwide since the global financial crisis, with quantitative easing highly likely to continue as a central strategy in confronting COVID-19 impacts.

Of course, effective intervention at the scale of the CCD economies requires the assembly of appropriate tools. This task is important and requires thought and discussion, an important next step for the managers of the CCD economies. Prior to this discussion, however, we need to define more deliberately what it is in the local economies that can be managed. We now turn to this analysis with a focus on what we find to be three attributes deserving of greater policy attention: lead firms, value chains and the CCD's strategic centres.

How can the influencers be managed or manipulated so as to advantage the CCD economies?

5. Manoeuvrings

So far in this report we have identified the forces leading to a record period of economic growth in the CCD economies, pre-COVID-19. We then examined and explained the economic impacts of COVID-19, noting the problems and uncertainties generated and the range of outlooks for recovery. A key lesson from all this analysis is that unassisted recovery is unlikely to leave the CCD economies in good shape for the medium and long term. So at this juncture of the report we turn attention to the question of how the CCD economies might be influenced in ways that enhance their resilience and sustainability while generating growth in jobs, income and wealth for local businesses and households.

Unassisted recovery is unlikely to leave the CCD economies in good shape for the medium and long term.

We start with a sketch of what a local economy is. First, it is a set of individual entities, a collection of individual businesses, government agencies, not-for-profits. All these entities can be managed individually in ways that enhance efficiency and encourage growth in returns. Their success is vital to a successful local economy.

Yet, while a local economy is all of these assets, there is more. In aggregate, a local economy generates externalities that can be tapped into by its members at low marginal cost and with high productivity benefits. This makes a local economy a complex thing, shaped by an almost infinite range of forces.¹ This understanding makes intervention very difficult. A way of dealing with this complexity is to think of the local economy as a moving set of human and material assets, moving daily but also into the future, the assets more or less bound to each other, more or less dependent on each other for growth and success. Local economic progress therefore involves manoeuvring these assets so they move forward in productive ways, providing mutual protection, while generating mutual, additional, benefits for local stakeholders.

When we seek to manoeuvre a local economy in this way, we elevate its status, seeing it as a coherent, whole thing, capable of expansion through growth, as if it were an organism.² This growth can come, to some degree, because of local connections to the growth trajectories of a broader metropolitan or national economy. We explore these connections in section 6. Local economic growth depends, therefore, on the extent to which the production, distribution, consumption and exchange components of the local economy receive growth impulses from the metropolitan, national and global economies. A downside of

these connections is that external impulses will be cyclical, so there will be downsides as well as upsides, and these will be difficult to moderate. So-called built-in stabilisers – the automatic injections of government spending via unemployment and taxation relief, for example – ensure timely subsidies to local employers and households during economic downturns. The COVID-19 recession has seen these stabilisers generated. But, at the level of local government, there are few tools for managing the economic impulses, positive or negative, generated at a metropolitan, national or global scale.³

That said, there are many things that can be done at a local scale to enhance both individual business profitability and the overall economic resilience and adaptability of a local economy. There is a substantial literature on targeted business programs. These are vitally important, but beyond the scope of this report. More relevant here are the opportunities which apply to the local economy in general, the interventions that create positive externalities that can be shared across an economy, to leverage-up an economy's growth performance while enhancing the rewards for local businesses and households.

The report's analysis in the following sections reveals local management of the CCD economies can be framed in three ways, namely by:

1. Acknowledging the pivotal role played by a small number of what we call *lead firms* in generating positive economic impulses within the CCD economies.
2. Uncovering the ways that enterprises, contractors, suppliers and specialist workers generate shared economic advantages through attachment to *value chains*.
3. Understanding how the co-presence of efficient infrastructure, amenity and liveability within *strategic centres* (and other locally-strategic economic spaces) generates competitive outcomes for the enterprises and workers that operate from that centre.

We call this threesome our *set of manoeuvrings*, the opportunities for enhancing local economic growth, sure, but also manoeuvrings that steer a local economy in directions that also instil resilience, ensure inclusiveness and build sustainable outcomes.

Local economic progress therefore involves manoeuvring these assets so they move forward in productive ways, providing mutual protection, while generating mutual, additional, benefits for local stakeholders.

1 Storper, Michael, 2011, Why Do Regions Develop and Change? The Challenge for Geography and Economics. *Journal of Economic Geography* 11: 333-46 <http://www.jstor.org/stable/26162224>.

2 Michael White, 2003, Metaphor and economics: the case of growth, *English for Specific Purposes*, 22, 131-151, [https://doi.org/10.1016/S0889-4906\(02\)00006-6](https://doi.org/10.1016/S0889-4906(02)00006-6)

3 Insights into manoeuvrings of the 21st economy emanate from scholars like Paul Krugman, Michael Porter, Richard Florida and Charles Landry. For overview see Gaspar 2021 <https://www.tandfonline-com.ezproxy.uws.edu.au/doi/full/10.1080/09672567.2020.1767671>

The following definitions are used for these manoeuvrings:

Lead firms are the businesses, institutions and agencies that are significantly larger than their sectoral peers and act as frontrunners in stretching market reach, building supply chains, and driving rates and direction of innovation.⁴

Value chains are the transactional links to other firms, institutions and agencies that enable efficient procurement of inputs and distribution of outputs, steer access to value-enhancing partnerships, capture innovation opportunities, and power-up influence over the regulatory environment.⁵

Strategic centres and other **locally-strategic economic spaces** are the higher-order central places and geographical sites where enterprises, institutions and agencies assemble in ways that maximise the benefits of attachment to a local economy's flows and connections and minimise the costs.⁶

Sections 6 through 9 mobilise these insights by investigating the economic make-up of the CCD local economies pre-COVID-19, focusing on the growth surge years, and then appraising the manoeuvrings that might be appropriate for local economic advancement as the post-COVID-19 recovery ensues. The sections following then examine options for managing the CCD economies for successful outcomes towards the 10-year horizon.

4 Insight into the role played by lead firms comes from Erikson 1974, Ingstrup 2013.

5 Insights into value chains come from Kano 2020, Parrilli 2019.

6 Discussion of the importance of strategic centres in western Sydney is contained in O'Neill, P., 2020c, *Where are the jobs? Part 3: Western Sydney workers in 2036*, Centre for Western Sydney, Western Sydney University, Parramatta <https://apo.org.au/node/306546>

6. The tradeables sectors

- Local economies are boosted by sales of good and services to external customers.
- ‘Manufacturing’ and the two logistics sectors, ‘transport, postal and warehousing’ and ‘wholesale trade’ are important generators of external sales across the CCD economies.
- The utilities sector, although with limited number of enterprises of size, is a significant player in the metropolitan market.
- Health services and education and training hold genuine metropolitan player status when their services are pitched beyond local markets.
- The home décor and renovation cluster of retailers in The Hills is an exemplar of how an agglomeration of businesses can significantly expand market reach.

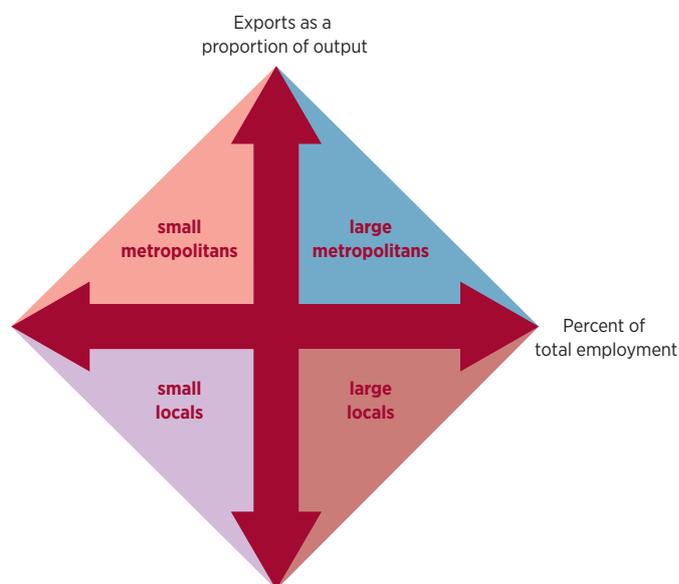
Local economies benefit disproportionately from sales of goods and services to outside customers. Having a healthy proportion of local production sold to outsiders – by what are called the ‘tradeables’ sectors – is desirable because these sales capture money circulating in other economies rather than by drawing down on limited local demand. A successful exposure to externally traded goods and services comes from:

- The competitiveness of local systems of production.
- The productivity of local labour.
- The efficiency of local utilities and connecting infrastructures.
- The organisational prowess of domiciled firms, institutions and agencies.
- Clever positioning within value chains.

We return to these characteristics of successful local economies in the sections which follow.

In this section we use data from NIEIR¹ to assess the nature and extent of the tradeables sectors in the CCD local economies. Data refer to FY2018-19 which is the last financial year unaffected by the COVID-19 downturn. This enables examination of the local economies during the growth surge, prior to COVID-19, and thus tells us the strengths and weakness of the local economies at the best of times. The graphs for each LGA use a matrix (figure 15) which charts an industry sector’s contribution to employment in the local economy (on the horizontal axis) and the external (or export) earnings of that sector as a proportion of its total earnings (on the vertical axis). Note, again, that exports refers to the sales of goods and services to buyers outside the LGA boundaries, not only to those outside the nation as a whole.²

Figure 15 ‘The distribution of sectors by export contribution’



¹ National Institute of Economic and Industry Research, 2021. Compiled and presented in economy.id <https://economy.id.com.au/cws/exports-by-industry> accessed 18 March 2021

² Exports are sales of goods and services to non-resident households, businesses and other organisations, outside the LGA boundaries. These sales include both local value added and the value of inputs.

THE EXPOSURE OF SECTORS IN BLACKTOWN TO EXPORTS

Figure 16 shows the extent to which sectors in the Blacktown local economy, based on pre-COVID-19 data, are part of the tradeables economy. The figure reveals:

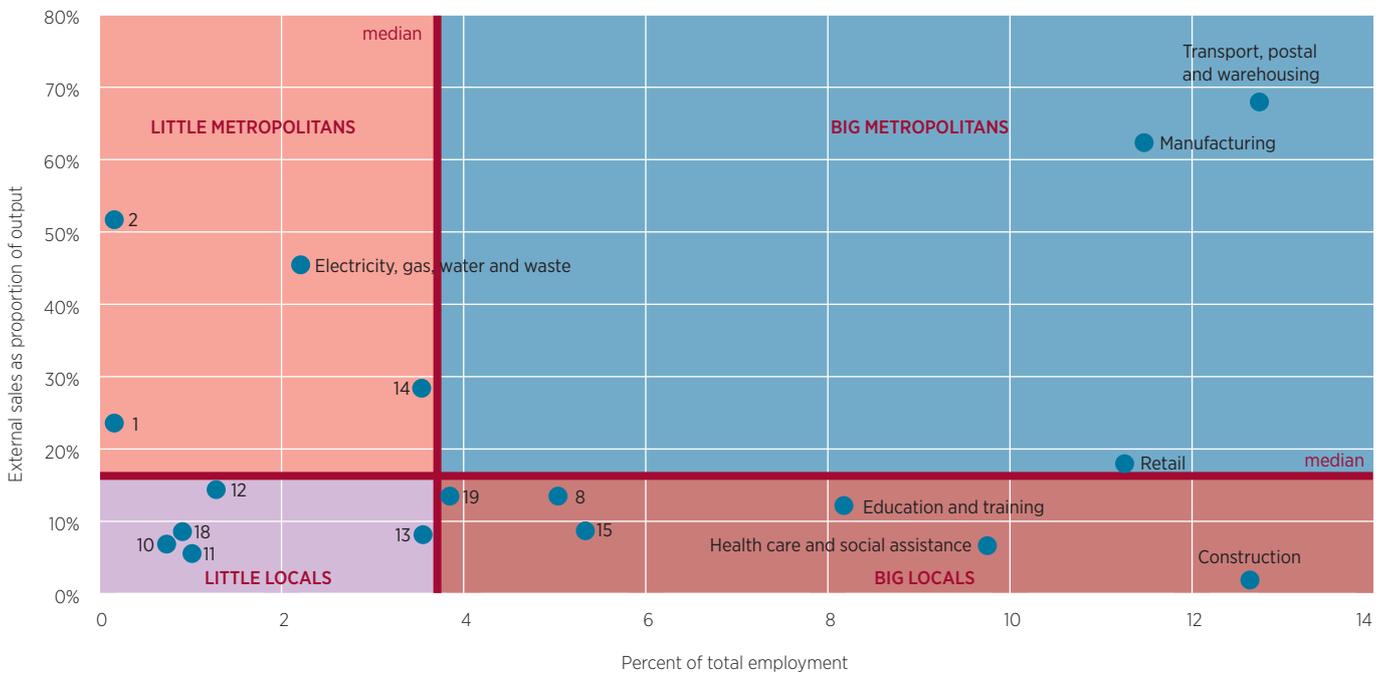
- There are three sectors in the Blacktown economy with major metropolitan exposure. These are 'manufacturing' and the two logistics sectors, 'transport, postal and warehousing' and 'wholesale trade'.
- The utilities sector, 'electricity, gas, water and waste', has a considerable metropolitan market position, which is due to the presence of the energy distribution company Endeavour Energy in a number of locations in Blacktown. In later sections we discuss the

important role of Endeavour Energy as a lead firm in the Blacktown local economy.

- While the 'construction' sector delivered 12.8% of local jobs in 2019-20, the highest for any sector in Blacktown, the sector had a relatively minor role in generating external income. Its relatively small contribution to tradeable goods and services, however, contrasts with the high multiplier effects of this sector within the local economy, as we observe in the next section.
- Despite being relatively large employment sectors in the LGA, the 'education and training' and 'health and social assistance' sectors are relatively insignificant as generators of income from the wider metropolitan economy. This reflects their status as local providers.

Figure 16 External sales, Blacktown, FY2019-20 (see key page 4)

Source: National Institute of Economic and Industry Research, 2021. Compiled by <http://www.id.com.au>



THE EXPOSURE OF SECTORS IN CUMBERLAND TO EXPORTS

Figure 17 shows the extent to which sectors in the Cumberland local economy, based on pre-COVID-19 data, are part of the tradeables economy. The figure reveals:

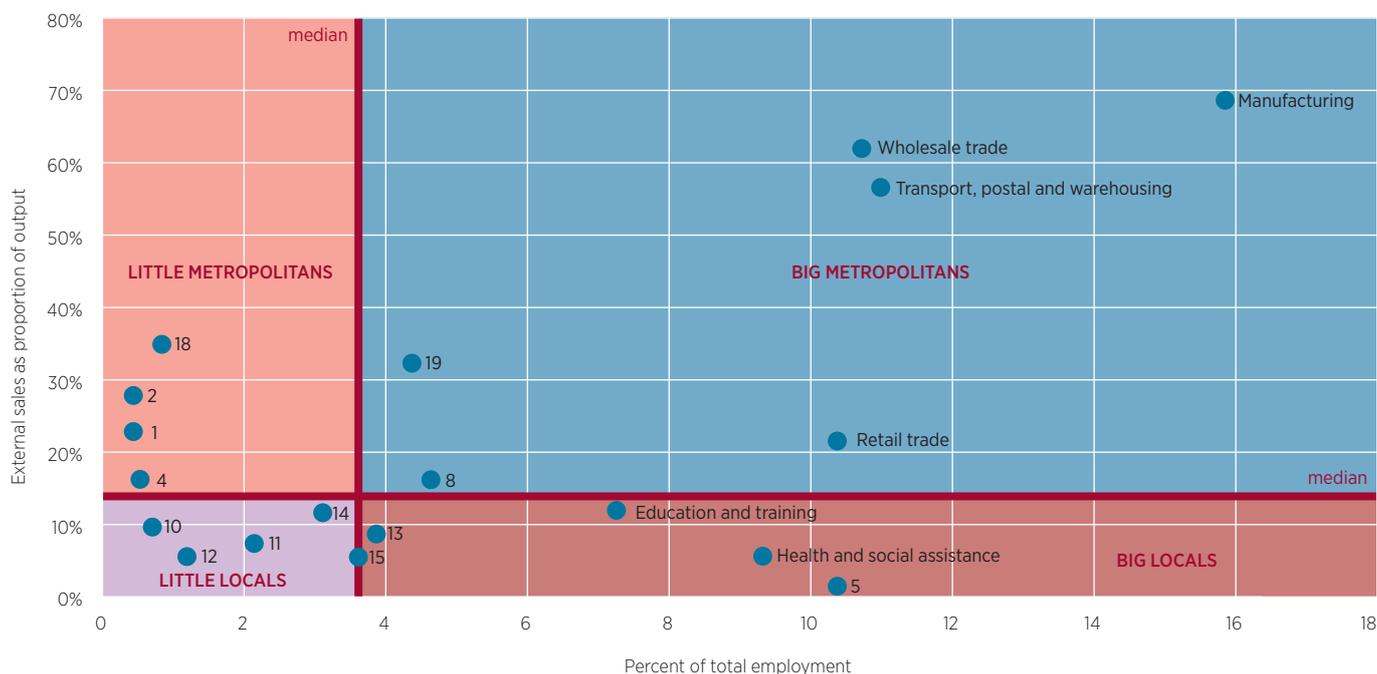
→ Like Blacktown, the Cumberland economy is dominated by three sectors with significant metropolitan exposure, namely ‘manufacturing’ and the two logistics sectors, ‘transport, postal and warehousing’, and ‘wholesale trade’.

→ The LGA’s three other large sectors – ‘retail trade’, ‘health and social assistance’ and ‘education and training’ – have limited exposure to the metropolitan economy.

→ Otherwise, economic activity in the Cumberland local economy is very much focused on local sales. We see the impact of this local focus in later sections where we observe for the LGA a deficiency in the number of lead firms and of high-impact industry sectors.

Figure 17 External sales, Cumberland, FY2019-20 (see key page 4)

Source: National Institute of Economic and Industry Research, 2021. Compiled by <http://www.id.com.au>



Like Blacktown, the Cumberland economy is dominated by three sectors with significant metropolitan exposure, namely ‘manufacturing’ and the two logistics sectors, ‘transport, postal and warehousing’, and ‘wholesale trade’.

THE EXPOSURE OF SECTORS IN PARRAMATTA TO EXPORTS

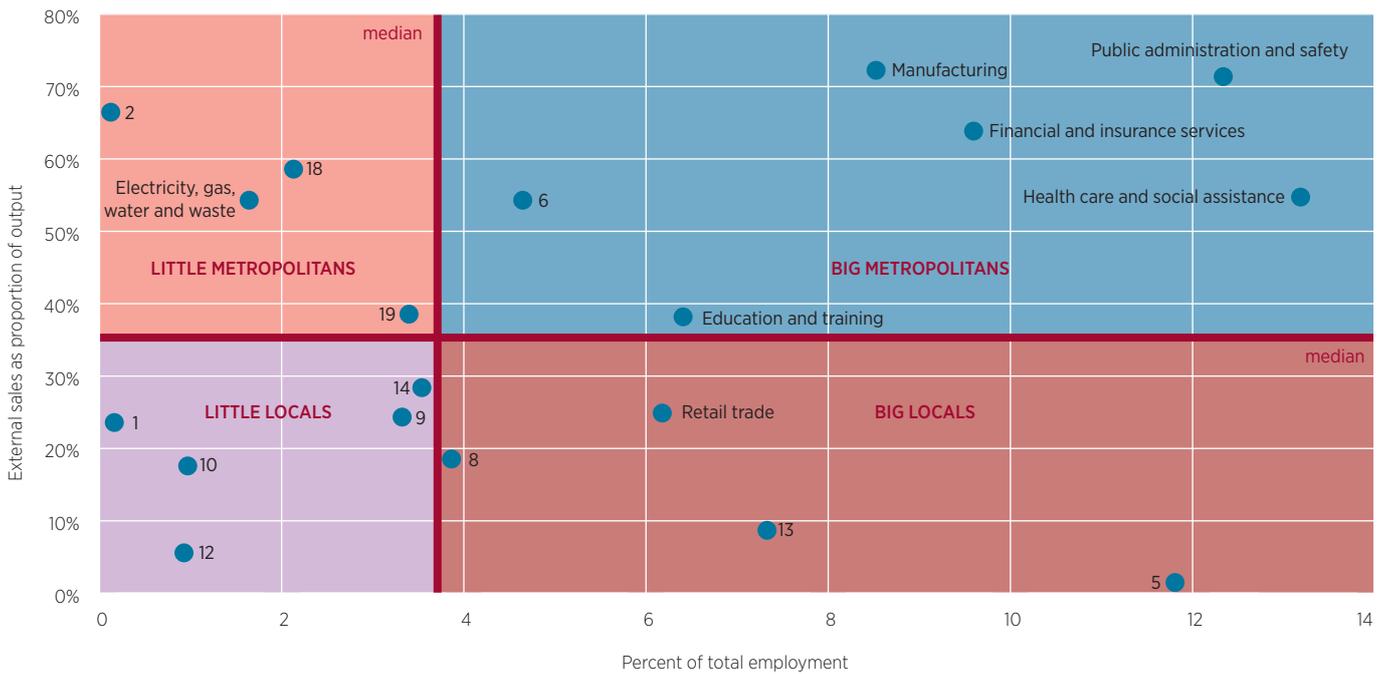
Figure 18 shows the extent to which sectors in the Parramatta local economy, based on pre-COVID-19 data, are part of the tradeables economy. The figure reveals:

→ The Parramatta economy is dominated by four sectors with major metropolitan exposure. The first of these is ‘public administration and safety’ where we find significant contributions by public sector agencies located in the Parramatta CBD, especially NSW Police, and the Corrective Services facilities at Silverwater. The other sectors with notable metropolitan market presence are ‘health care and social assistance’ based on a major contribution from the Westmead health precinct; ‘manufacturing’ where there are significant metropolitan-focused firms across the LGA; and ‘financial and insurance services’ which is dominated by the Commonwealth Bank’s (soon to be closed) operations in the Parramatta CBD and at Sydney Olympic Park.

- The ‘education and training’ sector in Parramatta has a more significant focus on the metropolitan market than we find for this sector in the other LGAs. This raised level is explained by the institutional presence of Western Sydney University in Parramatta CBD and Rydalmere locations, which attract enrolments from across the metropolitan area and internationally.
- Parramatta’s ‘electricity, gas, water and waste’ sector is heavily invested in the wider metropolitan economy despite its relatively small size. Key here is the presence of Sydney Water, especially from its Parramatta CBD head office operations. We analyse the importance of Sydney Water as a lead firm in a later section.
- A large number of sectors in the Parramatta local economy have only modest presence in the metropolitan economy despite the perception of Parramatta as a higher order centre in western Sydney. The relatively low involvement of Parramatta’s ‘retail trade’ sector in the wider metropolitan economy is somewhat surprising. Further investigation of this sector using alternate data is probably warranted.

Figure 18 External sales, Parramatta, FY2019-20 (see key page 4)

Source: National Institute of Economic and Industry Research, 2021. Compiled by <http://www.id.com.au>



The ‘education and training’ sector in Parramatta has a more significant focus on the metropolitan market than we find for this sector in the other LGAs.

THE EXPOSURE OF SECTORS IN THE HILLS TO EXPORTS

Figure 19 shows the extent to which sectors in The Hills local economy, based on pre-COVID-19 data, are part of the tradeables economy.

The figure reveals:

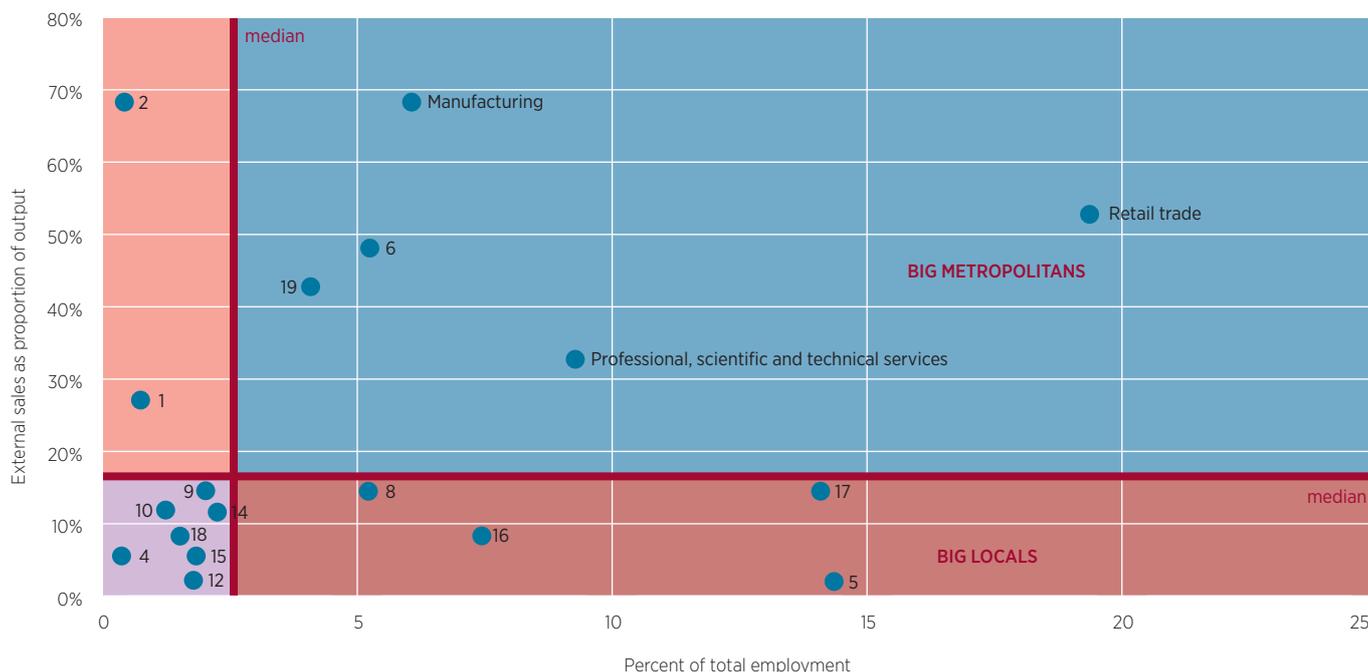
→ The Hills economy is dominated by four sectors with major metropolitan exposure, namely 'retail trade', 'manufacturing', 'wholesale trade' and the 'professional, scientific and technical services' sector. In the latter, the medical equipment supplier ResMed

is prominent. Yet the standout performer in this group of sectors is 'retail trade', reflecting the higher-order retailing activity conducted by the cluster of home décor and renovation retailers in Castle Hill.

→ Otherwise, economic activity in The Hills economy is focused on local transactions. We see the impact of this local focus in later sections where we find for the LGA an absence of both lead firms and high-impact sectors.

Figure 19 External sales, The Hills, FY2019-20 (see key page 4)

Source: National Institute of Economic and Industry Research, 2021. Compiled by <http://www.id.com.au>



IMPLICATIONS

Put together, the analysis of the four LGAs shows some straightforward patterns for the CCD local economies. A first is that the 'manufacturing' and combined logistics ('transport, postal and warehousing' and 'wholesale trade') sectors are significantly engaged in the metropolitan economy across *all* CCD local economies. A second pattern, somewhat surprisingly, is the confinement of a number of otherwise significant sectors to local markets and service domains, especially the 'construction', 'education and training', 'health and social assistance' and 'retail trade' sectors. Exceptions to this pattern tell an important story, being that when one of these sectors houses a significant higher-order goods or services provider or an agglomeration of higher-order providers then more significant metropolitan engagement follows. The exemplars here are Western Sydney University in the Parramatta LGA, the Westmead hospital complex, also in Parramatta, and the cluster of home décor and renovation retailers in The Hills. A third 'pattern' involves only two cases yet merits comment. This is the heightened engagement in the metropolitan economy in the utilities sector ('electricity, gas, water, waste') when a significant entity is involved. The presence of Endeavour Energy in Blacktown and Sydney Water in Parramatta is linked directly to raised level of exports in their respective LGAs with, as we see in a later section, significant local multiplier impacts.

In the next section, we delve into the composition of the four local economies and their key drivers by examining the extent to which the economic sectors are embedded into their local economies and within thick value chains.

Yet the standout performer in this group of sectors is 'retail trade', reflecting the higher-order retailing activity conducted by the cluster of home décor and renovation retailers in Castle Hill.

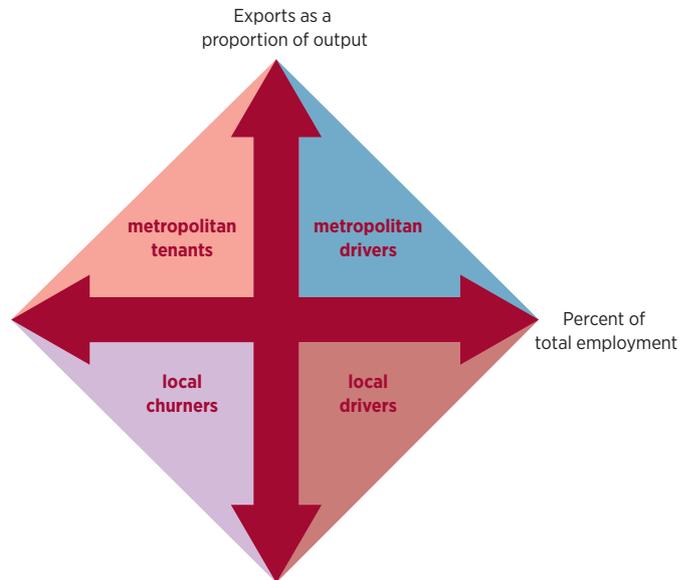
7. Impact multipliers

- Local economies benefit enormously from the presence of economic sectors that not only generate external earnings but are embedded in their host economies through suppliers, contractors and local labour.
- The ‘manufacturing’ sector is the stand-out generator of the multiplier effects that come from high levels of local embeddedness.
- The ‘construction’ sector also generates high multiplier effects across the CCD economies, even without the market reach of the CCD manufacturers.
- The logistics sectors have not yet evolved strong linkages to their host economies.
- Key utilities players generate strong multiplier effects.
- A number of acclaimed office decentralisations have yet to embed locally, meaning their multiplier impacts are disappointing.

Many commentators use the metaphor of a leaky bucket to explain multiplier effects on a local economy.¹ If a local economy has weak supply chains, minimal strategic couplings² and poor presence in external markets, then water trickling into the local economic bucket will leak quickly from its many holes. Better for the health of a local economy is when external earnings are piped directly to high-repetition, internal flows of revenue – water forced round and round in the bucket – by the use of local partners and local suppliers and by maximum re-circulation of local spending. We measure the extent of this local capture of economic value through impact multipliers. These calculate the income growth arising from the input of new spending to an economy due to the positive knock-on effects enjoyed by local partners, suppliers, workers and retailers.

In this section we calculate what are called ‘Type II impact multipliers’. These measure how much value is created in a local economy by new revenue flows, including value generated along local supply chains (called the direct effects), and the spending from household pay packets pumped-up by participating workers (called the indirect effects). We again present our results using a matrix (figure 20). The matrix shows the contribution of an industry sector to value generation and employment in the local economy (on the horizontal axis) and the export earnings of that sector as a proportion of its total earnings (on the vertical axis). In other words, the matrix shows what happens to external earnings once they start circulating in the local economy.

Figure 20 The distribution of sectors according to multiplier impact



The quadrants in figure 20 explain how a local economy benefits from external earnings. In the top right hand quadrant, we see sectors that generate earnings from the metropolitan economy *and* have high multiplier impacts on the local economy. We call these sectors ‘metropolitan drivers’. In the bottom right hand quadrant are sectors – we call them ‘local drivers’ – that also have strong impact multipliers but without access to significant external earnings. The left hand quadrants show sectors with impact multipliers below the all-LGAs median. The top left hand quadrant are those sectors that serve metropolitan customers but lack local embeddedness. We call these sectors ‘metropolitan tenants’ because, while they generate significant external earnings and have a local presence, they display weak links to the local economy. Typical are those government agencies that take office positions in a strategic centre but aren’t heavy recruiters of local labour and engage few local contractors. In the bottom left hand quadrant, then, are the remnant local businesses, those that generate weak local multipliers. These are businesses that rely heavily on local consumer spending. We call them ‘local churners’. While they are important to the vibrancy of local service centres, they are not significant value creators to the local economy overall.

Better for the health of a local economy is when external earnings are piped directly to high-repetition, internal flows of revenue – water forced round and round in the bucket – by the use of local partners and local suppliers and by maximum re-circulation of local spending.

1 See for example NEF Consulting at <https://www.nefconsulting.com/our-services/evaluation-impact-assessment/local-multiplier-3/#:~:text=A%20higher%20proportion%20of%20money,lead%20to%20better%20living%20standards> accessed 19 March 2021
 2 Strategic coupling refers to the partnerships and alliances that are forged, usually by way of considered tactical action, in order to advance the power of an enterprise or group of enterprises in a competitive market situation.

THE POTENCY OF IMPACT MULTIPLIERS IN BLACKTOWN

Figure 21 Blacktown's impact multipliers, FY2019-20 (see key page 4)

Source: National Institute of Economic and Industry Research, 2021. Compiled by <http://www.id.com.au>



Figure 21 assesses the economic punch of sectors in the Blacktown local economy, again based on pre-COVID-19 data. The figure reveals:

- The Blacktown economy has only two sectors describable as 'metropolitan drivers'. One is the 'manufacturing' sector, a large employer with a significant external earnings profile. The other metropolitan driver in Blacktown is the utilities sector ('electricity, gas, water, waste'), which, as explained previously, includes Endeavour Energy's cluster of operations. Clearly, as we detail in section 9, this cluster is embedded in thick supply and distribution chains with strong local connections, meaning the local economy gains much from its operations.
- The 'construction' sector, while local facing in terms of market demand, has strong multiplier impacts. This reflects the sector's heavy use of local contractors, suppliers and workers.

- The two logistics sectors, 'transport, postal and warehousing' and 'wholesale trade' – responsible for large-scale industrial and commercial property investments in the Blacktown LGA, especially since the opening of the M7 motorway in 2005 – have yet to engineer strong local connections either through supply chains or customer presence. Insertion of these growth sectors into local value chains is an obvious project for local economic managers.
- There is a preponderance of sectors that, while embedded in the local Blacktown economy, want for economic impact. The 'education and training' and 'health care and social assistance' sectors are two of these sectors. Worth noting here is that these two sectors are pointed to by the Greater Sydney Commission as having potential to act as economic drivers. Yet the impact performance of the sectors is well below these expectations.³ More favourable economic flow-on effects from these sectors will come from investments that elevate their market reach beyond their local district. Similarly, the LGA wants for 'professional services' activity capable of higher-level economic impact, again, by more significant metropolitan market participation.

³ For example, action 53 of the Greater Sydney Commission plan for the CCD promotes education and health sectors as sources of local economic competitiveness. See <https://www.greater.sydney/central-city-district-plan/productivity/jobs-and-skills-%C2%A0-city/supporting-growth-of-targeted> accessed 19 March 2021

THE POTENCY OF IMPACT MULTIPLIERS IN CUMBERLAND

Figure 22 Cumberland's impact multipliers, FY2019-20 (see key page 4)

Source: National Institute of Economic and Industry Research, 2021. Compiled by <http://www.id.com.au>

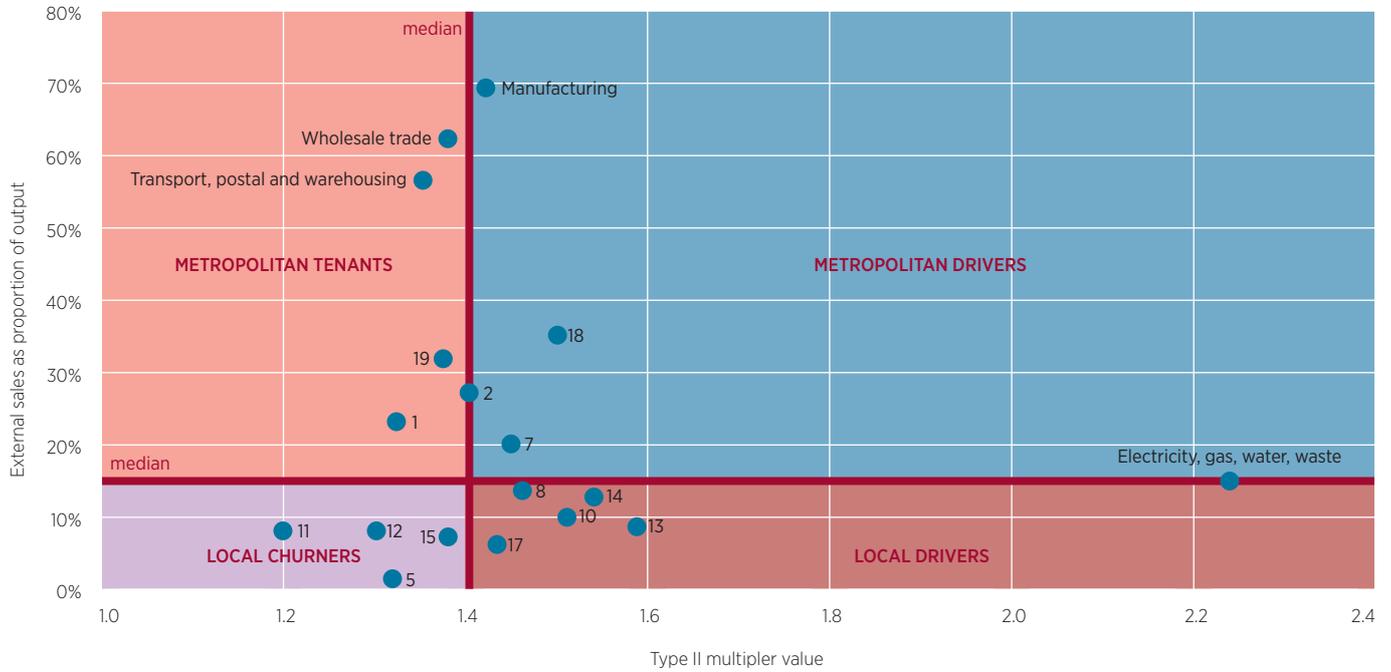


Figure 22 shows the sectoral multipliers for the Cumberland local economy, again based on pre-COVID-19 data. The figure reveals:

- Like in Blacktown, the 'manufacturing' sector in Cumberland is a genuine 'metropolitan driver', operating as a large employer coupled with a significant external earnings profile and an above-median impact multiplier.
- The two logistics sectors, 'transport, postal and warehousing' and 'wholesale trade' resemble Cumberland's manufacturing sector to a degree although with impact multiplier effects slightly below the LGA median. Like Blacktown, the logistics sector in Cumberland has potential for developing stronger local linkages.
- The utilities sector ('electricity, gas, water, waste'), although not a large employer in Cumberland, has a very high impact multiplier. This reflects the operation of the waste sub-sector in the LGA with the significant presence of global waste processors, Cleanaway, SUEZ and Veolia, and their local contractors. The positive impact of these firms and contractors shows the benefits of embedding economic activity in the local economy. We explore the embeddedness of Cumberland's waste sector in section 9.

→ Then, also like Blacktown, there is a preponderance of sectors in Cumberland that are heavily reliant on the day-to-day churn of the local economy but lack noteworthy growth or spread effects. Similarly, the LGA has a deficit in professional services activity, including in education and health services, where higher-level economic impact might be generated. The limited flow-on effects from Cumberland's very localised health services activity, for example, contrast starkly with the hefty impacts of health services in Parramatta where the Westmead complex plays a genuine metropolitan role.

Then, also like Blacktown, there is a preponderance of sectors in Cumberland that are heavily reliant on the day-to-day churn of the local economy but lack noteworthy growth or spread effects.

THE POTENCY OF IMPACT MULTIPLIERS IN PARRAMATTA

Figure 23 Parramatta's impact multipliers, FY2019-20 (see key page 4)

Source: National Institute of Economic and Industry Research, 2021. Compiled by <http://www.id.com.au>

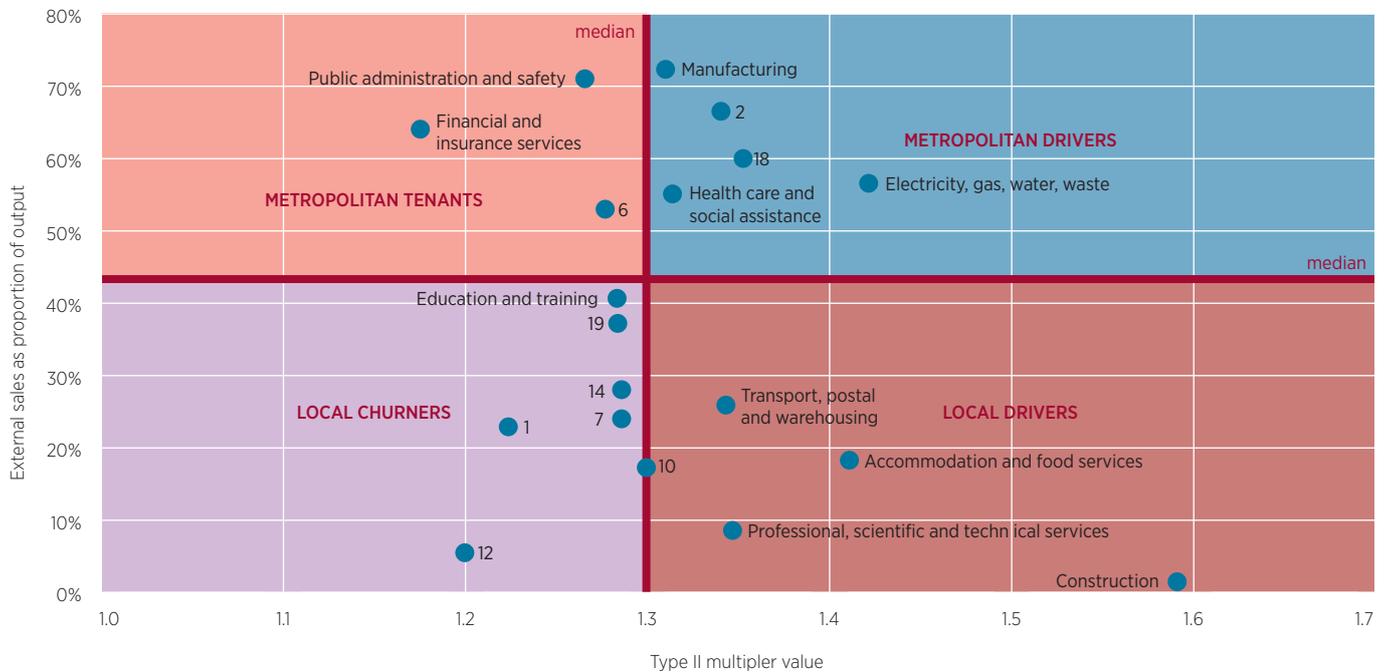


Figure 23 provides an assessment of sectoral multipliers in the Parramatta local economy, again based on pre-COVID-19 data. The figure reveals:

- The importance of lead firms and institutions in transforming economic sectors into metropolitan drivers. Thus, in the top right hand quadrant of figure 4 we observe not only the importance, once again, of ‘manufacturing’ in generating high multiplier effects, but also the multiplier effects generated by Westmead hospital in the ‘health care and social assistance’ sector and Sydney Water in the utilities (‘electricity, gas, water, waste’) sector. Western Sydney University’s role as a lead institution in the ‘education and training’ sector also elevates this sector as an emerging metropolitan driver.
- Much-vaunted office sector developments in Parramatta – contained in the ‘public administration and safety’ and ‘financial and insurance services’ sectors – have yet to develop the supply chain and user connections that drive stronger economic impacts within the local economy. An explanation for this underperformance might be that staffing and contracting arrangements for these office developments do not (yet) involve strong local connections, meaning the physical presence of these sectors in Parramatta has yet to translate into compound increases in the local circulation of economic value.

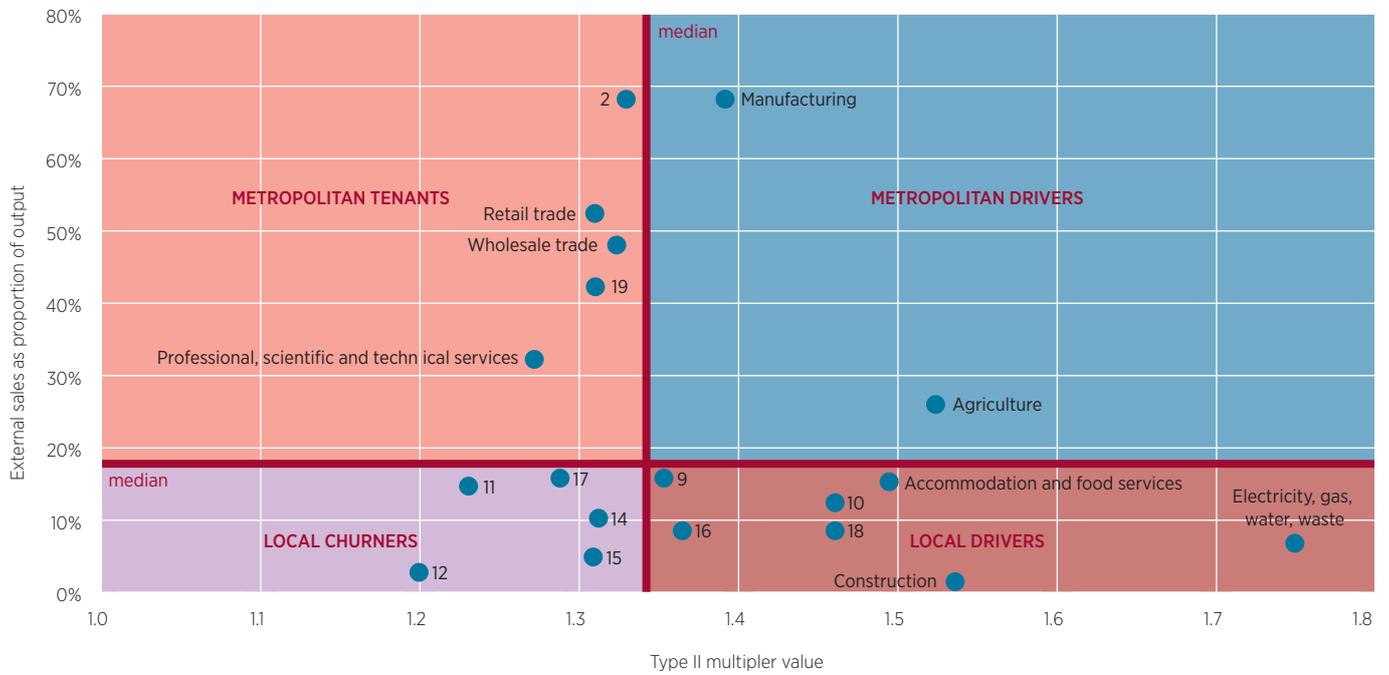
→ In contrast to the ‘churner’ role of small enterprises in the Blacktown and Cumberland economies, SME-dominated sectors in Parramatta are more likely positioned in the ‘local drivers’ quadrant. This suggests the presence of higher impact multipliers through strong local linkages. Once again, the ‘construction’ sector is the stand-out example.

Much-vaunted office sector developments in Parramatta – contained in the ‘public administration and safety’ and ‘financial and insurance services’ sectors – have yet to develop the supply chain and user connections that drive stronger economic impacts within the local economy.

THE POTENCY OF IMPACT MULTIPLIERS IN THE HILLS

Figure 24 The Hills' impact multipliers, FY2019-20 (see key page 4)

Source: National Institute of Economic and Industry Research, 2021. Compiled by <http://www.id.com.au>



Finally, figure 24 evaluates the impact of each economic sector in The Hills local economy, again based on pre-COVID-19 data. The figure reveals:

- The Hills local economy wants for significant 'metropolitan drivers'. Potential high-impact sectors – especially 'manufacturing', 'retail trade', 'wholesale trade' and 'professional, scientific and technical services' – while showing useful levels of external earnings, lack the levels of embeddedness in the local economy that would yield more favourable multiplier effects.
- Like many SME-dominated sectors in the Parramatta economy, many SME-dominated sectors in The Hills are positioned in the 'local drivers' quadrant, indicating their significant local linkages. The utilities sector ('electricity, gas, water, waste') joins the 'construction' sector as a significant 'local driver' for The Hills economy.

The Hills local economy wants for significant 'metropolitan drivers'.

IMPLICATIONS

Put together, analysis of the four LGAs reveals much about the generation and circulation of income in the local economy buckets within the CCD. A first understanding is that the 'manufacturing' sector is consistently the standout sector for generating local economic impact from its significant presence in the metropolitan economy. Yet this finding comes with disappointment that the manufacturing sector undertakes this important income-generation role too often in a singular fashion. Other sectors need to mimic manufacturing's broad shoulders.

A second understanding is that, with the exception of 'manufacturing', the sectors domiciled in the CCD economies that rely significantly on metropolitan-sourced earnings have below-the-median economic impacts. On this 'can show improvement' list are the logistics sectors ('transport, postal and warehousing' and 'wholesale trade') and, in respect to Parramatta, the white collar sectors, 'public administration and safety' and 'financial and insurance services'. Considerable economic betterments are available should these sectors migrate to the 'metropolitan drivers' quadrant through engagement with local supply chains and recruitment from local labour pools.

A third understanding is that the large numbers of SMEs across the LGAs perform mainly 'local churner' roles in the local economies, meaning they undertake few value-adding investments capable of piping more water into local economic buckets. The exception here is the 'construction' sector where local multiplier effects are handsomely above those of other sectors in each LGA.

A fourth understanding is that the 'education and training' and 'health care and social assistance' sectors too often play little more than local churner roles, except when there is presence of a significant lead institution such as Westmead hospital in the 'health and social assistance' sector and Western Sydney University in the 'education and training' sector. In such circumstances enhanced economic impacts are generated. This insight into how lead firms and institutions can enhance local economies can also be seen in the operations of Sydney Water in Parramatta, Endeavour Energy in Blacktown, and the waste sub-sector in Cumberland. We return to the importance of lead firms, institutions and sub-sectors in section 9.

In the next section, we turn our attention to a specific issue foreshadowed in this and previous sections, namely the consequences for skilled labour across key sectors in the four LGAs.

8. The need for degreed jobs

- The most successful urban economies host firms and institutions with high concentrations of degreed workers.
- The CCD economies exhibit large degreed-jobs deficits compared to Sydney’s metropolitan averages.
- The exception is Parramatta; however, even this centre underperforms its status as Sydney’s second CBD.
- The employment profiles of the CCD’s strategic centres need to be strengthened with degreed workers to improve prospects for growth, innovation and enterprise formation.

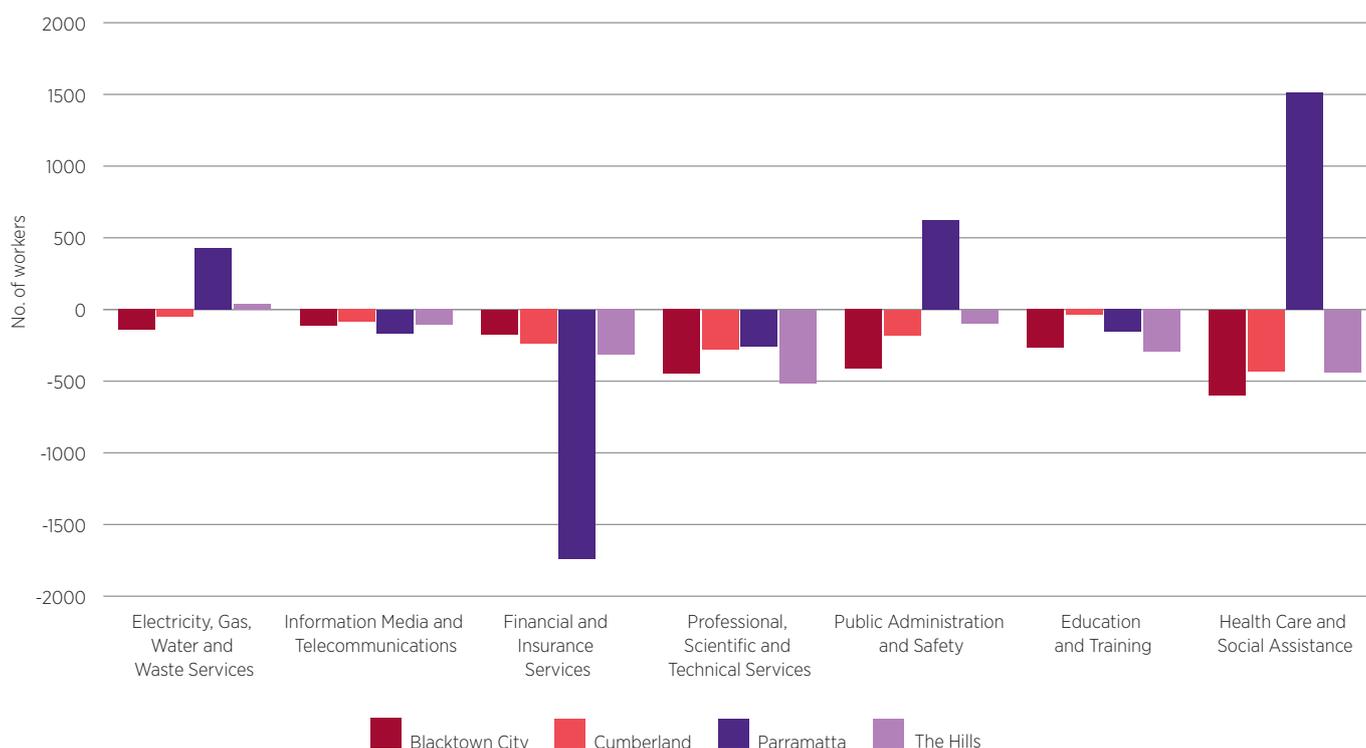
In his influential book, *The New Geography of Jobs*,¹ American scholar Enrico Moretti details the pathway taken by successful 21st century metropolitan economies. Central to success, says Moretti, is the navigation of a shift from economies based on the production of physical goods to economies that are driven by innovation and knowledge. This journey, says Moretti, isn’t a simple process of displacing sectors like manufacturing with sectors like professional services. Rather, he says, all sectors of the economy should embrace an intensification of skilling and innovation, with a key indicator of future success being the extent to which a sector has a rising proportion of its workforce holding university qualifications. Let’s call these degreed workers. Economic geographer Richard Florida says concentrations of degreed workers are central in a ‘winner take all’ battle between metropolitan economies around the world.²

Informed by Moretti’s argument, this section builds on understandings of the trends in the CCD from previous sections by undertaking an assessment of the intensity of degreed workers across the CCD’s economic sectors. We emphasise, in the first instance, the importance of lead firms. Thus far we have seen how the impact of lead firms varies according to their embeddedness in local value chains and their use of local labour. Moretti explains how lead firms with high proportions of degreed workers generate significantly higher positive impacts on the local economy. More degreed workers enhance the value-add that comes from belonging to a specific geographical locality. In turn, this builds the merit and longevity of a local facility in the portfolio of a large firm or institution. Moretti also notes that spin-offs and start-ups in a district are positively correlated with the presence of degreed workers in lead firms. A further enhancement to a district’s competitiveness comes from more intense political engagement by groups of resident degreed workers, resulting in more spending on local amenity by provincial and national governments. Local liveability improves as a direct consequence – and a virtuous cycle of betterment proceeds.

Figure 25 shows our calculation of the degreed-jobs deficit across the CCD economies at the last census. The graph shows the extent to which jobs in local economic sectors match the degreed worker profiles for these sectors based on overall metropolitan averages. We find, for example, that the Parramatta economy hosts 431 more degreed jobs in its utilities sector (‘electricity, gas, water and waste services’) than the metropolitan average for this sector would suggest, but that there are 413 fewer degreed jobs in the ‘public administration and safety’ sector in Blacktown than might be expected if the metropolitan average prevailed.

Figure 25 Degreed-jobs deficit across the CCD economies, 2016

Source: ABS, Census of Population and Housing, 2016. Compiled by www.id.com.au



1 Moretti, Enrico. 2012, *The New Geography of Jobs*. Houghton Mifflin Harcourt: Boston.

2 See <https://www.bloomberg.com/news/articles/2017-07-06/a-big-advantage-of-bigger-cities-more-skilled-workers> accessed 2 May 2021

Figure 25 reveals the following:

- For Blacktown, all key services sectors are found to have a lower presence of degreed workers compared to metropolitan averages. In the utilities sector, where there could be an expectation for a favourable concentration of degreed jobs arising from Endeavour Energy's investments in the LGA, there is a deficit of 142 degreed jobs. The largest deficit for degreed jobs is in the 'health care and social assistance' sector, registering 596 jobs below the metropolitan mean. This is explained by the absence of a higher-order, comprehensive hospital in the LGA. In the 'public administration and safety' sector, there is a deficit of 413 degreed jobs, exacerbated to a significant extent by the number of non-degreed jobs at the Parklea jail complex. There is a similar size degreed-jobs deficit (447) in the 'professional, scientific and technical services' sector.
- For Cumberland, we can observe similar deficiencies in its degreed-jobs profile. Like the Blacktown LGA, Cumberland lacks a higher-order hospital leaving the LGA with a 431 degreed-jobs deficiency in the 'health care and social assistance' sector. The LGA also experiences significant degreed-jobs deficits in 'financial and insurance services', 'public administration and safety', and 'professional, scientific and technical services', again a reflection of the absence in Cumberland of a comprehensive enterprise or institution in these sectors.
- For The Hills, we find the deficits uncovered for Blacktown and Cumberland are reproduced in similar ways. The absence of a higher-order teaching hospital leaves the LGA with a 437 degreed-jobs deficiency in the 'health care and social assistance' sector. Similarly, the absence of major firms and institutions undertaking higher-order functions means degreed-jobs deficits in the 'financial and insurance services', 'professional, scientific and technical services' and 'education and training' sectors.
- For Parramatta, we find significantly more favourable degreed-jobs densities compared to the other LGAs. For each of the utilities, 'public administration and safety', and 'health care and social assistance' sectors we find a degreed-jobs *surplus* compared to metropolitan wide averages, the betterment attributable to the presence of Sydney Water, state government offices and the Westmead hospital complex, respectively. The disappointing sector for Parramatta is 'financial and insurance services' reflecting the poor level of degreed jobs among the city's finance and insurance firms, notably at the Commonwealth Bank operations in Parramatta CBD and at Sydney Olympic Park, where back office support and call centre functions are concentrated. These operations are in the process of being relocated to the Advanced Technology Park in Sydney's inner west.

For Blacktown, all key services sectors are found to have a lower presence of degreed workers compared to metropolitan averages.

IMPLICATIONS

In total we calculate a degreed-jobs deficit of 4,912 across the CCD for the seven services sectors analysed. For Blacktown, the deficit is 2,151, for Cumberland 1,295, and for The Hills 1,725. The exception to these high deficits is Parramatta where a net degreed-jobs surplus of 259 is manifest. While this shows a favourable degreed-jobs density for Parramatta, slightly higher than the metropolitan average, the availability of degreed jobs is still lower than might be anticipated from the metropolitan area's second-ranked urban centre.

One of the obvious manifestations of the degreed-jobs deficit across the CCD is the daily outflow of degreed workers in pursuit of jobs that match their qualifications. Our recent study *Where are the Jobs?* estimates that only 40.4% of western Sydney's knowledge workers are employed in jobs in western Sydney, necessitating a high rate of outward commuting from the region.³ The CCD portion of western Sydney contributes heavily to this outflow due, obviously, to the CCD's local degreed-jobs deficit.

Aside from the journey-to-work question, the under-supply of degreed jobs in the CCD has other implications. One is that the deficiency of degreed jobs is symptomatic of the underperformance of the CCD's strategic centres. The historical role of strategic centres in the evolution of urban economies worldwide has been the production and supply of higher-order goods and services. In a modern economy, based on innovation and knowledge, the employment profiles of higher-order centres need to be biased in favour of degreed-jobs. That the CCD economies – including Parramatta, an under-performer – lack such employment profiles is attributable in no small way to weaknesses in their strategic centre make-up and performance. We return to the need for strong strategic centres in section 11.

A second implication, drawing again from Moretti, is that weak human capital formations erode the status of strategic centres in the metropolitan urban hierarchy. A chicken-and-egg problem becomes entrenched: the strategic centres lack the degreed worker profile to attract significant firms and institutions; and so the strategic centres continue to underperform in degreed workers segments of the labour market. Then follows a reduced likelihood of new enterprise formation and lower rates of innovation. As will be discussed in section 10, such weaknesses lead to diminished multiplier effects, despite the presence of larger firms and institutions, with a higher proportion of enterprises chasing the limited pool of dollars in the churn portions of the local economy.

³ O'Neill, P., 2020a, *Where are the jobs? Part 1: Western Sydney's Short-lived Jobs Boom*, Centre for Western Sydney, Western Sydney University, Parramatta.

9. The lead players

- Lead firms and institutions are the drivers of value chains in a local economy. Embedding and nurturing lead firms make local value chains more resilient, more productive and open to higher rates of innovation.
- The CCD has a number of significant lead firms and institutions. However, these are embedded in their local economies to varying degrees. There are substantial value-generating opportunities for elevating levels of embeddedness in the CCD economies.
- Case studies of lead firms and institutions show substantial direct employment benefits alongside high levels of engagement with SMEs and local service contractors.

The importance of lead firms, institutions and agencies ('lead firms' for short) in local economic development is one of the enduring understandings of regional development theory. Lead firms are the businesses and agencies that are significantly larger than their sectoral peers. They employ many people, invest heavily. They act as frontrunners in stretching market reach, building value chains and driving innovation. They influence policy makers. The power and importance of lead firms, in short, is that they control strategic assets at the most profitable points of value chains.¹

The immersion of a lead firm into a local economy is known as embeddedness.² An embedded firm or institution shares in growth and prosperity with its host economy through value chains and multiplier effects. The most basic of these connections are known as backward (or supplier) linkages and forward (or market-oriented) linkages. We have seen in previous sections how construction industry activity in the CCD economies is a builder of these important local linkages. In more advanced levels of embeddedness, we find linkages are assembled around agglomerations or clusters of SMEs and a lead firm or institution. An example here is the advanced water supply and treatment value chain in western Sydney, orchestrated by the head office of Sydney Water in Parramatta CBD (see box). These types of value chains generate a virtuous cycle, whereby firms and agencies share access to:

- 'Untraded inter-dependencies', such as sharing a pool of highly productive workers or being members of an active local business network.
- 'External economies', such as having access to quality local transport and telecommunications infrastructure.
- 'Knowledge transfers', by having access to local information flows shared through workers and business networks.

The power and importance of lead firms, in short, is that they control strategic assets at the most profitable points of value chains.

A local economy can therefore enjoy considerable benefits from the presence of a suitably embedded lead firm or institution.³ Higher levels of productivity and growth are typical benefits. Stronger, more enduring relationships develop with external supplier firms and downstream distribution networks. A raised level of resilience ensues, not only because of the capacity of the lead firm or institution to adapt to an external shock (like COVID-19) or a changing operational environment, but because of the presence of an ecosystem of supporting firms and agencies that provides a thicker, more adaptive economic buffer.⁴

There are also non-commercial benefits of lead firms. Significantly, the national reputations of large firms and institutions spill-over onto a regional economy and its participants. The North Ryde local economy, for example, benefits considerably from having the offices of Microsoft, Optus and Fujitsu within its Macquarie Park precinct. Alongside obvious commercial benefits, reputational effects can be leveraged for infrastructure spending, tax benefits, labour training assistance and so on. In turn this builds a layer of supporting agencies, or institutional thickness, which contributes in a systematic way to improved competitiveness, workforce productivity, business networking and cooperation, and rates of innovation.⁵

The contrary position, of course, is that when large firms or institutions are not significantly embedded in a local economy, they have a greater propensity to exit the region when large scale rationalisation in an organisation or sector takes place. The Commonwealth Bank's exit from Parramatta and Sydney Olympic Park is an example. So too, a large firm or institution might engage in government-led decisions that may be to the detriment of the host region (and in favour of a region elsewhere). Or the firm might undertake internal restructuring that negatively affects other local firms, such as by ending supply contracts or scrapping shared facilities.

LEAD FIRMS AND INSTITUTIONS IN THE SYDNEY METROPOLITAN AND CCD ECONOMIES

Importantly, lead firms and institutions are the key entities through which local economies engage with the metropolitan economy.⁶ This is of crucial importance in metropolitan Sydney, a city with two major qualities. First, Sydney is Australia's gateway city, the nation's portal for the passage of the information, ideas, finance and decisions, and the worker flows, that determine how Australia engages with the global economy. Second, Sydney is Australia's largest metropolitan economy, where the full suite of economic activity – from materials handling, processing and distribution through to advanced services – is played out by in the presence of 5.3 million people on a daily basis.

Lead firms and institutions, by definition, lead in the assembly of Sydney's strategic economic spaces, from assembling concentrations of advanced producer services in the CBD through to forging specialisations in the suburbs and outer edges of the metropolis. Lead firms are also the drivers of the level and the conditions of employment and they control the major distribution chains and sites of consumption.

1 Storper, Michael. 2011. *op. cit.*

2 Dicken, Peter, 1976, The multi-plant business enterprise and geographical space: Some issues in the study of external control and regional development, *Regional Studies*, 10, 401-412,

3 Erickson, R.A. 1974, The Regional Impact of Growth Firms: The Case of Boeing, 1963-1968. *Land Economics* 50, 127-36.

4 Urban, M., Pažitka, V., Ioannou, S., Wójcik, D. 2019, Lead firms and sectoral resilience. *Financial Geography Working Paper Series*, 23, ISSN 2515-0111

5 Amin A. and Thrift, N. 1995, Globalization, institutional "thickness" and the local economy' in Healey P, et al., eds, *Managing Cities: The New Urban Context*, John Wiley and Sons, Chichester, 91-108

6 Lyons D. 2000, Embeddedness, milieu and innovation among high-technology firms, *Environment and Planning A: Economy and Space*. 32, 891-908.

As we discuss in forthcoming sections, the commitment of lead firms and institutions to specific locales also determines the flow-on effects of value chains in a local economy, as well as the status of an economy's strategic economic spaces within the hierarchy of metropolitan urban centres.

Lead firms and institutions in the CCD economies include Endeavour Energy, Sydney Water, Westfield Parramatta and Blacktown, Western Sydney University, NSW Police Force Parramatta, MTC-Broadspectrum (Parklea prison), Corrective Services NSW (Silverwater prisons), and ResMed at Norwest. There are also significant value chains that congregate around more than one lead firm. Examples of such congregations include the waste companies – centred on Cleanaway, Veolia and SUEZ – in Cumberland LGA, the Hills Super Centre and businesses in its adjoining home décor and improvement precinct in The Hills, and the hospital and health precinct in Westmead. Four profiles from this list are featured in boxes that accompany this section.

POST-COVID-19

Lead firms and institutions are highly likely to be the primary agencies for the development of remote working options, including working-from-home, as we discuss in section 12. Lead firms will also steer the re-assembly of both materials processing and service delivery chains disrupted by COVID-19. Better integration and value extraction from the logistics sectors is one example of where lead firms might be better engaged. Put together, the future shape and health of value chains in the CCD will very much depend on the operations of its lead firms and institutions.

Importantly, the positive contributions of lead firms and institutions will also be key determinants of the composition and growth directions of the CCD's strategic centres. We explore this role in section 11.

Finally, we note the role of metropolitan planning agencies in the attraction and nurturing of lead firms and institutions in the CCD economies. Certainly, the Greater Sydney Commission recognises the importance of lead firms in the development of the aerotropolis and the Western Parkland City through efforts to engage potential large investors. The GSC's list of MOU signatories indicating interest in a Western Parkland City presence includes Mitsubishi Heavy Industries Ltd, Hitachi Ltd, Samsung SDS, SUEZ, BAE Systems, GE Additive, Siemens and DB Schenker, and Northrop Grumman.⁷ Such enthusiasm for the engagement of lead firms, and the enhancement of the presence of existing lead firms, in the CCD economies would be a welcome policy initiative in the post-COVID-19 period.

IDEAS FOR AN ACTION TO SUPPORT LEAD FIRMS IN THE CCD ECONOMIES

This section recognised the important role played by lead firms and institutions in the CCD local economies. It has also demonstrated how lead firms might be assisted to grow the positive impacts they have on local economies and ensure their positive contribution is maintained and strengthened into the future. To these ends, we propose the development of an action plan. This plan should consider incorporation of four components:

1. An extensive survey of lead firms and institutions in the CCD economies might be undertaken. This would identify the district's lead firms and institutions, their prospects, impediments affecting their operation, and their relative importance to the local economies.
2. Case studies of the place of a lead firm or institution in a local value chain could expose how lead firms contribute to the generation and capture of economic value in the local economy. This appraisal could guide actions to enhance the participation of local SMEs and other firms in the operation of local value chains.
3. These materials should be packaged in accessible ways to become catalysts at a small number of summits where participants might explore ways of better assisting:
 - The local operations of lead firms.
 - The engagement of other firms and parties with lead firms via upstream and downstream linkages and partnerships.
 - Mutually beneficial partnerships between lead firms and regulators, planners and service providers.
 - The presence of lead firms in status building exercises for local strategic centres.
4. The participation of key state agencies including relevant arms of NSW Department of Planning, Industry and Environment, and Greater Sydney Commission, including by providing financial assistance, expertise and organisational resources to develop and implement the CCD's lead firms project.

Importantly, the positive contributions of lead firms and institutions will also be key determinants of the composition and growth directions of the CCD's strategic centres.

⁷ Greater Sydney Commission, 2020, *Annual Report 2019/20*, NSW Government, Sydney, p.38

ENDEAVOUR ENERGY IN THE BLACKTOWN LOCAL ECONOMY

Endeavour Energy is responsible for the safe and reliable supply of electricity to 2.5 million people in households and businesses across Sydney's greater west, Blue Mountains, southern highlands, Illawarra and south coast. In the Blacktown area, Endeavour Energy operates offices and facilities at Huntingwood, Kings Park and Glendenning. These operations involve management functions, customer relations, accounts, service depots, supplies and equipment maintenance.

Value chains in Blacktown LGA, and the CCD more broadly, are enhanced in the following ways by the operations of Endeavour Energy:

- Direct employment involves 1,650 onsite staff. It is estimated that 75% of these employees live in Blacktown and nearby LGAs.
- An additional 2,200 businesses supply services commissioned by Endeavour Energy. A significant number of these services are contracted to firms from within Blacktown and nearby LGAs.
- Other services obtained commercially from within Blacktown and nearby LGAs include cleaning, food and beverage supplies, building and grounds maintenance, and air conditioning services.

Endeavour Energy also builds, owns and operates the electrical network that powers the local Blacktown economy, and maintains street lighting on behalf of Blacktown Council. A transition to LED lights has saved about \$848,000 in costs to date and shaved greenhouse gas emissions.

Source: Personal communication, Endeavour Energy, 2021.

NSW CORRECTIVE SERVICES AT SILVERWATER

Corrective Services NSW operates a range of facilities on its Silverwater sites. These include Silverwater Women's Correctional Centre, Metropolitan Remand and Reception Centre, and the Dawn de Loas Correctional Centre. In total, the Silverwater facilities held 1,472 inmates as at December 2020 (ABS Cat. 4517.0 Prisoners in Australia, 2020).

The Silverwater complex undertakes custody functions including accommodation, rehabilitative and education programs, onsite health care and services, facilities and asset management, and transport and escort services.

The Silverwater complex contributes substantially to local employment. According to the 2016 census (place of work data), the SA2 district encompassing the Silverwater complex generated the following employment profile, totalling 1,206 jobs:

- Investigation and security services, 191 jobs.
- Correctional and detention services, 902 jobs.
- Other public order and safety services, 16 jobs.
- Police services, 104 jobs.

Besides these direct employment effects, value chains in the Parramatta LGA, and the CCD economy more broadly, are enhanced in the following ways by Corrective Services NSW at its Silverwater location:

- Engagement of local contractors and on-site supply services.
- Off-site services obtained commercially from within Parramatta and nearby LGAs including cleaning, food and beverage, building maintenance, and IT services.
- Contributions to the visitor economy through family and friends of inmates.
- Payments to local businesses for involvement in prisoner rehabilitation programs.

Source: Compiled from a range of public sources and secondary data.

SYDNEY WATER IN THE PARRAMATTA LOCAL ECONOMY

From its head office in Smith Street Parramatta, Sydney Water manages the supply of water, wastewater and stormwater services to more than 5 million people in greater Sydney and Illawarra. Sydney Water's services and operations are a significant part of the capacity of the CCD economies. Head office operations for Sydney Water involve management functions, engineering services, billing and customer relations.

Value chains in the Parramatta LGA, and the CCD more broadly, are enhanced in the following ways by the operations of Sydney Water:

- Sydney Water employs approximately 2,800 employees, of which 1,640 work from sites in and around Parramatta.
- Sydney Water estimates that 36% of contract services it commissions are supplied from within Parramatta or adjacent LGAs. Contributors to the Sydney Water value chain include (in round numbers) 200 suppliers from Blacktown LGA, 100 from Cumberland, 250 from Parramatta and 90 from The Hills
- In addition, there are multiple contractors onsite supplying catering, maintenance, security, cleaning and transport services.

Source: Personal communication, Sydney Water, 2021

WASTE COMPANIES IN CUMBERLAND LGA

Three major firms – SUEZ, Cleanaway and Veolia – have significant operations within the Cumberland LGA for the supply of metropolitan waste services, including recycling, and industrial and liquids services. They operate integrated, state-of-the-art facilities, transfer stations, engineered landfills, liquid treatment plants and refineries. One of the companies, SUEZ, has identified these value-enhancing features:

- 848 employees are employed directly in the Cumberland and Parramatta LGAs
- Approximately 85% of these employees live within these LGAs or nearby LGAs.

An important growth opportunity for the waste sector in Cumberland will come from the development and rollout of ideas from the circular economy. According to the European Parliament, the circular economy is “a model of production and consumption, which involves sharing, leasing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible. In this way, the life cycle of products is extended”.⁸

The application of the idea of the circular economy is a core strategy of the global waste firms. This provides opportunity for the development of economic activity from within the Cumberland economy based around:

- New technologies for waste disposal including the decarbonisation of the waste stream.
- Recovery of reuseable componentry and source materials.
- Re-routing parts of the waste stream into renewable energy generation.

Source: Compiled from personal communication with SUEZ, and from a range of public sources and secondary data.

⁸ See <https://www.europarl.europa.eu/> accessed 2 May 2021

10. Value chains

- The concept of value chains enables us to see the local economy as a set of players seeking mutual benefits through enhanced external earnings and greater capture and circulation of the benefits that ensue.
- The construction industry is an excellent case study of how thick value chains can be built and nurtured.
- There is a need to know more about the role of value chains in local economies.

There is growing awareness of the role of value chains in local economic development. Building on the landmark work of Michael Porter,¹ the concept of value chains focuses attention on the more-or-less enduring arrangements that link firms together in a variety of sourcing and contracting arrangements. A value chains view of the local economy contrasts with textbook views of the local economy as a set of dispassionate transactions in impersonalised market settings.² The previous section of this report showed how thick value chains are crucial to embedding lead firms and institutions into a local economy. This section explores how this might be achieved.

Two understandings are important in building and thickening value chains.³ One understanding involves how value is created, circulated and captured. In a water utility, for example, value is created by the processing and distribution of harvested water for use by fee-paying customers. This value is captured in various ways by participants in the value chain. Contracted service providers take fees, workers receive wages, payments are made to equipment suppliers, interest is paid to credit providers, and so on, leaving any surplus value for retention by the water utility or for distribution to the utility's owners. Yet even where ample value is created at points along the water value chain, there isn't a guarantee of stable operation of the value chain, especially where participants don't have access to reasonable returns.

The second understanding involves how the value chain is stabilised through governance relations. The complex array of agents involved in value creation and capture for water, to continue the example, would become chaotic if left to the continuous interplay of market forces. Instead, the water value chain is stabilised by formal and informal measures which have the effect of ensuring repeat business to participants with minimal costs of participation and re-negotiation. This set of governance relations includes trusting relations between the water utility as a lead firm, the sector's regulatory and pricing authority, government treasury especially when capital guarantees are in place, and the array of private investors, greenfields developers, engineering firms and operating companies that contribute to the water supply chain. As we observed in section 9, in the case of Sydney Water, a local economy is much advantaged when it is the host of one or more of these key players.

For a local economy, participation in a value chain is of greatest benefit when a significant portion of the chain is embedded within its territorial boundaries. This embeddedness ensures a high concentration of business for local firms, high levels of value capture for these firms, raised levels of local employment through multiplier effects, and, importantly, an assurance that local participants have a degree of power over the operation of the chain and its future pathway. Studies show that agglomerations involving partnerships between lead firms and SMEs at key steps of locally embedded value chains can generate mutually beneficial cycles of growth and betterment. Such partnerships ensure not just present-day economic prosperity and resilience but competitive pathways into the future.

An issue for local economies is how to bind together the elements of a local value chain in an era of fragmented production systems and dislocated supply chains, disruptions that have been further exposed by COVID-19, as we observed in section 3.⁴ For most of the 20th century, such binding of value chains was undertaken by vertically integrated enterprises. New understandings of how to integrate value chains for the benefit of local economies are needed in the global era, especially in the context of industry 4.0 reformations and disruptions.⁵

For a local economy, participation in a value chain is of greatest benefit when a significant portion of the chain is embedded within its territorial boundaries.

CONSTRUCTION SECTOR CASE STUDY⁶

Here we demonstrate the concept of value chains by reference to the construction sector, one of the key value generators in the CCD economies in the pre-COVID-19 growth surge. In analysis in previous sections we observed for each LGA that the construction sector was a major generator of multiplier effects in the local economy. Why is this consistently the case? The following list answers this question.

- On both greenfields and brownfield construction sites, new buildings, by definition, create higher returns per square metre than the returns generated by pre-existing buildings or land uses.
- The fluid nature of work locations in the construction sector means a higher take-up of jobs by local workers. Local workers can also more easily adapt as the nature and location of work changes, often on a daily basis.
- Construction sector supply chains are usually on the short side and are often subject to unforeseen delays, including from the weather. This requires an agility that favours local suppliers and contractors.
- The engagement of local workers and contractors ensures maximum retention of incomes by local households and thereby a higher flow-through to local consumption spending.

1 Porter, M. E. 1990, *The Competitive Advantage of Nations*, New York: Free Press.

2 Gereffi, G. & Kaplinsky, R. 2001. Globalisation, Value Chains and Development. *IDS Bulletin*, 32, 1-8.

3 Kano et al 2020 *op. cit.*

4 Kano et al. 2020 *op. cit.*

5 KPMG explains industry 4.0 here <https://home.kpmg/xx/en/home/insights/2017/11/industry-4-0-explained.html>

6 De Boeck, S. Bassens, D. Ryckewaert, M. 2019, Making space for a more foundational economy: The case of the construction sector in Brussels, *Geoforum*, 105, 67-77

- The construction workforce penetrates labour markets otherwise segmented by income, skills, ethnicity, education and age. This means the sector is highly likely to undertake successful local recruiting despite language and cultural differences, such as in the CCD economies.
- Firms in the construction sector build through time a long list of known customers, contractors and suppliers, spread between local and non-local origins and between large enterprises and SMEs. This deep immersion into industry networks provides a buffer to shifting conditions of demand and supply chain disruptions.
- Similarly, construction sector activity spans the private and public sectors which maximises opportunities for growth in upswings and provides a safety net during downturns.
- The localisation of the construction sector's value chains generates knowledge advantages for local firms over external competitors which are impeded by poor knowledge of local market demand and supply chain contingencies.

Yet, there is a chronic problem of volatility arising from the nature and length of cycles in the construction sector. Management of this volatility is possible through value chain governance mechanisms, including the use of specific local government levers. Local government levers that might impact the construction sector positively include:

- Direct purchase of outputs.
- Taxation revenue.
- Zonings.
- Value capture and distribution (e.g. via investor levies).
- Leverage possibilities with local infrastructure spending.

IMPLICATIONS

We have seen in previous sections an enormous variation in positive economic impacts for different sectors in the CCD economies. This section has shown the role of value chains in enhancing the positive economic benefits that flow to a local economy from the presence of a particular sector. Policies to enhance value chains are thus capable of improving poor-performance sectors. The process of betterment is illustrated by reference to the 'construction' sector, the CCD local economies' best performer in terms of economic multiplier benefits. Note, again, that our analysis of the sectors in previous sections has been based on performance data from the pre-COVID growth-surge years. The analysis has revealed the presence of deficiencies in the local economies at a time when growth opportunities were maximised. Then we were able to observe the impacts of the COVID-19 recession on the CCD economies, and again we find a wide ranging mix of performance outcomes. The primary lesson of value chain analysis is that there are ways of enhancing local value and prosperity across all phases of the economic cycle, and ways to build local resilience for when times get a little rough.

IDEAS FOR VALUE CHAIN ANALYSIS IN THE CCD ECONOMIES

Unfortunately, the capacity to monitor value chains is limited by the paucity of useful data. Once, the ABS undertook censuses of firms in manufacturing, retailing and other sectors which could be used to understand shifts in employment and the value of production at small area scales. These supplementary censuses are long abandoned. Trend analysis of industrial change relies almost singularly on ABS census data, framed by information on resident workers and places of work and adjusted during inter-census periods using ABS labour force surveys. A consequence is that year-on-year information about trends in the local economy at regional and locality levels is poor quality, or reliant on expensive local surveys, and the participation of a time-poor business community.

In this context, a research project might be mounted to assess the ways that value is generated in the CCD local economies and explore existing data sources that might be mobilised to provide sensitive, ongoing indicators of value chain operation on a cost efficient basis. Understanding local value chains in key CCD economic sectors such as advanced manufacturing, construction, transport and logistics, health services, and the visitor economy would have obvious benefits to local planners and the business community.

The project might:

- Develop a framework that translates the concept of a value chain into a measurable entity so that primary and secondary data can be collected and analysed.
- Compile a small number of case studies to test the applicability of the framework to actual value chains and assess the robust qualities of the measurement instruments.
- Evaluate the framework and the measurement instruments within the business community so as to develop actions which might: intensify local value chains; expand the reach of value chains into new markets; and generate opportunities for beneficial intersection with other value chains.

We next turn attention to the role of strategic centres in the CCD economies, and an examination of the key role played by strategic centres in mobilising the economic benefits of lead firms and institutions in the context of the search for successful value chains in prosperous local economies.

New understandings of how to integrate value chains for the benefit of local economies are needed in the global era, especially in the context of industry 4.0 reformations and disruptions.

11. Strategic centres

- Strategic centres are the most important vehicles for mobilising the componentry that will underpin successful local economies in the decade ahead.
- There is a rich literature that not only asserts the importance of strategic centres, and other strategic economic spaces, but also tells us what needs to be done to assemble well-performing centres and spaces.
- Sadly, then, the strategic centres and spaces in the CCD economies, and others in western Sydney more generally, have struggled for definition and support in government planning.
- Analysis of Greater Sydney Commission plans reveals an intensification of the jobs crisis in the CCD economies, and in western Sydney generally, if the neglect of strategic centres and spaces continues.
- This report urges a 'city deals' commitment for the CCD economies to better position the strategic centres and spaces in the post-COVID-19 decade.

As we have discovered in previous sections, securing the economic benefits of lead firms and enriching the operation of local value chains require strong strategic centres. Successful lead firms and rich value chains depend on strategic centres for crucial externalities, the things that individual enterprises can't deliver internally, including:

- Access to quality labour.
- Efficient infrastructure.
- Education and training facilities.
- Business networks.
- All-round liveability in the places where businesses choose to locate.

Previous sections have explored the adequacy of these externalities pre-COVID-19, and how their importance may have shifted during the pandemic. This section asks how well are the CCD's strategic centres positioned to steer the CCD economies along enriched future pathways?

We start by positioning the CCD's strategic centres in the overall geography of strategic centres in metropolitan Sydney. The popular discourse about Sydney's success as a global city incorporates images of a gilded inner core lining the harbour and lower north shore. In this discourse western Sydney's contribution to the metropolitan economy gets thin coverage, usually as the passive provider of factories and warehouses, with scattered regional centres hosting little more than large undercover shopping malls and municipal councils in B-grade offices. The discourse may be useful for trade delegations needing glossy pamphlets or lobby groups seeking funding for another inner city amenity project. Yet, for the CCD economies, among others, the discourse is unhelpful to the tasks of attracting investors and securing a fair share of public spending. More important, probably, is that the discourse of the flourishing harbour city with a blue-collar hinterland to its west is simply inaccurate.

Successful lead firms and rich value chains depend on strategic centres for crucial externalities.

In other reports we profile the dramatic growth of knowledge workers and the relative decline of the blue-collar economy in western Sydney.¹ For now, a necessary understanding is that the actual distribution of jobs in the Sydney spatial economy isn't as dominated by the harbourside CBD and its surrounds as the popular discourse suggests. Rather, metropolitan Sydney is very much polycentric, a collection of strategic centres and specialist employment lands that collectively generate Sydney's jobs and prosperity. Indeed, 85.5% of jobs in greater Sydney are in locations outside the Sydney CBD.²

The spatial pattern of jobs has been pretty much stable in Sydney's metropolitan economy for over two decades. Around one third of metropolitan employment lies in Sydney's inner core (including the CBD), one third in other metropolitan strategic centres, and one third in specialist employment lands. Moreover, while there is a discernible urban hierarchy – places with different functions, of different sizes – within this distribution, it needs saying that the inner core is not the highest order centre for every urban function. The inner core certainly takes top position in respect to finance and professional services, and for certain public service functions, notably government, senior administration and the judicial apparatus. But there are other roles and functions where strategic centres and specialist employment lands elsewhere in metropolitan Sydney have superior status to inner Sydney. The remarkable thing is that the metropolitan area's strategic centres and specialist lands maintain such perches, despite insufficient attention from government at both state and federal levels, as we discuss below.

The actual distribution of jobs in the Sydney spatial economy isn't as dominated by the harbourside CBD and its surrounds as the popular discourse suggests.

We argue the need for policy makers to be educated about the importance of Sydney's strategic centres; in our case, because strong strategic centres in the CCD economies are crucial to economic success. So, what does the research tell us about the role of strategic centres and specialist employment lands in large cities? For insight we review here a literature that talks about the concept of 'urban polycentricity', or the presence in a city of a multitude of centres, usually in some sort of hierarchical formation.

An understanding of the polycentric city helps us to construct interventions to enhance the wider city's efficiencies and so grow prosperity for households and businesses alike. Central here is acknowledgement of the significance of the strategic centres in generating and steering flows of people, materials and information, and assembling fully-subscribed pools of labour. The idea of a 15-minute city (or the 30-minute one that the Greater Sydney Commission puts forward for Sydney, as a compromise) conjures a polycentric metropolis based on prosperous suburban centres, where there are thick concentrations of jobs, higher-order retailers, professional services, entertainment, civic functions, and the like, serviced by efficient modes of transport, especially of the public variety.

1 See O'Neill 2020a, 2020b, 2020c

2 Defined as the SA2 area Sydney-Haymarket-The Rocks, data from 2016 census POW.

An important task, then, is the assembly of a portfolio of actions to promote Sydney's metropolitan strategic centres and strategic employment lands – specifically, in this case, those in the CCD – so these centres become primary agents in building and maintaining successful local economies. Let's dissect this task.

In Sydney, like in any polycentric city, there is a hierarchy of urban centres, as we have noted above. Certain of these centres have a higher position in the urban system, meaning they have sufficient size, complexity and pulling power to attract higher-order producers and service providers, and more at-a-distance customers. Lower-order centres are unable to bring together such a critical mass of businesses and consumers.³ A thriving strategic centre, then, is one that hoovers up key urban functions and qualities, including:

- The decision making and control functions of significant lead firms, institutions and agencies, be they from the public, private or not-for-profit sector.
- Facilities and locally-generated practices that generate competitiveness and innovation advantages, in combinations of formal and informal events.
- Gateway infrastructure that stamps a centre as a nodal and distribution point for transport and communications.
- The symbolic functions, and the things that generate cultural and civic amenity, that give a centre status, legitimacy, charm and political bargaining power.

As we have emphasised in respect to the needs of lead firms and prosperous value chains, the CCD local economies will rely heavily into the future on strategic centres possessing these functions and qualities.

The positives for a firm or agency that come from the co-presence of these functions and qualities in a single geographical centre are pretty obvious. Some of these positives, like close access to service providers, are straight forward. But, in addition, firms and agencies, including government entities and NGOs, by locating in strategic centres, get access to a range of free externalities. Research shows that in high-growth metropolitan economies with well-constructed strategic centres, externalities flow into these centres as if sourced from a low-hanging metropolitan cloud.⁴ This means suburban strategic centres – not only the central CBD – can provide access to:

- Quality labour.
- Industry-specific technology clusters.
- Business networks that drive market competitiveness.
- Well connected infrastructure.
- High quality urban amenities.

There is strong evidence that labour productivity is higher for firms in strategic centres away from a central CBD because from these centres firms can access the agglomeration advantages of the metropolitan economy while avoiding its diseconomies.

At the same time, well-functioning strategic centres are able to avoid the many negative externalities that besiege an over-centralised city, especially 'crowding effects' such as congestion, housing inflation and raised business charges. In fact, there is strong evidence that labour productivity is higher for firms in strategic centres away from a central CBD because from these centres firms can access the agglomeration advantages of the metropolitan economy while avoiding its diseconomies.⁵ As we discover in the next section, on remote working, a post-COVID-19 city needs to re-engineer its structures to cope with a much-changed urban landscape. A more decentralised urban structure offers considerable prospects.

Of course, some economic sectors are unsuited to the denser urban settings of a strategic centre. Hence, there is a need for strategic employment lands. Yet, like strategic centres, these sites should be seen as places where the assembly of labour, capital and infrastructure is done purposefully and with maximum efficiency, and without disregard for negative externalities. Here the literature identifies four drivers for success.

1. Productivity benefits that come from the strategic location of employment lands, ensure easy access to metropolitan supply points, including international and interstate portals, and other infrastructure that links to suppliers and downstream markets.
2. Amenity advantages that come from the quality of the employment lands, including both built amenity and natural environment qualities.
3. Advantages that accrue from co-location of firms and agencies, their sharing of a quality local labour market, producer services, marketing opportunities, innovation systems and business networking and support.
4. Like for strategic centres, access to the agglomeration advantages of the metropolitan area more broadly, from its lingering cloud, without having to suffer the crowding effects of a more centralised location.

³ Key ideas in this section are taken from Volgmann K. & Münter, A. 2020, Understanding metropolitan growth in German polycentric urban regions, *Regional Studies*, DOI: 10.1080/00343404.2020.1807491

⁴ For example, Volgmann and Münter 2020, *op. cit.*

⁵ See Meijers E.J., 2013, Metropolitan Labor Productivity and Urban Spatial Structure. In: Klaesson J., Johansson B., Karlsson C. eds, *Metropolitan Regions*. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-32141-2_7

POLICY IMPLICATIONS FOR THE CCD ECONOMIES

The task for the CCD economies, then, is the conduct of an ongoing project to build and nurture strategic centres with sustained higher-order functions across economic, political, scientific, public governance and cultural domains. In essence, the project is the assembly of these functions as a package, recognising that each function correlates spatially with each of the others, that they are mutually-dependent, mutually-beneficial pursuits.

In parallel, there is the task of assembling and fitting-out of employment lands, in like manner to the strategic centres, so employment lands also deliver productivity advantages by providing access to the agglomeration economies a business expects from being located in a strategic location in a large metropolitan economy like Sydney's.

Common to the two – the strategic centres and the strategic employment lands – is the need for modes of governance that align to the scope and importance of these geographical assets.⁶ A problem for governance of these spaces is a lack of clarity in respect to state and local government responsibility. Tensions between these tiers of government need resolution so that management agencies – whatever these might be – are equipped with the necessary capacities and resources. Moreover, these agencies need to be able to reach across scales and geographical distances to influence other tiers and agencies to ensure the competitive advantages of local enterprises going forward. The system of governance of the strategic centres and lands needs to mimic the hierarchy of the metropolitan economy, meaning the higher-order strategic centres in the CCD economies need to be significantly powered-up with organisational resources and capacity.

We turn now to the specific issue of managing strategic centres for the benefit of the CCD economies in a post-COVID-19 world.

STRATEGIES FOR MANAGING STRATEGIC CENTRES IN THE CCD ECONOMIES

So far in this section we have identified the key elements of a successful higher order urban centre. In short, in such a centre we should observe the coming together of economic, political, scientific, civic and cultural functions as a package, where all these functions correlate with each other (figure 26). What can be done to supply this package to the CCD's economic spaces?

Figure 26 How a strategic centre can drive economic development post-COVID-19



First, we need to acknowledge the political difficulties that strategic centres, like those in the CCD economies, have faced in realising their economic potential. Distinguished planner and academic Dr Glen Searle has chronicled the long uphill battle by Sydney's strategic centres for government support and direction.⁷ Rather than grow as nodes in an orderly post-war growth project, western Sydney's strategic centres had population growth thrust upon them but weren't provided with the resources for delivering basic services and infrastructure. The uphill struggle by the strategic centres to assert viable urban structures across western Sydney commenced in the 1960s and 1970s. According to Searle, two parallel forces were involved:

1. The surge in international immigration with western Sydney targeted as one of the nation's key suburban settlement regions.
2. The heavily subsidised decentralisation of noxious, noisy industries out of inner Sydney into the west, which initiated western Sydney's dependence on what Searle labels 'truck-based industrial production and car-based work journeys', a dependence which continues to this day.

Hence, from the outset, government spending and strategic planning mechanisms were insufficient in forging the urban structures needed to cope with the levels of population and industrial growth underway. Urban infrastructure spending in western Sydney by the federal Whitlam government in the early 1970s came as emergency measures, reflecting the region's urban needs, but, most of all, confirming the historical neglect underway.

Following those decades, says Searle, a series of metropolitan plans pressed the case for strong strategic centres in Sydney's west, notably 'Sydney into its Third Century' in 1988, and 'Cities for the 21st Century' in 1995. Searle's analysis stops in 2002, but to his list of plans that talk-up western Sydney's strategic centres we can add 'City of Cities' in 2005, 'A Plan for Growing Sydney' in 2014, and the Greater Sydney Commission's 'A Metropolis of Three Cities' in 2018. In the latter, Sydney's strategic centres are talked about as key components of the metropolitan urban hierarchy, in need of substantial support as public transport nodes and as places for the congregation of health and education facilities. Yet, like its predecessors, 'A Metropolis of Three Cities' provides no actual plan for the development of strategic centres, meaning no agenda of actions and investments around which a campaign for funding might be mounted.

We need to acknowledge the political difficulties that strategic centres, like those in the CCD economies, have faced in realising their economic potential.

6 For overview see Schmitt, P. 2013, Planning for polycentricity in European metropolitan areas, *Planning Practice & Research*, 28, 400-419.

7 Searle, G.H. 2002, The demise of place equity in Sydney's economic development planning, *Australian Geographer*, 33, 317-336.

Disappointingly, but not surprisingly, the task of developing a blueprint for the rescue, resuscitation and further development of western Sydney’s strategic centres, including those in the CCD economies, has had to be undertaken outside of official government planning agencies. The most comprehensive analysis and action agenda is the Committee for Sydney’s 2018 document, ‘Re-Balancing the City: Town Centre Renewal for Sydney.’⁸ The report by Committee for Sydney, a

private think tank and lobby group, notes the importance of strategic centres in delivering on a 30-minute city.⁹ The report identifies the key components of successful strategic centres, which are summarised in table 1. Importantly, the report calls for the establishment of ‘Town Centre Renewal Deals’, modelled on the Western Sydney City Deal, a partnership across the three tiers of government involving delivery targets backed by generous resourcing¹⁰.

Table 1 The components of successful strategic centres

→ Well linked to public transport and walkable amenities.	→ A vibrant night-time economy and cultural options.
→ A diversity of people working, living and playing in the town centre.	→ More mixed-use, denser development.
→ Local jobs and businesses, including start-ups and diverse industries.	→ Key social infrastructure including schools, libraries, health facilities, leisure facilities, child play spaces, and public open space.

Source: Extracted from Committee for Sydney (2018).

The Committee for Sydney report goes some way to fill a major planning gap in the Greater Sydney Commission’s agenda for urban growth in western Sydney. In so doing it has the potential to drive actions in support of economic development in the strategic centres in a post-COVID-19 environment, including the opportunity to advance the presence of the CCD’s strategic centres in the reformulation of office work and remote working, as we discuss in the next section of the report.

AN ACTION AGENDA FOR STRATEGIC CENTRES IN THE CCD ECONOMIES

In our *Where are the jobs?* reports¹¹ we observe that for the 20-years interval 2016-36, Transport for NSW calculates that total jobs in the Sydney metropolitan area will increase by 897,861 – with 444,990 (or 49.6%) of this growth allocated to western Sydney. If realised, this increase would be a substantial change to the recent contributions by western Sydney to metropolitan jobs growth, the region delivering only about 33% between 2011 and 2018. Ramping up to supply nearly half of all new metropolitan area jobs 2016-36 is a substantial task, notwithstanding the desirability of such an achievement.

Using Transport for NSW figures, five local government areas in western Sydney are forecast to contribute 280,871 (or 63.1%) of western Sydney’s jobs growth 2016-36. The largest growth LGA is predicted to be Parramatta with an increase of 67,232 jobs in these two decades. Four other LGAs assigned for jobs growth are The Hills (up by 58,505), Blacktown (up by 57,367), Penrith (up by 49,988) and Liverpool (up by 47,779).

Yet jobs forecasts in the GSC’s *A Metropolis of Three Cities* don’t align with these ambitious forecasts. Indeed, the GSC fails to assign LGA targets, with jobs targets for western Sydney’s strategic centres totalling only 11.7% of the required metropolitan increase. For the CCD, the commission nominates ten strategic centres and predicts for them, 2016-36, a total baseline growth of 71,400 jobs. For the Western Parkland City, however, the GSC’s plans nominate only three strategic centres and predicts for them a jobs growth, 2016-36, of only 24,000 jobs.

So, the total jobs growth assigned to western Sydney strategic centres, 2016-36, by the GSC is 95,400, a mere 23.3% of the Transport for NSW jobs growth target of 408,500 for western Sydney, 2016-36. This means western Sydney will need 313,000 jobs to come from the new airport, the aerotropolis, specialist industrial areas and initiatives like the Luddenham science park. This severely devalues the important role that needs to be played by the strategic centres, like those in the CCD, in jobs generation. In particular, as this report argues, it shows little understanding of the role played by strategic centres in supporting lead firms and enterprises attached to the value chains of local economies.

Redressing neglect of the CCD strategic centres will be central to forging successful local economies into the future. Redress should have a number of components:

1. Clear definition of the status and role of the CCD’s strategic centres and other strategic economic spaces.
2. Detailed research to identify the composition of economic growth in the CCD’s strategic centres and spaces into the future, and the resources and capacities needed to support this growth.
3. Consideration of a ‘city deals’ commitment between the tiers of government and the participant business communities.

As argued in this section, a genuine agenda for supporting the CCD’s strategic centres and spaces needs to be a high priority for all governments in the post-COVID-19 metropolitan economy.

We now turn to a topic we think requires special consideration in this report, remote working, and then we make some concluding remarks.

A genuine agenda for supporting the CCD’s strategic centres and spaces needs to be a high priority for all governments in the post-COVID-19 metropolitan economy.

8 Committee for Sydney, 2018, Re-Balancing the City: Town Centre Renewal for Sydney http://www.sydney.org.au/wp-content/uploads/2015/10/Committee_TownCentreRenewal_Final_WEB.pdf

9 The 30-minute city is the idea adopted by the GSC in its metropolitan plans which says that services and jobs should be accessible within 30 minutes of travel from every dwelling.

10 See <https://www.wscd.sydney/>

11 See especially O’Neill, P., 2020c, *Where are the jobs? Part 3 Western Sydney workers in 2036*, Centre for Western Sydney, Western Sydney University, Parramatta

12. Remote working

- Working from home was an immediate, emergency response to the outbreak of COVID-19. Yet favourable assessments of worker productivity and technological capability have seen hybrid working arrangements gain widespread acceptance.
- A possible consequence of hybrid and remote working is the re-location of a substantial portion of CBD workers to both home and suburban nodal locations.
- This creates the opportunity for strategic centres in the CCD local economies to grow local concentrations of professional services functions.

As we revealed in our analysis of the influencers in section 4, one of the most likely shifts to urban living post-COVID-19 will be the rise of remote working. Because of the prospects for the CCD economies, we make special mention of this possibility here, the last substantial section of our report. We start our discussion with an examination of the effect of COVID-19 on working practices in the Sydney CBD – because from among such major concentrations of office workers trends to remote working are most likely to have their genesis. We then tease out the prospects and implications of remote working for the CCD local economies.

The rise of the Sydney CBD as one of the world's most successful agglomerations of advanced service providers required at least four decades of public and private endeavour. We need to understand the components of this success in order to identify the opportunities for remote working, post-COVID-19, in the CCD economies. Work by O'Neill (2021) examines the forces behind the growth of specialist office work in the Sydney CBD economy. The analysis finds that three forces coalesced to drive this concentration:

1. Access to high quality labour and, its reciprocal, the payment of high wages.
2. The co-location of professional services firms from advanced services sectors, especially finance, law, design and engineering, together with providers of advanced software services and technical equipment.
3. The patronage of high-end consumer and amenity services especially in personal goods and services, food, accommodation and entertainment.

Reflecting the importance of these forces, professional services firms in the Sydney CBD over the past 40 years overspent on salaries, research, innovation, technology and professional services compared with national averages. Yet these same firms underspent on office space and other property categories. In other words, the success of this giant agglomeration of professional firms came as much, probably more, from the supply of quality labour, close access to business-to-business collaborations, and the availability of specialist software and equipment than from a physical presence in a harbourside office tower *per se*.

Drawing on this insight, the question for advanced professional firms, post-COVID-19, is to what extent can remote working arrangements be adopted without eroding the benefits of geographical agglomeration? There are supplementary questions to consider:

- Could a worker function from a home or office in a CCD location, probably in a strategic centre, and still hold down a high-paying job with a CBD-based firm or agency?
- Will the rollout of 5G drive innovations, such as in augmented reality, enhance the capabilities of the remote worker to undertake the sorts of interactions once seemed confined to the giant CBD agglomerations?
- Will there be opportunities for bespoke satellite offices, say in strategic centres in the CCD, to function as strategic hubs for advanced and professional services firms?
- Might the growing number of new data centres in the CCD entice investments on sites for specialist professional and advanced services workers needing guaranteed data and equipment security when they are outside the physical environs of the firm?¹
- Can firms be attracted to specialist sites away from the CBD such as for client-servicing, staff training and product exhibitions?

WHAT HAPPENED TO CCD WORKERS DURING COVID-19?

It is difficult to answer these questions with confidence given remote working has emerged only recently as a serious work option in cities around the world. Some insight can be gained by analysis of what happened to local workplaces during the pandemic. Other insight comes from the global consultancy firms. We start with the workplaces of the CCD economies.

Novel data from Google (2021)² provide insight into how local CCD urban spaces, including workplaces, were affected by COVID-19. Table 2 is based on data sets released by Google which show how flows of people in the CCD LGAs were affected by the pandemic. Five activities are shown, namely daily visits to 'retail and recreation', 'supermarket and pharmacy', 'parks', 'public transport', 'workplaces' and 'residential' (a person's home address). Table 2 shows what happened in each LGA and, for comparison, in the City of Sydney LGA. The number in each cell shows the percentage shift in activity intensity from January 2020 to December 2020. Unfortunately, the records use January as the benchmark month, meaning Australian data is distorted by summer holiday activity, a time when workplace activity is lower and recreational activity is higher. We make comment on the implications of this benchmarking in the text as we go along. Note that while non-workplace activity is shown in the table, we do not make specific comment on it.

One of the most likely shifts to urban living post-COVID-19 will be the rise of remote working.

¹ The rise of new data centres in the CCD is explored here <https://www.afr.com/property/commercial/nsw-plans-fast-track-approvals-for-data-centres-20210406-p57gsj>

² Google, 2021, COVID-19 Community Mobility Report, <https://www.google.com/covid19/mobility/> accessed 13 April 2021

Table 2 Estimated impact of COVID-19 on various activities, change in activity score from January (base month = 100) to December 2020

Activity	Deviation				
	Blacktown	Cumberland	Parramatta	The Hills	City of Sydney
Retail and recreation	-11	-7	-3	+4	-37
Supermarket and pharmacy	+18	-10	-11	+5	-26
Parks	-12	-25	-15	-5	-44
Public transport	-25	-17	-24	-30	-39
Workplace	-23	-25	-33	-23	-32
Residential	+8	+6	+9	+9	-11

*Benchmark is the median value for each five-day working week in January 2020

Source: Google, 2021, *COVID-19 Community Mobility Report*, <https://www.google.com/covid19/mobility/> accessed 13 April 2021

BLACKTOWN

Table 2 shows an ongoing fall of 23% in workplace attendance in Blacktown from January to December 2020. This fall was probably as high as 41% given there was an 18% increase in recorded workplace attendance from January 2020 to early March 2020, when falls due to COVID-19 commenced. By mid-April, recorded workplace visits had fallen to around 43% of the January rate, meaning a fall of around 60% compared to early March. Since then recovery in workplace attendance has proceeded at a modest pace, but with December levels still well below pre-COVID-19 levels.

CUMBERLAND

Similar to Blacktown, Table 2 shows a fall of 25% in workplace attendance in Cumberland from January 2020 to December 2020. This fall might actually have been around 38% given there was a 13% increase in recorded workplace attendance from January 2020 to a high at the end of February 2020, when pandemic effects first show up in the data. By mid-April, recorded workplace visits had fallen to around 47% of the January rate, meaning a fall of around 60% compared to the end of February. Since then, like for Blacktown, recovery in workplace attendance has proceeded at a modest pace, while remaining only around 75% of pre-COVID-19 levels.

PARRAMATTA

Table 2 shows an ongoing fall of 33% in workplace attendance in Parramatta from January 2020 to December 2020, higher than the other LGAs and slightly more than the fall recorded for the City of Sydney. Moreover, the fall in workplace attendance in Parramatta might actually have been around 47% given the increase of 14% in recorded workplace visits from January 2020 to the high at the end of February, prior to the commencement of falling workplace attendance due to the pandemic. By mid-April, recorded workplace attendance had fallen to around 53% of the January rate, meaning a fall of around 67% compared to early March rates. Since then, like for the other LGAs, recovery in workplace attendance has proceeded at a modest pace, while remaining well below pre-COVID-19 levels.

THE HILLS

Table 2 shows an ongoing fall of 23% in workplace attendance in The Hills from January 2020 to December 2020, a fall similar to Blacktown and Cumberland while not as severe as Parramatta. Note, though, this fall in recorded workplace attendance might actually have been around 45% given a 22% increase in recorded workplace visits from January 2020 to a high at the end of February 2020, prior to the onset of the pandemic. By mid-April, recorded workplace visits had fallen to around 53% of the January rate, meaning a fall of over 70% compared to early March rates. If the Google data sets are reliable, this is the highest fall in the CCD economies. Since then, like for the other LGAs, recovery to workplace attendance has proceeded at a modest pace, while remaining well below pre-COVID-19 levels.

WHAT HAPPENED TO SYDNEY CBD WORKERS?

Much discussion, the world over, about options for remote working has focused on the sudden shift in daily work away from CBD sites, including from Sydney's CBD. To date, there has been little discussion of the trends in suburban workplace attendance that we point to above. Consequently, our discussion here takes the CBD as the frame for discussion, with commentary on suburban trends added as appropriate.

Like we find above for the CCD workforce, the curtailment of COVID-19 in NSW has not generated anything other than a slow, incomplete return of workers to Sydney CBD offices. The Property Council of Australia (PCA) reports that, by the end of February 2021, Sydney CBD desk occupancy had only returned to 50% of pre-COVID-19 levels, following attendance rates of only 35% in September 2020 and 45% in early December 2020.³ The fall is explained by:

- Worker concerns about health risks in confined indoor spaces.
- Restrictions to public transport rider numbers, coupled with commuters' perceptions of raised health risk.
- Diminished capacity of elevators due to social distancing requirements.

The preponderance of data showing a fall-off in CBD office attendance has now generated a major re-think about the geography and conduct of traditional CBD office work. Not surprisingly, the big four accounting and consulting firms have taken a keen interest in the issue. A survey conducted by KPMG⁴ reveals a dramatic rise during 2020 of the use

³ Property Council of Australia, 2021, CBD Occupancy, https://f.hubspotusercontent40.net/hubfs/2095495/_Communications/Mar%252021%2520Data%2520&%2520Charts.pdf accessed 4 April 2021

⁴ KPMG, 2020, Embedding New Ways of Working <http://KPMG.com> accessed 4 April 2021

of interactive software, online data sharing tools, intra-office emails, telephone calls, chat apps and online customer relations activity. Not only did office workers adapt readily to off-site working, and grasp interactive technology quickly, 40% of respondents told KPMG that they would prefer to work from home permanently, be it on a full-time or part-time basis. Confirming similar wishes, a survey by EY of 600 workers in Australian CBDs found 70% in favour of flexible working arrangements in preference to daily CBD attendance.⁵

There are two quandaries for firms and government agencies arising from the COVID-19 jolt to workplace attendance. One is consideration of what off-site functions a professional services firm or agency would need to manage using hybrid work formats. Table 3 lists the baseline needs of an organisation as it considers the development of such arrangements.

Table 3 Baseline considerations in developing hybrid ways of working

Workplace collaboration and culture	Productivity enhancement
Access to data, technology, support	Information security
Access to formal and informal learning	Worker health and wellbeing
Networking opportunities	Leadership practices and development
Access to external decision makers and regulators	Separation from the duties and distractions of home
Participation in innovation	Access to co-located cultural and entertainment facilities

Source: Adapted from KPMG (2020) and (EY 2021).

The other quandary is how to configure a locational map and operational schedule for hybrid ways of working to ensure an entity's outputs are successfully delivered. Important for this study of the CCD economies is the extent to which strategic centres and specialist lands can play significant roles in a new locational map. KPMG (2021) identifies resources that might be available in the rollout of hybrid working opportunities:

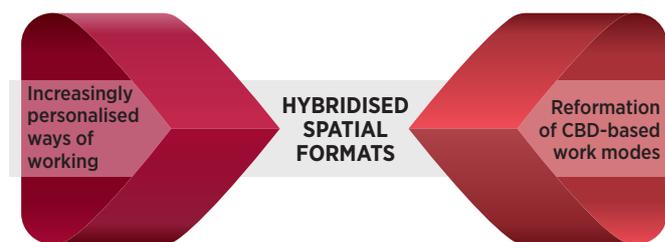
1. Resources freed up as a consequence of dismantling the high costs of providing office space for all.
2. Gains in worker productivity arising from enhanced online contact speed and user experience – including the use of augmented reality media – as a consequence of access to faster broadband and 5G rollout.
3. Savings in travel costs, staff amenity and the like.
4. Public savings as the need for expensive commuting infrastructure lessens.

No doubt there will be competing claims on these resources across a spectrum of opportunities. At one end of this spectrum we can situate a workplace where there is an infinite number of personalised ways of working (figure 27). At the other is a workplace which resumes a CBD-dominated way of working.

The preponderance of data showing a fall-off in CBD office attendance has now generated a major re-think about the geography and conduct of traditional CBD office work.

Figure 27 The future of work post-COVID19

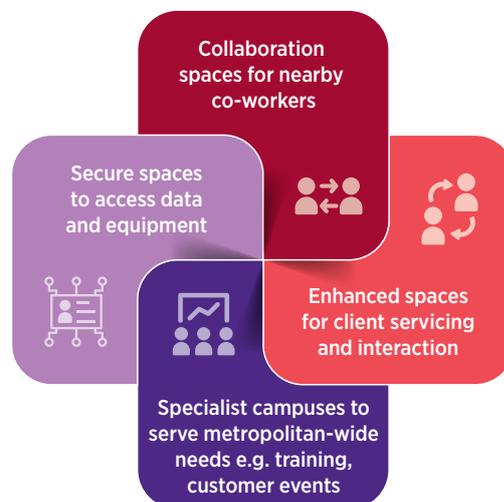
Source: Adapted from PWC (2021a, 2021c)



How this spectrum of opportunities will evolve, and the extent to which strategic centres and specialist lands in suburban locations can feature in hybridised working arrangements, depend on the quality of office spaces on offer and the level of amenity available from the host location. PWC (2021b) speculates on the range of offerings that might enhance the competitiveness of a suburban node. These are shown in figure 28.

Figure 28 Remote working options for strategic centres

Source: Adapted from PWC 2021b



5 EY, 2021, Reimagining Our Economic Powerhouses, <http://ey.com> accessed 4 April 2021

IMPLICATIONS

The flight of office workers from the historical agglomerations of service firms and agencies in Australian CBDs, like Sydney, was driven initially by worker health and safety concerns arising from COVID-19. Then, such has been the level of benefits for many workers of not having to attend the office on a daily basis, or even at all, firms and government agencies have shown willingness to consider new ways of working. This re-think has the potential to unsettle longstanding ways of organising worker-to-worker and firm-to-firm collaboration. There now seem to be forces which will drive the co-location of professional services workers and firms in high-order centres away from a central CBD, at least to a significant degree. Securing a role for strategic centres and specialist employment lands in a new world of work will not be easy. Important will be the extent to which strategic centres and specialist lands are able to offer attractive options to firms and government agencies as hybrid working arrangements evolve. This presents a timely opportunity for the enlivened management of strategic centres in the manners discussed in the previous section.

This re-think has the potential to unsettle longstanding ways of organising worker-to-worker and firm-to firm collaboration.

13. Conclusion

In the introduction to this report we proposed three dimensions to guide us towards the project's purpose of delivering information and insight to guide councils and local business communities, not only to plan for a post-pandemic environment in the CCD, but to prepare for forging an economy capable of delivering prosperity over the forthcoming ten-year horizon.

The dimensions fell naturally across our work. The first dimension involved gathering understandings about how the CCD economies had delivered record growth in the years before the pandemic. The second dimension involved examining how COVID-19 impacted the CCD economies. A set of eight influencers, identified in the project brief, guided this examination. And then the third dimension involved identifying forces that would likely determine how the CCD economies progress from here – the COVID-19-infected present – to the future, the challenge of the ten-year horizon set up in the brief.

In this concluding section, we reflect on the report's findings through these dimensions, and make some final guiding comments along the way. We also reflect on the aspirations in the project brief, especially its focus on knowledge outcomes:

- Information of use to local business communities.
- Insights to help with business strategies.
- Guidance for councils in strategic planning.
- A contribution to the leadership of the CCD local economies into the future.

We have interpreted these outcomes liberally by engaging in what we think are the big issues driving the creation and circulation of value in the CCD local economies. There are implications from these deliberations which by necessity are not addressed in this report. In particular, there is the important task of identifying specific tools for the hands of local government agencies in their economic development responsibilities. We hope, though, that our work is an important step on the way to developing practical next-steps.

We commenced the report with observations about the growth period that preceded COVID-19. In section 1 we explained the significance of the growth surge years, finding that the growth in jobs from 2013 to 2019 in the CCD labour force regions was an exceptional 20%, which included annual growth rates of at least 4.5% between 2016 and 2018. The consequences of such extraordinary growth rates should have been widespread prosperity. Yet the longstanding problems of unemployment and jobs access persisted in the usual parts of the CCD despite the growth.

In section 2 we sought explanations for the growth surge. We found three major drivers: population growth, record levels of government infrastructure spending, and the flow-over effect of the growth of the Sydney metropolitan economy, one of the world's most successful mega-urban regions, and a major driver of the high-value services sectors nationally.

The growth in jobs from 2013 to 2019 in the CCD labour force regions was an exceptional 20%.

We found three major drivers: population growth, record levels of government infrastructure spending, and the flow-over effect of the growth of the Sydney metropolitan economy.

Section 3 then undertook detailed analysis of the impacts of COVID-19 on the CCD economies with significant new analysis of how each industry sector in each local economy has performed in the face of the economic shocks and slowdown. The detail of COVID-19 matters because the impacts of the virus have been unequal and unpredictable. But we also established the need to seek out key concepts that help understand the data trends so as to move the project from this important second dimension – asking what are the impacts? – to the third dimension, where we ask what can be done for the future?

We started the search for explanatory concepts in section 4 by analysis of the eight influencers identified in the project brief as potential mediators of the impacts of COVID-19. In particular, we systematically identified not only the individual power settings of the influencers but also the extent to which anything could be done to shift or change the influencers. Through quadrant sorting we identified 'people movement', 'remote working possibilities' and 'visitor economy' as influencers where local management actions have potential to intervene for favourable outcomes, and 'employment impacts' and the 'housing market' where we found a combination of local and national interventions is probably the best course of action.

The report then attempted to identify what are called the 'manoeuvres' of local economies, the assets and structures that propel (or drag on) the performance of an economy. We explained these entities in section 5. Then in sections 6, 7, 8 and 9 we pulled out the key manoeuvres that seem to have had major effect on way the local economies performed in the growth surge years, and then how they performed under the pressure of COVID-19. In section 6 we delved into the economic question of the source of earnings, where we asked whether external-facing sectors had greater impacts than local-facing sectors. The traditional importance of the manufacturing sector was reinforced. But there were surprises in our analysis. The logistics sectors are becoming prime movers in the local economies. However, in some circumstances the much-vaunted health and education sectors earned 'can do better' ratings.

In section 7 we asked whether bigger firms, and external-facing firms, were more likely to create higher economic multiplier impacts than smaller entities and more local-oriented firms and agencies. Again, there are new insights from our work. Across all the CCD economies, manufacturing is responsible for beneficial multiplier impacts, translating external earnings into quality local income. Construction does this too for all the local economies, however, it does its work from an embedded position in the local economy. Key to whether a sector had above average multiplier impacts in any sector was the presence of lead firms, institutions and agencies. This is a key finding of our report. The utilities sector in Parramatta, for example, had multiplier effects elevated by the presence of Sydney Water. The same elevation occurred for utilities in Blacktown by the presence of Endeavour Energy, for public administration in Parramatta by Silverwater jail operations, and for the health sector in Parramatta by the burgeoning Westmead hospital precinct. The lead firm thus emerged for us as a key driver of the local CCD economies.

The lead firm thus emerged for us as a key driver of the local CCD economies.

In section 8 we paused to see what economic trends were doing to the demand for higher-skilled workers, the fastest growing segment of the CCD workforces. In general, and we note exceptions, the skills profiles of emerging sectors in the metropolitan economy are not translating sufficiently into demand for higher-skilled workers in the local CCD economies. Better jobs aren't finding their way into the branch offices of firms and agencies in the local economies, an issue needing investigation as the resilient economic sectors for the 21st century economy are further constructed. We explored this issue further in section 12 in an analysis of the effects of COVID-19 on workplace attendance and the rise of the remote worker.

In section 9, building on our findings in section 7, we explored further the economic concept of the lead firm (including lead institutions and agencies), asking:

- To what extent do the CCD economies host sufficient of these economic leaders?
- Do these lead firms have idiosyncrasies that not only embed them into a local economy, but see them surrounded by thick value chains, which not only enhance value creation in other local firms but ensure greater dollops of value remain within the local economies?

Again, we get mixed answers, some lead firms are standout performers, while some 'can do better'.

Our analysis of the manoeuvrings in the CCD economies led to an important conclusion. This is that there are three significant drivers of value creation in the CCD economies, namely:

1. The performance of lead firms (including lead institutions and lead agencies).
2. The existence of well-functioning value chains.
3. The presence of value-enhancing strategic centres and specialist lands.

We examined the importance of these three drivers in sections 9 (as noted above), 10 and 11. In particular we observed that where there are deficiencies in performance in respect to lead firms, value chains, and strategic centres and specialist lands, there are enormous opportunities for actions to redress these deficiencies and so create more prosperous, resilient economies for the future. It remains for future reports to tease out these opportunities. In each of these sections we made suggestions as to how this might be done.

Then, because we found remote working as a significant legacy of COVID-19, we devoted a full section, section 12, to an integrated discussion of the possibilities for hybrid working models for CCD economies in the years ahead. Worth stressing is that realising the opportunities for remote working in the CCD economies exposes the importance of the insights into lead firms, value chains and strategic centres and specialist lands. We trust we have emphasised these important connections through the back end of the report.

Finally, we are confident the report delivers a portfolio of knowledge resources for the third dimension, the task of building prosperity for the forthcoming ten-year horizon. We hope our insights contribute to the task of forging fruitful economies, some persuasive tools which might avoid the heat and hammering that forging sometimes requires, especially when questions of jurisdiction and resource availability arise.

Where there are deficiencies in performance in respect to lead firms, value chains, and strategic centres and specialist lands, there are enormous opportunities for actions.

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