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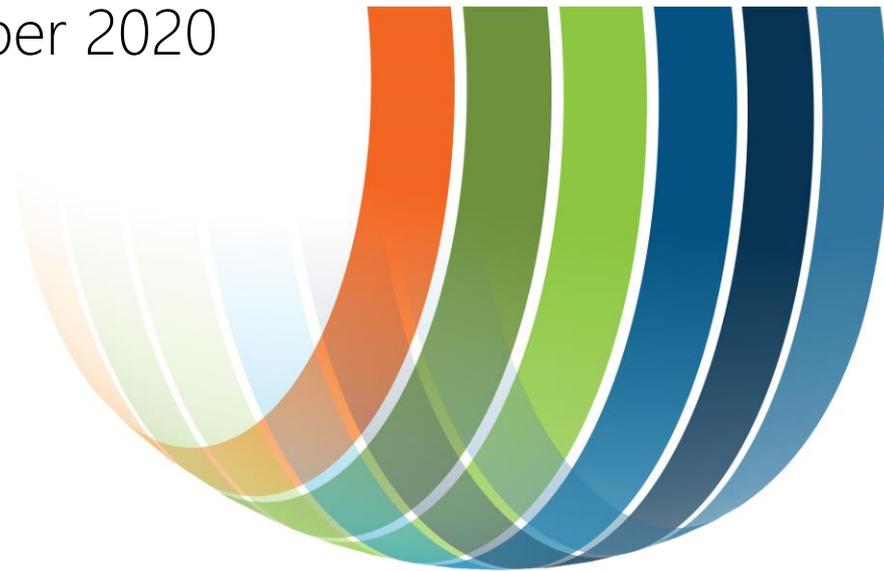
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# The effects of COVID-19 on the regional economies of New Zealand

## for The Treasury

October 2020



**Infometrics**

Economics put simply

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## Introduction

The Treasury has commissioned Infometrics to provide estimates of the effects of COVID-19 on employment and GDP at a regional and local authority level. This report details the results of our modelling for the March 2022 year (which we expect to be the low point for employment), as well as results for March 2025, when the economy's recovery is likely to be reasonably well-progressed.

This report outlines our broad macroeconomic outlook for the New Zealand economy, including our view that the disruption caused by COVID-19, and the associated job losses and business failures, will take time to recover from. We detail the key assumptions that we have made in our modelling of the industry and regional effects of the pandemic, such as the extent of the reduction in international tourism expenditure or the outlook for the global economy and its effects on New Zealand exports.

Our results show that tourism-related industries are likely to suffer the biggest contractions in GDP and employment over the next two years, which is a direct reflection of the border closures and other travel limitations in place. Accommodation and food services GDP is forecast to shrink 29% by March 2022, with double-digit declines also recorded in transport, postal, and warehousing; arts and recreation services; and manufacturing (the latter reflecting softer global demand for non-food manufactured products). However, these job losses and business failures will have flow-on effects for other industries, and there has already been some immediate job losses announced in response to COVID-19 and the initial lockdown in April.

By March 2022, GDP is forecast to be as much as 25% below its March 2020 level in Queenstown-Lakes, the worst affected area. Other tourism-dependent areas such as Mackenzie, Kaikōura, and Westland are expected to record double-digit declines. In contrast, 10 regional economies are expected to have a larger economy by 2022 than they had prior to the pandemic, with many of these areas having a significant agricultural base and little reliance on international tourism.

## Outlook for the New Zealand economy

Data to date tells a very limited story about the effects on the New Zealand economy of the COVID-19 pandemic, the lockdowns, and the government's response. The immediate bounce back in economic activity following the initial round of Level 3 and Level 4 restrictions between March and May was arguably better than expected. Money that would normally be spent on overseas holidays was instead used for domestic holidays, purchasing cars, or spending on homewares and renovation work. Labour market indicators have also held up relatively well, which is in part due to the considerable support provided by the wage subsidy scheme and other government initiatives.

Although economic activity contracted by 12.2% in the June quarter (seasonally adjusted), this result was heavily affected by the lockdown during the first part of the quarter, and so it does not provide a good indication of likely economic activity going forward. Instead, September quarter GDP will provide a much better, albeit hazy, picture of the economy's ability to operate given ongoing restrictions such as border closures.

Infometrics expects GDP in the year to March 2021 to be 5.7% below its March 2020 level. This result will largely reflect the weak June 2020 quarterly result, but it also hints at the persistent effects of COVID-19 on economic activity beyond the initial lockdown. Activity will pick up further during 2021/22, but Infometrics does not expect the overall size of the economy to surpass its pre-COVID level again until late 2022 or early 2023. This "U-shaped" recovery is based on several key factors, including:

- border closures in New Zealand that will severely restrict migrant and visitor movements throughout most or all of 2021
- relatively weak global demand conditions, given the ongoing effect of the pandemic on the international economy
- the time required for jobs lost in areas such as tourism-related businesses to be replaced by new positions being created within other industries.

In other words, economic scarring and resulting reallocation of talent and resources will occur as structural changes occur across the economy. These structural shifts will not be swift, causing the "U-shaped" profile of recovery.

Although the government's wage subsidy scheme appears to have limited the immediate number of job losses resulting from the pandemic, it is also likely to have delayed the expected downturn in the labour market. Infometrics forecasts a fall in total employment of 3.3% between March 2020 and March 2021, with job numbers declining a further 1.2% in the following year before bottoming out.

The speed of the New Zealand economy's recovery over following years will largely be determined by exogenous factors such as the availability of a COVID-19 vaccine, the openness of borders, and the strength of the global economy. However, within New Zealand, the ability of unemployed workers to retrain and find new employment, and the confidence of entrepreneurs to invest in creating new jobs through expanding their current businesses or establishing new businesses and creating new jobs, will also be key to the recovery. Infometrics expects that this process will take time, meaning that even if a vaccine is available and borders can reopen by the start of 2022, New Zealand's subsequent pick-up in employment and economic activity will not be instantaneous.

Infometrics forecasts a 3.9% lift in employment during the March 2023 year as international travel resumes and tourism-related businesses are re-established. Employment growth will remain above average over the following two years, and by 2025, total job numbers are expected to be 4.0% above their March 2020 level. This result represents average growth of 0.8%pa over the five years to March 2025, meaning that total employment at this stage will still be below what would have been expected had the pandemic not occurred, and that there will still be some spare capacity in the labour market.

The slightly earlier forecast rebound in GDP means that expected economic growth between 2022 and 2025 is less impressive than employment, averaging 2.4%pa. Over the five-year period between March 2020 and March 2025, this forecast implies average GDP growth of 1.1%pa. As with employment, this result is below both historical averages and pre-pandemic expectations. It reflects the structural changes forced on New Zealand by COVID-19 and the persistence of spare capacity in the economy even in 4-5 years' time.

Table 1 presents a summary of our macroeconomic forecasts between 2020 and 2025. Although our subsequent modelling of the effects of COVID-19 at an industry and regional level has been conducted on a March-year basis, Table 1 provides our overall macroeconomic outlook in June years. This presentation enables ease of comparison with Treasury's outlook published in the Pre-Election Economic and Fiscal Update (PREFU).

The key differences between Treasury's forecasts and Infometrics' forecasts underpinning our industry and regional modelling are as follows.

- Economic growth in the June 2021 year is likely to be better than Treasury expects. This result reflects the near-term momentum showing through across many partial indicators of activity, suggesting that the support provided by stimulatory fiscal and monetary policy is having a real effect on activity.
- However, we expect the effects of COVID-19 on the labour market to show through more fully during 2021, leading to weaker employment outcomes in the 2021 and 2022 June years. This outlook has clear implications for the industry and regional outcomes in 2022 discussed later in this report.
- In our view, this more extended period of labour market weakness will also negatively affect household spending and economic growth in the year to June 2022, limiting the ability of the economy to recover as quickly as Treasury is forecasting. Treasury's more positive projections of private consumption for 2022 would have flow-on effects for those parts of the country where (non-tourism) retail activity makes up a relatively high proportion of employment and economic activity.
- We also expect a weaker recovery in total investment spending in the later years of the forecast period. This result is primarily driven by continuing declines in residential investment over the medium term, with the weak labour market, slower population growth, and gradual rises in interest rates negatively affecting residential construction activity. A stronger outlook for residential investment would have positive implications for parts of the country where residential construction activity is a significant part of the economy.

Table 1

**Summary of macroeconomic forecasts**

Annual average percentage changes

<i>June years</i>	<b>2019/20</b>	<b>2020/21</b>	<b>2021/22</b>	<b>2022/23</b>	<b>2023/24</b>	<b>2024/25</b>
	Actual	Forecast	Forecast	Forecast	Forecast	Forecast
<b>Real expenditures</b>						
Private consumption	-1.2%	1.6%	1.3%	3.1%	2.8%	3.0%
Government consumption	5.2%	4.4%	4.0%	0.4%	1.3%	1.8%
Residential investment	-6.4%	-8.3%	4.9%	-5.8%	-6.6%	-11.9%
Other investment	-5.2%	-3.1%	7.1%	4.2%	5.3%	4.7%
Exports of goods and services	-5.8%	-15.3%	9.4%	9.7%	4.2%	3.5%
Imports of goods and services	-5.7%	-9.2%	7.8%	6.2%	5.8%	4.1%
<b>Gross domestic product</b>	<b>-2.0%</b>	<b>0.7%</b>	<b>1.5%</b>	<b>2.8%</b>	<b>2.3%</b>	<b>2.3%</b>
<b>Households</b>						
Net migration (1)	82,650	847	-5,694	-618	25,614	29,525
Population (2)	2.1%	0.6%	0.4%	0.5%	1.0%	1.1%
HLFS employment	1.7%	-4.2%	-0.7%	3.5%	3.3%	3.0%
HLFS unemployment rate (3)	4.1%	8.3%	8.4%	6.9%	5.9%	5.4%
HLFS participation rate (4)	70.2%	68.9%	68.8%	70.0%	70.8%	71.9%
<b>Prices</b>						
Consumers price index (2)	1.5%	1.2%	1.1%	1.6%	1.7%	1.7%
Hourly wage	3.6%	1.6%	1.2%	2.2%	2.4%	2.4%
Labour cost index	2.4%	1.4%	1.5%	1.7%	1.8%	1.8%
<b>External sector</b>						
Terms of trade	4.9%	1.0%	-1.6%	0.7%	0.9%	1.6%
Current account balance (\$m) (1)	-5,765	-9,539	-11,282	-12,564	-14,414	-14,224
as % of GDP (1)	-1.9%	-3.0%	-3.6%	-3.9%	-4.2%	-4.0%
<b>Financial (average rates, June quarter)</b>						
Exchange rate - TWI; level	69.7	70.6	71.2	69.9	68.6	67.4
Annual % change	-4.0%	1.3%	0.9%	-1.9%	-1.9%	-1.7%
International bond rate	0.5%	0.6%	1.2%	1.5%	1.8%	2.1%
plus NZ risk premium	0.4%	-0.1%	-0.7%	-0.6%	-0.7%	-0.9%
NZ interest rates - bonds	0.8%	0.4%	0.5%	0.9%	1.1%	1.2%
less bills	0.3%	-0.1%	-0.3%	0.2%	0.4%	1.2%
yield gap	0.5%	0.6%	0.8%	0.7%	0.6%	0.0%

(1) Total for June year

(2) June on June

(3) June quarter, seasonally adjusted

(4) Annual average for year ended

## Our broad approach to modelling the effects on regions

Infometrics has drawn on a range of econometric and statistical models to measure the potential effects of COVID-19 on regional economies. Our macro-economic framework provides forecasts of total GDP and employment to 2025. We have drawn on our general equilibrium model to estimate the effects of COVID-19 on individual industries

in the national economy. Our Regional Forecasting Model then splits the national industry forecasts to regional industry forecasts.

## Forecasting the macroeconomy

Infometrics maintains a macroeconomic forecasting framework that underpins our five-year forecasts of activity across the national economy. Our framework accounts for the relationships between different sectors of the economy and their responsiveness to one another. These include the labour market, households, businesses, government, the international trade sector, and financial markets.

In times of economic upheaval, we refine the output from the framework based on expert input from our forecasting team, their knowledge of rapidly changing trends in the economy, and the insights we gain from our interactions with central government, Councils, Economic Development Agencies and private sector clients.

Our macroeconomic framework provides quarterly forecasts of GDP, employment, unemployment, and a range of other macroeconomic indicators up to mid-2025.

## Measuring effects on individual industries

The pandemic will affect industries differently. To estimate this, we use Infometrics' general equilibrium (GE) model, which is designed to measure the effects of economic shocks on individual industries. We introduce shocks to the model, including a sharp decline in foreign tourism, declines in international education and non-food commodity exports, and a fall in productivity across affected industries. We also temper these shocks through the introduction of support measures such as the wage subsidy and an increase in benefit payments. Our assumptions are outlined in more detail later in the report.

The GE model estimates the combined effects of these factors on future economic output and employment across 54 industries. In this sense, the GE model breaks down the national macroeconomic forecasts of GDP and employment to industry level.

## Measure the effects on regions and districts

Regions will also be affected differently by COVID-19. Those with a large tourism industry, for example, will be hardest hit. To measure regional effects, we draw on our Regional Forecasting Model (RFM), an econometric model that breaks down national industry forecasts to territorial authority level.

The RFM draws on historic trends, patterns and relationships, and projects these into the future. It creates multiple forecast models for every territorial authority and industry combination and using machine learning techniques, selects and applies the model which is historically determined to have best predictive ability. It then produces forecasts of GDP and employment across 54 industries for each territorial authority up to a predetermined point in the future, e.g. 2025 or 2030.

## Our modelling assumptions

We have made the following assumptions when modelling the effects of the COVID-19 pandemic, the economic downturn, and the government's policy responses on the New Zealand economy.

- **We have not made any allowance for any further moves to Alert Levels 3 or 4.** We have based our industry employment and output modelling on lockdowns to date: 4½ weeks at Level 4 and two weeks at Level 3 in April and May, and 2½ weeks at Level 3 in Auckland during August. We have allowed for specific industry-level constraints at Levels 3 and 4 based on factors including whether work is deemed “essential” or not, the ability to work remotely, and distanced sales potential. The restrictions on economic activity implied by Alert Levels 1 and 2 are captured by specific assumptions for the tourism industry.
- **Economic activity is constrained across the entire economy** - we estimate that, nationally, approximately 65% of economic activity can take place under Level 4. This estimate includes people that can work from home and those people working in essential services. Under Level 3, our estimate of potential economic activity taking place rises to 82%.
- **Global demand for food products will hold up but non-food exports will take a hit** – people still need to eat during a recession, which will limit the reduction in our food exports. We have allowed for a 16% contraction in non-food manufacturing export volumes in the year to March 2021 and for international demand to remain 8% below trend in the following year. We have also assumed a 9.5% reduction in international demand for unprocessed forestry exports such as logs in the March 2021 year. Global demand conditions are expected to have returned to normal by 2025.
- **Foreign tourism tanks** – we have assumed a 99% reduction in foreign tourist spending in New Zealand in the March 2021 year,<sup>1</sup> with the possibility of a Trans-Tasman and/or Pacific travel bubble leading to a smaller 91% reduction in the March 2022 year. Even by 2025, foreign tourist spending is still expected to be 35% below “normal” due to reduced airline capacity to New Zealand, lingering reluctance around long-haul travel, and reduced spending on holidays following the global recession. We have also assumed similarly sized reductions in New Zealand tourists spending money overseas.
- **Domestic tourism spending will increase** – the inability of New Zealanders to travel overseas means that more will choose to have domestic holidays. We estimate a 3.3% increase in domestic tourism spending in the March 2021 year, with this positive result limited by the lockdown in April and May. Spending is

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<sup>1</sup> This modelled reduction of 99% in spending only applies to spending by business and “other personal” travellers, with international education treated as a separate export category in our modelling. We note that overall estimates of foreign spending within New Zealand will be higher than we have modelled due to the continued presence of some foreign students in the country, but this spending will be captured in our assumptions about international education. We also expect that some spending on foreign cards currently taking place is by people who will ultimately be classed as migrants rather than visitors, because they have stayed in New Zealand longer than originally anticipated due to COVID-19 lockdowns, reduced air connectivity, and visa extensions.

forecast to be 12% above “normal” in 2022, and still 6% above higher than usual by 2025.

- **International education revenue halves** – we estimate the number of international students at schools and tertiary education providers this year to be at 79% of normal levels and predict a 49% reduction in international education revenue during the March 2021 and 2022 years. Even by 2025, international education revenue is expected to still be 20% below trend.
- **Domestic education demand will increase** – we have allowed for a lift in total demand for tertiary training from domestic students over the coming year of 8.3%, which is similar to what we saw following the GFC. Labour market weakness is likely to keep domestic tertiary demand at above-average levels throughout the next five years.
- **Government comes to the party** – our modelling includes the effects of more than \$16b thanks to the wage subsidy scheme and a further injection of \$1.6b in various social welfare benefits in the March 2021 year. The permanent increase in benefit levels represents an additional \$450m of government payments by the March 2025 year.

## Industry outlook

Employment and GDP are expected to decline across almost all industries over the two years to March 2022, as shown in Table 2 and Table 3. These broad-based declines reflect the constraints on domestic economic activity imposed by lockdown restrictions, the effects of the global recession on demand for New Zealand exports, and the opportunity taken by some businesses to consolidate or rationalise their operations.

The most significant hit will be experienced by tourism-related industries, with the loss of revenue from international visitors not offset by increased spending on domestic travel. Accommodation and food services, which is forecast to record a 26% decline in GDP between March 2020 and March 2022, will be most critically affected. Apart from the border closures, activity in the hospitality industry will also be squeezed by physical distancing requirements, an increased prevalence of working from home, and reduced discretionary spending due to the broader economic downturn.

Other industries that reflect the collapse in international tourism include transport, postal, and warehousing (GDP down 11% between March 2020 and March 2022); arts and recreation services (down 10%); and rental, hiring, and real estate services (down 8.2%). The biggest declines in transport services are concentrated in air, scenic, and sightseeing transport, while the drop in rental services mostly reflects reduced demand for passenger car rentals. The decline in arts and recreation services is relatively broad-based, due to restrictions on gathering sizes and the associated uncertainty when planning these events.

The only industries not expected to experience a decline in employment over the two years to March 2022 are public administration and safety; education and training; and health care and social assistance. All these industries have significant levels of public sector employment and will thus be less affected by the broader economic downturn. In the case of education and training, an increased incidence of tertiary study and training for domestic students is expected to offset the effects of reduced international student numbers on employment.

Table 2

**Employment by broad industry**

Total filled jobs, Infometrics forecasts

	Mar-20	2020-22 %pa	Mar-22	2022-25 %pa	Mar-25
Agriculture, Forestry and Fishing	146,340	-0.5%	144,843	1.9%	153,435
Mining	6,157	-2.9%	5,811	3.4%	6,425
Manufacturing	243,575	-1.6%	236,033	2.7%	255,567
Electricity, Gas, Water and Waste Services	17,604	-0.8%	17,337	2.2%	18,481
Construction	259,653	-4.1%	238,958	2.7%	258,966
Wholesale Trade	125,852	-2.5%	119,707	2.3%	128,124
Retail Trade	228,077	-3.1%	213,947	2.4%	229,820
Accommodation and Food Services	170,032	-13.9%	125,995	8.7%	162,043
Transport, Postal and Warehousing	106,291	-7.1%	91,743	5.4%	107,390
Information Media and Telecommunications	41,547	-2.8%	39,261	-0.4%	38,753
Financial and Insurance Services	69,505	-0.3%	69,117	1.5%	72,357
Rental, Hiring and Real Estate Services	62,345	-5.3%	55,858	4.9%	64,435
Professional, Scientific and Technical Services	245,910	-0.9%	241,630	3.9%	271,294
Administrative and Support Services	132,650	-1.1%	129,856	3.3%	143,203
Public Administration and Safety	125,440	1.4%	129,042	2.2%	137,917
Education and Training	202,520	0.6%	204,793	1.0%	211,087
Health Care and Social Assistance	255,559	2.6%	269,014	0.8%	275,553
Arts and Recreation Services	48,892	-5.1%	44,018	5.5%	51,688
Other Services	99,403	-2.3%	94,903	3.7%	105,905
<b>Total</b>	<b>2,587,353</b>	<b>-2.3%</b>	<b>2,471,869</b>	<b>2.9%</b>	<b>2,692,444</b>

Source: Infometrics

In general, those industries that record the biggest contractions in employment and economic activity in the near-term are also expected to be among the fastest-growing industries between 2022 and 2025. For example, accommodation and food services GDP is forecast to grow by an average of 8.5%pa during this three-year period, with transport, postal, and warehousing GDP expanding by 6.0%pa and rental, hiring, and real estate services increasing by 5.1%pa.

However, this rebound does not tell the full story. As noted in our modelling assumptions, we expect international tourism activity to still be 35% below its pre-pandemic forecast level by 2025. As a result, the **level** of economic activity in the accommodation and food services and arts and recreation services industries is projected to be lower in 2025 than it was in 2020, even with relatively strong **growth** in second part of the forecast period.

The loss of jobs and reduction of economic activity in tourism-related industries will, over the medium term, result in resource reallocation as these resources are picked up and utilised by other industries. Our modelling suggests that primary sector industries are most likely to benefit from spare capacity in the labour market, including agriculture, forestry, and fishing and mining. Although employment growth over the five-year forecast period in these industries is not expected to be significantly faster than economy-wide growth, projected growth in primary sector employment is still expected to run ahead of what would have occurred under business-as-usual conditions.

Table 3

**GDP by broad industry**

\$millions, constant 2019 prices

	Mar-20	2020-22 %pa	Mar-22	2022-25 %pa	Mar-25
Agriculture, Forestry and Fishing	15,931	0.7%	16,160	2.1%	17,196
Mining	3,587	-3.8%	3,319	-0.9%	3,230
Manufacturing	29,120	-0.7%	28,728	2.3%	30,743
Electricity, Gas, Water and Waste Services	7,868	-3.4%	7,337	-1.9%	6,931
Construction	19,777	-2.4%	18,830	1.4%	19,638
Wholesale Trade	15,207	-1.0%	14,892	1.9%	15,761
Retail Trade	15,639	1.1%	15,993	5.4%	18,753
Accommodation and Food Services	6,484	-14.2%	4,774	8.5%	6,105
Transport, Postal and Warehousing	13,403	-5.7%	11,918	6.0%	14,175
Information Media and Telecommunications	10,566	2.1%	11,011	1.8%	11,622
Financial and Insurance Services	17,931	1.3%	18,403	1.0%	18,956
Rental, Hiring and Real Estate Services	21,271	-4.2%	19,537	5.1%	22,687
Professional, Scientific and Technical Services	25,538	1.0%	26,067	3.6%	29,014
Administrative and Support Services	6,238	-0.7%	6,154	2.1%	6,545
Public Administration and Safety	13,238	2.6%	13,942	2.0%	14,781
Owner-Occupied Property Operation	18,914	-0.8%	18,597	2.5%	20,022
Education and Training	11,362	-0.4%	11,262	-1.6%	10,716
Health Care and Social Assistance	17,627	3.5%	18,882	0.0%	18,892
Arts and Recreation Services	4,013	-5.4%	3,592	3.0%	3,924
Other Services	5,367	-2.2%	5,135	2.2%	5,481
Unallocated	23,142	-0.8%	22,765	2.4%	24,477
<b>New Zealand</b>	<b>302,224</b>	<b>-0.8%</b>	<b>297,300</b>	<b>2.4%</b>	<b>319,650</b>

Source: Infometrics

## Regional outlook

### Regional Council Areas

Employment is forecast to contract across all regions of New Zealand over the two years to March 2022 (see Table 4). In broad terms, the biggest declines are expected to occur in areas that have a relatively high dependence on international tourism: Otago (down 4.8%pa) and West Coast (down 3.6%pa). Even in Auckland and Canterbury, which contain the country's two largest urban centres, the role of international tourism cannot be escaped, with employment forecast to decline by 2.6%pa in both regions.

In contrast, provincial areas that have limited exposure to tourism, and are instead more reliant on agricultural activity, will fare better than the nationwide average. Key examples include Taranaki<sup>2</sup> (employment down 0.8%pa between March 2020 and March 2022), Manawatū-Whanganui (down 1.3%pa), and Gisborne (down 1.3%pa).

<sup>2</sup> In contrast to its employment result between 2020 and 2022, Taranaki's GDP is forecast to decline by more than the nationwide average. This outcome reflects the relative importance of the mining and electricity, gas, water, and waste services industries in Taranaki. Neither industry is particularly labour-intensive, so any contraction in these industries will have a larger effect on GDP than on employment.

Table 4

**Employment by regional council area**

Total filled jobs, Infometrics forecasts

	Mar-20	2020-22 %pa	Mar-22	2022-25 %pa	Mar-25
Northland Region	75,926	-2.5%	72,241	2.9%	78,755
Auckland Region	915,203	-2.6%	868,409	2.9%	944,868
Waikato Region	227,338	-1.7%	219,889	2.7%	238,447
Bay of Plenty Region	159,067	-1.4%	154,625	3.5%	171,357
Gisborne Region	22,820	-1.3%	22,222	2.4%	23,832
Hawke's Bay Region	84,957	-1.7%	82,132	2.9%	89,493
Taranaki Region	60,427	-0.8%	59,443	1.3%	61,703
Manawatu-Wanganui Region	118,682	-1.3%	115,571	2.6%	124,709
Wellington Region	298,950	-1.3%	290,970	2.8%	315,730
Tasman Region	25,473	-2.4%	24,241	3.4%	26,810
Nelson Region	30,329	-2.1%	29,087	3.2%	31,925
Marlborough Region	28,128	-3.0%	26,464	3.0%	28,929
West Coast Region	16,361	-3.6%	15,212	3.0%	16,608
Canterbury Region	336,631	-2.6%	319,625	3.0%	348,857
Otago Region	132,060	-4.8%	119,686	3.9%	134,374
Southland Region	55,000	-2.7%	52,052	2.5%	56,046
<b>New Zealand</b>	<b>2,587,353</b>	<b>-2.3%</b>	<b>2,471,869</b>	<b>2.9%</b>	<b>2,692,444</b>

Source: Infometrics

The subsequent recovery in employment between 2022 and 2025 is likely to be strongest in those areas that are hardest hit in the near term. However, comparing 2025 employment levels with 2020 levels reveals the lingering effects of the COVID-19 pandemic and matches up with our projections of employment by industry. The likelihood that international tourism does not fully recover within the forecast horizon means that total employment in 2025 in West Coast and Otago is expected to be just 1.5% and 1.8% respectively above its 2020 levels.

Other regions that are expected to struggle over the medium term are Southland and Taranaki. The likely closure of the aluminium smelter at Tiwai Point will have negative flow-on effects for the broader regional economy and constrain employment and economic growth. It is also worthwhile emphasising the importance of international tourism to the Fiordland area of Southland. For Taranaki, an ongoing move away from carbon-intensive energy sources will negatively affect medium-term prospects for the mining and electricity, gas, water, and waste services industries. The constraints experienced by these key parts of Taranaki's economy will limit overall growth in the region between 2022 and 2025.

At the other end of the spectrum, the best-performing regions in terms of employment over the five years between 2020 and 2025 are generally expected to be areas with a large agricultural sector, such as Bay of Plenty, Tasman, and Manawātū-Whanganui. Lifestyle will continue to be a key driver of population growth in parts of the country such as Bay of Plenty and Nelson, which will help to reinforce a solid economic performance. And Wellington's large public sector presence will see the region's economy relatively insulated from the economic downturn and well positioned to record good growth over the five-year period.

These results are largely repeated in our projections of GDP growth between 2020 and 2025 (see Table 5). Wellington is notably the only region where GDP is projected to be higher in March 2022 than it was in March 2020, with relatively small declines in activity forecast for agriculturally based regional economies such as Manawatū-Whanganui, Bay of Plenty, Waikato, and Hawke's Bay. The importance of international tourism again shows through in the results for Otago and West Coast.

Table 5

**GDP by regional council area**

\$millions, constant 2019 prices

	Mar-20	2020-22 %pa	Mar-22	2022-25 %pa	Mar-25
Northland Region	7,961	-1.7%	7,698	2.5%	8,292
Auckland Region	114,765	-0.8%	112,986	2.6%	122,067
Waikato Region	25,471	-0.5%	25,239	2.0%	26,760
Bay of Plenty Region	15,269	-0.1%	15,234	3.2%	16,740
Gisborne Region	2,004	-0.8%	1,973	2.9%	2,148
Hawke's Bay Region	7,873	-0.5%	7,790	2.8%	8,471
Taranaki Region	9,368	-1.2%	9,145	0.6%	9,318
Manawatu-Wanganui Region	11,368	-0.1%	11,356	2.3%	12,154
Wellington Region	40,778	0.0%	40,809	2.1%	43,451
Tasman Region	2,266	-1.1%	2,217	3.1%	2,430
Nelson Region	2,691	-0.9%	2,642	2.9%	2,878
Marlborough Region	3,121	-2.1%	2,992	2.6%	3,234
West Coast Region	1,846	-2.6%	1,752	1.5%	1,829
Canterbury Region	37,533	-1.1%	36,683	2.5%	39,491
Otago Region	13,516	-3.3%	12,626	3.4%	13,943
Southland Region	6,395	-1.9%	6,158	1.5%	6,444
<b>New Zealand</b>	<b>302,224</b>	<b>-0.8%</b>	<b>297,300</b>	<b>2.4%</b>	<b>319,650</b>

Source: Infometrics

By 2025, GDP in West Coast and Taranaki is expected to be smaller than it was in 2020, while Southland's economy is only expected to be 0.8% larger than five years earlier. The drivers of these regional GDP outcomes mirror the influences underpinning our employment forecasts.

The best-performing regions over the five-year forecast period are expected to be Bay of Plenty, Hawke's Bay, and Gisborne. The Hawke's Bay and Gisborne results reflect the relatively low level of economic disruption experienced by these regions during the pandemic, which will enable their economies to regain a growth trajectory more easily than other areas where job losses and business failures have been more substantial.

We also note relatively good economic growth outcomes across much of the upper North Island. Although COVID-19 will temporarily disrupt some of the long-term underlying trends in the economy, Auckland and Bay of Plenty are expected to maintain above-average population growth over the medium term, which will help foster GDP growth that is faster than the nationwide average.

## Key urban areas

Table 6 presents GDP and employment results between 2020 and 2022 for six key urban areas around New Zealand.

**Table 6**

### Key urban areas

% change in GDP and employment, 2020-2022 (March years)

Urban area	Employment	GDP
Auckland	-5.1%	-1.5%
Hamilton City	-1.7%	0.5%
Tauranga City	-1.4%	1.6%
Wellington City	-2.4%	0.6%
Christchurch City	-4.8%	-2.1%
Queenstown-Lakes District	-28.5%	-24.8%

Source: Infometrics

At this stage, Auckland is expected to fare slightly worse than the nationwide average in terms of employment outcomes in the two years to March 2022. This outcome reflects a range of factors, including the additional constraining effect of Auckland's recent period in Alert Level 3 on the economy, the importance of international tourism and international education to the region, and the significant slowdown in population growth given the lack of foreign migrants coming into the country. This latter point could also have flow-on effects for those areas that have benefited from the spill-over of Auckland's fast population growth in recent years, such as Waikato District.

Hamilton's relatively low reliance on international tourism, its importance to the surrounding food-producing districts, and the city's role as a significant hub for education, health, and other government services, mean that it is expected to perform relatively well. A long-term trend of significant infrastructure improvements also provides a solid basis for continued employment and economic growth in Hamilton, helping to mitigate the negative effects of the COVID-19 pandemic on activity.

The strength of Tauranga's port and the performance of the horticultural sector in surrounding areas are expected to limit the city's economic downturn. However, we see some downside risks to these results. Construction and retail trade make up a considerable part of the city's economy, and both industries are at risk of significant job losses. Furthermore, it is unclear if Tauranga will be able to maintain relatively strong population growth if the outflow of people from Auckland starts to wane.

The hit to employment and economic activity in Wellington from COVID-19 will be limited by the prevalence of public sector employment in the city. Wellington's economy is traditionally somewhat shielded from economic cycles that affect the rest of the country, and the substantial government support and stimulus required due to the pandemic is likely to lead to an expanding government sector. Even in the private sector, Wellington's professional and service-orientated workforce is likely to be less affected on average than workers in other parts of the country. However, we also note that although employment may be less affected, where these workers are located may well spread into the wider Wellington region as working from home and high house prices influence worker decisions.

Christchurch's role as a gateway for international tourists to the South Island means that the flow-on effects from border closures are likely to result in a significant hit to the city's economy. The city's construction industry has also been under pressure in recent years as building activity has retreated from its post-quake rebuild peak to more "normal" levels. These two factors are key contributors to Christchurch's underperformance over the next two years.

Queenstown-Lakes is projected to be the local authority area most heavily affected by COVID-19 and its aftermath. Tourism represents an estimated 56% of the District's economy, with almost two-thirds of that spending coming from international visitors. Although increases in domestic travel have helped pick up some of the slack, spending by New Zealanders will not come close to filling the hole caused by the border closures. Queenstown-Lakes' workforce is significantly overrepresented in accommodation and food services, construction, retail trade, and arts and recreation services.

## Most and least affected areas

The local council areas most heavily affected by fallout from the COVID-19 pandemic are, almost exclusively, heavily reliant on tourism (see Table 7). International visitors play an important role for areas such as Queenstown-Lakes and Mackenzie. But it is notable that, even for areas such as Thames-Coromandel and Hurunui, where domestic visitors play a more prominent role in tourist spending, the reduction in travel spending will have negative effects on employment and GDP.

**Table 7**

### TAs hardest hit by COVID-19

% change in GDP and employment, 2020-2022 (March years)

Territorial authority	Employment	GDP
Queenstown-Lakes District	-28.5%	-24.8%
Mackenzie District	-27.3%	-19.8%
Kaikoura District	-17.2%	-11.6%
Westland District	-14.1%	-11.2%
Taupo District	-9.8%	-5.9%
Selwyn District	-9.1%	-4.7%
Thames-Coromandel District	-9.0%	-4.6%
Southland District	-7.7%	-2.9%
Far North District	-7.2%	-4.4%
Hurunui District	-7.2%	-3.5%

Source: Infometrics

Recent buoyancy in domestic holiday spending presents some upside risks to these forecasts, both for areas that are normally reliant on domestic visitors, as well as for areas such as Queenstown-Lakes that have generally catered to international visitors. However, we note that any increase in domestic tourism spending due to New Zealanders' inability to travel overseas will not be sufficient to offset the loss of international tourism spending. During 2019, spending by international visitors in New Zealand totalled \$15.9b, compared to \$6.7b of travel and tourism-related spending by New Zealanders overseas.

Selwyn stands out as an unusual inclusion in the most affected districts, given that tourism only represents 2.2% of Selwyn's GDP, compared to the nationwide average of 5.4%. The weak result for Selwyn represents expectations that construction activity in the District will soften substantially over the next two years as the housing market weakens, population growth slows, and demand for new housing in the Greater Christchurch area continues to decline after the post-quake rebuild. Residential construction currently represents a significant chunk of the Selwyn economy, meaning that the area is vulnerable to a future downturn in activity.

At the other end of the spectrum, Ōtorohanga is the only area where employment levels are expected to be higher in March 2022 than they were in March 2020 (see Table 8). Ōtorohanga's growth is based around two major building projects in the District – the expansion at Waikeria Prison (where work has been underway for some time) and the planned construction of a \$280m dairy factory for Happy Valley Nutrition.

**Table 8**

**TAs hit least hard by COVID-19**

% change in GDP and employment, 2020-2022 (March years)

<b>Territorial authority</b>	<b>Employment</b>	<b>GDP</b>
Otorohanga District	6.5%	10.2%
Kawerau District	0.0%	1.8%
Manawatu District	-0.4%	2.8%
South Waikato District	-0.4%	2.4%
Western Bay of Plenty District	-1.0%	0.5%
Tauranga City	-1.4%	1.6%
New Plymouth District	-1.5%	-2.4%
Gore District	-1.5%	0.0%
South Taranaki District	-1.6%	-2.1%
Hamilton City	-1.7%	0.5%

Source: Infometrics

Alongside Ōtorohanga, many of the areas with modest employment falls between 2020 and 2022 have agriculturally based economies. Areas such as Manawatū, South Waikato, and Western Bay of Plenty are likely to be less negatively affected by the pandemic given ongoing international demand for New Zealand's agricultural exports.

Even the more urban areas that make the list of the top 10 performers have relatively strong linkages to the agricultural sector. Economic activity in New Plymouth and Hamilton are likely to benefit from the relative resilience of dairy activity in the surrounding regions, while export incomes from horticulture and sheep and beef farming will flow through into Tauranga from other parts of Bay of Plenty.

## Appendix A. GDP and Employment by territorial authority, 2020-2025

### Employment by territorial authority

Total filled jobs, Infometrics forecasts

	Mar-20	2020-22 %pa	Mar-22	2022-25 %pa	Mar-25
Far North District	25,591	-3.7%	23,746	2.9%	25,880
Whangarei District	41,571	-1.6%	40,252	2.5%	43,324
Kaipara District	8,763	-3.0%	8,243	5.0%	9,552
Auckland	915,203	-2.6%	868,409	2.9%	944,868
Thames-Coromandel District	13,240	-4.6%	12,053	3.4%	13,305
Hauraki District	7,792	-2.0%	7,483	1.9%	7,909
Waikato District	24,563	-2.1%	23,558	3.2%	25,882
Matamata-Piako District	18,670	-2.0%	17,934	2.1%	19,085
Hamilton City	98,605	-0.8%	96,970	2.7%	105,163
Waipa District	25,127	-1.4%	24,453	3.4%	27,008
Otorohanga District	4,910	3.2%	5,231	-2.2%	4,886
South Waikato District	10,137	-0.2%	10,095	2.9%	10,997
Waitomo District	5,194	-3.0%	4,886	1.4%	5,091
Taupo District	19,100	-5.0%	17,226	3.5%	19,122
Western Bay of Plenty District	24,456	-0.5%	24,216	3.9%	27,153
Tauranga City	75,893	-0.7%	74,805	3.7%	83,431
Rotorua District	35,982	-3.5%	33,531	3.7%	37,398
Whakatane District	15,963	-1.7%	15,429	1.7%	16,243
Kawerau District	2,898	0.0%	2,897	3.1%	3,170
Opotiki District	3,875	-1.7%	3,748	1.9%	3,963
Gisborne District	22,820	-1.3%	22,222	2.4%	23,832
Wairoa District	3,515	-1.5%	3,412	1.4%	3,559
Hastings District	46,122	-1.4%	44,850	2.8%	48,786
Napier City	28,778	-2.2%	27,501	3.4%	30,361
Central Hawke's Bay District	6,541	-1.3%	6,369	2.1%	6,786
New Plymouth District	42,465	-0.8%	41,818	1.1%	43,217
Stratford District	3,563	-1.5%	3,458	1.5%	3,615
South Taranaki District	14,400	-0.8%	14,168	1.6%	14,871
Ruapehu District	6,482	-2.8%	6,125	2.7%	6,631
Wanganui District	20,354	-1.2%	19,864	2.4%	21,344
Rangitikei District	6,738	-1.5%	6,531	2.0%	6,935
Manawatu District	12,467	-0.2%	12,418	3.8%	13,872
Palmerston North City	53,390	-1.5%	51,851	2.5%	55,904
Tararua District	7,827	-1.2%	7,643	1.9%	8,086
Horowhenua District	11,424	-1.2%	11,140	2.3%	11,937
Kapiti Coast District	17,941	-1.1%	17,550	3.8%	19,620
Porirua City	21,079	-1.5%	20,463	2.7%	22,179
Upper Hutt City	14,040	-2.4%	13,363	2.1%	14,208
Lower Hutt City	51,664	-1.1%	50,485	1.9%	53,424
Wellington City	173,319	-1.2%	169,142	3.0%	184,911
Masterton District	12,727	-1.8%	12,263	2.1%	13,049
Carterton District	3,876	-2.4%	3,688	2.3%	3,950
South Wairarapa District	4,305	-3.4%	4,014	3.0%	4,390

Source: Infometrics

**Employment by territorial authority**

Total filled jobs, Infometrics forecasts

	Mar-20	2020-22 %pa	Mar-22	2022-25 %pa	Mar-25
Tasman District	25,473	-2.4%	24,241	3.4%	26,810
Nelson City	30,329	-2.1%	29,087	3.2%	31,925
Marlborough District	28,128	-3.0%	26,464	3.0%	28,929
Kaikoura District	1,941	-9.0%	1,607	5.2%	1,872
Buller District	4,118	-3.4%	3,839	2.9%	4,180
Grey District	7,523	-1.4%	7,319	1.6%	7,674
Westland District	4,720	-7.3%	4,054	5.5%	4,755
Hurunui District	6,296	-3.7%	5,843	2.5%	6,288
Waimakariri District	19,532	-1.6%	18,923	3.1%	20,750
Christchurch City	233,639	-2.4%	222,426	3.1%	243,409
Selwyn District	23,762	-4.7%	21,596	2.9%	23,520
Ashburton District	19,261	-1.5%	18,673	2.4%	20,047
Timaru District	26,117	-1.5%	25,339	2.4%	27,183
Mackenzie District	2,845	-14.8%	2,067	5.9%	2,453
Waimate District	3,237	-1.3%	3,151	1.9%	3,338
Waitaki District	11,685	-2.5%	11,111	2.4%	11,946
Central Otago District	13,392	-2.8%	12,646	3.2%	13,882
Queenstown-Lakes District	30,979	-15.4%	22,152	6.9%	27,026
Dunedin City	66,618	-1.4%	64,738	3.6%	71,895
Clutha District	9,386	-1.9%	9,039	2.1%	9,625
Southland District	17,789	-3.9%	16,418	3.0%	17,959
Gore District	7,195	-0.8%	7,083	1.8%	7,480
Invercargill City	30,016	-2.5%	28,551	2.3%	30,606
<b>New Zealand</b>	<b>2,587,353</b>	<b>-2.3%</b>	<b>2,471,869</b>	<b>2.9%</b>	<b>2,692,444</b>

Source: Infometrics

**GDP by territorial authority**

\$millions, constant 2019 prices

	Mar-20	2020-22 %pa	Mar-22	2022-25 %pa	Mar-25
Far North District	2,494	-2.2%	2,383	2.5%	2,567
Whangarei District	4,545	-1.4%	4,415	2.2%	4,710
Kaipara District	922	-1.2%	899	4.1%	1,015
Auckland	114,765	-0.8%	112,986	2.6%	122,067
Thames-Coromandel District	1,325	-2.3%	1,264	3.1%	1,386
Hauraki District	1,071	-1.1%	1,048	0.7%	1,071
Waikato District	2,993	-1.5%	2,904	1.9%	3,071
Matamata-Piako District	2,125	-0.6%	2,100	1.6%	2,205
Hamilton City	10,101	0.2%	10,150	2.0%	10,778
Waipa District	2,749	0.1%	2,756	2.8%	2,998
Otorohanga District	608	5.0%	670	-2.4%	622
South Waikato District	1,317	1.2%	1,349	3.1%	1,478
Waitomo District	842	-2.9%	794	-1.0%	771
Taupo District	2,341	-3.0%	2,204	2.6%	2,380
Western Bay of Plenty District	2,171	0.3%	2,182	3.5%	2,418
Tauranga City	7,234	0.8%	7,351	3.7%	8,191
Rotorua District	3,508	-1.7%	3,391	3.2%	3,726
Whakatane District	1,656	-1.5%	1,606	0.9%	1,650
Kawerau District	358	0.9%	365	2.6%	394
Opotiki District	342	-0.5%	339	2.2%	361
Gisborne District	2,004	-0.8%	1,973	2.9%	2,148
Wairoa District	340	-0.6%	336	1.7%	353
Hastings District	4,180	-0.3%	4,155	2.6%	4,482
Napier City	2,733	-1.0%	2,680	3.6%	2,979
Central Hawke's Bay District	620	-0.1%	619	2.0%	657
New Plymouth District	6,603	-1.2%	6,441	0.6%	6,563
Stratford District	491	-1.3%	478	0.7%	488
South Taranaki District	2,274	-1.1%	2,226	0.6%	2,266
Ruapehu District	677	-1.0%	663	2.2%	708
Wanganui District	1,851	-0.2%	1,843	2.2%	1,970
Rangitikei District	658	-0.2%	656	2.1%	697
Manawatu District	1,256	1.4%	1,292	3.7%	1,439
Palmerston North City	4,928	-0.2%	4,911	2.2%	5,242
Tararua District	874	-0.1%	872	1.6%	916
Horowhenua District	1,124	-0.2%	1,119	1.8%	1,183
Kapiti Coast District	2,025	-0.2%	2,019	3.0%	2,209
Porirua City	2,291	-0.3%	2,278	2.5%	2,454
Upper Hutt City	1,781	-0.6%	1,758	1.9%	1,861
Lower Hutt City	6,133	-0.2%	6,112	1.6%	6,404
Wellington City	26,153	0.3%	26,297	2.2%	28,036
Masterton District	1,362	-0.9%	1,338	1.6%	1,404
Carterton District	498	-1.3%	484	2.0%	514
South Wairarapa District	535	-1.2%	522	2.9%	570

Source: Infometrics

**GDP by territorial authority**

\$millions, constant 2019 prices

	Mar-20	2020-22 %pa	Mar-22	2022-25 %pa	Mar-25
Tasman District	2,266	-1.1%	2,217	3.1%	2,430
Nelson City	2,691	-0.9%	2,642	2.9%	2,878
Marlborough District	3,121	-2.1%	2,992	2.6%	3,234
Kaikoura District	217	-6.0%	191	4.2%	217
Buller District	540	-2.3%	516	0.5%	523
Grey District	755	-0.5%	747	0.7%	762
Westland District	551	-5.8%	489	3.6%	544
Hurunui District	826	-1.8%	797	2.4%	855
Waimakariri District	2,151	-0.4%	2,132	3.0%	2,330
Christchurch City	25,429	-1.1%	24,895	2.6%	26,873
Selwyn District	2,798	-2.4%	2,665	2.4%	2,864
Ashburton District	2,361	-0.2%	2,353	1.9%	2,487
Timaru District	2,965	-0.5%	2,936	1.8%	3,098
Mackenzie District	359	-10.4%	288	3.7%	322
Waimate District	428	-0.2%	426	1.5%	446
Waitaki District	1,764	-0.2%	1,757	1.5%	1,839
Central Otago District	1,354	-1.7%	1,309	2.4%	1,407
Queenstown-Lakes District	3,162	-13.3%	2,377	6.4%	2,867
Dunedin City	6,266	-0.3%	6,231	3.0%	6,817
Clutha District	969	-0.9%	952	2.1%	1,012
Southland District	2,466	-1.4%	2,395	1.8%	2,525
Gore District	804	0.0%	804	1.2%	834
Invercargill City	3,125	-2.7%	2,959	1.4%	3,085
<b>New Zealand</b>	<b>302,224</b>	<b>-0.8%</b>	<b>297,300</b>	<b>2.4%</b>	<b>319,650</b>

Source: Infometrics