Taranaki's Labour Market Outlook to 2030

Venture Taranaki

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Infometrics

Economics put simply

Authorship

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Executive Summary

Infometrics was commissioned by Venture Taranaki to update the Workforce Outlook Tool developed in 2019. This Tool is used by Venture Taranaki to estimate future trends in the region's workforce for industries and occupations.

The revision to the Workforce Outlook Tool was prompted by recent developments in the economic landscape of New Zealand and the region, most notably the forecast economic effects of the COVID-19 pandemic.

This report describes the major labour market trends for Taranaki over the 10 years to 2030. It also provides details of the methodology used to prepare the forecasts, and Infometrics view of the economic impact of the pandemic and the road to recovery.

Taranaki's economy is faring better than it might

Infometrics' latest forecast, released in July 2020, projects the decline in economic activity in Taranaki in the year to March 2021 at 8.7%, while the projected decline in employment is 4.8%, or approximately 3,000 jobs. A further 500-600 jobs are forecast to be lost in the region over the year to March 2022.

The principal reason for the divergence between the forecast rates of GDP decline and job losses in the year to March 2021, is the significant financial support provided by the New Zealand government, most notably in the form of the wage subsidy. This support has likely reduced the number of job losses in the March 2021 year, and delayed some of these anticipated job losses to the March 2022 year.

In terms of the industries likely to be worst affected by the COVID-19 recession, the largest declines in both GDP and employment in Taranaki in the March 2021 year are forecast to take place in the Accommodation and Food Services, Transport, Postal and Warehousing, and Information, Media and Telecommunications industries. On a geographical basis, the majority of job losses are forecast to take place in the New Plymouth District, with the remainder split relatively evenly between the Stratford and South Taranaki Districts.

Taranaki's economic recovery will be slower than New Zealand's

Taranaki's economy is forecast to rebound relatively strongly in the March 2022 year, growing at 2.7%. After this, however, economic growth in the region will average only 0.8% pa until 2030, compared with 2.6%pa growth across all New Zealand. This means that the Taranaki economy is not forecast to get back to the size it was prior to COVID-19 until 2030 (compared to a much shorter timeframe of 2023/24 nationally).

Taranaki's economic recovery will be driven by industries such as Forestry and Logging, as well as by strong growth in service-based sectors such as Professional, Scientific, and Technical Services and Finance and Insurance Services. Other high-growth industries will include Transport, Postal and Warehousing Services and Retail Trade.

By contrast, areas of traditional economic strength such as Mining (oil and gas extraction), Electricity and Gas Supply, and Dairy Farming will provide little or no contribution to economic growth. In the case of both Mining and Electricity and Gas Supply, these industries are forecast to contract over the period to 2030.

The makeup of the economy will change

In terms of the contribution of various industries to Taranaki's GDP, the situation is forecast to change considerably between 2021 and 2030. In 2021, the largest contributors to the region's GDP are forecast to be Mining, Agriculture, Forestry and Fishing (dairy farming) and Manufacturing. By 2030, however, the contribution of the Mining industry to the region's GDP is forecast to decline significantly. This decline will for the most part be offset by small percentage increases in the contributions of other industries, including Manufacturing, Agriculture, Forestry and Fishing, Retail Trade, Transport, Postal and Warehousing and Professional, Scientific and Technical Services.

The Taranaki labour market will recover faster than GDP

Over the period to 2030, the labour market in Taranaki is forecast to recover somewhat more rapidly than many other regions of New Zealand. Employment growth is forecast to remain negative in the year to March 2022 at -0.6%, and rebound sharply to reach a growth rate of 3.8% in the March 2023 year, before stabilising around a growth rate of 1% for the remainder of the forecast period to 2030. This equates to a total employment level in 2030 of close to 65,000 jobs, as compared to a figure of just over 60,000 in 2020, prior to the onset of the COVID-19 recession.

The industries forecast to create the highest number of jobs in the period 2021 to 2030 are Manufacturing and Accommodation and Food Services. The only industry forecast to shed a significant number of jobs over the period is Mining.

The broad occupation categories in which the highest number of jobs are forecast to be created in Taranaki between 2021 and 2030 are Professionals, Technicians and Trades Workers and Managers. In terms of skill levels, employment growth is forecast to take place primarily in Highly-skilled and Low-skilled roles.

Labour market composition will change less than the economy as a whole

The composition of the Taranaki labour market is unlikely to change substantially over the period 2021 to 2030. The industries providing the largest contribution to employment in both 2021 and 2030 are Manufacturing, Agriculture, Forestry and Fishing, Construction and Health Care and Social Assistance. Other industries forecast to increase their share of total employment by 2030 include Accommodation and Food Services and Transport, Postal and Warehousing Services. Industries forecast to decline their share of total employment include Education and Training and Retail Trade.

While the precise scale and scope of the effects arising from the COVID-19 recession for New Zealand's population and economy remain uncertain, a number of opportunities exist for Venture Taranaki to support economic recovery in the region. These include collaboration with the recently established Taranaki Regional Skills Leadership Group (RSLG) in undertaking relevant locally-focused economic and labour market research, for example on matching skills and/or educational completions with local employment opportunities. Another area of potential further research is related to population and inward net migration.

Introduction

Infometrics has been commissioned by Venture Taranaki to update the Workforce Outlook tool developed in 2019. This tool is used by Venture Taranaki to estimate future trends in the region's workforce, on the basis of standard classifications for industries (ANZSIC – the Australian and New Zealand Standard Industrial Classification) and occupations (ANZSCO – the Australian and New Zealand Standard Classification of Occupations). The tool is also capable of evaluating workforce trends on the basis of a number of customised sector profiles, developed by Infometrics for Venture Taranaki.

The revision to the Workforce Outlook tool has been prompted by a number of recent developments in the economic landscape of New Zealand and the region, most notably the forecast effects of the COVID-19 recession. A report undertaken by Infometrics in April 2020 provided an initial forecast of declines of 8.5% in Taranaki's GDP and 9.5% in employment in the region in the year to March 2021.

This report provides an update of these figures, based on Infometrics' latest macroeconomic forecast of July 2020. It also describes the major labour market trends forecast for Taranaki over the 10 years to 2030. The report provides details of the methodology used to prepare the forecasts and of Infometrics' view of the economic impact of the pandemic and the road to recovery.

New Zealand's economy is faring better than expected

Infometrics' latest Macroeconomic Forecast, released on 24 July 2020, sees the New Zealand economy contracting by 8.2% over the year to March 2021, while the unemployment rate is forecast to increase for the next several quarters, to a high of 9.7% in the September 2021 quarter. Corresponding with these figures, consumer expenditure is forecast to decline by 7.4% over the year to March 2021.

Internationally, global growth projections continue to be revised downward, with consensus forecasts now estimating the contraction in global GDP in 2020 at more than 4%. This is likely to have significant implications for New Zealand's exports, with total export volumes set to decline by more than 20% over the year to March 2021.

This forecast represents a significant shift from our view of April 2020, which predicted a total of 250,000 jobs being lost in the national economy in the year to March 2021. New Zealand's success in dealing with the health threat posed by COVID-19 saw a return to relatively normal levels of economic activity (with the obvious exception of sectors such as international tourism) far earlier than initially anticipated.

In addition, measures such as the wage subsidy and the COVID-19 Income Relief Payment have served to delay job losses that might have occurred during the June quarter. The eight-week extension of the wage subsidy until September 2020 also means that a number of job losses might be delayed into the December 2020 quarter or beyond.

As a result of these measures, our latest estimates are for job losses in the year to March 2021 to be limited to approximately 120,000, with a further loss of approximately 65,000 jobs in the year to March 2022.

The full Infometrics Macroeconomic Forecast for July 2020 is included as Appendix B.

Taranaki is also faring better than it might have

Based on the Infometrics economic forecast for July 2020, we estimate the decline in economic activity in Taranaki over the year to March 2021 at 8.7%, while the projected decline in employment is reduced to 4.8%, or close to 2,900 jobs. A further 325 jobs are forecast to be lost in the region over the year to March 2022.

The divergence between the projected rates of decline in economic activity on the one hand and employment on the other, can be primarily ascribed to the significant financial support provided by the New Zealand government, particularly in the form of the wage subsidy. This support has likely reduced the number of job losses in the March 2021 year, and effectively delayed some of these anticipated job losses to the March 2022 year.

Table 1: Percentage Change in GDP and Employment by Industry, 2020–2022, Taranaki Region

Year	2020-2021		2021-2022	
% change in:	**GDP**	**Employment**	**GDP**	**Employment**
Industry				
Agriculture, Forestry and Fishing	-1.2%	1.5%	7.6%	-0.8%
Mining	-12.8%	-6.7%	-9.9%	-13.6%
Manufacturing	-5.2%	0.3%	5.8%	-0.2%
Electricity, Gas, Water and Waste Services	-13.2%	-5.1%	-1.0%	-3.6%
Construction	-6.7%	-4.2%	23.0%	14.1%
Wholesale Trade	-7.9%	-4.3%	3.6%	-3.7%
Retail Trade	-8.5%	-7.5%	-2.4%	-11.6%
Accommodation and Food Services	-30.3%	-27.6%	12.0%	4.5%
Transport, Postal and Warehousing	-21.7%	-18.2%	-3.3%	-10.4%
Information Media and Telecommunications	-16.9%	-16.1%	-1.7%	-10.7%
Financial and Insurance Services	-6.9%	-3.9%	5.7%	-2.3%
Rental, Hiring and Real Estate Services	-11.0%	-7.6%	3.5%	-4.0%
Professional, Scientific and Technical Services	-8.0%	-4.7%	2.9%	-4.7%
Administrative and Support Services	-7.6%	-2.8%	3.8%	-2.4%
Public Administration and Safety	-3.9%	0.4%	10.4%	2.8%
Owner-Occupied Property Operation	-8.7%		2.7%	
Education and Training	-5.5%	0.7%	4.6%	-0.3%
Health Care and Social Assistance	-5.4%	-0.9%	10.6%	3.6%
Arts and Recreation Services	-15.9%	-11.3%	-1.0%	-6.4%
Other Services	-10.0%	-5.3%	3.9%	-2.1%
Not Elsewhere Included	-8.7%		2.7%	
Total	**-8.7%**	**-4.8%**	**2.7%**	**-0.6%**

In terms of the industries likely to be worst affected by the COVID-19 recession, on a percentage basis, the largest declines in both GDP and employment in the region in the March 2021 year are forecast to take place in the Accommodation and Food Services, Transport, Postal and Warehousing, Information, Media and Telecommunications and Arts and Recreation Services industries.

In terms of absolute changes in job numbers, however, the industries forecast to be worst affected in the March 2021 year are Accommodation and Food Services, Transport, Postal and Warehousing, Retail Trade and Construction.

In the following year, further job losses are forecast in the Retail Trade and Transport, Postal and Warehousing industries, while employment in both Construction and Accommodation and Food Services begins to recover. The strong growth in Construction is ascribed to a number a significant infrastructure projects such as the construction of a new wing at Taranaki Base Hospital.

Table 2: Employment Changes by Industry, 2020–2022, Taranaki Region

Industry	Employment 2020	2021	2022	Absolute Change 2020-2021	2021-2022	Annual % Change 2020-2021	2021-2022
Agriculture, Forestry and Fishing	5,925	6,014	5,963	89	-51	1.5%	-0.8%
Mining	1,053	983	849	-70	-134	-6.6%	-13.6%
Manufacturing	9,161	9,185	9,169	24	-16	0.3%	-0.2%
Electricity, Gas, Water and Waste Services	697	661	637	-36	-24	-5.2%	-3.6%
Construction	6,028	5,773	6,585	-255	812	-4.2%	14.1%
Wholesale Trade	1,774	1,698	1,636	-76	-62	-4.3%	-3.7%
Retail Trade	5,270	4,877	4,313	-393	-564	-7.5%	-11.6%
Accommodation and Food Services	3,585	2,597	2,713	-988	116	-27.6%	4.5%
Transport, Postal and Warehousing	2,546	2,081	1,865	-465	-216	-18.3%	-10.4%
Information Media and Telecommunications	398	334	298	-64	-36	-16.1%	-10.8%
Financial and Insurance Services	1,018	979	956	-39	-23	-3.8%	-2.3%
Rental, Hiring and Real Estate Services	1,361	1,258	1,208	-103	-50	-7.6%	-4.0%
Professional, Scientific and Technical Services	3,787	3,607	3,437	-180	-170	-4.8%	-4.7%
Administrative and Support Services	2,145	2,084	2,035	-61	-49	-2.8%	-2.4%
Public Administration and Safety	1,892	1,900	1,952	8	52	0.4%	2.7%
Education and Training	4,193	4,223	4,211	30	-12	0.7%	-0.3%
Health Care and Social Assistance	5,797	5,746	5,952	-51	206	-0.9%	3.6%
Arts and Recreation Services	883	783	732	-100	-51	-11.3%	-6.5%
Other Services	2,620	2,482	2,429	-138	-53	-5.3%	-2.1%
Total	**60,133**	**57,265**	**56,940**	**-2,868**	**-325**	**-4.8%**	**-0.6%**

On a geographical basis, the majority of job losses in the year to March 2021 are forecast to take place in the New Plymouth District (-2,868 jobs) with the remainder split relatively evenly between the Stratford (-232) and South Taranaki (-212) Districts. In percentage terms, the high levels of employment in the dairy and meat industries in South Taranaki mean that the District fares relatively better (-1.5%) in terms of employment decline in the March 2021 year, than both the New Plymouth (-5.7%) and Stratford (-6.6%) Districts.

Table 3: Employment changes by District, 2020–2022, Taranaki Region

District	Employment 2020	2021	2022	Absolute Change 2020-2021	2021-2022	Annual % Change 2020-2021	2021-2022
New Plymouth	42,293	39,869	39,799	-2,424	-70	-5.7%	-0.2%
South Taranaki	14,306	14,094	13,921	-212	-173	-1.5%	-1.2%
Stratford	3,534	3,302	3,220	-232	-82	-6.6%	-2.5%
Taranaki Region	**60,133**	**57,265**	**56,940**	**-2,868**	**-325**	**-4.8%**	**-0.6%**

Taranaki's economy will recover slowly

Taranaki's economic growth is forecast to be below the national average throughout the next decade. Although economic activity in the region is expected to rebound by 2.7% in the March 2022 year, this increase is well below the 3.7% growth expected nationally. Between 2022 and 2030, Taranaki's GDP growth is then expected to average just 0.8%pa, compared with 2.6%pa growth across all New Zealand. This growth outlook means that the Taranaki economy is not forecast to get back to the size it was prior to COVID-19 until 2030 (compared to a much shorter timeframe of 2023/24 nationally).

Mining (oil and gas extraction) GDP is expected to contract by 21% over the two years to March 2022. Energy prices internationally have fallen substantially in response to the global recession, and this decline will negatively affect revenue and value-add in the industry. Demand for oil will be weaker internationally because of the recession's negative effect on freight and passenger transport, which will reduce the returns available to oil producers. Demand for gas is also set to be weaker within New Zealand from major users across the board, including electricity generation, large industrial users, food manufacturing, the broader accommodation and hospitality sector, and households.

Although some rebound in Mining GDP from this near-term trough is expected during 2023 and 2024, a medium-term trend of shrinking output is expected from 2024/25 onwards. The key driver of this trend is the move away from carbon-intensive energy sources in areas such as electricity production, industrial activity, and transportation (particularly road vehicles). The strength of the government's environmental policies is likely to be an important determinant of the speed with which the mining industry contracts over the medium term. We have assumed the continuation of a government involving the Labour and Green Parties for at least the next three years, but also note that there is increasing consensus on climate change within parliament and across society, meaning that a substantial reversal of the current policy direction is unlikely.

Electricity and Gas Supply will be subject to similar drivers as the mining industry. The government's push towards renewable energy sources will typically work against energy supply from the Taranaki region, which is generally centred on gas supply and thermal generation. After a 13% decline in activity in the March 2021 year, Electricity and Gas Supply GDP in the region is forecast to continue shrinking by an average of 2.0%pa between 2021 and 2030.

However, excluding the effects of these two industries from Taranaki's economy presents a significantly different outlook. Excluding Mining and Electricity and Gas Supply, economic activity in the region is forecast to recover by 5.8% in the March 2022 year, with GDP growth then averaging 1.8%pa over the 2022-2030 period. Although this latter growth rate is still below the nationwide average forecast, the more positive numbers when the above two industries are excluded highlight the substantial drag that these industries are set to place on Taranaki's overall outlook.

Forestry and Logging is forecast to make one of the biggest positive contributions to growth over the decade to 2030. Even with the constraining effect of the Level 4 lockdown on activity in 2020/21, forestry and logging GDP is expected to increase this year, and growth is forecast to average 3.8%pa over the ten years to March 2030. This expansion will be underpinned by an upward trend in the carbon price to $100/tonne of CO_2 by 2030, encouraging changes in land use towards forestry.

One of the overriding themes of the medium-term economic outlook, both nationally but also within Taranaki, is the continuing increase in services industries as a share of overall activity. This trend is reflected by several of the key contributors to Taranaki's economic growth over the coming decade. Included among these contributors are the Professional, Scientific, and Technical Services and Financial Services industries. Growth in Financial Services is expected to be particularly strong in the near-term, averaging 6.3%pa between 2021 and 2025, before easing to 2.7%pa between 2025 and 2030. Professional, Scientific, and Technical Services is predicted to expand by 4.3%pa between 2021 and 2025 and 2.9%pa over the following five years.

Growth in these services industries is being supported by rapid technological change as well as a trend towards greater outsourcing of these roles and functions by businesses in other industries. The latter trend will result in employment and output being shifted from other industries into specialised firms that are able to meet the needs of these businesses more efficiently.

Although this specialisation could result in the centralisation of jobs and businesses in larger urban areas, technological advancements are providing greater ability for these types of firms to service businesses in other parts of the country. In addition, the recent experience of working remotely during the COVID-19 lockdown has opened opportunities for greater work flexibility within firms as well. This ability to work remotely is likely to favour areas that can offer an attractive lifestyle and a relatively low cost of living, which could work to Taranaki's advantage.

Retail Trade activity will be hit in the short term by the COVID-19 pandemic and its effects on employment, consumer confidence, and willingness to spend. Job losses and declining incomes will weigh on overall spending activity during the next 18 months, and the step change towards online retailing caused by COVID-19 is also likely to see some spending head out of the region. Total GDP across the three retail subindustries is forecast to decline by almost 11% over the two years to March 2022.

This decline in retail activity would be greater if it were not for the relatively small contribution of international tourism to the Taranaki economy. The fact that retailers in the region are not reliant on spending by foreign visitors will mitigate some of the worst effects of the pandemic on the retail sector.

Over the medium-term, we expect retailers within the region to adapt to the broader market opportunities offered by online sales. Retail trade GDP is forecast to average growth of more than 5.0%pa between 2023 and 2030. This expansion is also expected to contribute to strong demand for logistics services, with the Transport, Postal and Warehousing Services industry forecast to expand by as much as 7.0%pa during the 2023-2030 period.

Although Dairy Cattle Farming is one of Taranaki's largest industries, we do not expect it to make a significant contribution to the region's economic growth over the next decade. Environmental issues, including freshwater quality and greenhouse gas emissions, are likely to prevent any further intensification of farming and, in some cases, could result in lower stocking levels across the agricultural sector. As previously mentioned, we also see the potential for a shift in some land use towards forestry, notwithstanding recent moves by the government to restrict the establishment of larger forestry blocks on higher-quality soils.

Our forecast of virtually static GDP for dairy farming over the coming decade is broadly in line with the industry's flat trend over the last 10-12 years in the Taranaki region. The importance of agriculture to Taranaki will stand the region in relatively good stead in the near term, with global demand for food products likely to hold up better than demand for industrial commodities and manufactured goods throughout the recession. However, this short-term stability will also be a limiting factor towards growth over the medium term, with our assessment that dairy production in the region is essentially at capacity.

The makeup of the economy will change

In terms of the contribution of various industries to Taranaki's GDP, the situation is forecast to change considerably between 2021 and 2030.

In 2021, the largest contributors to the region's GDP are forecast as Mining (oil and gas extraction) at 16.5%, Agriculture, Forestry and Fishing (dairy farming) at 15.8% and Manufacturing at 11.6%. By 2030, however, the contribution of the Mining industry to the region's GDP is forecast to decline to 10.0%, while the Electricity, Gas, Water and Waste Services (electricity and gas supply) industry is forecast to fall from 7.7% of GDP to 5.9%.

As indicated above, these declines are likely to be in part driven by central government policy related to the energy and resource extraction sectors in New Zealand, in particular the ban on new offshore oil and gas exploration activities.

The decline in the contribution of Taranaki's extractive industries to the region's GDP appears for the most part to be offset by small percentage increases in the contributions of other industries, rather than a significant increase in the percentage contribution by any single industry. Both Manufacturing and Agriculture, Forestry and Fishing are forecast to increase their respective shares of GDP. Other somewhat smaller sectors forecast to increase their share of GDP include Retail Trade, Transport, Postal and Warehousing and Professional, Scientific and Technical Services.

The highly capital-intensive nature of the oil and gas sector in the region is clearly demonstrated by the fact that despite contributing 16.5% to GDP in 2021, the Mining industry's contribution to employment is only 1.7%, with this figure forecast to decline to 1.4% by 2030. The same is true of Electricity, Gas, Water and Waste Services, Agriculture, Forestry and Fishing, and Rental, Hiring and Real Estate Services industries – on a percentage basis, each of these industries contributes more to Taranaki's GDP than to employment in the region. Furthermore, with the exception of Electricity, Gas, Water and Waste Services, this gap is forecast to widen between 2021 and 2030.

By contrast, the Manufacturing industry is in 2021 forecast to contribute a larger percentage to Taranaki's total employment (16%) than to GDP (11.6%), although this gap is projected to shrink by 2030. Similar trends are forecast in other relatively labour-intensive industries including Construction, Health Care and Social Assistance, Retail Trade, Education and Training, Professional, Scientific and Technical Services and Accommodation and Food Services.

Table 4: Industry Contribution to GDP and Employment, 2021 and 2030, Taranaki Region

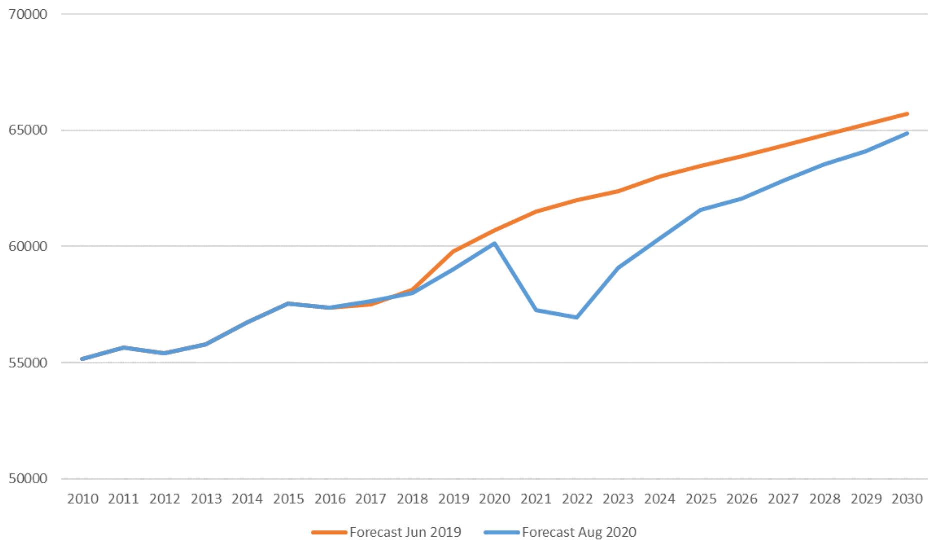
Year	2021		2030	
	GDP	Employment	GDP	Employment
Industry				
Agriculture, Forestry and Fishing	15.8%	10.5%	16.6%	9.3%
Mining	16.5%	1.7%	10.0%	1.4%
Manufacturing	11.6%	16.0%	12.2%	15.6%
Electricity, Gas, Water and Waste Services	7.7%	1.2%	5.9%	1.1%
Construction	4.6%	10.1%	4.6%	10.0%
Wholesale Trade	2.2%	3.0%	2.4%	2.8%
Retail Trade	3.5%	8.5%	5.0%	8.1%
Accommodation and Food Services	0.9%	4.5%	1.2%	5.5%
Transport, Postal and Warehousing	2.9%	3.6%	4.3%	4.4%
Information Media and Telecommunications	0.7%	0.6%	0.8%	0.5%
Financial and Insurance Services	2.5%	1.7%	3.3%	1.9%
Rental, Hiring and Real Estate Services	4.2%	2.2%	5.0%	2.2%
Professional, Scientific and Technical Services	4.1%	6.3%	5.2%	6.7%
Administrative and Support Services	1.5%	3.6%	1.7%	3.9%
Public Administration and Safety	1.4%	3.3%	1.7%	3.5%
Owner-Occupied Property Operation	4.7%		4.7%	
Education and Training	2.2%	7.4%	2.0%	6.9%
Health Care and Social Assistance	4.0%	10.0%	4.3%	10.0%
Arts and Recreation Services	0.4%	1.4%	0.6%	1.8%
Other Services	0.9%	4.3%	1.0%	4.6%
Not Elsewhere Included	7.7%		7.7%	
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Taranaki's labour market will recover from 2022

Over the longer term, from 2022 to 2030, it appears that the labour market in Taranaki will recover more rapidly than many other regions of New Zealand. Employment growth is forecast to be remain slightly negative in the year to March 2022 at -0.6%, and then rebound sharply to reach a growth rate of 3.8% in the March 2023 year, before slowing to stabilise at a growth rate of approximately 1%pa. This equates to a forecast total employment level in 2030 of close to 65,000 jobs, as compared to a figure of just over 60,000 in 2020, prior to the onset of the COVID-19 recession. The lowest levels of total employment in Taranaki is forecast to be approximately 56,700 jobs in the March 2022 year.

Chart 1 below shows the effects of the COVID-19 recession on forecast employment in Taranaki up to 2030, comparing the Infometrics forecast from June 2019 with current projections.

Chart 1: Total employment forecasts for Taranaki Region, pre- and post-COVID-19



Employment by Industry

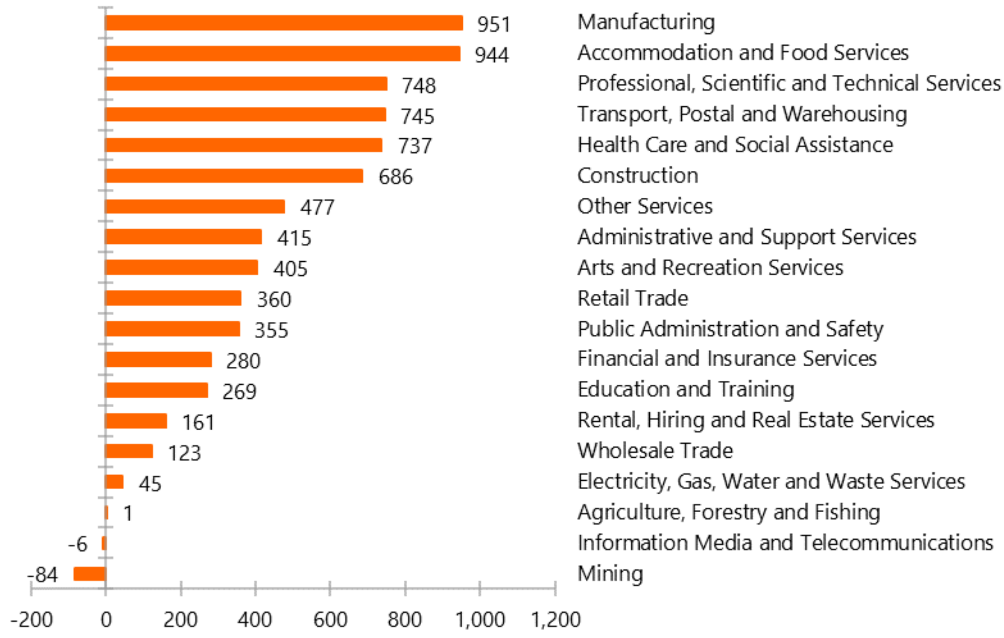
At ANZSIC 1-digit level, the industries forecast to create the highest number of jobs in the period 2021 to 2030 are Manufacturing (951 jobs) and Accommodation and Food Services (944).

In the case of the Accommodation and Food Services industry, the growth in employment over the period 2021-2030 represents a significant recovery following a large downturn in employment of 27.6% or close to 1,000 jobs, in the year to March 2021.

Other industries forecast to create significant numbers of jobs are Professional, Scientific and Technical Services, Transport, Postal and Warehousing and Health Care and Social Assistance. The employment growth in these industries would appear to support the suggestion that they will be critical to both continued economic growth and job creation in Taranaki over the next decade.

The industry forecast to shed the highest number of jobs over the period 2021 to 2030 is Mining (-84 jobs). This is once again consistent with the forecast contraction in economic output from the oil and gas sector over the same period.

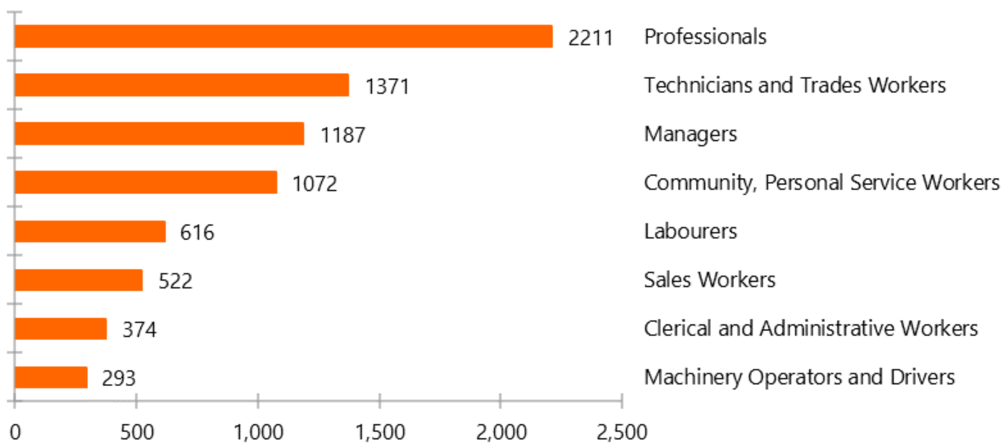
Chart 2: Employment changes by industry, ANZSIC Level 1, 2021-2030



Employment by Occupation

The broad occupation categories in which the highest number of jobs are forecast to be created in Taranaki between 2021 and 2030 are Professionals (2,211 jobs), Technicians and Trades Workers (1,371) and Managers (1,187).

Chart 3: Employment changes by occupation, ANZSCO Level 1, 2021-2030



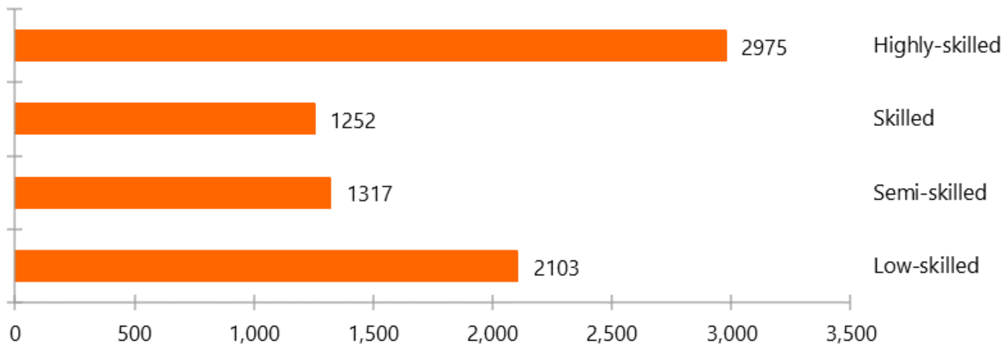
Employment by Skill Level

The newly developed Skills Module of the Venture Taranaki Workforce Outlook Tool makes use of four skill levels as defined in the ANZSCO classification. Under this classification, the declines in employment forecast for Taranaki in the year to March 2021 are concentrated in both Skilled and Low-skilled roles, particularly in the Accommodation and Food Services industry.

Over the longer term, growth in employment in the period 2021 to 2030 is forecast to take place amongst Highly-skilled (2,975 jobs) and Low-skilled (2,103) roles.

This appears to correlate with the analysis of employment increases by occupation at ANZSCO 1-digit and 2-digit level, as the majority of roles falling into the categories of Professionals and Technicians are likely to be considered Highly-skilled or Skilled. With regard to lower-skilled roles, substantial growth is forecast in occupations such as Community and Personal Service Workers and Labourers.

Chart 5: Employment changes by skill level, 2021-2030



Overall, the forecast changes in employment in Taranaki over the period 2021 to 2030 suggest a shift from lower- and semi-skilled generalist roles in primary industries such as resource extraction and dairy farming, to higher-skilled professional and technical roles, in specialist manufacturing and service-based industries.

At the same time, the forecast suggests that following a sharp decline in employment as a result of the COVID-19 recession, a significant recovery is likely in lower-skilled service-based roles, for example in the Accommodation and Food Services industry.

Labour market composition will change less than that of GDP

Despite the changes to the composition of Taranaki's GDP that are forecast between 2021 and 2030, it appears that the overall composition of the Taranaki labour market is unlikely to change substantially over the period to 2030.

In terms of the ANZSCO 1-digit industry classification, Table 5 below once again shows that the industries providing the largest contribution to employment in the March 2021 year are Manufacturing (16%), Agriculture, Forestry and Fishing (10.5%), Construction (10.1%) and Health Care and Social Assistance (10%). These industries are also forecast to remain the largest employers in the region in 2030, with slight declines in percentage terms for Manufacturing (to 15.6%), Agriculture, Forestry and Fishing (to 9.3%), and Construction (to 10%). The contribution of Health Care and Social Assistance to total employment remains unchanged at 10% in 2030.

Apart from these high-employment industries, other industries forecast to increase their share of total employment by 2030 include Accommodation and Food Services and Transport, Postal and Warehousing Services. Industries forecast to decline their share of total employment include Education and Training and Retail Trade.

These trends would once again appear to suggest a shift in employment in Taranaki over the next decade, from primary sectors such as resource extraction and dairy farming, to service-based industries.

Table 5: Industry Contribution to GDP and Employment, 2021 and 2030, Taranaki Region

Year	**2021**		**2030**	
	GDP	**Employment**	**GDP**	**Employment**
Industry				
Agriculture, Forestry and Fishing	15.8%	10.5%	16.6%	9.3%
Mining	16.5%	1.7%	10.0%	1.4%
Manufacturing	11.6%	16.0%	12.2%	15.6%
Electricity, Gas, Water and Waste Services	7.7%	1.2%	5.9%	1.1%
Construction	4.6%	10.1%	4.6%	10.0%
Wholesale Trade	2.2%	3.0%	2.4%	2.8%
Retail Trade	3.5%	8.5%	5.0%	8.1%
Accommodation and Food Services	0.9%	4.5%	1.2%	5.5%
Transport, Postal and Warehousing	2.9%	3.6%	4.3%	4.4%
Information Media and Telecommunications	0.7%	0.6%	0.8%	0.5%
Financial and Insurance Services	2.5%	1.7%	3.3%	1.9%
Rental, Hiring and Real Estate Services	4.2%	2.2%	5.0%	2.2%
Professional, Scientific and Technical Services	4.1%	6.3%	5.2%	6.7%
Administrative and Support Services	1.5%	3.6%	1.7%	3.9%
Public Administration and Safety	1.4%	3.3%	1.7%	3.5%
Owner-Occupied Property Operation	4.7%		4.7%	
Education and Training	2.2%	7.4%	2.0%	6.9%
Health Care and Social Assistance	4.0%	10.0%	4.3%	10.0%
Arts and Recreation Services	0.4%	1.4%	0.6%	1.8%
Other Services	0.9%	4.3%	1.0%	4.6%
Not Elsewhere Included	7.7%		7.7%	
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Opportunities for further investigation

While the precise scale and scope of the effects arising from the COVID-19 recession for New Zealand's population and economy remain uncertain, it is undeniable that we find ourselves in a far more fortunate position than many others. With the exception of the continued border closure, and the accompanying impact on sectors such as international tourism and international education, much of the domestic economy has returned to near-normal levels of activity.

At the same time, New Zealand continues to face significant risks. Apart from the ever-present risk of a domestic outbreak of COVID-19, the economic turmoil engulfing much of the global economy, and in particular some of our largest trading partners, presents a sizeable risk to export-oriented sectors that will be vital to domestic economic resilience and recovery.

In the longer term, the COVID-19 recession will place significant pressure on central and local governments to continue supporting those New Zealanders who lose jobs, or who return to New Zealand seeking employment. Effectively supporting local populations through this process will require a major change in focus on the part of Councils and Economic Development Agencies, from competing with other regions in attracting workers to fill jobs or recruiting from overseas, to supporting skills development and training initiatives for the local workforce, retaining young people who complete their education, and matching employers to potential employees.

In this regard, the establishment in July 2020 of ten interim Regional Skills Leadership Groups (RSLGs) provides an important signal of government's support for this process.

For Venture Taranaki, this appears to provide a number of opportunities for further research, or for an increased emphasis on certain activities. A natural opportunity exists for the collaboration with the Taranaki RSLG in undertaking relevant locally-focused economic and labour market research, for example on matching skills and/or educational completions with local employment opportunities. This equally applies to research into the skills profiles of returning New Zealanders.

Other activities might include additional support for the development of high-potential industries and sectors, particularly those that are highly skills-intensive, or that hold significant potential for the export of good and/or services from the region and from New Zealand. In many instances, these are activities that Venture Taranaki and its partners already undertake with some success, for example through the Taranaki 2050 Roadmap initiative.

Another area of potential further research is related to population growth and inward net migration. The likelihood of an extended border closure and ban on inward migration, with the exception of returning New Zealand citizens and residents, is in the short-term likely to exacerbate shortages of key skills, and in the longer term to also reduce population growth rates. At Infometrics, we are in the process of adjusting our population and labour force projection models to effectively account for these factors.

Overall, the most effective methods of support for local economic recovery will lie in continuing flexibility and adaptability on the part of Venture Taranaki, in providing high-quality data and support to the local community and local business sector.

Appendix A: Forecast changes to Taranaki's Economy and Labour Market, 2010-2030

Table 6: Change in Composition of GDP by Industry, 2010–2030, Taranaki Region

Year	2010		2020		2030		Annual % Change	
Industry	**GDP ($,000)**	**% of total**	**GDP ($,000)**	**% of total**	**GDP ($,000)**	**% of total**	**2010-2020**	**2020-2030**
Agriculture, Forestry and Fishing	1,214	14.0%	1,366	14.6%	1,546	16.6%	1.2%	1.2%
Mining	2,243	25.8%	1,621	17.3%	932	10.0%	-3.2%	-5.4%
Manufacturing	894	10.3%	1,049	11.2%	1,140	12.2%	1.6%	0.8%
Electricity, Gas, Water and Waste Services	586	6.7%	762	8.1%	550	5.9%	2.7%	-3.2%
Construction	339	3.9%	419	4.5%	431	4.6%	2.1%	0.3%
Wholesale Trade	191	2.2%	203	2.2%	221	2.4%	0.6%	0.9%
Retail Trade	232	2.7%	323	3.4%	467	5.0%	3.4%	3.7%
Accommodation and Food Services	86	1.0%	109	1.2%	109	1.2%	2.4%	0.0%
Transport, Postal and Warehousing	212	2.4%	312	3.3%	399	4.3%	3.9%	2.5%
Information Media and Telecommunications	64	0.7%	67	0.7%	78	0.8%	0.4%	1.6%
Financial and Insurance Services	161	1.9%	227	2.4%	304	3.3%	3.4%	3.0%
Rental, Hiring and Real Estate Services	323	3.7%	405	4.3%	468	5.0%	2.3%	1.5%
Professional, Scientific and Technical Services	307	3.5%	385	4.1%	481	5.2%	2.3%	2.2%
Administrative and Support Services	113	1.3%	140	1.5%	158	1.7%	2.2%	1.2%
Public Administration and Safety	107	1.2%	129	1.4%	159	1.7%	1.9%	2.1%
Owner-Occupied Property Operation	331	3.8%	444	4.7%	442	4.7%	3.0%	0.0%
Education and Training	205	2.4%	203	2.2%	183	2.0%	-0.1%	-1.1%
Health Care and Social Assistance	327	3.8%	359	3.8%	405	4.3%	0.9%	1.2%
Arts and Recreation Services	41	0.5%	45	0.5%	53	0.6%	1.0%	1.7%
Other Services	71	0.8%	90	1.0%	95	1.0%	2.3%	0.6%
Not Elsewhere Included	636	7.3%	719	7.7%	716	7.7%	1.2%	0.0%
Total	**8,682**	**100.0%**	**9,376**	**100.0%**	**9,338**	**100.0%**	**0.8%**	**0.0%**

Table 7: Composition of Employment by Industry, 2010–2030, Taranaki Region

Year	2010		2020		2030	
Industry	**Employment**	**% of total**	**Employment**	**% of total**	**Employment**	**% of total**
Agriculture, Forestry and Fishing	5,958	10.8%	5,925	9.9%	6,015	9.3%
Mining	1,044	1.9%	1,053	1.8%	899	1.4%
Manufacturing	8,190	14.8%	9,161	15.2%	10,137	15.6%
Electricity, Gas, Water and Waste Services	475	0.9%	697	1.2%	706	1.1%
Construction	5,407	9.8%	6,028	10.0%	6,458	10.0%
Wholesale Trade	1,947	3.5%	1,774	3.0%	1,821	2.8%
Retail Trade	5,459	9.9%	5,270	8.8%	5,238	8.1%
Accommodation and Food Services	3,148	5.7%	3,585	6.0%	3,541	5.5%
Transport, Postal and Warehousing	2,084	3.8%	2,546	4.2%	2,827	4.4%
Information Media and Telecommunications	685	1.2%	398	0.7%	328	0.5%
Financial and Insurance Services	824	1.5%	1,018	1.7%	1,258	1.9%
Rental, Hiring and Real Estate Services	1,140	2.1%	1,361	2.3%	1,419	2.2%
Professional, Scientific and Technical Services	3,411	6.2%	3,787	6.3%	4,355	6.7%
Administrative and Support Services	1,815	3.3%	2,145	3.6%	2,500	3.9%
Public Administration and Safety	1,606	2.9%	1,892	3.1%	2,254	3.5%
Education and Training	3,760	6.8%	4,193	7.0%	4,493	6.9%
Health Care and Social Assistance	5,331	9.7%	5,797	9.6%	6,484	10.0%
Arts and Recreation Services	795	1.4%	883	1.5%	1,188	1.8%
Other Services	2,078	3.8%	2,620	4.4%	2,959	4.6%
Total	**55,157**	**100.0%**	**60,133**	**100.0%**	**64,879**	**100.0%**

Table 8: Change in Composition of Employment by Industry, 2010–2030, Taranaki Region

	Employment			Absolute Change		Annual % Change	
Industry	**2010**	**2020**	**2030**	**2010-2020**	**2020-2030**	**2010-2020**	**2020-2030**
Agriculture, Forestry and Fishing	5,958	5,925	6,015	-33	90	-0.1%	0.2%
Mining	1,044	1,054	899	10	-155	0.1%	-1.6%
Manufacturing	8,190	9,161	10,137	971	976	1.1%	1.0%
Electricity, Gas, Water and Waste Services	475	697	706	222	9	3.9%	0.1%
Construction	5,407	6,028	6,458	621	430	1.1%	0.7%
Wholesale Trade	1,947	1,774	1,821	-173	47	-0.9%	0.3%
Retail Trade	5,459	5,270	5,238	-189	-33	-0.4%	-0.1%
Accommodation and Food Services	3,148	3,585	3,541	437	-44	1.3%	-0.1%
Transport, Postal and Warehousing	2,084	2,546	2,827	462	281	2.0%	1.1%
Information Media and Telecommunications	685	398	328	-287	-70	-5.3%	-1.9%
Financial and Insurance Services	824	1,018	1,258	194	240	2.1%	2.1%
Rental, Hiring and Real Estate Services	1,140	1,361	1,419	221	58	1.8%	0.4%
Professional, Scientific and Technical Services	3,411	3,787	4,355	376	568	1.1%	1.4%
Administrative and Support Services	1,815	2,145	2,500	330	355	1.7%	1.5%
Public Administration and Safety	1,605	1,892	2,254	287	362	1.7%	1.8%
Education and Training	3,760	4,193	4,493	433	300	1.1%	0.7%
Health Care and Social Assistance	5,331	5,797	6,484	466	687	0.8%	1.1%
Arts and Recreation Services	795	883	1,188	88	305	1.1%	3.0%
Other Services	2,078	2,620	2,959	542	339	2.3%	1.2%
Total	**55,157**	**60,133**	**64,879**	**4,976**	**4,746**	**0.9%**	**0.8%**

Table 9: Composition of Employment by District, 2010–2030, Taranaki Region

	Employment			Absolute Change		Annual % Change	
District	**2010**	**2020**	**2030**	**2010-2020**	**2020-2030**	**2010-2020**	**2020-2030**
New Plymouth	38,478	42,293	46,659	3,815	4,366	0.9%	1.0%
South Taranaki	13,119	14,306	14,588	1,187	282	0.9%	0.2%
Stratford	3,560	3,533	3,632	-26	98	-0.1%	0.3%
Taranaki Region	**55,157**	**60,133**	**64,879**	**4,976**	**4,746**	**0.9%**	**0.8%**

Appendix B – The Infometrics Macroeconomic Forecast, July 2020

We've mastered the health response, now for the economy

Firstly, the good news: the public health results of New Zealand's COVID-19 lockdown have been exceptional, despite some issues at the border that saw some people get out of isolation early without being tested. The return to Alert Level 1, less than 2½ months after the country went into lockdown, was far quicker than anyone dared to hope for as the global pandemic escalated so quickly back in March.

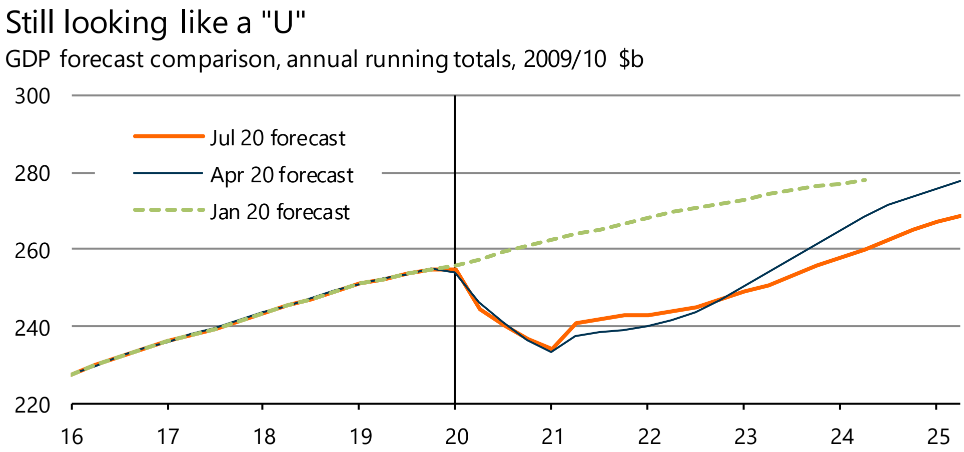
The series of scenarios published by Treasury in mid-April, based around a range of different lockdown lengths, showed a drop in GDP in the year to March 2021 of between 11% and 34%. Although Treasury's estimates of the short-term hit to economic activity seemed unduly pessimistic alongside our 8.0% contraction, Treasury's larger declines could not be ruled out if the country had remained at Alert Levels 3 and 4 for longer.

The relatively short period of time (3½ weeks) at Alert Level 2 and the fact that this Alert Level was less restrictive than had initially been indicated, particularly regarding domestic travel, also point towards a faster bounce back in the domestic economy than was previously expected.

However, we have also refined our estimates of how much economic activity was restricted during Alert Levels 3 and 4. We now estimate that seasonally adjusted quarterly GDP in June will be 18% smaller than in the December quarter (compared with a 13% drop in our previous forecasts). Although the ensuing bounce in the September quarter will also be larger (revised up from a 5.8% rebound to a 14% lift in activity), the maths of the short-term hit in the June quarter means our forecasts of annual GDP growth end up slightly lower through until March 2021.

Beyond those short-term adjustments, the economic outlook remains bleak. We remain of the view that the most important question is about how the economy's recovery shapes up during 2021 and 2022. We continue to expect a U-shaped recovery (see Graph 1) – one where economic activity remains lower for longer, which is considerably less optimistic than the V-shaped pick-ups forecast by Treasury, Westpac, and the Reserve Bank.

Graph 1



For the economy to turn around and genuinely regain momentum, the following criteria need to be met.

- More certainty is needed about the international economic outlook.
- The tourism sector needs greater clarity about border restrictions and the likely timeline for them being partially or wholly removed.
- The rate of job losses needs to slow.
- People need time to see new opportunities for growth and start investing and hiring accordingly.

Looking through this list, it is clear that a rapid economic recovery will be difficult to achieve. The remainder of our Forecast Story details our thinking about the key aspects of the economic outlook and touches on the ongoing areas of uncertainty mentioned above.

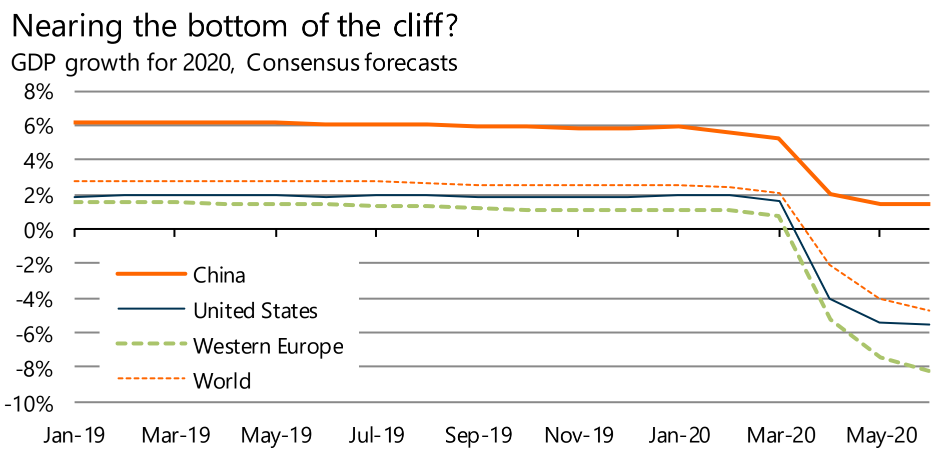
World still in a dire state

With day-to-day life in New Zealand largely back to normal, it's easy to forget that the COVID-19 pandemic continues to rage around much of the rest of the globe. Parts of the US, South America, and Africa are under severe pressure, and infection numbers have been picking up again in many European countries. However, the appetite for ongoing or renewed restrictions on people's movements and economic activity appears limited.

The ongoing pandemic is raising substantial concerns about the global economic outlook. With New Zealand's status as a small trading nation, our economic fortunes are inextricably linked to the global economy. Even though New Zealand's domestic activity is showing signs of a rebound, this rebound will be limited by weak global activity.

From a global economic perspective, then, the world faces the worst mix of outcomes: short-term economic pain caused by lockdown conditions, and longer-term problems generated by a mix of official incompetence in containment measures and ongoing public fear of the virus. Graph 2 shows that global growth projections have continued to be revised down since our last forecasts were published in April.

Graph 2



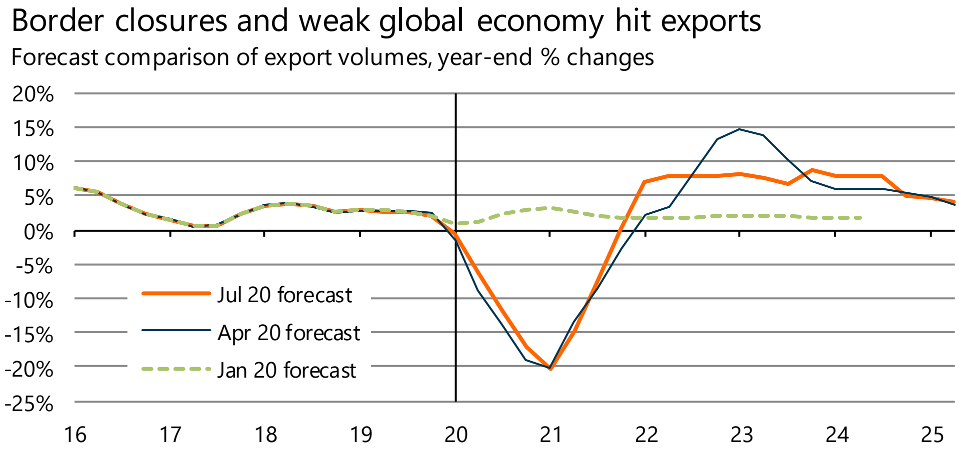
Chinese economic activity rebounded in the June quarter but remains subdued. After a 6.8%pa reduction in GDP in the March quarter, Chinese growth lifted to 3.2%pa in the June quarter on the back of rising industrial production. However, retail spending over the first half of 2020 in China was down by 12%pa and is struggling to show a post-lockdown surge. In general, we expect slower Chinese economic growth to persist, particularly if the COVID-19 pandemic continues to suppress global demand. Weak global GDP outcomes will continue to hit trade, with a 3.2%pa fall in New Zealand's goods exports to China in the June quarter symptomatic of the trade slowdown.

Prospects for goods exports volumes and prices are highly dependent on global demand. We have not revised down our export forecasts over the next two years, because the continued deterioration in Consensus forecasts for global growth is consistent with our April view that the numbers at that stage had not fully incorporated the effects of the pandemic.

However, the second half of this year will prove important as prospects for global growth in 2021 start to become clearer. To date, ongoing downward revisions in growth expectations for 2020 have been accompanied by similar upward revisions for global growth in 2021. If COVID-19 problems hang around and global optimism about 2021 starts to fade, then we will be forced to reconsider the speed of our forecast recovery in exports. Indeed, we have already knocked the peak off our forecasts for export growth later in 2022/23.

Services exports are obviously heavily influenced by the effects of the border restrictions on tourism and international education. There has been much discussion about a trans-Tasman or Pacific bubble – a possibility that, from December this year, we incorporated into our modelling of the regional economic effects of COVID-19. Better outcomes for services exports are the primary driver of our improved export forecasts during 2021 (see Graph 3), but the amount of political and media vacillation on the topic makes it difficult to predict the services outlook with any confidence.

Graph 3



Finally, in the trade space, we note that the disruption of COVID-19 to the international economy, including supply chains, has created discussion about the need to produce and source more goods locally. However, we are sceptical of the scope for investment in domestic manufacturing given New Zealand's lack of scale and relatively high-cost operating environment. There might be a window of 2-3 years where firms are able to take advantage of global disruption and a public desire to support local business. But over the long-run, manufacturers are likely to keep being squeezed by low-cost Chinese producers as trends in international trade return to something more "normal". Instead, a focus on niche manufacturing opportunities and the continued development of "weightless" services exports are better long-term prospects for the economy.

Pressure for more from the Reserve Bank

Apart from continuing global economic uncertainty, exporters are also having to grapple with a sharp rebound in the exchange rate from its March lows. By the end of June, the New Zealand dollar had rallied from US56c to US64c, recovering about 70% of the ground it lost between the start of January and mid-March. The lift reflects several factors.

- The greenback has fallen from favour as the US has become one of the countries that has been worst affected by COVID-19, with no signs of improvement.
- Investors' risk appetite has improved after the big decline in financial markets during March.
- Australasia's COVID-19 health outcomes have been viewed favourably by the rest of the world.
- Australia's immediate economic outlook appears to be relatively good, with less reliance on tourism than New Zealand, and strong export commodity prices given disruptions to production in competing nations such as Brazil. The Australian dollar's rise has, in part, dragged the New Zealand dollar higher as well.

The de facto tightening in monetary conditions implied by the rebound in the dollar is increasing the pressure on the Reserve Bank to ease other monetary settings. We expect the Bank to expand its Large Scale Asset Purchases (LSAP) from $60b to as much as $100b by early next year. Such a move will probably be accompanied by a moderation in the Bank's forecast speed of recovery in economic activity and employment, given that the Bank's outlook is currently among the most optimistic projections.

Just as importantly, the Bank will soon need to signal what is coming in 2021 when the current LSAP spending is completed. It is unlikely that the Bank will suddenly cease its programme of monetary stimulus and financial market support. Thus additional purchasing headspace will need to be announced in early 2021 to give the market certainty of accommodative monetary policy conditions being continued.

A lot more job losses to come yet

We have used a combination of wage subsidy recipient numbers and jobseeker benefit numbers to model the likely track in the unemployment rate through the middle part of this year. Other forecasters estimate the unemployment rate spiked from 4.2% in the March quarter to between 5.9% and 8.3% in the June quarter, and that it will climb to between 7.4% and 10% in the September quarter. However, we struggle to see the unemployment rate climbing quite so rapidly, and we estimate that it will be at 5.8% in June and 7.6% in September.

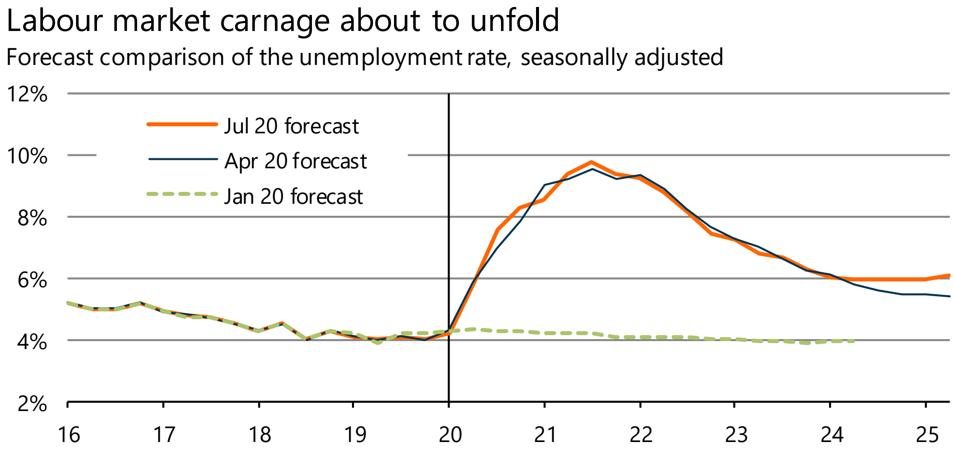
In our view, the wage subsidy and its extension have effectively delayed the inevitable job losses and associated rise in unemployment sparked by the pandemic and lockdown. Around 20,000 jobs have been lost since June, and we expect job losses will mount further during the final months of 2020 after the wage subsidy extension runs out. There is then likely to be a continuing stream of redundancies throughout much of 2021 as businesses struggle with persistently weaker demand conditions.

We also note that many of the job losses we have seen to date are difficult to directly attribute to COVID-19. Although job cuts in the tourism sector are an obvious effect of the collapse in international visitor numbers, redundancies across many other firms and industries reflect businesses using COVID-19 as a catalyst for rationalisation or consolidation that they were looking to implement anyway. Other businesses were already in difficult financial situations, with the lockdown hastening their demise, rather than being the primary cause of it.

In other words, the downturn offers an opportunity for some of the dead wood across the economy to be removed and for resources to be shifted towards more productive uses. This process is an uncomfortable one and has significant human costs and consequences along the way. However, it should ultimately place New Zealand on a better trajectory for productivity and economic growth over the longer term.

Our forecast for a peak in the unemployment rate of 9.7% in the second half of next year is little changed from the 9.5% high we were predicting in our April forecasts (see Graph 4). However, our predicted unemployment rate is slightly lower than previously forecast during 2022 and the first half of 2023. This small shift reflects slightly better economic outcomes than we were anticipating in April, as well as the additional support the government is providing to the broader economy.

Graph 4



Our current forecasts reinforce our view from April that the rise in unemployment is still coming but will not arrive as fast as other forecasters had predicted. Equally, we sound a note of caution about views that there have been significantly fewer job losses to date than expected. There have still been more than 63,000 jobs lost over the past 3½ months, with over 400,000 workers whose firms have experienced a revenue decline of 40% or more even under Alert Levels 2 and 1. In short, many workers remain in a vulnerable position with a significant lack of job security.

Unemployment will force consumer caution

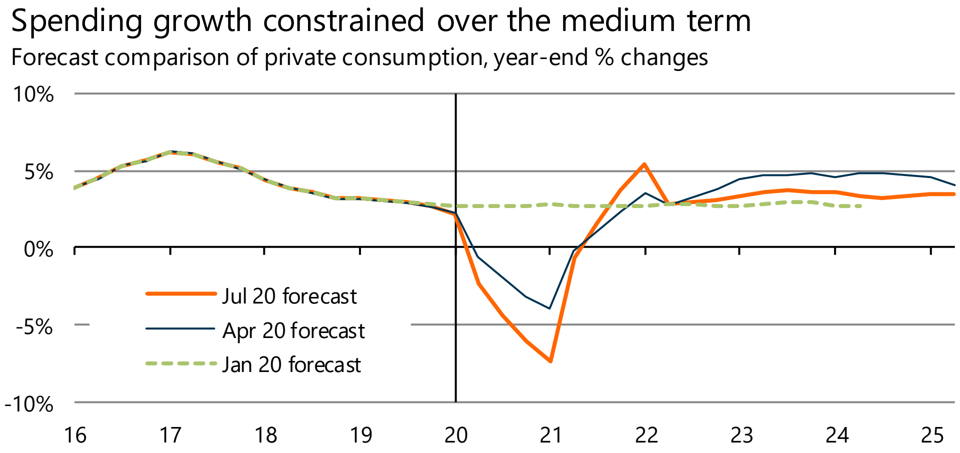
Household spending has been more heavily affected by the lockdown than we had initially anticipated. An estimated 16% drop in private consumption spending in the June quarter will create a bigger hole in annual spending, which we now forecast will be down 7.4% over the year to March 2021.

This sharper near-term drop in spending will lead to a commensurately bigger bounce in activity during 2021/22. The government's various methods of support for household incomes, which include increases to welfare benefits, a temporary doubling of the winter energy payment, wage subsidy payments, and the COVID-19 Income Relief Payment, will all help shore up household spending over the next year.

Nevertheless, data to date suggests there has not been much of a post-lockdown spike in household spending. Spending appears to be sitting at similar levels to a year ago, meaning that households are not catching up on the lack of spending that occurred during April and early May. This outcome reflects caution from consumers in the face of job losses, income cuts, and uncertainty about future economic conditions.

With unemployment expected to continue pushing higher throughout the next 12 months, it could be late 2022 before private consumption surpasses its pre-COVID peak. As with GDP, perhaps the most important question lies around the longer-term outlook for spending. We are adopting a more conservative view about potential spending growth over the medium term, revising average growth for the three years to June 2025 down from 4.5% to 3.5%pa (see Graph 5). Put simply, the scars of the COVID-19 pandemic on spending behaviour will remain visible for many years to come.

Graph 5

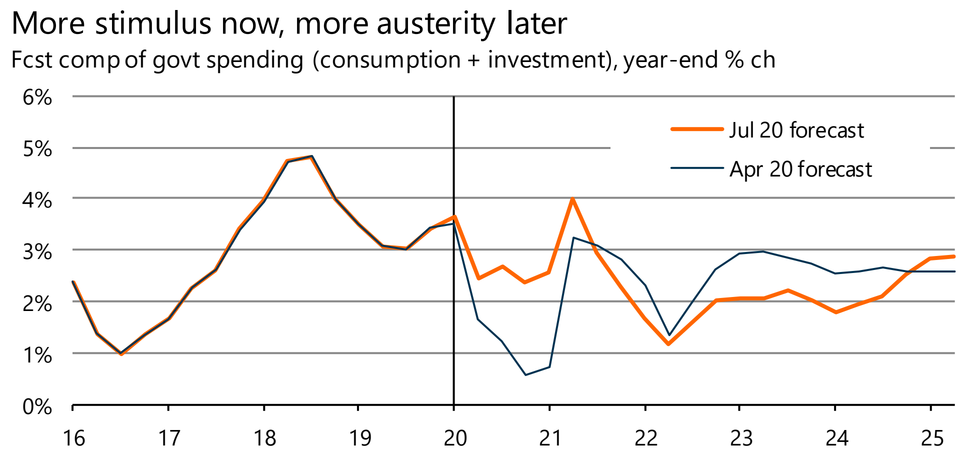


The effects of the government's response

The government's response to the pandemic has been rapid and substantial. Spending associated with the government's $50b COVID-19 Response and Recovery Fund (CRFF), coming on top of the $12b originally allocated for the wage subsidy, is expected to push net debt up from $58b to $201b by 2024 (or from 20% to 54% of GDP).

Much of the government's fiscal stimulus will come via increased transfer payments to individuals and businesses and will lead to less negative outcomes for private consumption and investment spending. However, we have also revised up our forecasts of government consumption spending over the next year, with more money being channelled into the likes of health and education. This faster growth in public sector spending is likely to give way to a more austere approach by 2022 (see Graph 6) as the economy regains a more even keel and private sector spending gathers momentum. After peaking at 5.4%pa this year, government consumption is forecast to grow by an average of just 1.6%pa over the four years to June 2025.

Graph 6



Although we have revised up our forecasts of government consumption spending in the near term, we are less confident about the government's ability to deliver on its investment plans. Putting aside the temporary hole that the lockdown will have created in government investment, we have moderated our growth projections for activity throughout the remainder of the forecast period. Over the four years to June 2025, we now predict that government investment will grow at an average of 3.3%pa, well short of the 4.5%pa growth we had pencilled in back in April.

Failures around major initiatives such as KiwiBuild, light rail in Auckland, and the Provincial Growth Fund mean we are cautious about the government's ability to deliver on its promises. These doubts are reinforced by loose use of the term "shovel-ready", although the government expects work on the projects contained in its $3b infrastructure package to start within the next 12 months.

The end of the beginning, not the beginning of the end

New Zealand still faces significant economic headwinds. Although current economic activity appears, on the surface, to be upbeat, outcomes to date have been propped up by sizable but temporary support measures. The government has confirmed that it does not plan to make any further significant announcements of support, keeping $14b of the CRRF in reserve in case of another outbreak of COVID-19. As the various supports are removed from the economy in coming months, we expect more sobering, but realistic, economic outcomes will start to show through.

Appendix C: Our approach

In the execution of this assignment, Infometrics draws on a range of econometric and statistical models, that have been developed over several years, and that make use of a range of data inputs and best practice modelling techniques.

Each of the models described below provides inputs for the Workforce Outlook Tool developed for Venture Taranaki.

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.

The outputs of this forecasting framework are refined on a quarterly basis, taking into account 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.

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

Measuring impacts on individual industries

The Infometrics ESSAM (Energy Substitution, Social Accounting Matrix) general equilibrium model measures the impact of economic shocks on individual industries. In the case of COVID-19, the shocks introduced into the model include sharp declines in foreign tourism, international education and non-food commodity exports, and a fall in productivity across affected industries. At the same time, the impact of these shocks is tempered through the introduction into the model of various government support measures such as the wage subsidy and an increase in benefit payments.

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

The ESSAM model is maintained by one of New Zealand's foremost econometricians and Infometrics' Chief Economist, Dr Adolf Stroombergen.

The macroeconomic assumptions for New Zealand that underly the ESSAM model are as follows:

Table 1: Macroeconomic Inputs / Assumptions for ESSAM Model, July 2020

Indicator	**2018-2024**	**2025-2031**
New Zealand		
Population	1.2%pa	1.0% pa
Net migration (NZ)	32,000pa	30,000pa
Labour force	1.6%pa	0.7%pa
GDP	2.4%pa	2.9%pa*
World trade	2.8%pa	2.7%pa
Oil price	US$54/bbl in 2024	US$110/bbl in 2029
Carbon price	NZ$50 / tonne CO_2 in 2024	NZ$100/tonne CO_2 in 2029
Government consumption	2.4%pa	2.1% pa
Investment in dwellings	-3.3%pa	2.0%pa

* These are model results, not input assumptions

Additional COVID-19 assumptions regarding the New Zealand economy are as follows (unless indicated otherwise, all assumptions are for the year to March 2021):

- Social welfare benefits raised by $2.4b
- Foreign tourism down by 91%
- Domestic tourism down by 21%
- International education demand down by 49%
- Domestic demand for tertiary education up by 8.3%
- Wage subsidy of $9.9b to all industries except central and local government where it is effectively implicit in 2020
- World demand for non-food manufactured exports down 16%
- World demand for forestry (non-manufactured) exports down 9.5%
- New dwelling construction down 35%

- Additional spending on infrastructure up 15% (to March 2025)
- World demand for all NZ service exports down 10% (to March 2025)
- World demand for all NZ exports down 5% (to March 2025)
- Capital stock down 4% (to March 2025)

Measuring regional impacts

Forecast changes to GDP and employment are distributed regionally across New Zealand in very different ways, depending upon the composition of the economy and the nature of the workforce within a particular region or district.

In many cases, these regional distinctions are reinforced by the COVID-19 recession. Those with a large internationally-focused tourism industry, such as Queenstown, will be hardest hit. By contrast, those regions and districts that rely heavily on food-based primary export products might fare relatively better.

To measure regional impacts, we draw on our Regional Forecasting Model (RFM), an econometric model that breaks down national industry forecasts to regional and 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 region or territorial authority up to a predetermined point in the future, in this case 2030.