

Targeting support for rural communities in the COVID-19 recovery

Uniting for the COVID-19 recovery means targeting support to places that need it most. Here's how to identify those places.

Some communities will benefit from targeted support

Budget 2020 is called 'Rebuilding Together'. If the country is going to recover together from COVID-19, the rebuilding will need to include rural communities. The Minister of Finance's Budget speech referred to targeted support for wages, critical industries, economic sectors, students and investment. The government can also target support to the rural communities that need it most by knowing more about them.

This Insight looks at two sources of differences among rural communities: the structure of local economies and community resilience. The analysis identifies places that are likely to need a greater share of support in the recovery.

We identified three groups of rural communities. The largest group – the 'Mixed' communities – will be affected the same as the rest of New Zealand and has average to good levels of resilience to underpin their recovery. Another group can expect large economic impacts but has high levels of resilience to draw upon. By and large, these are 'Tourism-reliant' communities. The third group contains communities with pre-existing socio-economic deprivation. Although the size of the economic downturn is not predicted to be above average for them, 'Economically deprived' communities may still struggle during the recovery. There is also good news from a missing fourth group: we did not find a group of communities that were facing large drop-offs in employment and also started from weak levels of resilience.

To identify these groups of communities, we combined analysis of gross domestic product (GDP) and employment with an assessment of a wider group of resilience indicators. This Insight provides a summary of the analysis and results.

Regional and local economies: the breakdown on lockdown

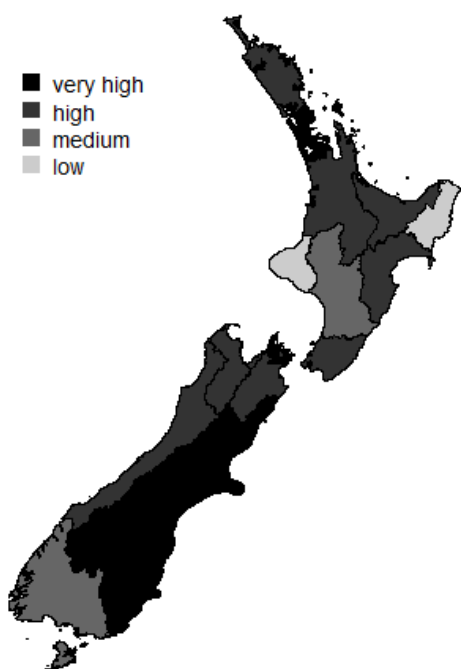
The economic impacts of COVID-19 are not spread uniformly across the country. We've seen this already in the pleas coming from places like Queenstown and Gisborne. Queenstown mayor Jim Boulton pointed to one source of the differences, saying, 'Tourism businesses are shut and that is the driver of our economy. With tourism businesses shut, there is nothing happening.'¹

For our latest modelling, we analysed the potential variation of economic impacts across the regions. We used data from Statistics New Zealand on the GDP produced by 17 industries in 15 regions. We considered how impacts would vary across the industries, grouping them into industries with 'low', 'medium' and 'high' losses. In creating the groupings and the levels of impact, we were guided by analysis from the Reserve Bank of New Zealand² and The Treasury.³ We were also guided by recent NZIER analysis of impacts of economic cycles on specific industries.

The results suggested that no region escapes an economic downturn. In the case of a 14 percent fall in overall economic activity (Treasury Scenario 4 for 2021⁴), Auckland showed the largest impact (15.2 percent decline) because of the size of its finance, IT and professional services sectors. Taranaki had the smallest impact (10.9 percent decline), buffered by its primary sectors and oil and gas production. Figure 1 shows the impacts on the GDP in each region.

- ¹ Radio NZ. 05 May 2020. 'We've got to open the door for them': Queenstown mayor pushing to be open for business. www.rnz.co.nz/news/business/415834/we-ve-got-to-open-the-door-for-them-queenstown-mayor-pushing-to-be-open-for-business.
- ² T. Stannard, G. Steven, C. McDonald. May 2020. Economic impacts of COVID-19 containment measures. Analytical Notes AN2020/4. Wellington: Reserve Bank of New Zealand.
- ³ The Treasury. 13 April 2020. COVID-19 Information Release. T2020/973. Wellington.
- ⁴ The Treasury, 2020, p. 8.

Figure 1 GDP impacts by region



Source: NZIER

The results underscore two features of regional economies. The first is that the regional economies are fairly similar to each other. Like economies in many other countries, they are largely driven by services and the public sector. The second feature is that the public sector – government spending on social services, healthcare, administration, and more – provides a stable core of economic activity. The things that make regional economies different – their primary industries, for example – are a relatively small part of the overall economy.

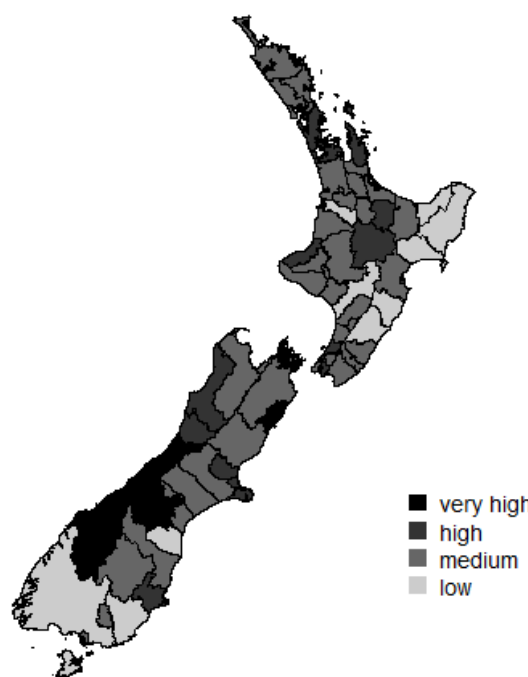
The biggest impacts are localised

We decided to dig deeper. The second analysis looked at employment data from Statistics New Zealand for 67 territorial authorities – districts and cities – and 211 industries. We again focused on a 14 percent decline based on the RBNZ and Treasury analysis. The results are shown in the figure below. The least-affected districts, such as Waimate District, Otorohanga District and Central Hawke’s Bay District, showed about an 11 percent decline. The most-affected districts, such as Westland District, Mackenzie District and Queenstown-Lakes District, had economic impacts that were nearly twice as large (17 to 19 percent declines).

The differences came down to the structure of the economies. We assumed that each industry would be affected the same regardless of where it was in the

country. However, each territorial authority contains a different mix of industries. The differences in economic structure at this geographic level led to quite different results. Areas with more tourism and construction were hit hardest. Areas with more government and infrastructure services and larger primary sectors tended to do better. No place escaped from the decline, but some were definitely more affected. Figure 2 provides an indication of the relative impacts across the country.

Figure 2 Employment losses by territorial authority



Source: NZIER

Community resilience: a broader look at resources

How well will communities be able to cope with the downturn? To gain some insight, we turned to research led by AgResearch and summarised in the book *Heartland Strong: How rural New Zealand can change and thrive*.⁵ The research examined the factors that affect the resilience of rural communities.

Two parts of that research are important here. First, the work developed a ‘resilience index’ that used data from the Census to compare rural communities. The index can identify communities that are more resilient or more vulnerable to pressures like recessions. Second, the

⁵ M. Brown, B. Kaye-Blake and P. Payne (Eds.). 2019. *Heartland strong: how rural New Zealand can change and thrive*. Palmerston North: Massey University Press.

community research showed the importance of engaging with people in the community to understand what makes them resilient. This Insight focuses on new data analysis, but that focus should not be taken as a replacement for community engagement.

Calculating an updated resilience index

We updated the AgResearch resilience index with data from the 2018 Census. The data analysis used 14 variables from the Census that are recognised indicators of social, cultural and economic resilience. The purpose was to consider wellbeing more broadly rather than just GDP or jobs. The method analysed how the variables were correlated with each other, and then produced an index or score that summarised that correlation.⁶ The variables in this analysis included population change, access to a car, access to the internet, percentage of population that is Māori and more. By combining them, we computed a 'resilience score' for each location.

We calculated a resilience index for 395 rural places in New Zealand.⁷ We found that 55 percent of the apparent variation in the 14 variables could be captured by a single, underlying index. That is, disparate variables such as smoking rates, population change and religious affiliation reflected, to some extent, something common across these places. The resilience index – the 'something common' – represented over one-half of the differences that were seen across rural communities in New Zealand.

To understand what this resilience score was capturing, we compared it to the New Zealand Deprivation Index for 2018 (NZDep2018).⁸ The Index is an indicator of socio-economic deprivation in New Zealand. It has been calculated for communities using Census data across several years and at different geographic scales. We also compared the resilience index to each of the individual Census items that composed it. The analysis showed that the resilience index is capturing differences in socio-economic deprivation and resources across communities,

linked to larger issues such as the historical experiences of Māori and access to education and employment.

Combining economic and resilience measures

In the discussion above, we looked at rural areas through two sets of data analysis. One analysis focused on the economy of each area, estimating the relative impact of COVID-19 because of economic structure. The second analysis focused on wider measures of resilience, including social, cultural and economic data.

The first analysis allows us to identify those areas that are likely to be more affected by the economic downturn. These are places that are highly dependent on a narrow economic base that has fallen away. One such place that has been in the news is Queenstown. It is dependent on international tourism, which has stopped. It will therefore feel a big economic impact.

The second analysis allows us to identify areas that were vulnerable going into the pandemic. These are places that were affected by existing inequities in New Zealand. They are readily identified by individual Census variables or by composite indicators such as NZDep2018 or a resilience index. They are unlikely to have the same resources as more resilient communities, so they will find recovery more difficult.

We can use these two sets of results to create a scatterplot, shown in Figure 3 below. The horizontal axis is the estimated change in employment for the territorial authority containing the community. The vertical axis is the resilience index score for the community.

The three groups of rural communities

The area of the figure can be divided into four parts. The bottom left is empty: we did not identify any communities that were vulnerable going into the pandemic AND are expected to have larger-than-average employment losses. The upper right is crowded; these 'Mixed' communities represent most of the places assessed. They will be affected by the downturn to much the same extent as the whole country, and they have average to good levels of resilience to draw upon.

The other two parts of the figure indicate communities that are likely to need additional support. In the bottom right are communities that were already vulnerable or deprived. These 'Economically deprived' communities are likely to have lower levels of resilience and material resources to draw upon. If they are not supported in the recovery, pre-existing inequities are likely to be reinforced. The upper left contains communities that had

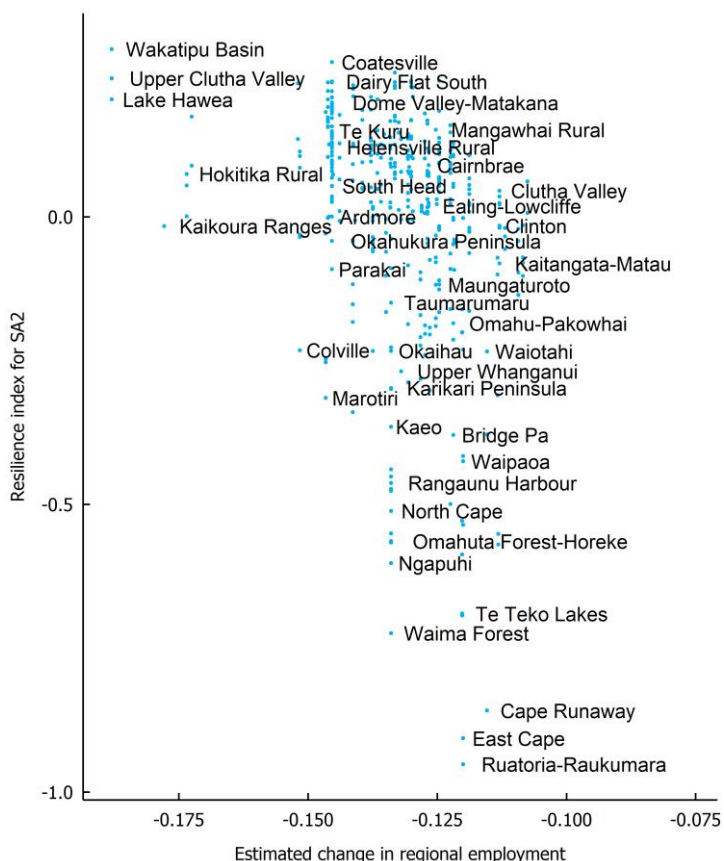
⁶ The method was principal component analysis. It calculates a set of vectors that represents the original (correlated) data set as orthogonal (non-correlated) vectors. The first principal component represents the largest share of correlation among the variables in the original data set. In effect, it collapses a multidimensional data set onto a single variable or index with the least possible loss of variation.

⁷ Statistics New Zealand divided the country into 2,253 places called Statistical Area 2 2018 (SA2). Of these, 562 SA2s contained rural areas. These rural areas were smaller divisions (Statistical Area 1) that were labelled 'Rural settlement' or 'Rural other'. The analysis considered the 395 rural SA2s with populations greater than 1,000 people (one such SA2 (Burnham Camp) was omitted from the analysis as an outlier, e.g., no home ownership).

⁸ J. Atkinson, C. Salmond, P. Crampton. (2019). NZDep2018 Index of Deprivation, Interim Research Report, December 2019. Wellington: University of Otago.

relatively high levels of resilience before COVID-19, but their resilience will be tested by the size of the local economic downturn. They are mainly ‘Tourism-reliant’ communities and they are likely to require targeted support during the recovery.

Figure 3 Economic impacts and resilience by rural SA2⁹



Source: NZIER

What next?

We can identify places in New Zealand that are likely to require above-average levels of support during the recovery from COVID-19. These are communities that either were already deprived before the pandemic or are expected to have large employment losses.

Importantly, we can identify the specific places that are likely to require support. We can do this in a transparent manner using public data, economic analysis and the wider concept of resilience.

Policy-makers can use this knowledge to target post-lockdown recovery with greater precision. While broad-brush, universal policies can be useful in the early stages

⁹ The figure includes 395 points; some place names are excluded for legibility.

of a pandemic response, recovery policy has time to be more thoughtful and targeted. The analysis shows how to identify communities that will potentially have the largest challenges, and whether the challenges arise from recent or long-standing issues.

A COVID-19 Local Government Response Unit has been set up, involving the Department of Internal Affairs (DIA), Local Government New Zealand, the Society of Local Government Managers and the National Emergency Management Agency. This type of co-ordination could be a channel for linking local communities to the resources they need in the recovery.

The literature on community resilience and community-led development has helpful recommendations for this work, too.¹⁰ Engaging with community members is important, rather than assuming that a statistical profile is the last word. In addition, understanding and working with local networks can boost local success, as long as key people and organisations are not overburdened. Within government, the DIA has good resource material on working with communities.¹¹

The Government asked New Zealanders to support each other in Level 4. As the country gets further into this crisis and starts to come out the other side, it will be important to maintain that support for everyone if we value social cohesion and equity. Rural communities must be part of that, the resilient and the vulnerable ones alike.

This Insight was written by Dr Bill Kaye-Blake at NZIER and peer reviewed by Dr John Yeabsley, NZIER, and Dr Margaret Brown, Senior Social Scientist, AgResearch, May 2020.

For further information please contact bill.kaye-blake@nzier.org.nz or 027 362 0743

NZIER | (04) 472 1880 | econ@nzier.org.nz | PO Box 3479 Wellington

NZIER Insights are short notes designed to stimulate discussion on topical issues or to illustrate frameworks available for analysing economic problems. They are produced by NZIER as part of its self-funded Public Good research programme. NZIER is an independent non-profit organisation, founded in 1958, that uses applied economic analysis to provide business and policy advice to clients in the public and private sectors.

While NZIER will use all reasonable endeavours in undertaking contract research and producing reports to ensure the information is as accurate as practicable, the Institute, its contributors, employees, and Board shall not be liable (whether in contract, tort (including negligence), equity or on any other basis) for any loss or damage sustained by any person relying on such work whatever the cause of such loss or damage.

¹⁰ H. Rhodes, W. Kaye-Blake, and D. Bewsell. (2016). Experts and local people in community-led development. Palmerston North: AgResearch, September.

¹¹ <https://www.dia.govt.nz/Resource-material-Our-Policy-Advice-Areas-Community-led-Development>