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ABSTRACT

COVID-19 Government Responses to Labour Market Disruptions and Economic Impacts: The New Zealand Model

The Covid-19 pandemic caused major shifts in the operation and fortunes of several industries within New Zealand, including an immediate impact on the workforce. In this setting, the combined epidemiological and economic responses of the government, businesses and the general public played a significant role in the health of, and the provision of basic necessities to, the population, maintaining the viability of the economy despite lockdowns. Indeed, New Zealand's combination of policy responses resulted in one of the world's lowest death rates, while the economy's economic loss was on a par with the European countries. Policy responses to workforce disruptions included the swift designation of essential service workers, a government-sponsored wage subsidy scheme and the facilitation of remote work and digital commerce, which allowed uninterrupted operations for many businesses and public sector agencies. This paper discusses the changes in the business environment in New Zealand from an economics perspective, and the special elements of the government's policy response to the Covid-19 pandemic.

JEL Classification: H12, J18, J10, D7, D78, H25, I30, I31

Keywords: COVID-19, economic impact, labour market, remote work, essential workers, wage subsidy

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1 Introduction

What shape would the employment and the economic environment take if all social and work contact is potentially deadly? The idea that, one day, almost the entire workforce of a country would be confined to quarantine at home may at first appear as the setting of a dystopian science fiction movie. But this is precisely what New Zealand and many other countries have experienced in 2020, in response to the Covid-19 pandemic. How has such an event change the economic landscape? What lessons have we learned from this experience?

The Covid-19 crisis created significant shifts in the operations and fortunes of several sectors within New Zealand. The economic fallout happened immediately. Yet, the full impacts continued to evolve through the recovery periods – and are expected to continue into the foreseeable future. The international flow of people and products stopped or was severely disrupted, significantly impacting the tourism and hospitality industries. This changed the expected short- to long-term viability of some industries, compared to others. Changes to employment opportunities had a significant role in the economic landscape. In many sectors, the production of goods and services was reduced (on the supply side). From an earnings perspective, incomes were significantly reduced. Isolation in quarantine in New Zealand and overseas also reduced consumer demand for products and services, leading to further losses in employment and income. A reinforcing feedback loop of underemployment, reduced incomes and reduced demand for products and services created a vicious cycle.

The onset of the pandemic in New Zealand was slightly later than in the US and Europe. This fortuitous timing helped New Zealand to prepare for and avoid an exponential growth of the virus – 'flattening the curve'. New Zealand's response to the pandemic was, in many ways, different from the responses in other countries, providing an interesting case study. Specifically, the government adopted the ambitious goal of eliminating the virus. The quarantine measures proved to curb the virus from overtaking the population, which made normal life and work possible for 102 consecutive days, and again after a second shorter resurgence and elimination period.

Given the unknown and highly contagious nature of the virus, the key trade-off between public health and economic activity proved to be a daunting international challenge. A growing number of international studies relating to the epidemiological and economic response to the Covid-19 pandemic have highlighted the trade-off between these objectives

(e.g., Adda, 2016; Eichenbaum et al., 2020; Glover et al., 2020; Guerrieri et al., 2020; Hur, 2020; Mendiola, et al., 2020; Verelst, et al., 2016).

As part of the elimination strategy, the government introduced an economic package to support businesses and employment. The logic behind this strategy was to keep the population safe, while protecting livelihoods and economic activity to the greatest extent possible (Robertson, 2020; Robertson and Sepuloni, 2020). The package included the designation of essential workers – those who worked in food, medical supplies and other essential production and service industries. In addition, a wage subsidy scheme was swiftly enacted to stop mass unemployment. The New Zealand government moved its own operation to online work performed by staff working at home. Many businesses followed suit.

This paper focuses on major changes in the economic landscape and employment during and in the aftermath of the Covid-19 response. The paper evaluates the impact of three important components of the policy that have affected economy and employment. First is the contribution of essential workers to maintaining the operation of the economy. Second is the successful large-scale move to contactless work and production. Third is the wage subsidy that was, in many respects, unique to the New Zealand policy. These three employment-related examples of the policy response in New Zealand provide an interesting case, with lessons that can guide our understanding in the future. The paper concludes by examining both the question of whether Covid-19 will change the New Zealand economic landscape forever and the learning from the New Zealand experience.

The experience of New Zealand, and many other countries, during the pandemic has highlighted that manoeuvring the competing goals of public health and economic activity is impossible without trade-offs. In the case of New Zealand, border closures and lockdowns resulted in contractions in economic activity, and government economic stimulus expenditures and safety-net expenditures resulted in a government budget deficit – a change from a budget surplus before the pandemic. These trade-offs were experienced by several other countries in responses to the pandemic. This paper focuses on positive aspects of the New Zealand response on employment.

2 The pre-pandemic economic landscape

In considering the impacts of the pandemic, it is useful to briefly note some of the features of the New Zealand population and economy prior to the pandemic's onset.

First, since the recovery from the global financial crisis, the New Zealand economy had seen a decade of steady positive economic growth (an average of 2 per cent per annum). At the time of the onset of the pandemic, the economy enjoyed a high employment rate, with unemployment at a historically low(est) rate of around 4 per cent – signifying a strong economy at the time.

Second, and importantly, New Zealand had a fiscal budget surplus – among the privileged few in the OECD. This proved to be imperative in allowing the government to provide relief policies, including wage subsidies and tax deferments, with speed.

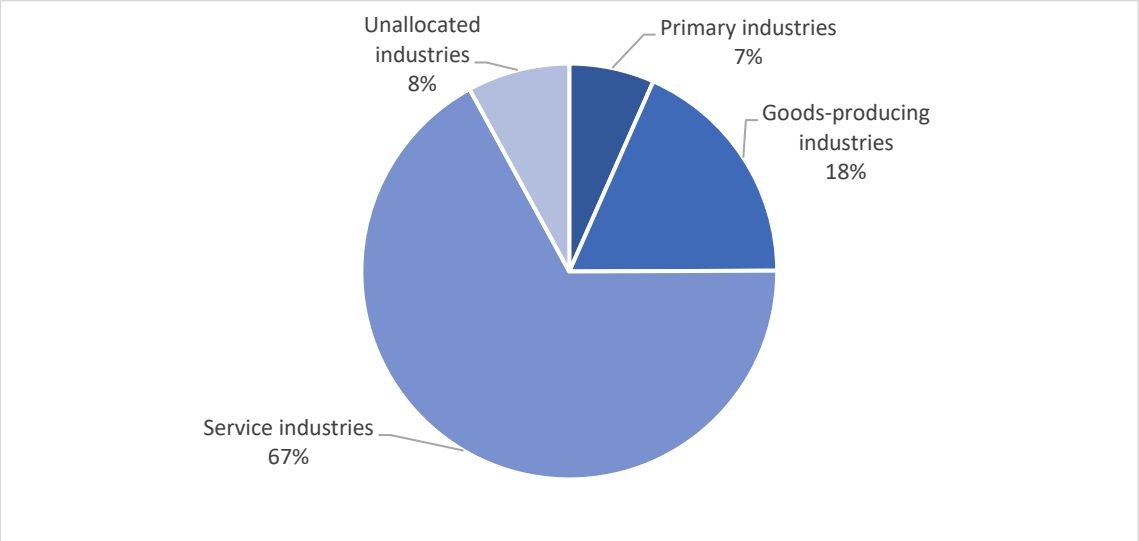
Third, the workforce had been upskilled significantly in the past three decades, with one of the highest percentages of the population with higher education in the OECD (2020). As a result, a greater proportion of the workforce has been engaged in professional occupations that use technology platforms.

Fourth, New Zealand can be classified as a service economy, with a productive agricultural sector. Service industries (Figure 3.1) made up about 67 per cent of the country's Gross Domestic Product (GDP), goods-producing industries accounted for about 18 per cent, and primary industries 7 per cent.[1]

In addition, international demand for New Zealand's agricultural and dairy products has been developed to a strong and stable market. The fact that New Zealand could provide food for her trade partners during the pandemic was a key component of economic policy prior to and during the pandemic. Tourism had grown to contribute significantly to the New Zealand economy (about 5 per cent of GDP in 2019) and the sector was on the rise prior to the pandemic.

1 These percentage allocations were similarly 66 per cent of GDP for service industries, and 19 per cent for goods-producing industries in March 2019.

Figure 3.1: The shares in GDP and a significant service industries sector, followed by goods and services industries, March 2020



Source: Stats NZ (2020a)

Finally, New Zealand has a large proportion of small and medium size enterprises (SMEs). SMEs can show significant flexibility and agility to market shifts. However, capital shortage can put SMEs at a greater risk, which proved to be important during lockdown periods.

3 Unforeseen disruptions

The pandemic-induced disruptions in employment markets are attributable to three key sources: (1) a decrease in domestic and international demand; (2) the fear of contagion itself – the effect of these two factors was greatest for jobs that required face-to-face or physical contact; and (3) quarantine compliance, which necessitated further isolation and reduced business activity, exacerbating the feedback effect of decreased demand due to diminished and uncertain earnings.

However, consumer demand and employment for 'necessities' continued. This was also true of essential services that were deliverable in contactless settings. A surprising result was that, with remote work from home, productivity did not drop in many firms, and it increased in some cases. While the sectors reliant on travel were heavily hit, international trade provided a welcome relief for the economy.

Some skills proved more resilient and compatible with this landmark shift – notably, farming, legal, financial, technical support, government and most high-skilled jobs that could

be conducted online. In contrast, employment in tourism, hospitality and retail could not effectively shift to online platforms. In addition, many small businesses were caught unprepared for digital operations, and their premises were required to stay closed during lockdown periods. As a result, they found it difficult to establish an online presence and payment systems with short notice.

4 Government economic response

Since the onset of the pandemic, the trade-off between saving lives and having a functioning economy emerged as a key challenge for the government and New Zealanders alike. While these two imperatives were clearly at odds in the short term, the long-term links between stamping out the virus and normalized economic activity were fully congruent.

The approach ventured by the New Zealand government was to prioritize lives, while accepting lower economic activity in the short term, with the aim of recovered and sustained economic activity in the long term. This entailed a leap of faith as dealing with a new and unknown virus, it was not possible to know exactly when and how the virus could be eliminated.

The early and stringent quarantine system adopted in New Zealand was a four-stage system, with varying degrees of restrictions. The initial and longest stage of quarantine (Level 4) through March and April of 2020 required people, with few exceptions, to stay at home in their defined 'bubbles'! The government also implemented travel bans for both international and domestic travel. The quarantine system was later moved to less stringent levels (3 and 2). The return to normal activity of Level 1 occurred in May 2020. By early June, domestic travel had resumed, which was followed by an immediate increase in economic activity in both increased consumption and production.

However, a resurgence of cases – albeit on a much smaller scale – in August 2020 resulted in a second but shorter lockdown period. This second wave lasted until 21 September, with easing for Auckland delayed until 8 October.[2]

2 Public opinion is divided on whether or not the stringent second lockdown was necessary, given the very small number of cases in the second wave. With hindsight, the less stringent Australian response suggests that a less strict alert level (Level 3) with less impact on the economy may have been justified.

The quarantine restrictions required companion programmes to secure the operation of the economy, population wellbeing and preservation of work and earnings to the maximum extent possible. The designation of essential workers, remote work and contactless trade, and a wage subsidy system to keep people at work, comprised important features of New Zealand's policy response.

4.1 Designation of essential workers

Government allowed essential workers, those working in diverse sectors including healthcare, aged care, security, education (primary, secondary, and tertiary education), food transport for supermarkets, cleaners of essential services, medical and other essential supplies to continue to operate. International trade was made possible by essential workers. New Zealand's primary products, especially food and dairy, continued to flow to her trade partners.

New Zealand's designation of essential workers (released on 23 March) was set earlier than other countries after the onset of the first Covid-19 case in the country. The unified national designation and its clear communication reduced much confusion. The European Commission's designation of essential workers, albeit released later (on 30 March), was also accepted as a clear baseline for member countries. But its implementation proved problematic, as it allowed movement of essential workers across the EU. In the US, the Cybersecurity and Infrastructure Security Agency (CISA)'s definition of essential workers was followed by less than half of the U.S. states. The inconsistency in the definition of essential workers is plausibly one of the reasons that prevented the US from containing the COVID-19 outbreak.

4.2 Remote work and contactless retail

Remote work and contactless business activities, including in retail, were among important features of the pandemic response. The government itself moved its own operations and services to remote modes through its technology platforms. Both local and national government departments continued to function uninterrupted. This included civil defence, customs, education, health and welfare, payrolls, emergency management functions and overseeing of primary products. Many government departments showed flexibility and prompt expansion of services. Other businesses which could adapt, such as the financial sector and teaching institutions, followed suit.

A notable response of the market to the disruption – caused both by the pandemic and government restrictions – was the remarkable agility, flexibility and willingness by organizations and the workforce to adapt, cooperate and adopt new technologies within a short span of time.

4.3 Wage subsidy scheme

As part of the government response package, a wage subsidy to firms was provided which reduced labour costs for employers and helped preserve jobs. The wage subsidy scheme, introduced swiftly in March 2020, provided financial assistance to businesses that were significantly impacted by the pandemic. The employer eligibility criteria for receiving the wage subsidy required that the business's revenues had to be at least 30 per cent lower in the previous 30 days compared to a similar time-period in the previous year (Employment New Zealand, 2020). The scheme paid out weekly per-employee rates of $585.80 for full-time workers (working for more than 20 hours per week), and $350 for part-time workers, for a period of 12 weeks. To put these figures in context, the full-time rate was equivalent to 57.6 per cent of the median weekly earnings in New Zealand in the year 2019.

5 Impact on economic sectors

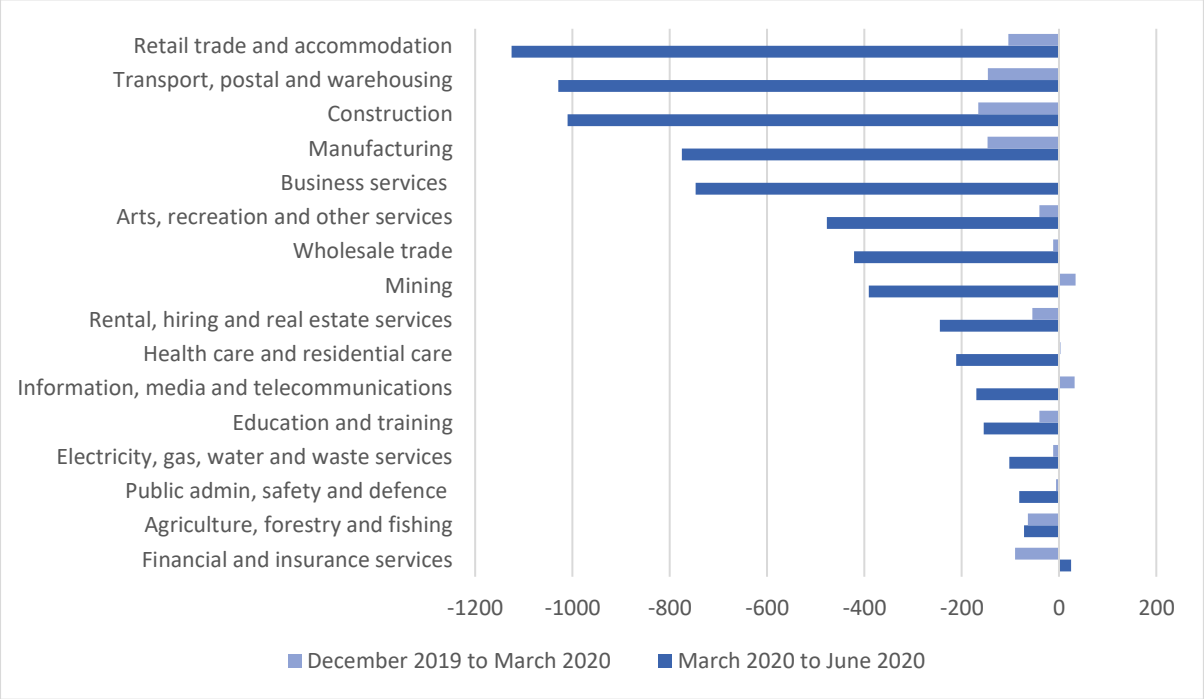
By March 2020, the New Zealand economy was growing at an annual rate of 1.5 per cent. This was a significant drop from the previously projected growth rate of 3.7 per cent. During the first quarter of 2020, the New Zealand economy shrunk by 1.6 per cent (Stats NZ, 2020a). This was the single largest decrease in New Zealand's GDP in 29 years – and a greater decline than during the global financial crisis. Per capita GDP also decreased by 2.2 per cent during the same quarter. Figure 3.2 shows changes in GDP by industry during the 4-month period of December 2019 to March 2020, representing effects in the initial stages of the pandemic compared to the pre-pandemic period in December 2019.

By June 2020, the economy had contracted at an annual rate of 2.0 per cent since June 2019 (Stannard et al., 2020; Stats NZ, 2020b). A more significant drop of about 12.2 per cent in GDP production occurred during Quarter 2, compared to the first quarter of 2020. This represents the largest decrease in economic activity in New Zealand in decades. The measure also reflects the substitution of some government-sponsored economic activity and services in place of previous production by the private sector.

On an annual basis, New Zealand's GDP had decreased by a similar drop of 12.4 per cent, compared to Quarter 2 of 2019. Likewise, New Zealand's trade partners had also reported contractions in their annual GDP growth by the end of Quarter 2 of 2020: The European Union, -13.9 per cent; OECD average, -11.7 per cent; Australia, -6.3 per cent; US, -9.1 per cent; UK, -21.7 per cent; and Canada, -13 per cent (Stats NZ, 2020; OECD, 2020).

Figure 3.2 provides a comparison of the contractions in economic activity (GDP) by industry in the first and second quarters of 2020. As seen in Figure 3.2, 13 out of 16 industries showed decreases in GDP, with construction, manufacturing, retail and accommodation being hardest hit. SMEs were highly represented among the latter two groups and were disproportionately affected. Energy, business services, wholesale trade, public administration, safety and defence experienced more modest impacts. In contrast, information, media and the telecommunications industry, healthcare and mining showed continued positive changes in their industry GDP.

Figure 3.2: Gross domestic product by industry, changes from December 2019–March 2020, and March 2020–June 2020



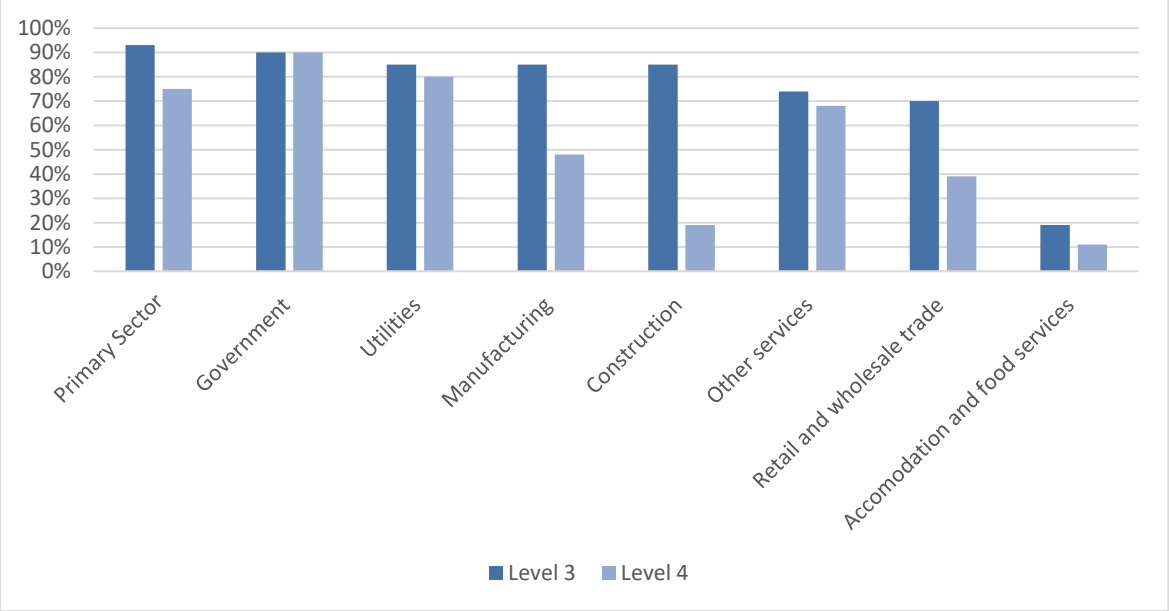
Source: Figure based on Stats NZ (2020a, 2020b) data

Figure 3.2 further shows that by June 2020, no industry was unscathed by the pandemic. Retail, transport, construction and business services continued to shrink significantly in the June quarter. The large impacts in Quarter 2 of 2020 reflected the combined impacts of

the pandemic itself, loss of tourism and the lockdown periods that caused the closure of many businesses. These combined forces had unequal impacts across industries.

Figure 3.3 highlights the impact of the lockdown on capacity utilization for different industries. Notably, during the Level 4 alert, construction, retail, accommodation, food services and manufacturing were operating below 50 per cent of their usual pre-pandemic levels, representing one of the main reasons for the reduced GDP.

Figure 3.3: GDP Production by industry during lockdown as percentage of pre-pandemic production)



Source: Figure based on data in Stannard et al. (2020)

In addition to the reduction of GDP, the share of GDP components had also changed by June 2020, in comparison with June 2019 (Stats NZ, 2020b). Private investment's share of GDP had decreased (from 24 per cent to 18 per cent), and the share of government spending and net exports had increased (respectively from 19 per cent to 22 per cent and from -0.1 per cent to 3 per cent). The relative share of private consumption in the GDP had remained almost unchanged (about 57 per cent). The increased share of public spending reflected the amplified government administrative support required for the response to Covid-19, and economic stimulus spending to generate economic activity. Increased net exports partly reflected the impact of reduced imports.

6 Impacts on the workforce

Despite the reduced economic activity by June 2020, a key positive outcome of the New Zealand strategy was the preservation of jobs, while minimizing the loss of lives.

New Zealand experienced a modest change in the unemployment rate of 0.2 per cent in the first 6 months from December 2019 to June 2020 (New Zealand Parliament, 2020, Stats NZ, 2020c). Stats NZ (2020a, 2020b) data placed New Zealand in 5th ranking among OECD countries on employment engagement in both March and June 2020. Sweden had the 6th ranking, UK and Finland were ranked 8th equal. Australia's position had deteriorated from 13th to 18th, while the US dropped from 20th to 31st place during the same period.

6.1 Essential workers

As mentioned earlier, essential workers made a significant contribution to the success of New Zealand's response, both in terms of the population's wellbeing, and in providing essential goods and services. This included doctors, nurses and medical staff, aged-care workers, security and border control employees, those working in supermarkets and related supply chains, bus and transport drivers, delivery and courier workers, police force and cleaners in sensitive operations. Without these workers, the impact on the economy would have been severe.

The Ministry of Health's (2020) list of essential workers under the Covid-19 isolation alert systems ensured provision of physical and mental health, education, government and financial services. In addition, many front-line workers for the production and distribution of food, essential construction, running of utilities and the manufacturing and distribution of essential items were designated as essential workers. Statistics from the Ministry of Business, Innovation and Employment (MBIE, 2020), summarized in Table 3.1, show the number of individuals who were designated as essential workers under Alert Level 4, and who worked for the population's wellbeing during lockdowns.

As shown in Table 3.1, more than half a million (529 000) people were identified as critical service workers. In addition to this group, another 139 000 essential workers worked from home. This combined group comprised about 25 per cent of the New Zealand workforce. Without the operation of this group of workers, the economy would have been paralyzed.

Table 3.1: Essential Service and other Work under Alert Levels 3 and 4 (Year 2020)

		Essential Service	Non-Essential Service	Total
Alert Level 4	Going to work	529 000	NA	529 000
	Working from home	139 000	501 000	640 000
	Unable to work	457 000	1 019 000	1 476 000
	Total	1 125 000	1 520 000	2 645 000
		Operational Service	Non-Operating Service	Total
Alert Level 3	Going to work	1 172 000	NA	1 172 000
	Working from home	507 000	NA	507 000
	Unable to work	829 000	137 000	966 000
	Total	2 508 000	137 000	2 645 000

Source: Ministry of Business, Innovation, and Employment (MBIE), 2020.

On the impact of the alert systems on work, as Table 3.1 (column 1) shows, the percentage of active workers moved up to 63.4 per cent under Level 3 compared to 25 per cent under the lockdown. This comparison clearly demonstrates the significant increase in employment activities made possible during Level 3. Further analysis confirms employment gains across all industries with greatest increases in construction and retail (MBIE, 2020).

Under Alert Level 3, gatherings of up to ten people with social distancing were possible, allowing several more people to go to work. This, combined with 'contact tracing', prevented a more severe adverse economic impact.

Throughout the lockdown and alert levels essential workers continued to work regardless of the risks involved. The recognition of the significant role that these members of the workforce play created a major shift in public recognition of what constitutes 'essential work' for the operation of the economy and the wellbeing of its population. It is interesting that if a survey were to have been conducted prior to the experience from the pandemic, asking individuals to identify essential workers in our economy, a different list would have been very likely to emerge – assigning higher value to jobs with greater influence, earnings and prestige. This lesson and awareness from the experience with the Covid-19 pandemic may indeed endure.

6.2 Remote work and contactless business

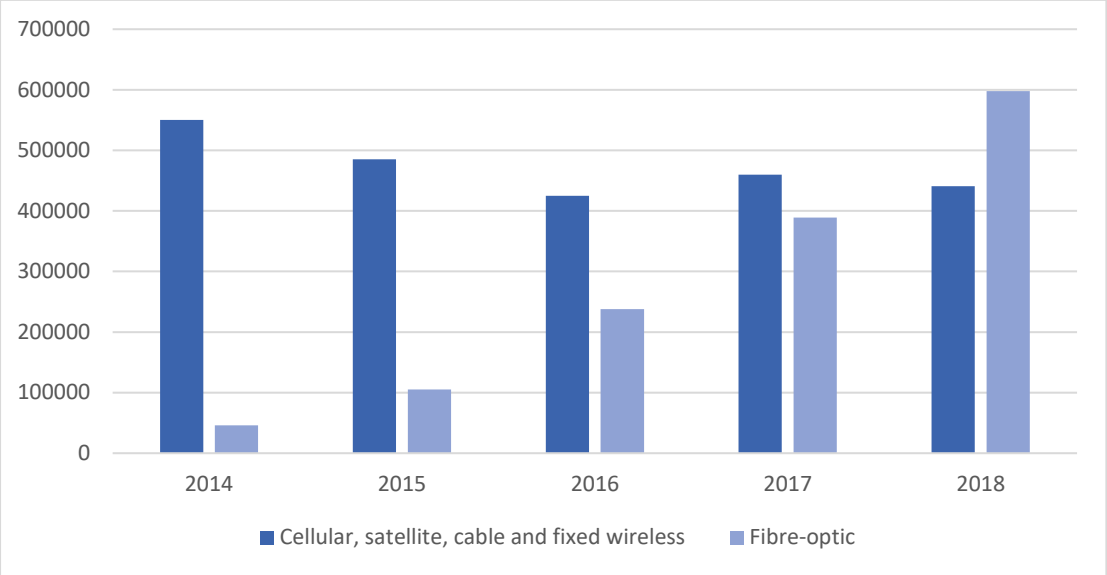
The notion of working from home, although a partial practice in the past by many professional firms, was not considered as a viable option by the majority of businesses. The experience of the pandemic altered those assumptions, by demonstrating that this mode of work can be viable and effective for both organizations and workers.

Subsequent statistics from MBIE (2020; see Table 3.1) confirm that under the lockdowns, close to a quarter of the workforce (24.2 per cent) was able to work remotely from home and further remote work became possible as digital and contactless systems improved. This sudden major change is indeed likely to have created an impetus for long-lasting changes in remote work arrangements as a norm in labour markets. Bick et al. (2020) find a similar surge in working entirely from home following the pandemic (35 per cent of the workforce), in particular among highly educated employees.

The relatively high level of remote and digital work done in New Zealand, including by the government, was made possible through its significant digital infrastructure – in particular the high-speed fibre and broadband infrastructures that had started a decade earlier. Figure 3.4 demonstrates the significant increase in the country's number of high-speed fibre-optic broadband installations during the period prior to the pandemic. Indeed, had the pandemic occurred even 5 years earlier, the possibility of remote work from home in New Zealand cities would have been much more restrained.

It is important to note that back in 2009, the New Zealand government collaborated with Crown Fibre Investment Co to work on the Ultra-Fast Broadband programme with the objective of delivering high-speed broadband for New Zealanders. At the cost of approximately 1.5 billion dollars, this programme aimed to speed the connection up to 100 megabits per second, which was 50 times faster than the speed in 2009. Phase 1 of the programme commenced in the same year, focussing on areas that had higher populations ranging from 1.2 million people (Auckland) to 12 600 people (Oamaru; Stats NZ, 2019).

Figure 3.4: Broadband internet connections infrastructure



Source: Figure based on Stats NZ (2019) data

By 2019, high-speed internet connections were available to 79 per cent of New Zealanders, exceeding initial expectations. As of Quarter 2 of 2020, the number of active connections had increased to 83 per cent with more than 1 million households using it (Crown Infrastructure Partners, 2020.

A Harvard Business Review study that evaluated several countries in terms of their readiness for remote work (Chakravorti and Chaturvedi, 2020) placed New Zealand in the top category of readiness at the time of the onset of the pandemic. The analysis incorporated 3 dimensions of internet availability (robustness of digital platforms, the resilience of internet infrastructure to traffic surges, and proliferation of digital payment systems). Other countries in the top readiness group included Singapore, Netherlands, U.S., Canada, Germany and South Korea.

This underscored the importance of internet and other digital infrastructures for continued economic activity across several professional services, financial, government, health and education as well as wholesale and retail.

6.3 Hybrid remote and flexible work hours

Since the onset of the pandemic, a number of interesting and hybrid models of flexible work arrangements that combine a mixture of remote and in-office work have proven workable and even desirable across New Zealand private and public sector organizations.

An unintended but welcome outcome of the remote work was the significant digital upskilling and capacity building for organizations and their workforce. This included a noticeable increase in the uptake of digital and contactless transactions to operate across different alert levels. Online ordering and payment system capability for small and medium-sized businesses and their workforces was an important part of this enhancement.

This was highlighted during Auckland's resurgence of Covid-19 cases which caused the second quarantine period in August 2020. This shorter period demonstrated that the businesses that were unprepared during the earlier quarantine period had learned to adopt contactless or online sales, pick-up and payment systems, allowing them to operate under the quarantine restrictions. This is a major shift that could affect the nature of future work operations and service delivery in New Zealand.

A central learning from the remote work experience was that worker productivity could in fact remain unchanged in the remote mode. This was a major shift in long-held assumptions regarding the importance of monitoring of employees at work places to ensure high productivity. Further, the efficiency gains by saving travel time and more focused and flexible work hours at home were also recognized.

The recognition of the feasibility of remote work is a major unintended consequence and learning from the response to the pandemic. In addition, flexible work-hour arrangements have proven viable and productive in many work places, while improving work–life balance. It is likely that this change will continue to shape employment and work relations in this decade. Economic history has other interesting parallels, such as the labour-force participation of women during World Wars I and II, which, later, was recognized as a major impetus for the significant and irreversible increase in the economic activity of women in the post-World War II period (Goldin, 1991).

6.4 Wage subsidy

The wage subsidy was made available in the latter part of Quarter 1, 2020, under significant time pressure, as the pandemic had started to take hold in New Zealand. Speed in rolling out the policy in connection with imposed stringent social distancing and lockdown systems was imperative before mass job losses took hold.

An important feature of the 12-week subsidy scheme – and the Wage Subsidy Extension Scheme (WSES) – was that employers were required to retain the staff members for whom the wage subsidy was received, and they were urged to pay them their regular wages.

The wage rate paid to employees could, however, be renegotiated between the employer and the employee, at levels not below 80 per cent of the employee's regular wage.

The WSES was rolled out for a period of 8 weeks beyond the initial 12-week period. To qualify for the extension, employers had to demonstrate an earnings loss of more than 40 per cent of their regular earnings during the previous month. The cumulative number of applications received was just below 1 million (982 194), of which 77.3 per cent were approved (Ministry of Social Development, 2020).

By mid-October 2020, the wage subsidy schemes had cost 14 billion dollars (about 4.5 per cent of GDP), and the programme had supported 76 000 employees. According to the Ministry of Social Development (2020), 11 billion dollars of the expenditure on the scheme was used in the first 12 weeks of the programme.

It was recognized that the administrative cost of scrutinizing the applications process on a case-by-case basis would be costly and time consuming. The government's compromise was to make the scheme available within broad criteria for eligibility. This naturally resulted in some teething issues, including an over- rather than undersubscription of the scheme. For example, the number of complaints received by the government about misuse of the scheme was as high as 4000. Some 10 500 recipients of the scheme also returned the subsidy received to the government as either their income losses proved not to be severe, or they were unable to maintain employment for their employees. Some of these returns of the subsidy were initiated voluntarily.

Despite the cost, the policy was successful in preventing possible mass unemployment across the country and a domino-effect of losses of output, which would have been further caused by lost earnings and spending.

By September 2020, the unemployment rate reached 5.3 per cent as wage subsidy eligibility ended for many businesses, and with Covid-induced economic downturn in affected industries. Jobs that were secure and productive in the pre-pandemic periods were painfully lost across the skill spectrum. In the absence of the wage subsidy, the job losses would have initially resulted in an estimated additional increase of around 3 per cent in the unemployment rate, to rates of around 7 per cent of the labour force, followed by higher rates with secondary impacts due to lost earnings and lower consumer spending. Job losses that were averted in the first two quarters due to the wage subsidy would have been costly for the econ-

omy in the form of unemployment income-support payments. Job losses would have had further costs for the business community due to reduced production and the loss of skills and talent.

7 Conclusion

The New Zealand Covid-19 pandemic experience has provided many lessons for both the government and the private sector. The government's early and stringent approach to combating the pandemic succeeded in eliminating the spread of the virus and saw a return to 'normality' for 102 consecutive days. However, despite closed borders, New Zealand experienced a second wave of contagion in August, which was addressed swiftly in a similar way, returning to freedom of movement in Quarter 4 of 2020. In addition, with returning citizens, flight staff and transport workers, the risk of a new contagion at the border has necessitated diligent isolation monitoring of new arrivals on a regular basis. This New Zealand experience has shown the complexity of fully stamping out the virus, if borders are to be opened, even to a limited extent. Yet it also shows the exceptional success of the response in relation to health outcomes.

Some of the successes of the New Zealand experience may have been facilitated due to its lower population density, geographical isolation, the structure of the economy and the high level of social coherence. However, much of its approach as a case study in relation to the very early lockdown, the designation of essential service workers, remote work and the wage subsidy has relevance to other countries.

New Zealand's response also featured the government's provision of some safety nets for businesses and employees. The wage subsidy played an important role in keeping workers employed, avoiding an alternative of mass unemployment and business bankruptcies in the wake of the pandemic itself and the consequent quarantine. The policy reduced or delayed the impact of the lockdowns. However, the haste with which the scheme had to be rolled out, showed that it requires adjustments in assessing eligibility for targeting the wage subsidy to employers and businesses in need. Extended border closures continued to result in reduced economic activity and job losses in certain industries.

During the height of the pandemic, essential workers played a key role in keeping the economy moving. These workers made it possible for the population to stay safe, and for the economy to continue to function at a difficult time, when both the fear of illness and the need

for necessities plagued the nation. This also highlighted that, ironically, some of these workers have earnings that are at the lower end of the wage scale. This begs the question of whether, beyond the current pandemic, a living wage would be considered more favourably for this group of workers in the lowest earnings decile, recognizing their role and contribution to the population's critical needs and economic vitality.

Another key learning is that remote work could prove to be productive in many organizations and allow superior work–life balance for staff. Future historians may note that, in a similar way that the experience of women's work during WWII provided the impetus for greater workforce participation of women, the Covid-19 pandemic may have already provided the impetus for many more organizations to embrace remote working modes, more flexible work arrangements and the possibility of a 4-day work week. The remote work experience further demonstrated older workers' willingness and aptitude to upskill with technology when it is called for.

New Zealand's Covid-19 response with expanded and amplified remote work has allowed many businesses and individuals to continue their operations with less disruption over the course of the pandemic. This has placed New Zealand in a strong position for economic recovery in her post-pandemic period. Overall, the New Zealand experience provides a plausible case study for other countries on the positive effects of its policy responses, in evaluating response options or should future pandemics arise.

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