



TE TAI ŌHANGA
THE TREASURY

Economic policy for the challenges ahead

Opening presentation delivered by Caralee McLiesh,
Secretary to the Treasury¹

New Zealand Association of Economists (NZAE)
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Tēnā koutou, tēnā koutou, tēnā koutou katoa.

Thank you for the opportunity to open the New Zealand Association of Economists (NZAE) conference proceedings today. I would like to acknowledge and thank John Saunders, Shelley Haring and the wider NZAE organising committee for bringing us together for this exciting conference programme as well as Caroline Nebel from Victoria University of Wellington for hosting the conference.

The conference programme is suitably broad for the wide range of challenges and opportunities that New Zealand faces. Economics has much to offer in tackling these issues. The exchange of economic ideas and evidence across academia, the public and private sectors over the next few days is an important and valuable way to build our knowledge and research infrastructure and help us navigate what lies ahead.

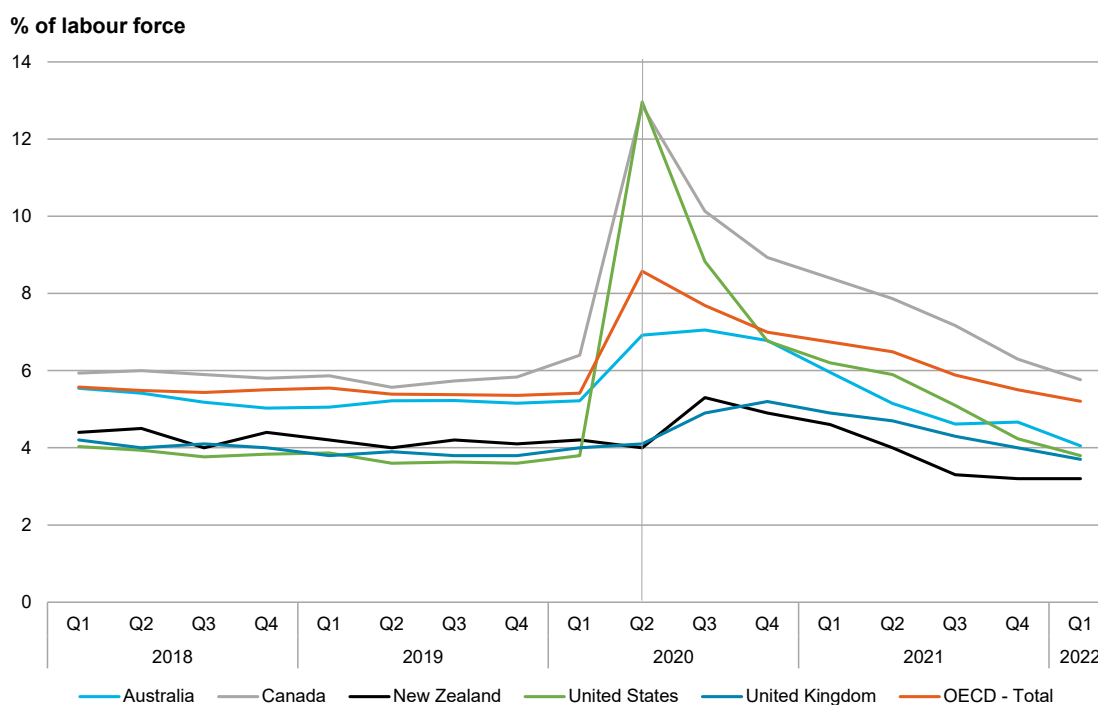
Today I want to help set the scene for your next couple of days by offering some reflections on New Zealand's economic performance and challenges ahead. I am going to focus on why productivity and supply-side flexibility, and in particular regulatory agility can expand the capacity of our economy and are central to our prosperity.

¹ I would like to acknowledge with thanks all those involved in preparing this speech. In particular thank you to John Janssen, Chris Nees, James Bibby, Hilary Devine and Giles Bollinger.

Economic context

New Zealand along with the rest of the world has faced more than two years of significant economic and social disruption from the effects of COVID-19. Our economy has proven comparatively resilient through this time. GDP is now around 3.5% above pre-pandemic levels, well above the OECD average, and unemployment is at record lows, at 3.2% as shown in Figure 1.

Figure 1: Unemployment rates in selected OECD countries



Source: OECD

The economic shocks over the last 2 years are distinguished by their scale, complexity and global nature. Numerous key economic measures have hit record highs or lows in this time—in fact, I'd posit we've had a record number of records—from the sharpest contraction in GDP to the highest terms-of-trade, the tightest labour market to the lowest consumer confidence.

Our economy has experienced a complex mix of demand and supply shocks, many of which interact and will reverberate in years to come. Demand shocks have been highly uneven, but well-supported by the fiscal and monetary policy response to the pandemic, as well as a strong public health response that allowed activity to continue (on average) more normally than other countries through much of the pandemic.

Our greatest challenge is strong demand interacting with constrained supply:

- Shifts in demand away from services towards goods have placed pressure on global supply chains.
- Lockdowns and mobility restrictions, which continue in China, have further disrupted supply.

- Labour supply shocks have been significant, with New Zealand's net migration falling close to zero for the past 2 years and 1.3 million of us who have contracted COVID-19 isolating at home at various times, along with our close contacts.
- And Russia's invasion of Ukraine has led to sharp rises in oil, energy, food and other commodity prices as the war and sanctions restrict supply further—imposing a direct hit to New Zealand's national income through higher input prices.

Resilient demand pushing up against tight supply means the economy is operating well above capacity.² This has given rise to today's principal macroeconomic policy issue both here and abroad: inflation. The Treasury and most other forecasters are expecting inflation to have peaked at around 7% in the first half of 2022, and gradually ease as temporary supply constraints unwind, monetary policy continues to tighten and temporary government spending reduces, bringing demand back closer to supply.

Across advanced economies, central banks are also tightening monetary policy, causing asset prices to decline as investors grapple with the implications. The war in Ukraine continues to reverberate—from energy markets in Australia to food insecurity in developing countries. Global growth forecasts have been downgraded and remain a key source of uncertainty for New Zealand's outlook.

This strained and uncertain economic environment reinforces that in our interconnected world, shocks and risks are increasingly complex and global. Some are immediate, like ongoing pandemics and wars, and others are longer term, like climate change, new technologies and the impact of shifting geopolitics on economic security. Many risks interact in complex ways.

While New Zealand can be a leader on some issues, we are largely a policy and price taker, not maker in global markets. This means we gain from being closely connected to the global frontier and sharing experience with others. It also means some of our domestic policy tools are limited in the face of global events. For example, a shock to domestic food prices from a local drought could be mitigated through trade. Tighter monetary policy can ease inflation by appreciating the New Zealand dollar. With global food prices rising, and other central banks also raising their interest rates, these channels are less effective.

This combination of challenges brings me to the themes of my remarks today:

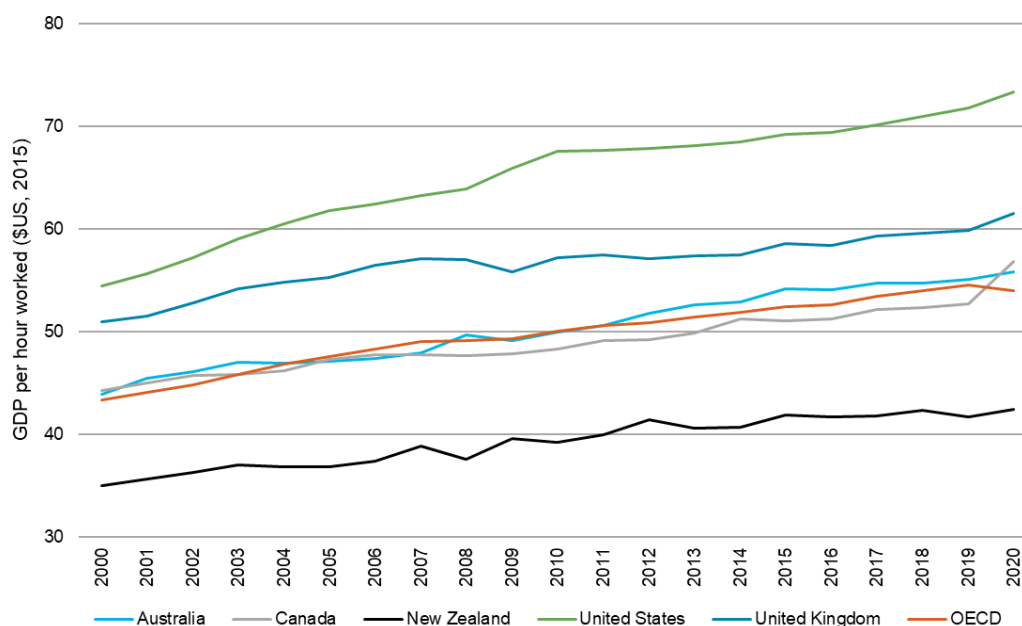
- First, further research and measures that take a broad view of economic performance and productivity are a foundation for navigating our complex environment.
- Second, our economic performance both now and in the longer term depends critically on tackling supply constraints and enabling innovation and dynamism. Although monetary and fiscal policy are adjusting and playing their part in reducing demand towards supply, reforms that drive productivity and expand the productive capacity of the economy are as important as they have ever been.
- Third, we need a greater focus on building economic resilience. While there are a range of reforms that boost productivity and resilience, today I want to highlight regulatory policy as a critical lever.

² The Budget Update forecasts that the output gap (the percentage difference between actual real GDP and potential real GDP) will reach 2.7% (June 2022).

Assessing economic performance and productivity

I will start with some perspectives on New Zealand's longer term economic performance. New Zealand's large and steady slippage in comparative income, as measured by GDP per capita, is well-canvassed. Sitting behind that is weak productivity performance. As the Productivity Commission highlights, compared to workers in the rest of the OECD Kiwis work 7% more but produce 20% less (I will turn to the measurement of this shortly). While productivity growth has been sluggish across other advanced economies in general, New Zealand's productivity growth performance has also been exceptionally poor over decades as shown in Figure 2.

Figure 2: Labour productivity growth 2000-2020



Source: OECD and Productivity Commission

Explanations for this poor performance vary, and include macroeconomic imbalances, capital shallowness, New Zealand's small market size and distance from other markets, and slow diffusion of productivity-enhancing change.³ Also relevant is the performance of the non-market sector, the role of our cities and the effectiveness of reforms to reduce barriers to productivity.

Whatever the reasons, New Zealand's weak productivity performance matters for our living standards. Higher productivity means higher incomes, cheaper and better quality goods and services, expanded choices across leisure and work, and at a societal level, across policies and spending towards social and environmental goals. Real wages tend to grow more rapidly when labour productivity growth is strong and are more likely to increase in high-productivity growth industries.⁴ In short, higher productivity lifts wellbeing.

³ In addition to the wide range of Productivity Commission inquiries, see also: Patrick Nolan, Huron Fraser and Paul Conway (2018) Moving on from New Zealand's productivity paradox. *Policy Quarterly*, 14:3, pp.3-9; and OECD (2022) *OECD Economic Surveys: New Zealand 2022*, OECD Publishing, Paris.

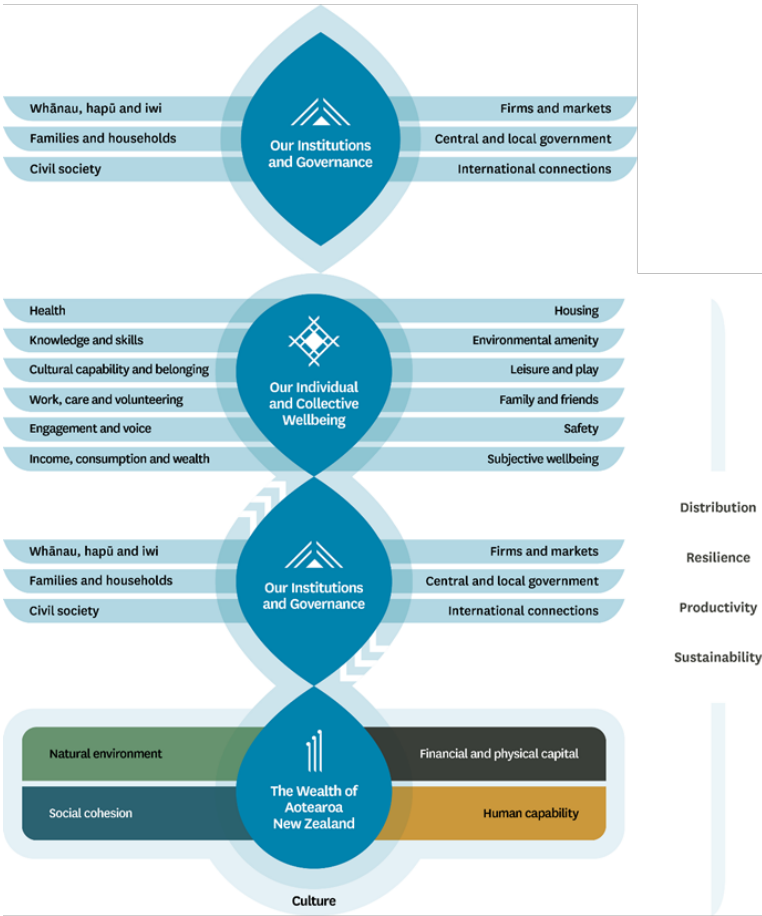
⁴ The extent to which productivity is reflected in real wages will also depend on the allocation of gains across labour and capital, or the labour income share (LIS). Evidence indicates that New Zealand experienced a rise in the LIS until the 1970s. Like many other countries, New Zealand then experienced a decline in the share. However, the share began increasing from around 2000. The timing and size of these trends is subject to debate see Productivity Commission (2021) *Productivity by the Numbers 2021*.

Broadening measures of success

In seeking to understand New Zealand’s economic performance and productivity, Treasury takes a deliberately broad view. We look at performance in terms of a wide range of measures that matter for wellbeing—or speaking to a room of economists, we could also say utility. We examine productivity alongside other aspects of performance like resilience, sustainability and distribution.

In the Treasury’s Living Standards Framework shown in Figure 3, economic performance and productivity conceptually encompass all inputs used to produce all outputs that matter for wellbeing.⁵ And the concept of “production” is not limited to the formal market economy, but includes all institutions within which human activity is organised, including firms, government, communities, social institutions and families and whānau.

Figure 3: The Treasury’s Living Standards Framework



The standard GDP per hour worked measure of productivity emphasises firm- and market-based production, and the income and consumption domains of wellbeing. But for a long time now, theoretical and empirical research has recognised the complex interactions of physical capital, knowledge-based capital, social and human capital, and the natural environment in productivity and growth. We know that standard productivity interacts with how efficiently we draw upon other aspects of wealth to deliver wellbeing, even if we cannot measure and track that yet.

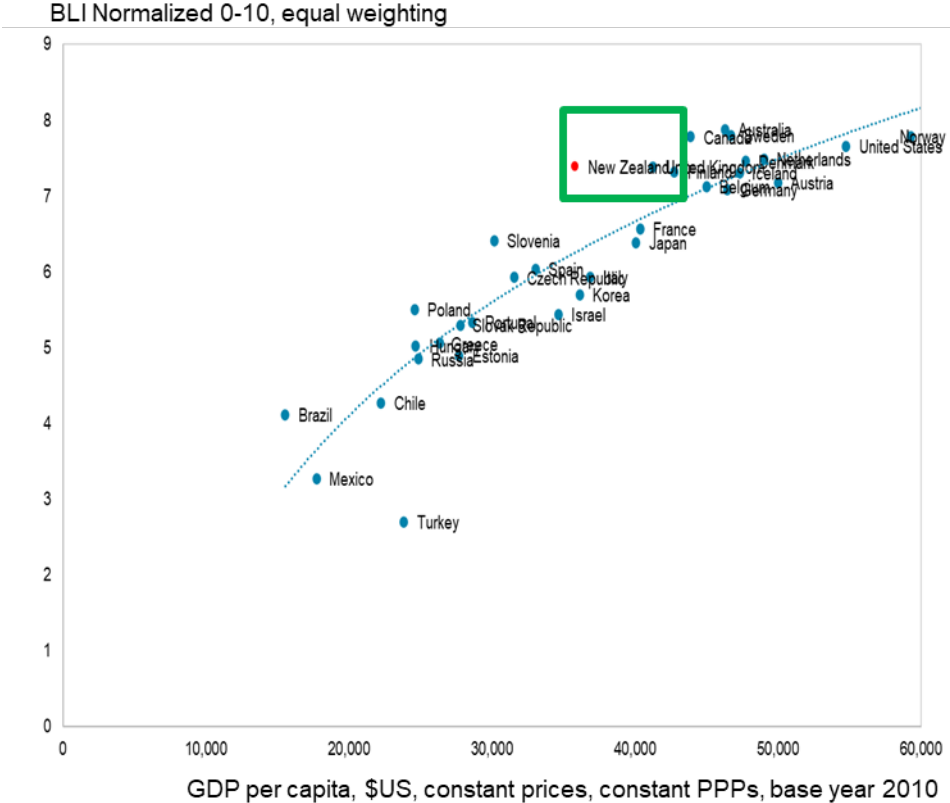
⁵ Refer to <https://www.treasury.govt.nz/information-and-services/nz-economy/higher-living-standards/our-living-standards-framework>

The Treasury has been working to better understand the drivers of subjective wellbeing (measured by reported life satisfaction). I am pleased to note that there is a paper being presented on this work at this conference, showing that—in order—mental health, income adequacy, and trust in institutions and people are the factors most strongly correlated with subjective wellbeing.⁶

Measurement has been a concern in the productivity literature for many years—in 1987 Robert Solow famously said that the computer age was everywhere except for the productivity statistics. So these questions of how we can better measure inputs and outputs are a natural next step. Efforts are underway to improve measures of public sector productivity, including in health and education, and explore how to better capture quality improvements, for example. Better measures and analyses are being developed constantly and it is great to see some of these efforts in the programme for the next three days.

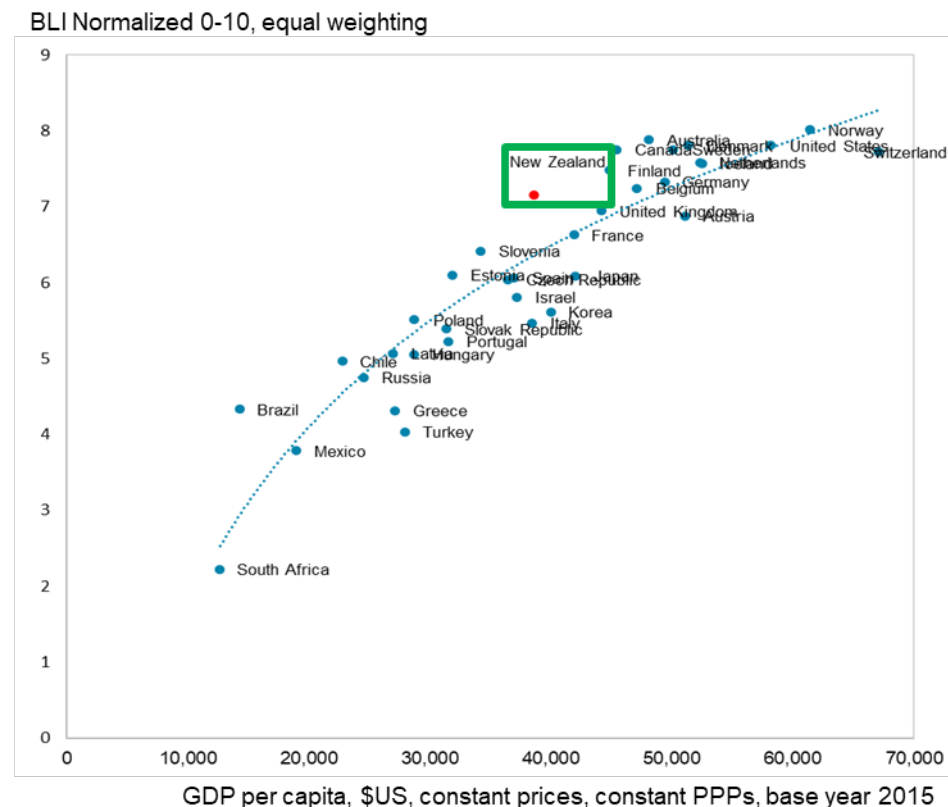
Taking a broad view of economic performance casts a somewhat different lens on how New Zealand has fared. New Zealand performs considerably better on the OECD Better Life Index (BLI), for example, than on GDP *per capita*, relative to the rest of the OECD, shown in Figures 4a and 4b.

Figure 4a Better Life Index and GDP per capita, 2013



⁶ Hien Nyugen and Sarah Crichton (2022) Wellbeing in New Zealand: A Population Segmentation Analysis.

Figure 4b: Better Life Index and GDP per capita, 2017



Source: OECD Better Life Index

This relatively strong wellbeing performance could result from many factors, including for example how productively we draw upon aspects of wealth that are independent of economic productivity or income, and various aspects of quality that aren't measured in national accounts.

While the reasons for this pattern are no doubt complex and deserving of in-depth research, a couple of factors do seem to be part of the story.

Income versus GDP – terms of trade effects

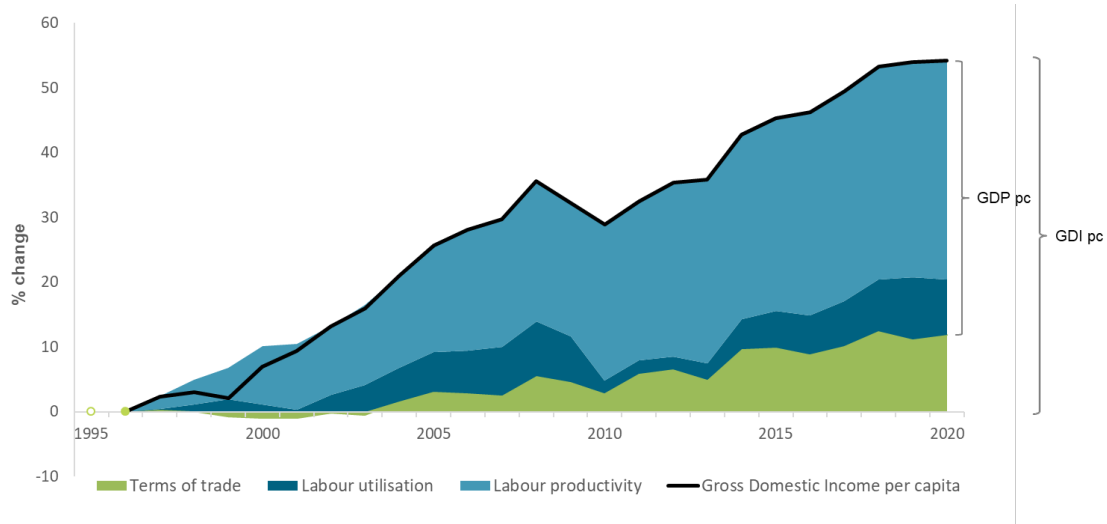
The first is that New Zealand's real income has grown faster than our real GDP. This reflects a combination of comparative advantage, a rising terms of trade, and shifts in the structure of the economy in response to that.

When the terms of trade are high, the international purchasing power of exports is high, independent of any change in productive efficiency. To give you a rough example, today we can sell around 130 trays of kiwifruit for the equivalent of one iPhone while back in 2016 we had to sell around 275.⁷

⁷ Treasury estimates based on Zespri green kiwifruit return per tray.

For most countries, the difference between real GDP and real Gross Domestic Income (GDI), which captures the terms of trade effect, is small and short-lived. But as shown in Figure 5 since the mid-1990s, the difference between GDP and GDI has become significant and persistent for New Zealand. It is driven largely by growth in export prices—with dairy a large contributor but price gains across most exports—as well as a change in the composition of imports before the early 2000s and declines in import prices since the Global Financial Crisis.⁸

Figure 5: Sources of growth in New Zealand GDI per capita

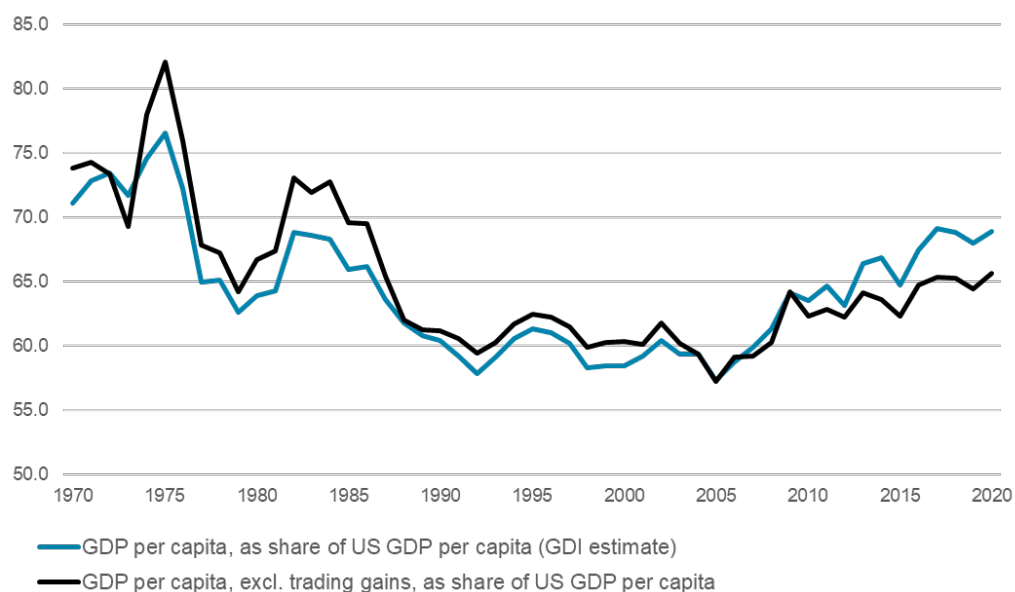


Source: Productivity Commission analysis of Stats NZ data

Although the size and timing of the term-of-trade or income effect depends somewhat on the methodology used, Figure 6 from the OECD helps convey three points: first, the weak relative performance of GDP and GDI *per capita* relative to the USA, which is often considered the global ‘frontier’ in performance; second, the modest convergence of *per capita* GDP (more on this shortly); and third, the increasing income gains from a rising terms-of-trade.

⁸ Phillip Mellor (2015) [Decomposing New Zealand's Terms of Trade \(WP 15/16\) \(treasury.govt.nz\)](https://www.treasury.govt.nz/publications/wp/15/16). Capital goods and, to a lesser extent, consumer goods have steadily increased as a share of imports as their deflators have generally declined, while intermediate goods and mineral fuels have done the opposite.

Figure 6: GDP per capita relative to the US (%)



Source: OECD Economic Survey of New Zealand (2022)

Note: The OECD use the ratio of NZ/US GDP per capita at current PPP exchange rates to capture trading gains/losses. They apply a separate calculation to exclude trading gains/losses, where the current trade balance is deflated by a single price index, minus real exports, plus real imports. These gains/losses are the difference between real GDI and real GDP. The United States is used as a benchmark because it has long been the productivity leader across a wide range of industries and because there is little difference between values for the United States and the population-weighted upper half of OECD countries.

The income gain aspect is important because, as Arthur Grimes and Shine Wu noted in a paper at last year's NZAE Conference, productivity analyses typically measure technical efficiency which is not the only ingredient for income. Significantly, income is also a function of allocative efficiency.⁹

The income perspective has implications for how we interpret New Zealand's economic performance.

- First, using historical GDP is likely to understate the income and wellbeing benefits of the changes in economic structure since 1990.
- Second, the income gain arising from a higher terms-of-trade is greater when policy settings enable resources to move into higher value production.
- Third, the income gain provides more choices, both for consumption and investment.

⁹ Arthur Grimes, and Shine Wu (2021) *Reinterpreting productivity: New Zealand's surprising performance or The shortcomings of an engineering approach to productivity measurement*, Paper presented to New Zealand Association of Economists conference, Wellington, June. Grimes and Wu also compile broader measures of performance based on the income available for consumption while also maintaining the capital stock, which accounts for capital depreciation and resource depletion.

While this income growth is likely to be positive for individual wellbeing, we need to keep in mind other factors also:

- *One consideration is dynamic efficiency – or efficiency over time.* Past terms-of-trade growth is not a guarantee for future income growth. Terms-of-trade could fall, for example if new supply or substitute products come on-stream – think protein substitutes and New Zealand's experience with wool when synthetics were mass-produced. That we have been able to reallocate resources provides some confidence that the economy can be resilient to these types of changes; other countries have experienced more difficult adjustments.
- *Another consideration is social efficiency – or whether externalities as well as private costs and benefits are taken into account in decisions.* Improvements in allocative efficiency have resulted in the reallocation of resources within the agricultural sector, for example the conversion of forestry land and sheep farms to dairy production. While this is a rational response to past price signals it has created considerable pressure on our natural resources, such as water quality and biodiversity, as prices did not reflect externalities.

Are hours worked comparable across countries?

The second take-away from Figure 6 is that there has been a modest closure of both the output and income gaps in *per capita* terms. The standard narrative is that this reflects New Zealand's relatively high labour utilisation (hours worked *per capita*) as opposed to labour productivity.¹⁰ In turn, high labour utilisation relative to the OECD average reflects relatively high rates of labour force participation and low unemployment (high employment).

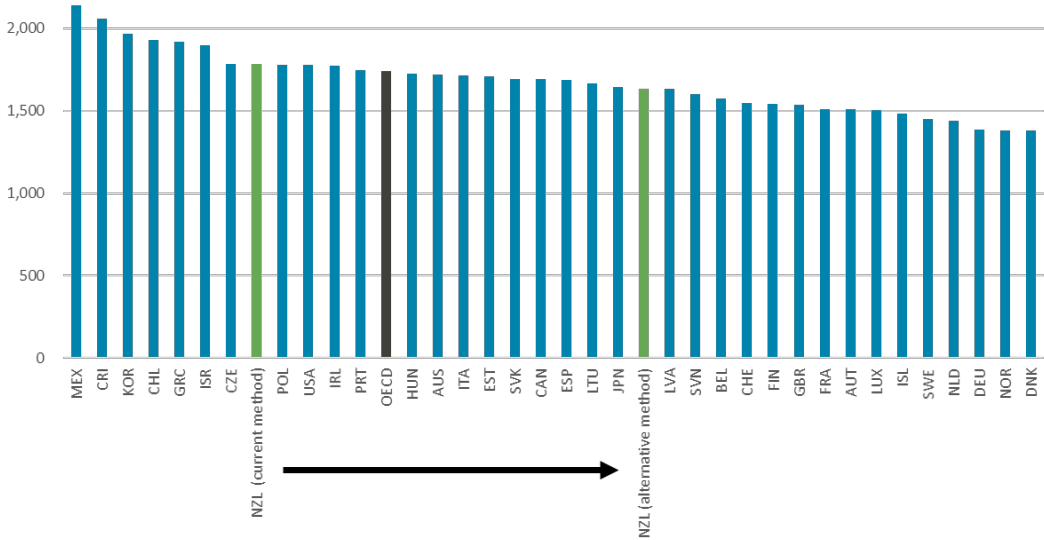
The other key component of labour utilisation is average hours worked. There are different ways to compile hours-worked data. OECD analysis in 2018 found that for countries relying on self-reporting from labour surveys, average-hours-worked were likely overstated – and so labour productivity was understated. For several countries, including the United Kingdom, the effect was in the order of 10%. To improve international comparability the OECD has applied its own method to these countries.

Although New Zealand was not included in the OECD analysis, our data are also based on self-reported hours worked. Our preliminary replications of the OECD analysis suggest that applying their adjustment method would reduce New Zealand's average annual average hours worked by an order of 6% to 9% as shown in Figure 7.¹¹

¹⁰ For example, see Figure 6 in the Productivity Commission's 2021 *Productivity by the numbers*.

¹¹ For details on the hours-worked issue see Section 4 of <https://www.treasury.govt.nz/publications/background/labour-productivity-growth-in-treasurys-fiscal-projections>

Figure 7: Comparison of annual hours worked (2019)



Note: 2019 is used to avoid the effects of the COVID-19 pandemic. For Austria, Estonia, Finland, Greece, Latvia, Lithuania, Poland, Portugal, Sweden and the United Kingdom, average actual hours worked data calculated in each country have been replaced with OECD estimates. For New Zealand, the alternative method uses a combination of HLFs data, international research and New Zealand legislation.

Source: OECD, Stats NZ calculations

This measurement change would not affect overall GDP *per capita*. However, all else equal, it would alter the split in the sources of GDP *per capita* growth, in favour of labour productivity over labour utilisation and would also slightly change New Zealand’s labour productivity ranking. The Treasury is currently working with Stats New Zealand and the OECD on this issue, including on the extent to which labour productivity growth is also affected given the increase in New Zealand’s number of public holidays.

Together these findings suggest a somewhat stronger economic performance than previous assessments.

I want to emphasise, however, that that none of this denies that we have a productivity problem. The findings mitigate somewhat but do not erase the slide in New Zealand’s relative performance over time. Our future prosperity remains dependent on productivity growth as the single largest contributor to per capita income growth, which in turn is the largest contributor to wellbeing.

Nevertheless lines of analysis such as those above illustrate how we need to improve our measures of economic performance and continue to deepen research on what drives it. This includes broadening our measures to better capture all the different inputs and outputs relevant to living standards, understanding how different types of capital—physical, human, social, natural—interact in the production process, and understanding how allocative, dynamic, and social efficiency emerge from effective institutions.

The Productivity Commission and others have written extensively on the current limits of standard measures and outlined areas for future research; we endorse this work and look forward to the contributions of many of you in this room towards it.

Expanding potential output

Productivity is not just a central driver of long-term living standards, it matters equally for today’s challenges. New Zealand’s economy is operating beyond its potential—or with a positive ‘output gap’. This means that activity either happens at higher prices, as we are seeing with high inflation, or it simply doesn’t happen, as we are seeing with building work that can’t commence or restaurants that operate on reduced hours because of lack of supplies and labour.

Both monetary and fiscal policy are tightening, which will dampen demand and bring output back towards its potential. Today I want to highlight the importance of reforms that lift the growth in potential output—or expand supply to closer to demand. The channels are well known: through capital, labour and productivity (see Figure 8).

Figure 8: Sources of potential output growth



Note: Labour and capital are trend series (rather than actual) and are not adjusted for the impact of lockdowns. The potential output series is adjusted to reflect the constraints on output that were the result of lockdowns. This adjustment is undertaken to avoid a negative output gap during these periods, which would have large (and spurious) disinflationary impacts in the forecasting model. Since the multi-factor productivity (MFP) series is derived as a residual, it captures transitory lockdown impacts. As a result, care should be taken in presenting and interpreting MFP growth over the affected periods.

Source: The Treasury

We currently face a number of supply constraints in the economy, whether they be skills shortages across the labour market, supply chain disruptions and uncompetitive land markets. We also face a range of future challenges that could impact our economic performance such as a shifting and uncertain geopolitical environment, natural hazards including earthquakes and climate change, and technological and market developments. All this means we need to look hard at the way we support our economy to have flexible supply and be resilient to future shocks.

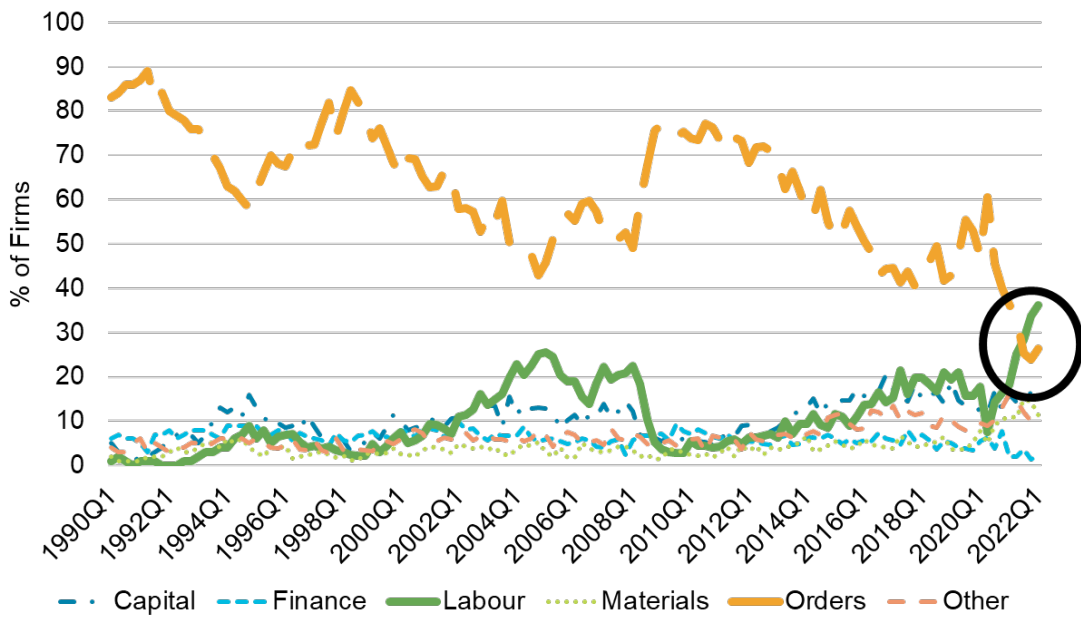
There are many policy tools that can address supply constraints across the economy and support productivity and resilience. These range from infrastructure investment, tax policy, strengthening trade connections, innovation policy and improving our human capital. They are well-traversed in reports and advice, from many institutions and researchers.¹² Some supply constraints will unwind independent of government policy as well of course.

The obvious and cliched conclusion is that there is no 'silver bullet' to the challenge. Many things have to go well, and on an on-going basis. Indeed, consistency and coherence across different governments is important given the multitude of investment decisions involved across physical, intangible and human capital.

A range of reforms are underway to address supply constraints—from air freight support to work underway to decouple building consents from specific brands, and longer-term changes such as Resource Management Act reforms.

Measures to ease labour market constraints are also critical. The QSBO suggests labour availability is the key binding constraint on economic activity – the first time this has happened, as shown in Figure 9.

Figure 9: Primary limiting factor on production reported by firms

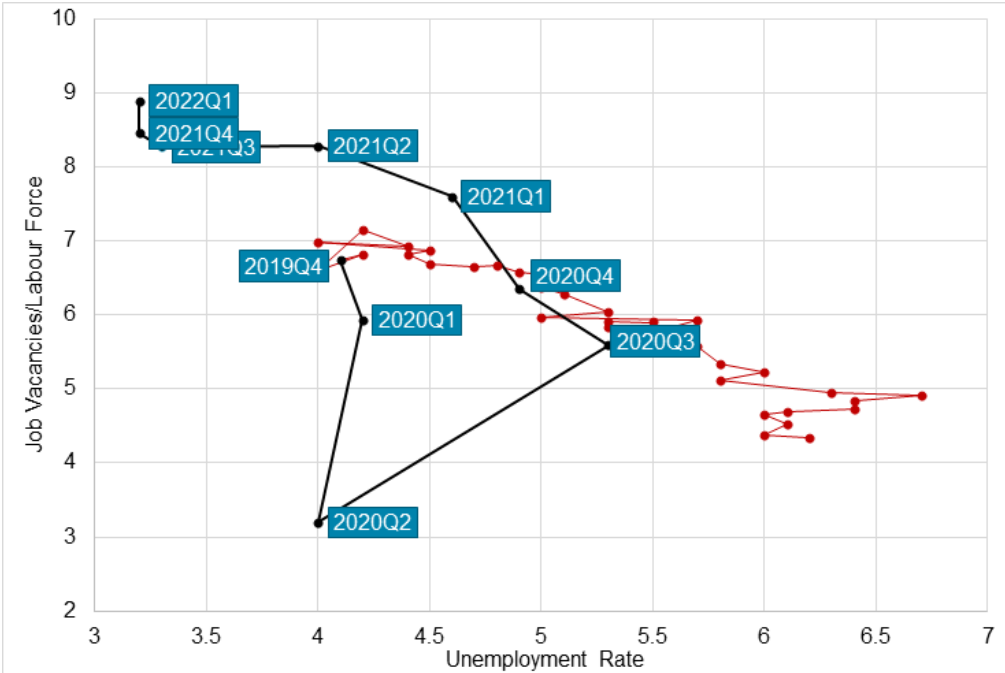


Source: NZIER QSBO (2022)

Skills mismatches have grown, as shown by the outward shift in the Beveridge curve, which traces job vacancy and unemployment rates (Figure 10). Various programs to support skills and labour market entry, as well as structural reforms to vocational education and training aim to address this. These reforms take time to have an impact and will need to be carefully implemented if they are to deliver the gains sought.

¹² Refer to footnote 3.

Figure 10: Beveridge curve



Note: Moving up the curve indicates moving towards maximum sustainable employment. Outward shifts of the curve represent a decline in matching efficiency. Red line denotes pre-COVID, black line covers the COVID period to date.

Source: The Treasury

The key short-term lever for easing constraints is immigration, and with border restrictions easing there is an opportunity to help address the skills shortage. The Productivity Commission recently concluded that overall, immigration does not reduce productivity, and with the right skills mix can enhance it. The Government’s immigration reset seeks to make it easier for highly-skilled migrants to work here and the system will need to remain nimble to adapt to skills shortages across the economy over time. Flexibility in the supply of housing, infrastructure and other capacity will also be needed to absorb more migrants.

Speedy and effective implementation of labour market and other supply-side measures will help lift potential growth, easing inflation pressure and allowing activity to expand.

Regulation

One area for further attention that I want to focus on today is the role of regulation in addressing supply-side constraints and supporting resilience and productivity.

Regulation is about the rules, standards and incentives for how all sectors of our economy and society operate, and is therefore a key institution in our society. The regulatory system includes not just formal rules agreed by Parliament, but the organisations that implement regulation, the regulated parties, and those that are intended to benefit from the regulation.

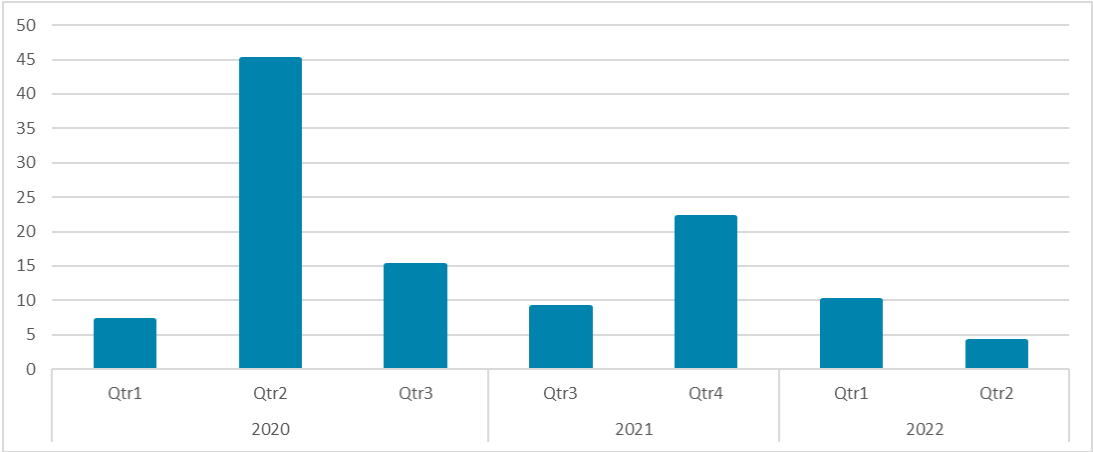
Regulation both helps to prevent harm, as well as supports economic and social activity—for example by defining clear property rights that allow markets to function. Striking a balance between these goals is crucial. Without it, we risk regulatory failure that leads to severe harm, or stifles innovation, flexibility, and activity.

Early lessons from regulatory change in COVID-19

Our experience through the pandemic underscores how regulatory reform can unlock barriers to activity.

Regulatory change was a critical—although possibly less visible—part of the economic response to COVID-19. The pandemic forced everyone to innovate in response to extreme circumstances. More than 110 regulatory changes were agreed through fast-tracked pandemic-related regulatory approval processes (Figure 11).

Figure 11: COVID fast-track regulatory approvals by quarter



Source: The Treasury

We are still at an early stage of understanding the impacts of these regulatory responses, and this ‘natural experiment’ should provide many of you in the room with plenty of data and evidence to work on. For the Treasury’s part, we’ve begun work to assess where COVID- related regulatory change supported innovation and flexibility.

One example I want to highlight today relates to the Medicines Act and Regulations, which effectively limited vaccination to being delivered only by registered health practitioners. Changes in early 2021 enabled a more diverse range of people to administer COVID-19 vaccines, subject to that person working under clinical supervision and having carried out appropriate training.

The change increased the supply of vaccinators significantly and the majority of new vaccinators were Māori or Pacific people. It meant that vulnerable populations were able to be vaccinated by people they already knew and trusted, vaccination was available at more convenient times such as after hours, and in more convenient places such as pharmacies and marae, while maintaining clinical safety. It’s hard to see how we could have achieved 94% vaccination coverage of New Zealanders without it.

Another notable change was the role of regulation in enabling technology uptake. We have all experienced the shift to entirely virtual meetings and engagement through the pandemic. Regulatory change was a big part of this in some sectors, for example enabling courts to make better use of technology such as video conferencing to continue hearings, the provision of some health services virtually, and boards and directors able to continue to perform their duties and exercise their functions with electronic signatures and virtual meetings. The innovation in service delivery made compliance easier, cheaper and safer.

Regulatory constraints

The flipside of unlocking innovation through regulatory reform is regulation that constrains new technologies and ways of working.

With technology advancing rapidly and in some cases, disrupting industries, regulators need to work hard to keep pace. The struggle for regulators to quickly adapt to ridesharing services is a notable example—with initial bans and restrictions eventually replaced by more enabling regimes, supported by private technologies for safety and quality transparency, like ride tracking and consumer ratings.

Another example is our Hazardous Substances and New Organisms (HSNO) regime. Among other things, the regime regulates genetic modification technology and organisms. The regime has not been reviewed for more than 20 years, over which time the science on gene editing has advanced significantly. New techniques are now available that can speed up existing natural processes and are often indistinguishable from changes made by traditional breeding techniques.¹³

While other advanced economies have embraced these techniques, our current regulatory barriers mean that we are missing opportunities—for example, to improve drought and disease resistance in plants, reduce greenhouse gas emissions from grazing animals; and reduce fertilizer use issues by improving disease resistance. Numerous agencies have raised concerns with aspects of the HSNO regime.¹⁴ Treasury is of the view we would benefit from a national conversation on the science and role of these technologies in New Zealand.

More generally, regulatory regimes that allow fast adoption of new technologies, including through mutual recognition are important for New Zealand, as a small, open economy that sources many new technologies internationally. The pandemic has reinforced the importance of swift approvals and certifications of new health technologies, including vaccines and treatments.

¹³ A technique called CRISPR has increased the speed, ease and accuracy of gene editing. Modified from a system found in bacteria to cut up invading virus DNA, CRISPR is much more precise than earlier gene editing techniques. See <https://www.royalsociety.org.nz/assets/Uploads/Gene-Editing-FINAL-COMPILATION-compressed.pdf>

¹⁴ Including the Productivity Commission, MfE, the Royal Society, Sir Peter Gluckman and the Climate Commission, and the Treasury. See Productivity Commission Frontier Firms inquiry for details.

Regulatory Stewardship

One reflection on these examples is the power of a crisis—such as a pandemic, or regulatory failure—to accelerate changes that we know we need to make. We need to ask the question: is there a better way to make regulatory policy that unlocks activity and supports resilience and productivity?

Regulatory reform is a straightforward concept; the hard part is identifying specific obstacles and improvements, getting agreement, and then prioritising action. It can be technical, unglamorous, replete with unintended consequences, and with risk aversion and vested interests in the status quo. Better evidence on gains that might be possible and who will benefit are needed to help spur change.

Treasury sees regulatory stewardship as a key tool for improving the performance of our regulatory systems. This means moving away from an approach of “set and forget” to an approach of keeping regulatory systems “fit for purpose.” Regulatory stewardship requires taking the same care of our regulatory systems as we would of any other important asset – with sustained attention and improvements over time, and not waiting for regulatory failure or crises to act.

Features of regulatory stewardship include:

- a) *A long term view*: anticipating how future trends may disrupt regulation, testing and adapting regulations over time, including discontinuing regulations.
- b) *An outcome focus*: with careful monitoring of how the system is delivering outcomes, building evidence of what works and identifying risks early.
- c) *A systems approach*: to identify and address systemic issues that relate to multiple and related regulatory systems, rather than each in isolation.
- d) *Collaboration*: regular and deliberate stakeholder engagement across all points of the regulatory cycle, to test whether regulations are working as intended, and identify ongoing improvements.

Treasury is working with MBIE and other agencies to support efforts to improve regulatory stewardship across the public sector—through developing guidance, surveying practices and helping exchange of good practice, and capability-building initiatives.

Effective regulatory stewardship practices both reduce the risks of costly failure, while boosting productivity, addressing supply-side constraints and supporting the resilience of the economy to adapt to shocks.

Resilience

Before I close I would like to make a few points about resilience more generally. This is a topic the Treasury is examining as a part of its Wellbeing Report, which will be released later this year.

The events of the last two years have reinforced the importance of building capability to respond to inevitable harmful shocks, as well as take advantage of opportunities.

One approach is to build more redundancy in the system—for example, stocking up on rapid-antigen tests for a pandemic, or holding inventory for supply disruptions. Another is to simply avoid the event—for example producing on-shore to avoid supply chain risk. Diversification and insurance may also be options.

Each of these strategies is likely to raise costs—that is, there are potential trade-offs between building resilience and productivity or efficiency. The choice in this trade-off depends on risk appetite.

And critically, the need for a trade-off between resilience and productivity depends on the agility of institutions and ability to repurpose assets. The more quickly households, businesses, and governments can adapt to shocks, the less likely they require costly risk mitigation. Specialist hand sanitiser production is unnecessary if alcohol producers can quickly adapt and prepare it. Large inventory is unnecessary if alternative suppliers or inputs can be readily accessed. As I have highlighted before, across countries health outcomes in the pandemic were more closely associated with measures of institutions than preparedness in the health system.¹⁵

New Zealand has comparatively effective institutions, which helped us overall in the pandemic response. We need to examine how to build agility for the many known and unknown shocks to come.

Deciding where and how to build resilience also depends on how risk is allocated, including across the public and private sector. This is an area we need to examine further in assessing the response to the pandemic, including the types of economic supports to deploy in different circumstances.

Closing

In closing, I'd like to reiterate that productivity and resilience are relevant for today's economic environment as well as longstanding and looming challenges such as climate change, technological change and demographic change. We have many levers to support productivity and supply-side flexibility. I have focused today on one that is less talked about yet is crucial: regulatory stewardship.

I said earlier that better measures and further research that take a broad view of economic performance are a foundation for navigating our complex environment. That's one reason why this forum is so important. There will be much to enlighten, challenge, and motivate all of us over the next three days. I'd like to congratulate everyone who has authored papers or is delivering presentations for this conference, covering a wide spectrum of economic thought. Best wishes for a successful conference.

¹⁵ Caralee McLiesh (2022) *Wellbeing in Aotearoa New Zealand 2022: Work towards Te Tai Waiora (the Wellbeing Report)*.