



Looking to the future

**An enduring policy and
research agenda to address
Aotearoa New Zealand's
productivity challenges**

February (Huitanguru) 2024

NEW ZEALAND
PRODUCTIVITY COMMISSION
Te Kōmihana Whai Hua o Aotearoa



**The New Zealand Productivity Commission
Te Kōmihana Whai Hua o Aotearoa**

The Commission – an independent Crown entity – completed in-depth inquiry reports on topics selected by the Government, carried out productivity-related research and promoted understanding of productivity issues. The Commission aimed to provide insightful, well-informed and accessible advice that lead to the best possible improvement in the wellbeing of New Zealanders. The New Zealand Productivity Commission Act 2010 guided and bound the Commission, until its disestablishment in February 2024.

You can find information on the Commission at www.productivity.govt.nz

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Foreword



The Productivity Commission has been working to identify the key productivity challenges that would benefit from deep exploration via the Commission's inquiry programme. This work was originally intended to be provided as advice to Ministers, to shape their decisions on the Commission's future inquiries work programme. Since the Commission is now to be disestablished, we have repurposed this work to set out an enduring productivity policy and research agenda.

This work is offered to inform the ongoing research and analysis on policy issues that matter for productivity and to support public debate, given the ongoing importance of productivity to Aotearoa New Zealand's future.

The opportunities identified in this report – building from the work the Commission has done not just recently, but over its time in operation – illustrate that there is no one solution to Aotearoa New Zealand's productivity challenges.

Rather, productivity improvements require co-ordinated, connected and cross-sector approaches and policies that align with cohesive objectives for our social and economic systems. Fed by aspirational objectives, productivity improvements are achieved through the implementation of transparent rules and accountabilities, enabling individuals, families, whānau, businesses, communities, hapū and iwi the ability to make choices reflecting their values and their best interests.

In this context, this paper emphasises the importance of long-term thinking. This includes the importance of maintaining capacity (and institutions) with a focus on productivity to ensure continued focus, effort, and alignment across and beyond government.

A key opportunity identified in this regard is the potential to develop an all-of-government productivity strategy. This could provide what has been lacking in the past – a coherent and aligned approach to productivity that looks to the future and its challenges and opportunities.

Aotearoa New Zealand's productivity demise is long-term in its origins, and also in its solutions. Fundamentally, the core foundation required to achieve greater productivity for Aotearoa New Zealand is an approach that looks to the future. Such solutions must support the development of long-term, sustainable social, environmental, and economic systems consistent with hearing the voices of future generations. The increasing uncertainty posed by the myriad of challenges facing the communities of the 21st century, reinforces the need for a more integrated approach to lift productivity and deliver for all. In this way we can be aspirational not just for the current citizens of this land, but for those we have yet to see.

My thanks to the Commission team and workshop attendees along with other groups and individuals who provided insights for this work. Throughout this engagement, we heard the message that Aotearoa has strong business, community, and institutional foundations from which greater productivity can be achieved; but seizing this opportunity demands foresight, long-term commitment, and political will.

We encourage all to pick up this wero so that we can indeed be proud of the legacy we leave to future generations.

Kia kaha.



Dr Ganesh Nana

Chair

New Zealand Productivity Commission

Te Kōmihana Whai Hua o Aotearoa

February 2024

Overview: An enduring productivity policy and research agenda

Productivity matters

A productive economy is essential to Aotearoa New Zealand's people and its future.

Improved productivity increases the nation's income and people's ability to produce and afford the goods and services that underpin a happy, healthy life. It also allows the Government to invest in public goods and services to benefit everyone – like education and health services and infrastructure. The investments that Aotearoa New Zealand makes in its people, communities, infrastructure, institutions and knowledge will determine the lives that New Zealanders are able to lead, as well as their children's lives and those of future generations.

This report:

- sets out the core productivity challenges and opportunities facing Aotearoa New Zealand, grounded in the Commission's previous work and stakeholder engagement carried out in October 2023
- proposes a policy and research agenda that could form the basis for work across government to target productivity growth.

Aotearoa New Zealand's productivity is low relative to other developed countries...

Aotearoa New Zealand's productivity growth has been low for many decades, with levels lagging behind the growth of its peers since the early 1970s. Aotearoa New Zealand's workers have been producing less for every hour worked compared with many other OECD countries for half a century.

As in all nations, a range of factors drive productivity performance, and the reasons for Aotearoa New Zealand's relatively low performance can be attributed across these. Some factors are beyond our direct control – for example, Aotearoa New Zealand's distance from global markets and small market size.

...and global challenges are approaching

Transformative global “megatrends” are approaching Aotearoa New Zealand. These are likely to significantly impact future productivity performance, and will present both challenges and opportunities for the future. The trends include:

- **A changing climate and environment:** significant climate and environmental changes will lead to global disruption and scarcity of critical resources, as well as costs and opportunities associated with adapting to, and mitigating, the effects of climate change through new technologies, products and services.
- **Technological innovation:** the speed of technological change and innovation will present huge opportunities, but individuals, businesses and states may face costs if they are unable to adapt in time to harness the benefits of these advances.

- **Complex geopolitics:** shifting institutional, cultural and economic alliances and systems will drive a rebalancing of international power relations, and potentially increased conflict, in the face of overall challenges to the role and power of state and non-state actors.
- **Demographic change:** an ageing workforce will place increasing pressure on meeting skills and labour needs, with impacts potentially dependent on migration patterns.
- **Social cohesion in a changing world:** increasing polarisation and distrust may be driven by increasing inequality.
- **Public health:** increasing pressure on the public health system will require active management of the risks and opportunities posed by technology and data.

A focus on the key enablers of productivity can drive better outcomes...

There is no “silver bullet” to achieving improved productivity. Increasing Aotearoa New Zealand’s performance will require long-term commitment, and targeted effort across the range of factors that drive Aotearoa New Zealand’s currently lacklustre productivity outcomes.

Local and international experience demonstrates that there is potential to drive increases in productivity over time – and to be resilient in the face of approaching challenges – by focusing efforts on some key enablers of productivity:

- **Innovation and its diffusion** – which can support Aotearoa New Zealand to solve big problems while the economy benefits from new and improved technologies and business processes.
- **Investment in capital** – building an asset base that enables labour to become more productive over time.
- Growing the value of Aotearoa New Zealand’s **human capability** through investments in education and health, and balanced migration settings, to ensure we have a workforce that will meet the needs of the current and future economy.
- Strengthening **institutions** to provide capability, capacity, transparency, and certainty within which markets can operate and market players can look to the long term.

Aotearoa New Zealand also has some unique characteristics that will present specific opportunities and challenges. In particular, a focus on leveraging the opportunities presented by **te ao Māori**, and a focus on effective and efficient **land use**, represent useful avenues for Aotearoa New Zealand to build its productivity performance.

...but action must be rooted in strong foundations

During stakeholder engagement on the core challenges and opportunities for productivity facing Aotearoa New Zealand, participants talked to the importance of having strong foundations for its efforts to improve productivity. They told us that:

- Long-term commitment to improving productivity requires ambition over the long run. We heard about the importance of having a vision for the future to underpin national aspiration, and the importance of thinking intergenerationally and about the long term.

- Driving improved productivity will require making hard choices – to confront highly complex and systemic challenges, to challenge the status quo and its outcomes, and to deliberately invest in – and manage the costs of – change.
- Strong productivity outcomes are underpinned by high levels of social cohesion. This can be enabled by commitment to policies that promote fairness, inclusiveness, and effective participation for all.

Timing is critical: work needs to start now

Productivity growth will not happen by accident, or over the short term. It requires sustained, concerted investment and deliberate decisions over the long term – but the sooner effort begins, the sooner gains may begin to be realised for individuals, firms, industry and the broader economy and society of Aotearoa New Zealand.

We have outlined a policy and research agenda that will support productivity improvements now, and for future generations.

The key areas we have recommended for further work or investigation are:

- **Opportunity 1. Focus on the role of innovation – and diffusion of innovation:** Technological innovation, and the diffusion of innovation, has the potential to significantly drive Aotearoa New Zealand’s future levels of productivity and make its economy more resilient in the face of change. Focus is needed not only on encouraging innovation, but perhaps more importantly on encouraging the innovation that does occur to be used and fed into improved business practices, increased efficiency, and investment in products and services that deliver more value and more value for less cost.
- **Opportunity 2. Invest in the basics – a skilled, healthy population:** A strong focus on investing in skills, education and public health is essential to drive current and future productivity, and to support a socially cohesive and engaged population that is prepared to meet the challenges of the future together. This focus will ensure that firms are able to access an adequate supply of skilled workers, and that access to skills is maintained over time in the face of global health challenges and an ageing population.
- **Opportunity 3. Think long-term about Aotearoa New Zealand’s approach to land use and infrastructure:** How New Zealanders use land – the nation’s most precious and fundamental resource – will significantly shape Aotearoa New Zealand’s productivity outcomes now and in the future. With urgent challenges in housing and infrastructure, and the economy’s strong focus on primary production, it will be important to consider how to balance the rights of current and future generations, including to meet the emerging challenges of climate change.
- **Opportunity 4. Look to the potential inherent in te ao Māori and across the Māori economy:** Māori perspectives and a te ao Māori worldview provide opportunities to contribute significantly to Aotearoa’s economic performance. Meaningfully integrating these perspectives could support building more long-term and intergenerational thinking into business models and greater differentiation of goods and services, providing added brand value for Aotearoa New Zealand internationally.
- **Opportunity 5. Continue work to address Aotearoa New Zealand’s specific productivity challenges:** As a nation, sustained effort is needed to target and address New Zealand’s known productivity issues – from how to understand and address low levels of capital investment, to the role that trade relationships may play in addressing

distance challenges. Taking work of this kind forward requires expertise, analytical capability, and the commitment and investment to tackle difficult and complex issues and identify sometimes hard solutions.

We have identified in the body of this report some more specific policy and research topics that could provide a potential starting point for work on each of these opportunity areas. These topics reflect areas already raised (through engagement) as potential issues for the Commission to examine through future inquiries if the organisation had continued to operate. They cover a range of diverse topics: insurance retreat, capital deepening, innovation diffusion, land use, energy system transformation, the readiness of regional economies and labour markets for transition, the care economy, and skilled employees and lifelong learning.

Success will depend on thinking over the long term

The extensive work undertaken recently by pro-productivity institutions in Australia and the United Kingdom contrasts with the lack of high-level strategic direction for productivity growth in Aotearoa New Zealand. While developing such a strategy was outside the Commission's remit, such work would, in our view, provide much-needed coherence and direction across efforts to improve productivity performance, by setting a clear goal and realistic pathways to deliberately move Aotearoa New Zealand toward an understood and agreed economic future.

We offer this report and the policy and research agenda proposed within it, as a starting point to inform an all-of-government productivity strategy that sets a clear vision for Aotearoa New Zealand's future economy, and pathways to achieve it.

Such a strategy would help to drive Aotearoa New Zealand's long-run productivity by reducing confusion and uncertainty and enabling business and society to make informed investment decisions.

We are confident that, through sustained and joined-up effort focused over the long term, Aotearoa New Zealand has strong foundations from which to grow its productivity performance and support better outcomes for its people. This policy and research agenda provides a fresh place from which to start.

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From inquiries to a productivity agenda

Aotearoa New Zealand's productivity performance matters for all New Zealanders. Improved productivity increases the nation's incomes and our ability to produce and afford the goods and services that underpin a happy, healthy life.

Aotearoa New Zealand's productivity performance remains low relative to many of its OECD peers, and some known barriers are impairing improvement – ranging from low levels of investment in research and development, and in physical infrastructure, through to weak management practices and continued depletion of natural resources (New Zealand Productivity Commission, 2023c). Improving productivity therefore depends on action across a wide range of interconnected factors, while also requiring sustained focus over the long term. Aotearoa New Zealand also needs to look to the future, to understand how global issues could impact on its productivity performance, and anticipate the kind of investment required.

In late 2023, the Productivity Commission undertook some work to identify the key productivity challenges that would benefit from deep exploration as part of the Commission's inquiry programme. This work was originally intended to form advice to Ministers, to shape the Commission's future inquiries work programme. Since the Commission is now to be disestablished, we have repurposed this work to set out an enduring productivity policy and research agenda.

This work involved three stages:

- **Initial desk-based analysis** – to synthesise the broader work of the Commission and its research and evidence base alongside exploring global megatrends and their implications for Aotearoa New Zealand's future productivity, supported by input from an expert panel of futurists.¹ These findings are set out on pages 11–21 of this report.
- **Targeted stakeholder engagement workshops** – to inform identification of productivity challenges and opportunities. These workshops took place in October 2023 in Auckland, Wellington, and Christchurch. Key themes from these workshops are set out on page 22, with further details in Appendix A.
- **Shaping potential “inquiry topics”** – drawing from the inputs provided by workshop participants, additional engagement with key stakeholders and supported by the expert panel and our Commissioners. High-value topics identified through this process are set out in Appendix B, and informed the opportunity areas set out on pages 23–29 of this report.

This report sets out the key findings of the work, with a focus on the overall insights and themes that will have universal application for the government's future focus on improving productivity. Where useful, we have identified more specific topics or issues that might be investigated, drawing from the work undertaken.

Productivity is of utmost importance, and the issues raised in this report are likely to become increasingly more urgent. This report is offered to inform the ongoing research and analysis on policy issues that matter for productivity and to support public debate, given the ongoing importance of productivity to New Zealand's future.

¹ The expert panel members were Andrew Jackson (Director of Strategic Projects at Victoria University of Wellington); Martin Grant (facilitator, sense-maker, and designer); Wendy McGuinness (founder and chief executive of the McGuinness Institute); and Eruera Tarena-Prendergast (Kaihautū at Tokona te Raki).

Productivity and the challenges approaching Aotearoa New Zealand

This section sets out key elements of Aotearoa New Zealand's productivity experience. It focuses on:

- setting the scene for Aotearoa New Zealand's relatively poor productivity and the global megatrends likely to impact it
- identifying some key factors that could drive improvement
- signalling the potential of focused productivity efforts to support Aotearoa New Zealand to be resilient in the face of approaching challenges.

Aotearoa New Zealand has a longstanding problem with productivity

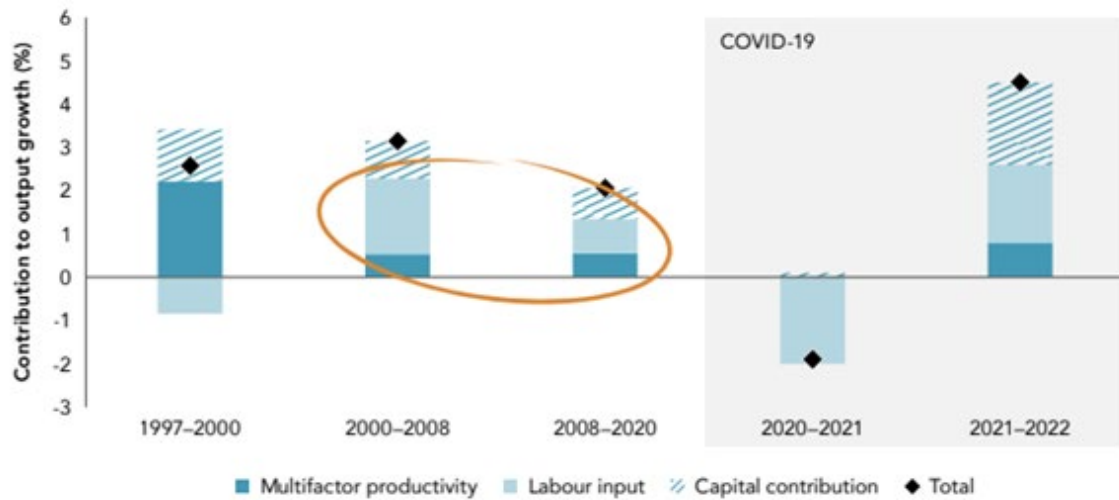
Aotearoa New Zealand has a longstanding problem with low productivity relative to its peers, and persistently low productivity growth over the past few decades. Since the 1970s, there has been a long period of relative decline, with Aotearoa New Zealand's position relative to other OECD countries stabilising in the 2000s (NZPC, 2023c).

Growing productivity lifts incomes, increases output and the possibility of more time for leisure, and is one of the key factors that improve material living standards.

Growing productivity also increases Aotearoa New Zealand's ability to fund and expand access to public goods such as education, healthcare and infrastructure, and to achieve socially desirable outcomes such as reducing poverty. Done well, this ensures that the benefits of productivity are shared across the population, and can help to mitigate any negative effects including inequitable outcomes.

As shown in Figure 1, Aotearoa New Zealand's productivity performance over the last few decades reflects the result of working harder and longer, and not smarter. As the diagram shows, labour input formed a large proportion of net total growth (indicated by the diamond) between the period from 2000 to 2020, relative to other inputs. That is, the nation is missing opportunities to invest in the factors that help drive productivity growth (NZPC, 2023c).

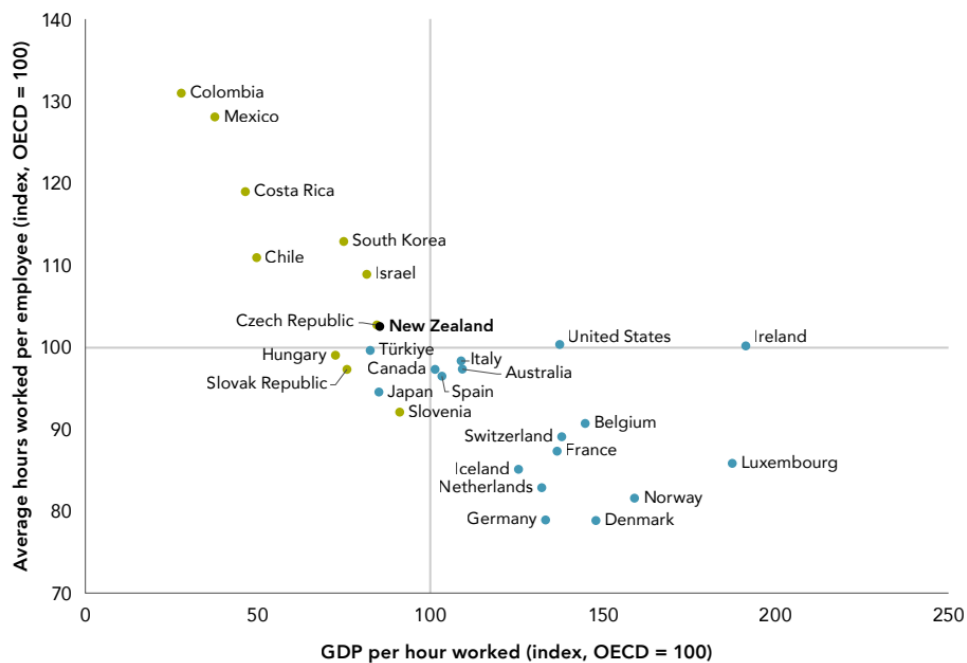
Figure 1: Contribution to economic growth based on labour, capital, and multifactor productivity based on OECD data



Source: (NZPC, 2023c)

Aotearoa New Zealand’s workers have also been producing less for every hour worked compared to workers in many other OECD countries for half a century. Figure 2 illustrates the impact of this trend in terms of output per hour worked comparative to other OECD countries in 2019.² How could Aotearoa New Zealand improve its productivity performance towards the results of best-in-class countries, such as Denmark?

Figure 2: Hours worked per year vs output per hour relative to the OECD average, 2019



Source: (NZPC, 2023c)

² New Zealand Productivity Commission calculations, based on the OECD Productivity Database.

There is no “silver bullet” for productivity growth – but targeting our efforts can support improvement

The reasons for Aotearoa New Zealand’s relatively low levels of productivity growth have been attributed to a range of potential factors. Some of these are beyond our direct control, such as distance from global markets and small market size. Many successful economies are small, but they are almost exclusively part of, or close to, larger trading areas (for example, the European Union), so cannot be easily compared to New Zealand.

Improving productivity will require long-term commitment and targeted effort across the range of factors that inform productivity. No single lever is likely to result in transformational change. Rather, improvement will be delivered by sustained and coordinated effort across key levers within the economy (NZPC, 2023c).

In its bi-annual publication *Productivity by the Numbers*, the Commission identified several key drivers and enablers of productivity where improvements could be made. These drivers and enablers are summarised below.

- **Innovation** is the engine of growth and is the dynamic process through which economic factors create new economic value by creating, adopting and adapting technology or knowledge into new or improved products and services, or by improving operational, organisational and managerial processes and approaches to marketing.
- **Investment, capital, and financial markets** also play a key role in improving productivity, in particular by increasing Aotearoa New Zealand’s currently “shallow” levels of capital stock (NZPC, 2021).
- **International linkages** are important for productivity and economic performance, allowing Aotearoa New Zealand to gain from specialisation, and providing mechanisms for the transfer of technology and knowledge, market access, and fostering business relationships.
- **Management capability** has significant impact on organisational performance, and effective governance, and skilled managers add to productivity and profitability by creating an environment where innovation and skills development can flourish.
- **Skills and education** are fundamental to economic development, because more highly educated, skilled and talented people tend to be more innovative and productive (Earle, 2010; Lucas, 1988, 2015; Sianesi & Van Reenen, 2003).
- **Infrastructure** plays a key role (for example, by increasing the connectivity between people, information, and goods and services), and is important for the delivery of essential services that drive social and health outcomes.
- **Institutions** – cultural, economic, legal, political and social – play an important role in setting social rules and norms. These support productivity by enabling a well-functioning economy and society by, for example, providing a common framework or mutual understanding for economic transactions and social interactions.

All these factors play a role in determining productivity performance. However, as a country, Aotearoa New Zealand should target its efforts towards those areas most likely to lift its productivity performance.

Helpfully, other countries (including the United Kingdom and Australia) have recently been considering their productivity performance and priorities. The Australian Productivity

Commission in particular has recently undertaken a comprehensive look at the barriers to future productivity growth, and has set out a policy agenda to overcome these barriers (Australian Productivity Commission, 2023). Likewise, in October 2023 the UK's Productivity Institute published *The Productivity Agenda*, a blueprint for boosting the UK's productivity (The Productivity Institute, 2023).

These documents highlight the striking similarity between many of the productivity challenges faced by those nations and those experienced in Aotearoa New Zealand, despite obvious differences in geography, demographics, political and economic structures and policy settings. By looking at what is consistent across the international efforts to address these challenges, we reason that priorities identified by those bodies are likely to have significance for Aotearoa New Zealand too. Of course, New Zealand will also have specific issues not faced elsewhere that are also critical to address. Taking both elements together, we have identified some key areas where further effort is required: innovation and diffusion, human capability, investment in capital, and institutions.

Innovation and diffusion

Innovation is fundamental to improving living standards generally and to productivity growth. It is not necessary – or possible – for every firm to innovate, but productivity performance is further driven by diffusion of innovation – when firms beyond the innovators act to adopt new technology and better practices developed elsewhere.

In the Aotearoa New Zealand context, innovation rates – including through uptake of new technology – are comparatively low across the economy (NZPC, 2020). In some instances, this has been the result of deliberate settings – for example, regulating to limit the uptake of genetically modified products. With a small domestic market, the incentives to compete by investing in creating or adopting new technology are relatively low.

Some unique characteristics of Aotearoa New Zealand's economy reinforce its challenges in more effectively pulling the lever of innovation and diffusion to drive domestic productivity growth. For example, the relatively low levels of investment across the economy in research and development will limit innovative potential. In addition, the prevalence of smaller firms (Battisti et al., 2010) may hinder potential opportunities to diffuse the innovation that does occur. Noting that, while most innovation globally occurs within the most productive “frontier firms” and may not be taken up at scale across other parts of the economy, having a larger proportion of smaller firms may magnify this impact.

The *Frontier Firms* inquiry found that the most promising path for Aotearoa New Zealand to lift its productivity is to foster the development of innovation ecosystems (NZPC, 2021, 2023b).

The OECD has pointed to digital technology and its adoption as a key lever to increase innovation and improve productivity in Aotearoa New Zealand (OECD, 2022b). Technology and skills are together called the twin engines of growth (Stokey, 2021).

Human capability

A focus on human capability relates to the role of skills and education as a key enabler of productivity. Highly skilled and educated people create and embody knowledge and ideas, and help facilitate the uptake of ideas from within Aotearoa New Zealand and internationally.

Although the percentage of adults of working age with a bachelor's degree or higher in Aotearoa New Zealand is close to the OECD average (NZPC, 2023c), the

New Zealand-born population living overseas has notably higher rates of qualification attainment. This impacts the supply of skilled labour available domestically and is commonly referred to as the “brain drain” (NZPC, 2022a). Student performance at secondary (high school) level has also been declining, in both relative and absolute terms (NZPC, 2023c).

Aotearoa New Zealand has traditionally had a greater proportion of its workforce supplied through immigration to fill skill gaps over the short term and long term, including to replace the skill losses incurred by New Zealanders moving overseas. In its inquiry into immigration settings, the Commission identified the important interactions between immigration and the skills, education, and training system, and recommended better coordination with labour market skill needs through the development of a Government Policy Statement (NZPC, 2022b).

The importance of building a skilled workforce that matches the needs of the future economy was a common theme across productivity agendas in Aotearoa New Zealand, Australia and the United Kingdom, as well as the OECD (OECD, 2019). For example, one of the reform pillars identified by the Australian Productivity Commission focuses on the importance of lifting educational quality and outcomes to support a more adaptable workforce. This focus also acknowledges shared challenges resulting from the ageing workforces in developed economies.

Aotearoa New Zealand invests in human capability not only through its skills and education systems, but also through the efforts it expends to keep people healthy so that they can continue to contribute to the workforce and to society.

Investment, capital and financial markets

Investment, capital, and financial markets were identified as a key driver of productivity across all countries considered.

Aotearoa New Zealand has relatively low levels of capital stock (as measured by gross fixed capital formation)³ compared to its peers in the OECD, and generally there is a link between capital intensity⁴ and higher levels of productivity (NZPC, 2023c). Aotearoa New Zealand’s distance from global markets and small market size pose unique challenges. Both may affect the costs and barriers of importing capital and integrating into global supply chains, or have implications for competition settings where large firms may be more able to exercise monopolistic powers.

Well-functioning financial markets also allow firms to access finance for investments, and Aotearoa New Zealand is known to have both lower levels of venture capital and a smaller equity market (for example, the NZX, New Zealand’s stock market) for the size of its economy than other developed economies (Levine, 2004; New Zealand Productivity Commission, 2023c).

Investment in capital across the economy is a focus for pro-productivity efforts internationally, by building the asset base that enables labour to become more efficient over time. The precise reasons for underinvestment are likely caused by multiple factors. Yet the three countries we considered (Aotearoa New Zealand, Australia, and the United Kingdom)

³ Gross fixed capital formation is a measure of acquisitions of new or existing fixed assets by businesses, government, and households. Fixed assets refer to the produced assets used in the production process, such as machinery, buildings, and vehicles.

⁴ Capital intensity refers to the amount of fixed assets present in relation to other factors of production, especially labour.

identified the need to improve market settings, such as the need to promote competition, efficiency, and contestability in markets.

Institutions

Government and institutions are also key drivers for productivity in Aotearoa New Zealand, Australia and the United Kingdom. These drivers influence laws and regulations, taxes and spending, and the broader settings that influence productivity – such as business and social norms, regulatory quality, and trust (Kaufmann & Kraay, 2023). The business environment in Aotearoa New Zealand is generally favourable, with low costs of entry for businesses (World Bank, 2020).

Aotearoa New Zealand also leads in terms of its institutional quality on measures such as government effectiveness and regulatory quality (OECD, 2022a). However, levels of trust in government and democratic institutions have declined across English-speaking countries (OECD, 2022a). Trust, built from a foundation of strong social cohesion and collaborative processes, will play a key role in enabling societies to address future collective challenges, such as climate change (Koi Tū: The Centre for Informed Futures, 2023).

There is also the need to lift productivity in the non-market sector. A core focus should be on the public sector, which accounts for almost one-fifth (Public Service Commission, 2023) of all employment in New Zealand. It is large, and the services provided are critical – with many being provided to the most vulnerable members of society. The public sector also provides services to the rest of the economy: setting and maintaining regulations, enforcing the rule of law, providing and supporting physical and knowledge infrastructure, undertaking and funding research, supporting people in need, and building a healthy and educated workforce.

It is imperative that the business of government is undertaken effectively and efficiently, to prevent costs from being felt across society and the economy. These costs are not paid in lost shareholder value, but in lost opportunities, ill health, and low levels of wellbeing for the people they serve. The Commission has already examined this area (NZPC, 2019), and attention is needed to address institutional fragmentation and the lack of joined-up policies as a result of bias towards short-term thinking and silos between government agencies (NZPC, 2023a).

Aotearoa New Zealand also has unique challenges and opportunities relating to land and te ao Māori

We also considered what opportunities Aotearoa New Zealand may have that are unique to our circumstances and culture. In particular, we consider that land use and the opportunities posed by te ao Māori represent useful areas where further focus could be placed, beyond the drivers identified by international evidence and experience.

Land use

The role of the natural environment and the utilisation of land plays a particularly strong role in how Aotearoa New Zealand addresses its productivity challenges compared to its peers. The reasons for this difference include the cultural significance of whenua to Māori and the prominence of the primary sector – which uses large amounts of land – to the trade and economy of Aotearoa New Zealand. For example, the scale and location of agricultural

activity creates competition for the best use of productive land around the rural and residential/urban boundaries, which can create challenges to manage the trade-offs between meeting the needs of growing populations, the export economy, demand for housing, and long-term sustainability of Aotearoa New Zealand's environmental resources (Ministry for the Environment, 2021).

Pressures on housing and infrastructure also signal that land could be used more efficiently, and the resource management system has been identified as an important lever to address these pressures (New Zealand Infrastructure Commission, 2023; New Zealand Productivity Commission, 2015). These challenges may also be symptomatic more broadly of an economy that relies on residential property as a form of investment and wealth accumulation.

Economic growth achieved through environmental depletion – including sub-optimal land allocation – may also reduce the potential resources available for future years and the potential wellbeing of future generations (Au & van Zyl, 2018). The intensity of land use also has flow-on impacts to biodiversity and human health (Ministry for the Environment, 2021).

The challenges inherent in balancing the competing interests and objectives of the economy, agriculture, resilience and environmental sustainability in land use decisions has also been recognised domestically by Koi Tū – the Centre for Informed Futures (Koi Tū: The Centre for Informed Futures, 2023). Koi Tū notes that “New Zealand's prosperity is intricately tied to land and the downstream consequences of poorly regulated and utilised land use is being felt and will be aggravated by climate change”. Accordingly, they call for “a game-changing shift in land-use-oversight that unambiguously links economic prosperity and community resilience with environmental wellbeing”.

Te ao Māori

Te ao Māori presents a unique opportunity to take an Aotearoa New Zealand-specific lens on productivity, and to address the challenges this nation faces in ways that build from its existing strengths and resource base.

This has been a core message reflected to the Commission over many years and through engagement with successive inquiries. Analysis of key themes raised by Māori stakeholders or on te ao Māori issues through inquiries over the last six years identified the importance of taking an intergenerational and collective approach to understanding Aotearoa New Zealand's productivity challenges and opportunities. Some significant recurring issues raised included:

- The intergenerational perspective and long-term approach of Māori presents opportunities and challenges for Māori businesses and for Aotearoa. By looking to Māori perspectives and a te ao Māori worldview, grounded in Te Tiriti, there may be potential to take new and innovative approaches to managing productivity challenges (Millin & Mill, 2021). Some ways to do this were set out in the Commission's *Frontier Firms* inquiry, including fostering innovation by connecting Māori organisations and businesses up to STEM, high-quality data, analytics, and technological advancements; or building innovative and transparent business practices by learning from the collective and intergenerational accountability models practised by Māori organisations (NZPC, 2021).
- Land and the limitations on its use under collective ownership models, including to enable access to finance, are a key concern expressed repeatedly by Māori.

The Māori-Crown relationship and the obligations Te Tiriti places on the Crown are central to effective and fair treatment of Māori as Aotearoa New Zealand works to address productivity challenges. Given the intergenerational impacts of colonisation and inequity, it is essential that the impacts of change are managed effectively and do not disproportionately affect Māori, compounding existing trauma and disparities. It is also essential that Māori are adequately resourced and enabled to play their part in this relationship.

The Commission has previously recognised the value-add provided by Māori firms and te ao Māori perspectives in business, noting that “Kaupapa Māori firms are distinctive for having long-term horizons and managing multiple stakeholders and objectives” (NZPC, 2021). As reported in the *Frontier Firms* inquiry, figures from Stats NZ showed that employment in Māori authorities and firms grew faster than in the wider economy – and that these organisations were also more likely to export and had higher rates of innovation and R&D, than other New Zealand firms (NZPC, 2021).

In addition, integration of Māori values – such as kaitiakitanga, kōtahitanga, and whanaungatanga serve to differentiate Māori goods and services and provide added brand value for Aotearoa New Zealand products overseas, aligning closely with growing consumer demand for products with strong environmental and social credentials (NZPC, 2021).

From our engagements and the feedback from Māori stakeholders, a greater emphasis on sustainability and long-term focus can also help firms and government take more innovative and comprehensive approaches to solving cross-cutting, enduring, and emerging productivity challenges.

Targeting effort will help Aotearoa New Zealand deal with approaching global challenges

Aotearoa New Zealand’s economy faces further challenge from transformative forces emerging globally. These forces – or global “megatrends” – may herald irreversible changes across society, the economy, and the New Zealand way of life both domestically and globally. Aotearoa New Zealand’s relatively lower levels of innovation and productivity mean it has less ability than other countries to absorb and recover from adverse shocks and trends and limits its ability to proactively prepare for and respond to future challenges (NZPC, Forthcoming).

The global megatrends are likely to influence both the way that the determinants of Aotearoa New Zealand’s productivity play out and our overall future productivity trajectory. As these megatrends originate beyond Aotearoa New Zealand, we have limited influence over them, their magnitude, and the extent of their impacts on productivity.

However, the extent to which these megatrends and their likely impacts on productivity can be anticipated may make a significant difference to Aotearoa New Zealand’s prospects, by enabling the country to make choices now about how to prepare or respond to what is approaching.

In our assessment, six global megatrends are likely to significantly impact Aotearoa New Zealand’s productivity, as set out below. These have been drawn from a variety of sources including international organisations, strategic analysis by public agencies in New Zealand, forward-looking analysis by international and domestic think tanks, and research by private consultancies (Centre for Strategic Futures, 2021; CSIRO, 2017; European Strategy and Policy Analysis System, 2015; Inland Revenue, 2023; KPMG

International, 2014; Ministry of Defence, 2021; Ministry of Foreign Affairs and Trade, 2023; OECD, 2021a; PWC, 2022; Retief et al., 2016; UN Environment Programme, 2012; United Nations, 2020; World Economic Forum, 2023).

These megatrends are all approaching now, and each will influence and be influenced by the other trends and broader changes occurring across society and the economy. This means that there is a high level of uncertainty about how they will be experienced, the level of risk that they present to Aotearoa New Zealand's productivity, and the speed and significance of their anticipated impacts.

Changing climate and the environment

Significant climate and environmental changes will lead to global disruption such as loss of homes, habitats, and productive capacity, as well as scarcity of critical, life-sustaining resources.

Aotearoa New Zealand is already seeing the impact that increasing severe weather events are having on people, communities, infrastructure, land and property – reducing the productive capacity of businesses and individuals. In the context of an economy that is strongly tilted towards the primary sector, these challenges are likely to become wider and more systemic in the future for Aotearoa New Zealand, including issues such as food and water insecurity, natural ecosystem vulnerabilities, soil health, and climate (mal)adaptation – particularly. As supply chains, shipping, and global modes of transport are increasingly affected, there will also be impacts on Aotearoa New Zealand's ability to import and export.

These climate challenges will require Aotearoa New Zealand to develop new approaches and ways of operating in the face of increasing constraints on, and depletion of, natural resources (for example, forest, fresh water, energy, and minerals) and disruption. A more productive economy, with a strong focus on innovation and diffusion, will be better positioned to develop and implement these approaches. For instance, the Commission's forthcoming inquiry into improving economic resilience recommends changes to policies and institutional settings that can enhance the capability of firms, industries and communities to anticipate, prepare for and respond to disruptions and slow-moving shocks like climate change (NZPC, Forthcoming).

Technological innovation

The speed of technological change and innovation will present huge opportunities – consistent with the role of innovation and diffusion as a key enabler in driving productivity growth. Areas of innovation could include manufacturing innovation, the acquisition and use of data, rapid progression of artificial intelligence, and the impact of transnational connections and networks. However, unless carefully managed these shifts will come with costs for individuals, businesses and states. Benefits may go unrealised or be unevenly distributed, and there may be negative impacts on inclusivity and social cohesion.

Slow adoption, or low levels of uptake, of technological advancements may limit Aotearoa New Zealand's productivity potential and could mean we are left further behind. Opportunities may exist from taking a whole-of-government approach to this challenge – for example, to ensure regulatory settings appropriately balance risk and opportunity, and/or to smooth the costs of transition for businesses and individuals.

Complex geopolitics

Shifting institutional, cultural and economic alliances and systems will drive a rebalancing of international power relations, and potentially increased conflict, in the face of overall challenges to the role and power of state actors and non-state actors. Governments including in Aotearoa New Zealand will grapple with dilemmas surrounding the regulation of technology, the meeting of global emissions commitments, competition over significant marine routes and disputed territories, and global governance challenges relating to Antarctica and outer space, while continuing to consider the rights of indigenous peoples, post-colonial changes and constitutional evolution.

All these issues may cause disruption to existing trade and diplomatic relationships, supply chains and our overall economic resilience – which is the focus of the Commission’s forthcoming final inquiry report (NZPC, forthcoming 2024). Improved productivity, including strong institutions, can support Aotearoa New Zealand to be better positioned to respond to this disruption.

Demographic change

Aotearoa New Zealand, like many other countries, faces an ageing workforce, which will place increasing pressure on its ability to meet skill and labour needs and provide for the welfare of the population. The level of impact will depend on the uncertain outcomes of migration and movement of peoples. This directly links to the role of investment in human capability to drive productivity growth.

Particularly as the impacts of climate change play out, migration and the movement of people will reshape communities globally and domestically, further reinforcing the trend of complex geopolitics. Alongside this, transition to a “care-centric economy” to support our ageing population will demand a workforce evolution. Additionally, increasing population diversity will likely create a need to build a robust societal framework for integrating te ao Māori and multiculturalism in Aotearoa New Zealand (Ministry of Social Development, 2021; New Zealand Treasury, 2022).

Social cohesion in a changing world

Global trends of increasing polarisation, distrust and conflict across society are also being seen within Aotearoa New Zealand (Koi Tū: The Centre for Informed Futures, 2023).

Globally, income and wealth inequality has risen in many OECD countries in recent decades (CSIRO, 2017), stoking social discontent. An increasingly unequal society can weaken trust in public institutions and undermine democratic governance (Qureshi, 2023).

In Aotearoa New Zealand, trust in institutions is declining and there is increasing risk of disinformation as well as polarisation (OECD, 2022a). This is reinforced by a range of inequities across society – such as child poverty and inequitable outcomes from education and healthcare investment. As noted in our recent inquiry *A Fair Chance for All* (NZPC, 2023a), the cycle of persistent disadvantage faced by too many New Zealanders risks eroding the social contract.

As discussed earlier, from a productivity standpoint, social cohesion and institutional trust are necessary conditions for a functioning society and economy in which individuals and businesses can trust the ways they engage and transact with each other. This reinforces the importance of a focus on human capability and strong institutions across efforts to grow

productivity – and the importance of equitable distribution of productivity gains across society.

Public health

There will be increasing pressure on the public health system resulting from demographic changes, shifting disease patterns and health threats that transcend national boundaries, which will require active management to ensure Aotearoa New Zealand remains able to meet its skills and labour needs from within the population. This megatrend therefore significantly links to the role of human capability in supporting productivity performance.

The experience of the COVID-19 pandemic is yet to be fully understood, but initial evidence suggests that lingering economic consequences will likely result, not only from the actions taken to manage spread but also from the long-term health effects experienced by some people because of contracting the virus (Northern Trust, 2023; Voruz et al., 2023). For Aotearoa New Zealand, the mental wellbeing of young New Zealanders is a significant concern, which had deteriorated even in the decade before the pandemic (Stats NZ, 2022). Intergenerational disadvantage caused by factors such as poor parental mental health and socioeconomic disparities can lead to longer-term impacts on student achievement and future labour productivity (Low et al., 2021). Aotearoa New Zealand will also face additional pressures on its health system given an ageing population and increasing climate change.

Long-term thinking is fundamental for productivity

A significant message emerging from the evidence, literature and domestic and international thinking relates to the long-term, intergenerational nature of productivity and productivity performance. Overall, taking a long-term and intergenerational approach is clearly fundamental to leveraging improved productivity across the range of factors that influence Aotearoa New Zealand's productivity performance.

By combining a clear focus on the key drivers of productivity with an approach that looks to the long term, there is potential to enable significant improvements across Aotearoa New Zealand's productivity performance for New Zealanders now and in the future. This then enables the benefits from productivity to be shared equitably across the population to benefit all citizens.

The section that follows complements our analysis of the literature with themes raised through stakeholder engagement.

What we heard through engagement

To more fully understand the opportunities available, and what these may mean for Aotearoa New Zealand's future direction, we sought input and expertise from those with different views and perspectives through a series of targeted stakeholder workshops.⁵

Analysis of these workshop discussions resulted in some key themes about the core foundations necessary to build productivity:

- **Theme 1 – Long-term investment in improving productivity, taking an intergenerational perspective, is fundamental:** Participants expressed concern that the prevailing policy approach of successive governments over past decades is not effectively addressing the “big issues”. Overall, they considered long-term investment (and the right policy environment to foster it) as key to improving productivity.
- **Theme 2 – A willingness to confront high-complexity, whole-of-system challenges is necessary to meaningfully lift Aotearoa New Zealand's productivity performance:** Participants reflected that addressing productivity challenges requires consideration of the broader system barriers – for example, the dynamics of power and constitutional settings that keep things as they are – which may be impeding necessary change.
- **Theme 3 – Aotearoa New Zealand struggles with achieving transformative change and underinvests in building deliberate transition pathways:** Participants identified managing change effectively as a key challenge, including how to design clear and deliberate transition pathways for Aotearoa New Zealand to move from one paradigm to the next.
- **Theme 4 – Policies that promote fairness, inclusivity and effective participation by all are foundational for productivity:** Participants emphasised social cohesion and the maintenance of the social contract as a core foundation for productivity. In particular, the importance of sustaining levels of trust in public institutions and in government was seen as central to enable continued effective governance. Fundamental to this discussion was recognition that policy settings that erode or are seen to erode fairness, equity, and democratic participation result in damage to social cohesion.
- **Theme 5 – Achieving long-term change requires a clear vision for the future:** Underlying these discussions was the acknowledgement by participants that having an agreed vision for what New Zealanders want Aotearoa New Zealand to look like in the future is essential to enable prioritisation of effort and investment – and drive improved productivity.

These five key themes resonate with what we know from other sources. Their cross-cutting nature underpins all the opportunity areas presented in the following section.

More detail about these five themes is set out in Appendix A, and a list of stakeholders we engaged with is provided in Appendix C.

⁵ We undertook the stakeholder workshops in October 2023 for the purpose of informing advice on potential topics that could form the basis of a future inquiry for the Productivity Commission. While this advice is no longer needed, we consider that the feedback received remains valuable for the broader purpose of this report.

An enduring productivity policy and research agenda: Key opportunities

The importance of long-term thinking and commitment to addressing Aotearoa New Zealand's productivity challenges was the strongest message received through the stakeholder workshops – mirroring the domestic and international evidence. It is essential that government continues to place a strong focus on productivity across its work.

In this context, we signal the importance of setting and maintaining an enduring productivity policy and research agenda.

Below, we set out a starting point for such an agenda, bringing together what we heard from stakeholders with our other analysis.

We have identified five key opportunities:

- Opportunity 1: Focus on the role of innovation – and diffusion of innovation
- Opportunity 2: Invest in the basics – a skilled, healthy population
- Opportunity 3: Think long-term about Aotearoa New Zealand's approach to land use and infrastructure
- Opportunity 4: Look to the potential inherent in te ao Māori and across the Māori economy
- Opportunity 5: Continue work to address Aotearoa New Zealand's specific productivity challenges.

Each opportunity is set out in more detail below and, where relevant, linked to “inquiry topic”⁶ ideas identified through engagement. These topics provide more concrete potential issues that could be investigated to target productivity improvement in specific contexts across the opportunity areas – although noting that the scope of the opportunities identified are much broader than any single inquiry topic. Fuller explanations of each topic are provided in **Appendix B**.

Opportunity 1: Focus on the role of innovation – And diffusion of innovation

Technological innovation, and the diffusion of innovation, has the potential to significantly drive Aotearoa New Zealand's future levels of productivity and make its economy more resilient in the face of change.

This is also an area of significant uncertainty, with the speed of change and innovation limiting the ability to plan for the future – especially in areas as rapidly evolving as artificial intelligence and where the limitations (or opportunities) of technological innovation are not yet fully understood. This level of uncertainty and rapid change brings into prominence the importance of systems, structures and settings that:

⁶ As part of the Productivity Commission's original mandate for this work, staff had begun to work up some potential future “inquiry topics”. These were intended as topics for the Commission itself to take forward, and as such were focused on areas where the organisation would have had capacity and capability to undertake the work.

- encourage innovation (either in general or in areas where Aotearoa New Zealand has identified the greatest benefit may be achieved)
- (perhaps more importantly) encourage the innovation that does occur to be used and fed into improved business practices, increased efficiency and investment in products and services that deliver more value for less cost.

Some key challenges will be to understand how Aotearoa New Zealand can harness the potential of machine learning and artificial intelligence, including the government's role in directing the responsible adoption of new technologies.

Similar recommendations have been made elsewhere, with a focus on innovation and diffusion being consistent with the advice of most pro-productivity institutions globally. One of the five themes of the Australian Productivity Commission's reform agenda is "harnessing data, digital technology and diffusion to capture the dividend of new ideas" (Australian Productivity Commission, 2023). The Productivity Institute in the United Kingdom highlighted "inadequate diffusion of productivity-enhancing practices between firms and places" as one of the three key challenges faced by the United Kingdom (The Productivity Institute, 2023).

Getting started on this opportunity

This opportunity area particularly links to the potential inquiry topic idea raised by stakeholders in relation to *Innovation diffusion*. The focus question identified for this topic was:

- How can Aotearoa New Zealand increase the rate of diffusion of innovation and good business practices across businesses that are not operating at the frontier? In particular, what management, governance and leadership capabilities are needed to increase the rate at which new technologies are adopted by businesses?

Opportunity 2: Invest in the basics – A skilled, healthy population

A strong focus on skills and education, and public health, is essential to drive current and future productivity, particularly in the face of approaching social, environmental and economic changes and in light of Aotearoa New Zealand's changing demographics.

The focus also reflects the significant contribution that a socially cohesive, engaged population plays in maintaining and growing productivity.

Traditionally, a focus on education and skills tends to consider the role of early learning and school system performance – both of which are essential for driving strong skills outcomes, and should be a continuing area of policy effort to support improved productivity. However, the broader ecosystem for skills also matters – including how employers access skills not developed locally (for example, through immigration), and which skills are in short supply; and how skills continue to develop over a person's lifetime and working career.

The role of the public health system in supporting access to skilled labour across the economy is likely to become increasingly important as the population ages and changes, and climate change and environmental degradation reinforce future global health

challenges.⁷ New health challenges, and the increased demand on aged care and services that meet the needs of older New Zealanders, will require ongoing investment and will shift the skills needs of the health system.

Investment in human capability is a strong focus across many economies' productivity-related policies (Pilat, 2023). For example, "building an adaptable workforce to supply skilled workers for Australia's future economy" is one of the five key themes of the Australian Productivity Commission's reform agenda (Australian Productivity Commission, 2023). As noted by van Ark et al, "countries will increasingly be forced to use their available human resources as productively as possible, including through further improvements in the quality of that human capital" (Ark et al., 2023).

Getting started on this opportunity

This opportunity area particularly links to the potential inquiry topic ideas raised by stakeholders in relation to *The care economy* and *Skilled employees and lifelong learning*. The focus questions identified for these topics were:

- The "care economy" (encompassing paid jobs in the care sectors and unpaid care jobs in homes and communities) underpins labour productivity yet is unrecognised as such and is increasingly fragile. How can Aotearoa New Zealand's care economy be strengthened to support a more productive workforce in the face of changing demographics and an ageing population?
- Acquiring job-relevant skills is important for productivity. How can the benefits/rewards and costs/risks of investing in gaining these skills be shared appropriately between workers, employers and the government? For example, this could include investigation of how government investment affects employer incentives to fund training for employees who they may not retain, and the extent to which the ability to demonstrate and transport skills (for example, through gaining credentials) affects a person's incentive to participate in training.

Opportunity 3: Think long-term about Aotearoa New Zealand's approach to land use and infrastructure

Aotearoa New Zealand is facing significant challenges in its long-term planning that affects current and long-run productivity outcomes. How New Zealanders use land – the nation's most precious and fundamental resource – will significantly shape Aotearoa New Zealand's productivity outcomes now, and in the future. This issue will become even more urgent as the impacts of climate change and resource constraints continue to play out.

This brings to the fore some urgent questions about how to balance the rights of current and future generations, including how Aotearoa New Zealand can respect existing property rights while acknowledging that some compromise may be needed to ensure sustainability in the future. Directly confronting these questions, and ensuring that decision making now is

⁷ An example is rising temperatures affecting the health outcomes of workers in outdoor roles (for example, primary production) and/or increasing the likelihood of new diseases.

grounded in what will be needed for the future, will be essential to growing productivity for Aotearoa New Zealand and maintaining that growth.

This opportunity area fundamentally connects to Aotearoa New Zealand's long-term thinking about how its economic systems are set up and its aim for the future economy. This is because a foundational challenge for future economic models will be the extent to which Aotearoa New Zealand bravely confronts the challenges of existing resource uses (for example, over-representation of non-productive sectors like housing within the economy) and their implications for future generations.

A focus on land use and infrastructure recognises the outsize role that these issues play, and are likely to continue to play, in relation to Aotearoa New Zealand's productivity challenges. This could be seen alternatively as a sub-question to a broader one about the future economy that Aotearoa New Zealand is seeking to transition towards. For example, in the Australian Productivity Commission's reform agenda, policies such as land use regulation are seen as levers through which to create a more dynamic economy (Australian Productivity Commission, 2023).

Getting started on this opportunity

This opportunity area particularly links to the potential inquiry topic ideas raised by stakeholders in relation to *Land use*, *Insurance retreat*, and *Energy system transformation*. The focus questions identified for these topics were:

- How can the regulatory and planning systems of Aotearoa New Zealand best enable land use decisions that balance the costs/risks and benefits/rewards of alternative land uses and deliver long-term productivity? For example, this area could investigate any barriers that may prevent land from being made available for its “best use”, limit easy transfer between uses, or inhibit adoption of more sustainable practices within an existing land use.
- How will “insurance retreat⁸” impact insurance affordability and access – particularly for businesses and property owners – as well as the resilience of the economy and society? What are the implications for productivity and wellbeing?
- What are the barriers to transitioning to a resilient and sustainable energy system? How, and at what pace, can Aotearoa New Zealand best transition its energy system in a way that supports productivity and wellbeing?

Opportunity 4: Look to the potential inherent in te ao Māori and across the Māori economy

By looking to Māori perspectives and a te ao Māori worldview, there may be potential to take new and innovative approaches to managing productivity challenges.

A focus on the Māori economy and the potential of te ao Māori to contribute meaningfully to the economic performance of Aotearoa New Zealand is not new – He Kai Kei Aku Ringa: the

⁸ “Insurance retreat” is the withdrawal of insurance over time, usually by the private market, due to increases in the underlying risks covered.

Māori-Crown Economic Growth Partnership updated in 2023 was initially published in 2013. This strategy recognises that there is an important opportunity to consolidate and extend the growth of the Māori economy. That economy grew 37% from 2013 to 2018, compared to the national GDP growth of 20% for the same period. This growth benefited both Māori and Aotearoa New Zealand (Ministry of Business, Innovation and Employment, 2023).

A continued, and increased, focus on the role of the Māori economy and te ao Māori contributions to the broader Aotearoa New Zealand economy would deliver significant opportunities for Aotearoa New Zealand's economic performance and overall productivity. Through supporting more effective integration of te ao Māori into Aotearoa New Zealand's way of operating, these benefits could accrue more broadly to benefit Māori, Māori businesses and firms, and all parts of the broader Aotearoa New Zealand economy.

This opportunity area is unique to Aotearoa New Zealand and has not been explicitly identified in the pro-productivity policy agendas of other nations. Yet its importance has been widely recognised within Aotearoa New Zealand and is an area of active work consistent with He Kai Kei Aku Ringa: the Māori-Crown Economic Growth Partnership.

Getting started on this opportunity

This opportunity area has relevance across all potential inquiry topic ideas raised by stakeholders. However, it would have particularly strong connections to *Land use*, *Skilled employees and lifelong learning*, and *Readiness of regional economies and labour markets for transition*. The focus questions identified for these topics were:

- How can the regulatory and planning systems of Aotearoa New Zealand best enable land use decisions that balance the costs/risks and benefits/rewards of alternative land uses and deliver long-term productivity? For example, this area could investigate any barriers that may prevent land from being made available for its “best use”, limit easy transfer between uses, or inhibit adoption of more sustainable practices within an existing land use.
- Acquiring job-relevant skills is important for productivity. How can the benefits/rewards and costs/risks of investing in gaining these skills be shared appropriately between workers, employers and the government? For example, this could include investigation of how government investment affects employer incentives to fund training for employees who they may not retain, and the extent to which the ability to demonstrate and transport skills (for example, through gaining credentials) affects a person's incentive to participate in training.
- How ready are Aotearoa New Zealand's regional economies and labour markets for transition in response to future challenges, including the regional impacts of climate and infrastructure challenges as well as demographic change?

Opportunity 5: Continue work to address Aotearoa New Zealand's specific productivity challenges

During its time in operation, the Productivity Commission has focused on building a better understanding of Aotearoa New Zealand's productivity performance, and how this could be

improved to contribute to better outcomes across the economy and better living standards for all.

This work, and the work of others – both organisations and individuals – must be acted on as current and future governments look to develop policies and actions to improve the lives of New Zealanders.

Many of Aotearoa New Zealand’s productivity challenges are shared by other nations, and this nation can and should continue to learn from their experiences. Yet Aotearoa New Zealand also has its own distinct productivity context and opportunities to address this nation’s challenges in ways that build from its unique strengths.

Some immediate areas that would warrant further exploration – through research efforts and/or inclusion in government’s broader policy work programme may include:

- how New Zealanders can understand and address challenges flowing from Aotearoa New Zealand’s low level of investment in capital
- the potential for trade relationships to play a part in addressing Aotearoa New Zealand’s distance challenges
- how Aotearoa New Zealand might capture the benefits of intangible capital, and continue to learn from international experience
- how to build a broader understanding of what productivity is and how it is measured – reflecting some of the challenges to traditional economic models posed by issues such as climate change and biophysical limits, and the importance of capturing the social and flow-on benefits delivered by “non-economic” activities (for example, unpaid care work) (NZPC, 2023c).

Taking work of this kind forward requires expertise and analytical capability, as well as the commitment and investment to tackle difficult and complex issues and identify the sometimes hard changes needed to drive future productivity improvement. Government will need to play a core role in ensuring these foundations, reflecting Aotearoa New Zealand’s relatively few academic and non-academic think tanks, which in other countries might play a stronger role in this space.

Ongoing effort and investment in understanding and addressing the key drivers of productivity is the basis upon which countries around the world have created and maintained pro-productivity institutions. These institutions commonly identify similar policy challenges – framed in *The Productivity Agenda* as centring around managing trade-offs and how to achieve inclusive growth (The Productivity Institute, 2023).

Getting started on this opportunity

This opportunity area particularly links to the potential inquiry topic ideas raised by stakeholders in relation to *Capital deepening*, *Readiness of regional economies and labour markets for transition*, and *The care economy*. The focus questions identified for these topics were:

- How can Aotearoa New Zealand’s low levels of investment in capital be better understood, and how could greater investment (and/or capital deepening) be encouraged to support increased productivity and wellbeing?

- How ready are Aotearoa New Zealand’s regional economies and labour markets for transition in response to future challenges, including the regional impacts of climate and infrastructure challenges as well as demographic change?
- The “care economy” (encompassing paid jobs in the care sectors and unpaid care jobs in homes and communities) underpins labour productivity yet is unrecognised as such and is increasingly fragile. How can Aotearoa New Zealand’s care economy be strengthened to support a more productive workforce in the face of changing demographics and an ageing population?

Conclusion: A productivity strategy?

Aotearoa New Zealand’s future ability to achieve productivity and deliver prosperity for citizens depends on the choices that New Zealanders make as a nation about what to aim for. In the face of the significant challenges, New Zealanders have the opportunity now to decide what they want the future economy to be, and how they want it to deliver for the country and its citizens.

Government may wish to take the advice contained in this report, and the proposed policy and research agenda, as a starting point to develop an all-of-government productivity strategy that sets a clear vision for Aotearoa New Zealand’s future economy, and pathways to achieve it. This would be consistent with the evidence emerging from other pro-productivity institutions around the world – for example, The Productivity Institute’s recommendation that the United Kingdom needs to develop “an integrated range of pro-productivity policies and commit to them for the long-term” (The Productivity Institute, 2023).

To achieve this future – and deliver long-term productivity growth – such a strategy must address how to deliberately manage the costs of transition and change. The important role played by public sector productivity also needs acknowledging, and attention given to address institutional fragmentation and the lack of joined-up policies that result from bias towards short-term thinking and silos between government agencies.

Such a strategy would need to be broad-based and reflect the collective mandate of citizens to ensure that traction is maintained over time and across a changing political landscape.

Having a clear goal and realistic pathways that are deliberately moving Aotearoa New Zealand towards achieving an understood and agreed economic future would drive this nation’s long-run productivity. It would ensure that individuals, communities, firms and industries have certainty about the context in which they are operating and can make informed choices about their activities that are consistent with the country’s long-term economic plan. It would also provide a significant opportunity to build a future Aotearoa New Zealand that is fair and inclusive, and enables participation by all.

Overall, this would support a stronger, more socially cohesive, and more productive Aotearoa New Zealand grounded by the social contract.

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Appendix A: Engagement identified core foundations for building productivity

This appendix sets out the feedback gained through stakeholder workshops held in October 2023, expanding on the themes identified in the body of this report.

The October stakeholder workshops were deliberately designed to take an open approach and draw out different views and perspectives on the productivity challenges and opportunities approaching Aotearoa New Zealand. Participants at the workshops were selected to add diversity, depth and breadth to the conversation, and to ensure real-world input. Attendees represented a wide range of perspectives across the public, private and NGO sectors about the challenges facing Aotearoa New Zealand's future. A full list of the organisations represented at the workshops is provided in Appendix C.

The workshops uncovered two types of findings:

- A range of specific “topic areas” that might have been valuable to explore through potential Productivity Commission inquiries, should the Commission have continued its work. These topic areas are not examined in detail in this report, given the planned disestablishment of the Commission and its inquiry function, but short summaries of the high-impact topic ideas developed are set out in Appendix B.
- Broader themes and reflections about the conditions that are necessary, and the challenges that need resolving, to ensure that government's investment in improving productivity is meaningful. Themes were identified based on issues being raised by a broad base of participants across all workshops, or where strong views were identified within a particular context.

This appendix provides an examination of these broader themes and reflections. These themes illustrate the importance of viewing productivity – and the potential opportunities to improve it – from a broad perspective.

Theme 1:

Long-term investment in improving productivity, taking an intergenerational perspective, is fundamental

Participants expressed concern that the prevailing policy approach of successive governments over the past decades is not effectively addressing the “big issues”. This included explicit acknowledgement of the tension between addressing immediate issues and focusing on profound, long-term challenges and how Aotearoa New Zealand can navigate these in light of existing system barriers and the palatability of change. Overall, long-term investment (and the right policy environment to foster it) was seen as key to improving productivity outcomes for Aotearoa New Zealand.

A central issue raised related to the importance of thinking intergenerationally – reflecting a perceived increasing divide between the focus of younger generations to act urgently in the interests of survival and the preference of older generations for comfort and stability. Participants perceived that an intergenerational perspective was often absent in policy thinking, reflecting gaps in understanding where the costs of addressing challenges may fall over time, and who will bear these costs. This included a perceived tendency to inadequately consider the costs of maintaining things as they are.

One advantage identified by participants, particularly in relation to taking an intergenerational perspective, was the potential contribution that te ao Māori could make in shaping distinctly Aotearoa New Zealand approaches – a reflection also identified through the Commission’s internal thinking about Aotearoa New Zealand’s productivity context (see page 17). The long-term perspective and collective approach central to a Māori worldview were seen to provide a distinct, and potentially competitive, advantage for Aotearoa New Zealand as compared to other countries, if those foundations could be effectively learned from and built upon.

One specific opportunity identified was the potential for long-term investment in industry policy, which was seen to be lacking. Participants raised concerns about the connection between industry policy and the flow of investment and implementation, with initiatives like pilot programmes often being funded temporarily but lacking ongoing commitment due to the impact of political cycles. This was seen to create an unstable environment for the deep, long-term investment needed to support change.

Theme 2:

A willingness to confront high-complexity, whole-of-system challenges is necessary to meaningfully lift Aotearoa New Zealand’s productivity performance

Participants raised that, in the context of the importance of addressing longer-term, profound issues impacting Aotearoa New Zealand’s productivity, it is important to be willing to confront high-complexity, whole-of-system challenges.

It was recognised that addressing these longer-term challenges requires consideration of the broader system barriers – for example, the dynamics of power and constitutional settings which keep things as they are – which may be impeding necessary change.

Participants raised a number of examples of interconnected “system dynamics” – that is, features of various system that participants perceived as potentially pre-determining Aotearoa New Zealand’s future trajectory or closing off productivity potential. Participants perceived these system dynamics to be under-addressed or not considered adequately in national policy settings – adding impetus to the importance of taking a whole-of-system approach. Some examples of the dynamics identified included:

- the quality and extent of infrastructure, such as transport and energy, which play an important role in determining the potential for economic development (and therefore productivity)
- the effectiveness of the education system in equipping the workforce with relevant skills and fostering innovation, influencing economic potential
- the critical impact that sustainability of natural resources has in relation to economic activity, and the future trajectory of specific industries such as agriculture and tourism
- the dominance of certain industry sectors and the extent to which this may influence the legislative agenda in favour of their own interests
- the state of innovation ecosystems, including research and development initiatives, which influence Aotearoa New Zealand’s ability to stay competitive and foster new industries

- the nature of Aotearoa New Zealand's relationships with other countries – in particular its international commitments and trade agreements – and the influence these may have on future economic trajectories
- the impact of trends relating to social cohesion, inclusion, equity and diversity – for example, related to demographic shifts that will see a significantly larger share of the population identifying as Māori, Pasifika, and Asian by 2040 (see also Theme 4).

Theme 3:

Aotearoa New Zealand struggles with achieving transformative change and underinvests in building deliberate transition pathways

Participants reflected on Aotearoa New Zealand's approach to change and the balance of effort that is expended on optimising existing systems, processes and strategies as compared to exploring emerging opportunities and innovations or even envisioning and experimenting with transformative, disruptive ideas.

There was acknowledgement that the further into the future, the less certainty there is about what will be needed and therefore the less confidence policymakers can have about what it is important to invest in. However, there was seen to be a mismatch between the ambition that Aotearoa New Zealand expresses as a nation and what it chooses to do – or not to do – to deliver on that ambition.

A key challenge identified was managing change effectively, and how policymakers can design clear and deliberate transition pathways that enable Aotearoa New Zealand to move from one paradigm to the next – for example, to address some of the constraining system dynamics identified in Theme 2. These movements were acknowledged to require deliberate design and commitment – some of which may be hard – to phase out old systems, approaches and ways of doing, and to design and move into new systems, new approaches and new ways.

A specific example of the challenges that Aotearoa New Zealand faces in building deliberate transition pathways was identified in relation to the transition to more regenerative models – for example, moving Aotearoa New Zealand to a circular economy by 2050, which was part of the vision of the country's first emissions reduction plan.⁹ A circular economy is one in which waste and pollution is designed out, resources are used for as long as possible, and products and materials are recovered and regenerated at the end of their lifecycle.

Workshop participants suggested that the challenge of making this transition was particularly hard for Aotearoa New Zealand given the strength of its primary industries within the economy and under-representation of secondary and tertiary industries, particularly manufacturing. Participants also noted an overemphasis on the first phase of transition – minimising waste and pollution after the fact – rather than the full range of changes required to embrace a genuinely regenerative model.

⁹ Chapter 9 of the first emissions reduction plan (available from the Ministry for the Environment website at <https://environment.govt.nz/publications/aotearoa-new-zealands-first-emissions-reduction-plan/>) discusses the role that a circular economy and bioeconomy would play in supporting achievement of 2050 targets and meeting emissions budgets.

Theme 4:

Policies that promote fairness, inclusivity, and effective participation by all are foundational for productivity

Participants emphasised social cohesion and the maintenance of the social contract as a core foundation for productivity and productivity growth, consistent with discussion earlier in this report about social cohesion as a global challenge. In particular, the importance of sustaining levels of trust in public institutions and in government was seen as central to enable continued effective governance. This focus on trust supports productivity by ensuring that government can put in place, and maintain, rules and systems that provide certainty and enable individuals and firms to operate effectively, limited only by constraints that are well-understood and democratically supported.

Fundamental to this discussion was recognition that significant challenges to social cohesion are posed by settings that may lead to, or be seen to lead to, negative impacts on:

- distributional fairness between populations, including the allocation of resources and of the benefits that productivity growth can bring
- equality of outcomes across the population
- citizen participation in democratic decision-making.

Participants recognised that the core foundations of society and the economy, which improved productivity depends upon, may be at risk without policies that promote fairness, inclusivity and effective participation.

This focus on fairness, inclusivity and participation also links explicitly to the recognition in Theme 1 of the importance of intergenerational thinking and the importance of preserving and protecting the rights of future generations. By building an intergenerational perspective more actively into government policy and decision-making, long-term productivity can be supported and enhanced so that the benefits that accrue to the current generation do not come at the cost of limiting opportunities for generations yet to come.

Theme 5:

Achieving long-term change requires a clear vision for the future

Underlying much of the discussion was the acknowledgement by participants that having an agreed vision for what New Zealanders want Aotearoa New Zealand to look like in the future is essential. Such a vision is needed to guide the setting of priorities for effort and investment, to drive productivity improvements in the parts of its economy where they are most needed to align with this vision.

Workshop participants identified that a lot is known about Aotearoa New Zealand's productivity challenges, including as a result of past inquiries undertaken by the Productivity Commission. There was general agreement that recognising the gaps in, and impacts of, previous work is essential to expand existing knowledge and ensure that government does not duplicate previous efforts. Addressing knowledge gaps was seen to be crucial to building a more comprehensive understanding of the factors influencing productivity and how Aotearoa New Zealand can act on these meaningfully.

Having a clear – and shared – vision for the future that is grounded in robust evidence and analysis would require investment in new ways of thinking about the future that Aotearoa New Zealand and its people want. Some discussion related to the increasing use and value delivered by “foresight tools” internationally. For example, Singapore has created a Centre for Strategic Futures as part of its Prime Minister’s Office. The Centre is intended to support the building of a “strategically agile public service ready to manage a complex and fast-changing environment” (Centre for Strategic Futures, 2021). These tools can help governments to think ahead, and to identify critical issues and the dynamic and evolving responses and changes which may be needed over time.

Aotearoa New Zealand currently makes limited use of these tools and approaches. Greater investment in them could support work towards building consensus, and mandate, for the shared future that Aotearoa New Zealand is working towards.

Participants discussed and raised concerns about the perceived shallowness of expertise in long-term and futures-based thinking throughout Aotearoa New Zealand. This included comments about the importance of maintaining institutions with responsibility for undertaking long-term, futures-based thinking. This concern links to the first of the themes identified through stakeholder engagement (*Long-term investment in improving productivity, taking an intergenerational perspective, is fundamental*), but also to the broader insights and opportunity areas identified in the body of this report.

Appendix B: Summary of potential high-value “inquiry topic” ideas

As part of the original work to identify potential topic areas for an inquiry to be progressed by the Productivity Commission, a small number of topics were assessed as being potentially high value for work.

Note that these topic areas do not reflect the full range of ideas raised by stakeholders, or where there would be value to examine a productivity challenge. They instead reflect the top-performing topics based on assessment against four key criteria:

- magnitude of potential impact of the topic on productivity and wellbeing
- extent of potential distributional impacts of the topic across the population
- degree of alignment of the topic with the role, mandate and capabilities of the Productivity Commission
- whether timing is right to pursue the topic, given the broader operating context.

We note that these criteria will have filtered out some potential topic areas that there could be value in addressing, but where broader constraints or the role/capabilities of the Commission would have presented barriers to taking a topic forward. However, this set of topics may still provide some value for agencies and government considering what opportunities there may be to examine, and potentially address some of Aotearoa New Zealand’s current and emerging productivity challenges. All these topics are valuable and are not ranked in any specific order.

The potential topics set out in this Appendix are:

1. Insurance retreat
2. Capital deepening
3. Innovation diffusion
4. Land use
5. Energy system transformation
6. Readiness of regional economies and labour markets for transition
7. The care economy
8. Skilled employees and lifelong learning.

1. Insurance retreat

Insurance underpins the operation of Aotearoa New Zealand’s economy and society. It provides certainty for individuals, businesses and investors to operate and helps them recover from unexpected events. Insurance also plays a key role in disaster recovery for individuals, communities and the economy.

It is expected that climate change will increase the risk to existing assets due to sea-level rise and more extreme weather. Paired with Aotearoa New Zealand’s pre-existing natural disaster risks – such as high-magnitude earthquakes – this is likely to result in “insurance

retreat”¹⁰ over time. Early signals of this have already been observed for some coastal communities and in the wake of recent natural disasters.

Insurance retreat will significantly impact productivity across the economy, and Aotearoa New Zealand’s overall experience of wellbeing. For example, productivity could decrease due to a reduction in investment, a fall in business confidence, or because of economic scarring caused by delays in economic recovery and disruption to people’s ability to work. There could also be pressure for the state to provide support to uninsured individuals and businesses, with this fiscal risk potentially incurring opportunity cost as a result of not being able to fund other productivity and wellbeing enhancements.

Te Tiriti impacts or differential impacts on Māori are likely, due to factors such as the connection to land and water, pricing of cultural assets, and different attitudes to insurance.

There is increased interest in addressing this topic area, and a base of existing evidence and connected work, but for now there has been limited progress or consensus on what actions to take.

Investigating this issue could examine key issues such as:

- how individuals and businesses respond to risk, price signals, and incentives
- moral hazard
- the intersection with risk-reduction activities
- the appropriate role of central and local government
- understanding the market structure and commercial considerations of the sector.

Potential focus question: How will “insurance retreat” impact insurance affordability and access – particularly for businesses and property owners – as well as the resilience of the economy and society? What are the implications for productivity and wellbeing?

2. Capital deepening

Capital intensity is a key driver for increasing productivity. Aotearoa New Zealand’s persistently low levels of productivity growth may be partly due to the low levels of capital relative to workers, compared with other OECD countries. New Zealanders work more hours to account for the lower level of capital input. This topic provides an opportunity to address one of the key challenges for Aotearoa New Zealand’s productivity growth.

The persistent problem of capital shallowness for Aotearoa New Zealand, and the research and commentary around this, generally refers to the low levels of physical assets or tangible capital (such as factories, machinery and tools), suggesting that the core focus of work in this area should be on investment in physical assets. However, there could also be value in considering other forms of capital further, particularly if they are likely to affect the deepening of physical capital – for example, intangible capital and natural capital.

¹⁰ Insurance retreat refers to the withdrawal of insurance over time, usually by the private market, due to the increase in the underlying risks that are covered by the insurance. It may also be manifested by significant increases in insurance premiums (even though it remains available) and/or people choosing not to take up insurance because it is no longer affordable.

Some starting points for consideration of this topic could be to investigate:

- The cost of capital: the cost of capital in Aotearoa New Zealand is high and could affect the amount of investment in capital.
- Access to capital: there may be barriers to accessing finance, which can reduce the amount of investment by firms. Aotearoa New Zealand's financial markets are dominated by mortgage bank lending, with small and potentially underdeveloped equity and listed markets.
- Demand for capital: firms may choose not to invest due to factors such as limited competition and incentives to expand, which are often used overseas by small and medium-sized firms as a defensive strategy.
- Firm-level analysis: the dominance of small and medium-sized firms in Aotearoa New Zealand may present specific challenges to capital investment.

Considerable research literature has been written on this topic both in Aotearoa New Zealand and internationally, as the link between capital intensity and productivity is well-established. There may be potential gaps that can be examined further, such as the role that the housing market plays in relation to the issue. However, the significant opportunity posed by this topic is to bring together the research that already exists, to identify how the topic fits together, what it means, and what could be done in the Aotearoa New Zealand context.

Potential focus question: How can Aotearoa New Zealand's low levels of investment in capital be better understood, and how could greater investment (and/or capital deepening) be encouraged to support increased productivity and wellbeing

3. Innovation diffusion

Innovation is fundamental to productivity growth and improving living standards. It is the process of generating new economic value by creating, adopting and adapting knowledge into new or improved products and services, operational processes, organisational and managerial processes, and approaches to marketing. The adoption of innovations is a key driver for increasing productivity within businesses and organisations.

Productivity growth is influenced by how quickly innovation diffuses across the economy. Much of Aotearoa New Zealand's low growth in productivity and incomes is due to low levels of diffusion of innovation from the most productive firms globally to the most advanced or "frontier" firms in Aotearoa New Zealand, and then to firms away from the frontier — the so-called "laggard" firms.

An important focus of considering this topic should be the role of management, governance and leadership in adopting new innovations and what capabilities they need. Management capability was identified as an important factor in the successful adoption of technology by the Productivity Commission's Future of work inquiry. Current evidence suggests that management practices are average in Aotearoa New Zealand firms and are not improving. Governance and leadership practices are also likely to be important because of their role in developing long-term strategies to improve business performance.

The topic could be expanded to look at other barriers raised by the Future of work inquiry as preventing innovation adoption and diffusion in Aotearoa New Zealand (NZPC, 2020). These include difficulties of learning from others (due to Aotearoa New Zealand being a small and distant economy with a small base), a lack of complementary skills, the low presence of large firms in Aotearoa New Zealand (which tend to be early adopters), and low levels of competition in many Aotearoa New Zealand industries.

In addition, work in this area could focus on what support or ecosystem small to medium-sized businesses need to encourage them to innovate by adopting new products, processes or business models.

Potential focus question: How can Aotearoa New Zealand increase the rate of diffusion of innovation and good business practices across businesses that are not operating at the frontier? What management, governance and leadership capabilities are needed to increase the rate at which new technologies are adopted by businesses

4. Land use

Land use underpins the operation of society and the economy, with decisions relating to land use directly affecting multiple sectors (for example, housing and agriculture) and large proportions of the population, and having economy-wide impacts.

Existing patterns of land use¹¹ (Ministry for the Environment, 2007) across Aotearoa reflect the outcome of multiple generations of decision making at all levels (individual, business, locality, region, and state). Currently Aotearoa New Zealand is unlikely to be making the best use of its existing land resource, given known challenges such as housing affordability and the anticipated impacts of climate change. The challenges may include (potentially significant) barriers that may prevent land from being made available for its “best use”, limit easy transfer between uses, or inhibit adoption of more sustainable practices within an existing land use. In addition, climate change, natural disaster risk and other environmental challenges shed new light on what “best” (or even viable) use may mean, both now and in the future.

There would be value in exploring the concept of “best use” of land, and how existing settings may hinder or enable effective and efficient allocation of land as a resource for its most productive long-term use. Core questions would likely be to what extent land-use decisions should be driven by market price signals, which tend to have a short-term horizon and do not adequately capture the externalities of land use decisions; and what level and type of regulation is desirable to achieve the right balance between market and non-market signals.

This issue could involve consideration of:

- The different forms of land use, and how patterns of land use vary across Aotearoa New Zealand.

¹¹ “Land use” refers to the different human activities or economic functions that occur on land.

- The value derived from different forms of land use, and how these values interact. This would include value derived from economic activity, as well as the human, social and cultural value derived by non-market forms of land use.
- The challenges that Aotearoa New Zealand currently faces with respect to existing patterns and trends of land use, as well as the anticipated challenges to come, particularly as a result of climate change affecting the ability to continue to use land that is currently available and/or to use land in the same way as currently.
- The incentives, including barriers and opportunities, that exist for decision makers at all levels to make choices to change existing patterns of use.
- The key systems and regulatory settings that drive these incentives, and how they interact.

Potential focus question: How can the regulatory and planning systems of Aotearoa New Zealand best enable land use decisions that balance the costs/risks and benefits/rewards of alternative land uses and deliver long-term productivity?

5. Energy system transformation

The energy system underpins Aotearoa New Zealand’s economy and society, and involves critical infrastructure. Aotearoa New Zealand needs to transition to have a more sustainable and resilient energy system to adapt to the challenges of climate change, such as greater exposure to extreme weather and as part of the shift to a low-emissions economy.

Making the energy system more resilient and sustainable¹² will have significant impacts on productivity and wellbeing. Multiple sectors rely on the energy system, including key parts of Aotearoa New Zealand’s economy, including manufacturing, construction, and light vehicles and other transport. On the supply side, transforming the energy system is likely to disrupt existing industries and communities and potentially create new industries. This presents major challenges and opportunities for creating a just transition and driving economic development.

The primary value add of this topic area would be to focus on the pace of transition to a sustainable and resilient energy system. A faster transition would result in greater disruption to the energy sector. This would require a faster phasing out of fossil fuel energy alongside a phasing in of wind, electricity, hydrogen, the electrification of transport and industry, and improved energy efficiency. Greater policy action will also be required – for example, to tax, adapt pricing mechanisms, or capture and regulate environmental externalities.

There is value for the topic to explore key factors that both drive and determine whether Aotearoa New Zealand should aim for a gradual or rapid transition. A key factor is technology growth, as there will be technology differences that affect cost (and expected cost) of existing and new technologies. Other considerations would be jobs, health, climate change, geopolitics, pressures from civil society, and vested interests in and beneficiaries of the existing and new energy system. It will be important to minimise the avoidable costs of transition and take into account the distributive impacts due to “sunset” (declining) and

¹² Aotearoa New Zealand is under international obligations to achieve net zero emissions by 2050, with the government setting interim targets of 50% of total energy consumption from renewables by 2035, and 100% renewable electricity by 2030.

“sunrise” (new and fast-growing) industries, how to support economic development, social licence for the transition, and to examine the market structure of the energy sector.

Potential focus question: What are the barriers to transitioning to a resilient and sustainable energy system? How, and at what pace, can Aotearoa New Zealand best transition its energy system in a way that supports productivity and wellbeing

6. Readiness of regional economies and labour markets for transition

Aotearoa New Zealand’s economic future is likely to be more uncertain and more volatile than in the recent past. Understanding how regional economic development policy in Aotearoa New Zealand could help or hinder overall economic performance, and support regions to respond and adapt to change, is important within this wider context.¹³

Thriving regions and communities are not only important for overall wellbeing and productivity outcomes, but also for the geographic distribution of wellbeing outcomes across the country. The strength of regional economies and labour markets also influences broader regional outcomes and can be a form of resilience in the face of challenges, including the ease of transition to new approaches.

Aotearoa New Zealand’s current approach to supporting regional economic development and the performance of regional labour markets is relatively ad hoc, and focused more on current opportunities and challenges than the need to build long-term resilience and adaptability. This topic would provide an opportunity to:

- set out the role and value-add that functional economic regions and labour markets play in relation to Aotearoa New Zealand’s productivity and wellbeing performance
- consider the role of the Māori economy in these functional economic regions
- look to the future challenges that regional economies and labour markets are likely to face, and identify how well-positioned they are likely to be in the face of these challenges
- identify what needs to change – including in the interactions between central and local government, and the regions – to ensure productivity and wellbeing for regional communities now and over time.

The relationship between local and central government would be an important consideration in an inquiry of this kind, particularly linking to the work coming out of the future of local government review.

Potential focus question: How ready are Aotearoa New Zealand’s regional economies and labour markets for transition in response to future challenges, including the regional impacts of climate and infrastructure challenges as well as demographic change?

¹³ In this context, “regional” is intended to cover all geographic regions, including those which are centres of economic activity such as Auckland and Christchurch.

7. The care economy

Almost everyone is likely to require care during their life, especially when they get older. Some people may require more help than others with their everyday living because of a disability, health condition or illness. The demand for care is likely to increase in the future as the population ages, which could impact on the productivity and wellbeing of the care workforce, those being cared for, and the broader economy.

The care economy includes paid and unpaid care services:

- Paid services are provided by government and the private sector and include institutions (for example, retirement homes) and staff (for example, nurses and personal care assistants).
- Unpaid carers are people who care for friends, family, whānau and aiga members, and are a hidden workforce without whom the health system would not be able to cope with the extra demand for its services. Unpaid care also carries other economic consequences – for example, through constraining people’s ability to participate elsewhere in the economy. In 2020, the estimated economic value of unpaid care work in Aotearoa New Zealand was \$18bn or 5.4% of GDP (Heyes & Grimmond, 2022).

The lack of visibility of unpaid care work means the government lacks the information to understand the contribution unpaid care work makes to productivity, the economy and to the wellbeing of individuals, families and communities. The lack of visibility also means the government is not able to plan and support the future supply of care work in Aotearoa New Zealand because it does not know the number of unpaid care workers, and who they are.

This topic would provide an opportunity to add value by understanding how unpaid care work underpins economic and social activity and how this could be reflected in policy settings. Core elements of the work could include:

- Building understanding of the size and structure of the unpaid and paid care sector in Aotearoa New Zealand, and its impact on productivity and wellbeing
- Examining how individuals, businesses and government respond to incentives that influence the demand and supply of unpaid and paid care work
- Identifying how the sector needs to adjust to a changing Aotearoa New Zealand population. For example, while there is general agreement that the demand for care will increase, there are likely to be differences on how to meet future demand and what role unpaid and paid care should play.

Potential focus question: The “care economy” (encompassing paid jobs in the care sectors and unpaid care jobs in homes and communities) underpins labour productivity yet is unrecognised as such and is increasingly fragile. How can Aotearoa New Zealand’s care economy be strengthened to support a more productive workforce in the face of changing demographics and an ageing population?

8. Skilled employees and lifelong learning

Skills and education are a significant driver of productivity across all economies. Having the right skills in the labour market, and an adequate supply of these skills, supports economic growth and stronger wellbeing outcomes across society. Skills are gained in a range of ways, both formal and informal, in-work and in the education system, and over different parts of a person's lifetime.

Increasingly, labour market trends globally and within Aotearoa New Zealand point to the importance of “lifelong learning” (OECD, 2021b),¹⁴ including to respond to changes in the nature of work and structural shifts in the economy. However, current barriers may limit the extent to which workers in Aotearoa New Zealand engage in lifelong learning opportunities. These depend on the types of upskilling being sought, and can vary across individuals, groups and industries. Some key barriers are financial cost, time needed to participate, and employers' ability – and willingness – to support or deliver training.

In this context, there would be value in specifically considering skill acquisition after formal education, including through on-the-job training. In particular, such consideration could support better understanding of where and to whom the benefits and rewards of such skill acquisition accrue, and therefore how costs and risks might be best allocated to support productivity and wellbeing gains for individuals, workplaces and society. This understanding could support development of a more “principled” approach to investment in lifelong learning over time.

Taking an economic lens to this participation challenge would support stronger understanding and could inform future decision-making at all levels – how learning is funded and delivered (largely at the government/industry level), how learning is incorporated within workplaces (decisions made by businesses/firms), and how and whether to engage in learning (as an individual worker). A key issue to consider would be the role of signalling in relation to skill acquisition. One example is the different risks and rewards associated with the different decision-makers regarding gaining a skill rather than having that skill recognised through some form of credential.

Potential focus question: Acquiring job-relevant skills is important for productivity. How can the benefits/rewards and costs/risks of investing in gaining these skills be shared appropriately between workers, employers, and the government? For example, this could include investigation of how government investment affects employer incentives to fund training for employees who they may not retain, and the extent to which the ability to demonstrate and transport skills (for example, through gaining credentials) affects a person's incentive to participate in training.

¹⁴ Lifelong learning encompasses all forms of skill development and knowledge acquisition occurring over a person's lifetime.

Appendix C: Organisations engaged with

Participants in stakeholder workshops	
AI Forum NZ	Ministry of Health
ANZSOG – the Australia and New Zealand School of Government	Ministry of Pacific Peoples
Big Sky Consulting	Ministry of Transport
Callaghan Innovation	New Zealand Council of Trade Unions
Climate and Mental Health advocate	New Zealand Infrastructure Commission
Destination Capacity	Ngāi Tahu
Dragonfly Data Science	Office of the Auditor-General
Environment Canterbury	Office of the Prime Minister’s Chief Science Advisor
External Reporting Board (XRB)	Parliamentary Commissioner for the Environment
Fonterra	PwC (Manukura Māori team)
Gael Surgenor (ex-Future of Local Government Review panel member / Independent)	Resilient Organisations (consulting and research group specialising in organisational risk and resilience)
Geoff Bertram (independent economist and policy consultant)	Social Wellbeing Agency
Hutt City Council	Sustainable Business Council
Independent policy and evaluation expert	Sustainability Council of New Zealand
Inland Revenue	Te Papa – Museum of New Zealand
Koi Tū: The Centre for Informed Futures	Te Tira Whakamātaki (independent Māori environmental and research not-for-profit)
Leaft Foods	The Manufacturers’ Network
Lincoln University	The Treasury
Mental Health and Wellbeing Commission	Think Beyond
Ministry for the Environment	University of Auckland
Ministry for Primary Industries	Victoria University of Wellington (School of Government)
Ministry of Business, Innovation and Employment (Chief Economist unit)	ZX Security (cyber-security consultancy)

Additional engagements outside of the workshops

Auckland Council	Max Harris
Beca	Ministry of Business, Innovation and Employment
BusinessNZ	New Zealand Council of Trade Unions
Climate Change Commission	Phil O'Reilly
Environmental Defence Society	Sustainable Business Council
Federation of Māori Authorities	The Southern Initiative
Girol Karacaoglu	The Treasury
Māori Economic Development Advisory Board	

