

New Zealand's productivity in a changing world

**How can we accelerate the growth of high productivity activities
in the New Zealand economy?**

Consultation on MBIE and MFAT's draft Long-term Insights Briefing

OCTOBER 2025



Te Kāwanatanga o Aotearoa
New Zealand Government



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INNOVATION & EMPLOYMENT**
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More information

This document and further information about the work is available at mbie.govt.nz/ltib-future-productivity

ISBN (online): 978-1-991409-47-8

OCTOBER 2025

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1. Executive summary

Productivity is the main driver of income and living standards over time, meaning productivity growth is vital for New Zealand's future. New Zealand's productivity performance in recent decades has lagged that of other advanced economies, and the make-up of the economy has shifted towards lower complexity, lower productivity sectors. These trends will need to be reversed for New Zealanders to be more prosperous and to enjoy higher standards of living in the period ahead.

New Zealand's unique economic geography poses real challenges for productivity. The vast distance to key markets and suppliers hinders efforts to connect internationally to enable innovation, as does the internal economy comprising a series of small dispersed regional economies largely made up of small firms.

A future high productivity New Zealand economy will be one that tilts towards higher value, more knowledge-intensive and technology-driven activities, and strengthens international connections and trade. New Zealand has high value opportunities developing, for example in a range of bio-based product areas that build on existing economic strength and capability in the primary sector.

The deteriorating geopolitical outlook, fast pace of technological development, pressing limits on environmental resources and other changes happening in the world provide impetus, opportunity and challenge for this shift to higher productivity economic activities. To do this, New Zealand will need to successfully navigate the challenges of a much less certain global trading environment, climate impact and energy transition, while also leveraging technology-driven growth opportunities in international markets.

The complexity and uncertainties in these global shifts point to the importance of forward-looking policies that support adaptability, agility, innovation and resilience in the economy, as necessary underpinnings for productivity growth.

This Long-term Insights Briefing (Briefing) presents insights to guide New Zealand government approaches to domestic economic policy and international trade policy to lift productivity in the period ahead. Its focus is the question of: **How can we accelerate the growth of high productivity activities in the New Zealand economy?**

The Briefing provides a framework to help policymakers identify what type and mix of domestic and international government policies (levers) will best support this productivity objective, informed by answers to questions such as:

- What are the viable and high value opportunities for productivity growth involving sectors, firms, places or technology? (Focus)
- What are the innovation needs of emerging industries and how can connections and capabilities be developed and leveraged? (Dynamics)
- What is the future outlook, including threats and opportunities, that should be considered in the strategic approach and choice of levers? (Trends).

New Zealand is credited with having strong ‘horizontal’ policy settings that are conducive to private investment, business creation and employment. Horizontal settings apply across the economy and establish the framework for markets to operate well, through things such as macroeconomic policy, flexible labour markets and competition. These horizontal settings require continual refinement and must be responsive to changing domestic and international circumstances.

Governments, including in New Zealand, also use ‘vertical’ levers that target sectors, places, technologies or issues where government has a role. These go beyond subsidies and include regulatory enablement, innovation support and research and development (R&D).

The recent growth in the use of vertical levers by many governments has been driven by a range of policy imperatives including economic competitiveness and productivity, national security and the energy transition. This Briefing finds that other Small Advanced Economies (SAEs) have been more deliberate and strategic in the use of vertical levers when compared to New Zealand.

It is important that the New Zealand government considers how to best use the range of domestic economic policy levers available to lift productivity, including how to appropriately tailor these to New Zealand’s specific characteristics. Applying our policy framework to other small advanced economies, like Finland and Ireland, suggests that the strategic use of targeted policies can supplement horizontal settings to speed innovation, improve efficiency across value chains and enable economies to diversify and branch into adjacent and related industries to lift the level of productivity.

International levers improve productivity by enhancing trade and international connectivity. These levers include trade and economic agreements as well as economic diplomacy, trade promotion and investment attraction.

With Free Trade Agreements (FTAs) facilitating market access for over two-thirds of New Zealand’s exports, this Briefing foresees opportunities for productivity growth through deeper regional economic integration and regulatory cooperation with key partners that are already engaging in closer integration. This would help mitigate the disadvantages of New Zealand’s distance from markets and its relatively small scale, and in doing so support innovation and growth in higher value and more knowledge-intensive sectors.

Case studies of the dairy, space and advanced aviation and biomanufacturing sectors, and New Zealand’s close economic ties with Australia, illustrate the approach and range of levers the New Zealand government is already using in these areas. A main insight from these is that long-term, targeted government attention and engagement builds lasting industry strengths and unlocks opportunities for economic diversification.

This draft Briefing suggests that adopting a more deliberate and strategic approach to enabling high productivity activities will be critical for lifting New Zealand’s overall productivity. Careful coordination and alignment between domestic economic development policy and international trade policy can facilitate productivity growth.

A mix of government policies will be needed – broad horizontal enablers as well as targeted domestic and international initiatives. This is likely to require government to make choices

about where and how to focus effort and resources. This Briefing offers general guidance on how to understand and identify sectors or activities with high productivity and growth potential.

The final section of the Briefing, to be developed further through public consultation, will identify a set of insights and choices that answer our key question on how to accelerate the growth of high productivity activities in the New Zealand economy.

We welcome your feedback on this draft Briefing to help further develop the insights and choices for government that will help New Zealand successfully lift its productivity performance in a changing world and grow prosperity for all New Zealanders.

2. Introduction, and inviting your feedback

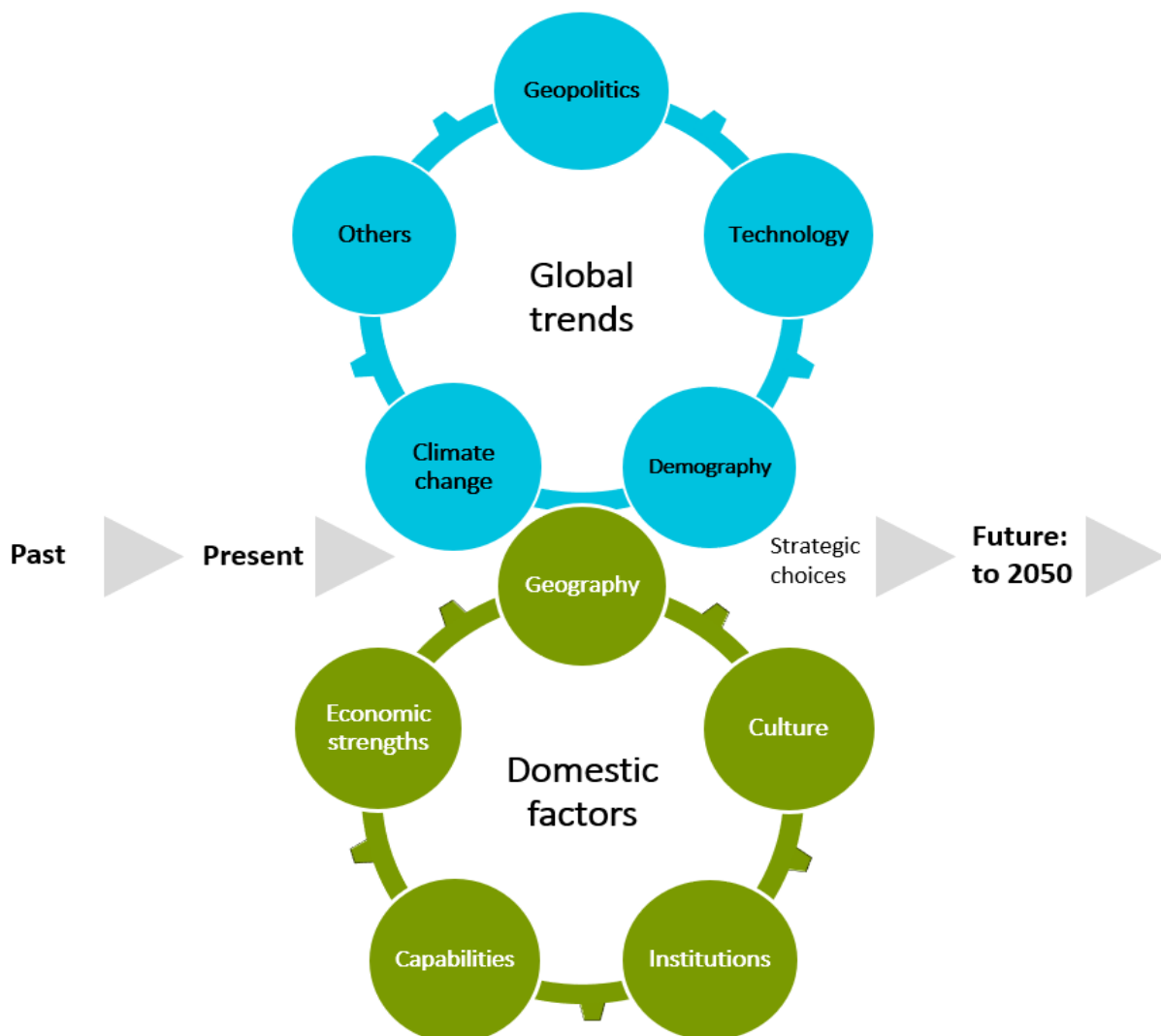
This Long-term Insights Briefing is about New Zealand's productivity and how we can improve it to benefit current and future generations.

Conversations about productivity can be technical and challenging, but they are key to ensuring New Zealand's future as a prosperous country for all those who live and work here.

This Briefing explains why New Zealand's productivity is where it is today and outlines what can help improve it. This draws on earlier research on this topic.

Crucially, this Briefing has a view to the future. It explores some of the global challenges arising from geopolitics, technological development, climate change and demographics, and how they may interact with and affect New Zealand's productivity over the next ten years and beyond (Figure 1).

Figure 1: New Zealand's productivity performance, influenced by global trends and domestic factors and their interactions.



The background to this Briefing

This Briefing was prepared by the Ministry of Business, Innovation and Employment (MBIE) and the Ministry of Foreign Affairs and Trade (MFAT). As such it focuses on economic development, as well as international and trade aspects of New Zealand's productivity.

These are areas where MBIE and MFAT have roles in, both as advisors to the government and through the delivery of programmes. The Briefing sets out choices for government to help new high productivity sectors grow and identifies how international trade and connections enhance productivity more widely.

This document is the result of our research, which draws on a range of published material from New Zealand and elsewhere, as well as our own case studies. It has benefited from feedback received during the public consultation on the topic in November 2024 to February 2025. Thank you again to everyone who provided information and insights to support our consideration of the subject matter for this Briefing. A summary of this consultation can be found in this [link](#).

The feedback highlighted that productivity is a broad topic. We have chosen to focus on a particular aspect: How can we accelerate the growth of high productivity activities in the New Zealand economy?

This focus means that this Briefing does not cover all aspects of productivity. Even so, there are many issues raised during the topic consultation, such as the important role of institutions, public trust and governance, the role of the labour market and the foundational role of health and education. These have helped inform our thinking.

A future outlook to decisions

Long-term Insights Briefings are a different way for government agencies to explore and report back on issues that matter for the future of New Zealand. They are not government policy and are developed independently of Ministers.

We want to use this Briefing to help us consider what options New Zealand faces to raise productivity over the long term, as well as to hear your views about what our future productivity could look like.

Your feedback

MBIE and MFAT are seeking feedback on this draft by Monday 17 November to support completion of the Briefing.

There are questions to guide your feedback at the end of this draft (page 51). A submission form can be accessed [at this link](#).

How to read this Briefing

Each section of the Briefing explores the topic of New Zealand's future productivity from a particular perspective. While the different sections examine issues that are interconnected, it is also possible to read any section of the Briefing on its own.

Section 3 of the Briefing examines the patterns in New Zealand's past and current productivity, and the impacts of its unique characteristics including our geography, international connections and economic structure.

Section 4 identifies important global shifts under way in geopolitics, technology, climate change and demographics that will influence New Zealand's productivity in the period ahead.

Section 5 explores contemporary approaches to economic development and sets out a framework to support thinking about domestic and international policy settings that can lift New Zealand's productivity, including broad-based, economy-wide policy settings and supplementary, targeted policy settings.

Section 6 applies this framework to explore how Denmark, Finland, Ireland and Singapore, as other small advanced economies, are taking strategic approaches and using a mix of policy levers to support productivity growth and competitiveness.

Section 7 applies the framework to case studies on New Zealand's dairy, space and advanced aviation and biomanufacturing sectors, and an international case study of New Zealand's Single Economic Market with Australia. This approach is used to illustrate the range of targeted policies that New Zealand is currently using and how this could develop going forward to lift New Zealand's productivity and navigate a period of global change.

Section 8 draws the threads of the Briefing together to lay out insights and choices to answer our key question: How can we accelerate the growth of high productivity activities in the New Zealand economy? This section invites feedback from readers during the consultation period in October and November 2025.

Section 9 is a Glossary with explanations for some of the more technical terms in this Briefing. Terms with Glossary explanations are those underlined through the document and appear mainly in Section 3.

Note on AI use:

Some of the content in this Briefing was developed with the assistance of the AI tool Copilot. CoPilot was used for information gathering, content generation, as well as summarisation and editing of some sections of this Briefing.

The authors have reviewed and verified all factual content and references to ensure accuracy and uphold quality standards. For any queries about the use of Copilot in this document, please contact ltib@mbie.govt.nz.

What is productivity?

Our definitions in this Briefing:

Put simply, productivity is a measure of outputs for given inputs.

Labour productivity measures the amount of goods and services a worker produces in a certain amount of time. In a similar way, capital productivity is output per machine, and resource productivity is output per unit of resource, such as raw materials, electricity, fuel and land.

Multifactor productivity measures the increases in output that cannot be attributed to increases in labour or capital inputs. Importantly, this includes how efficiently a business, an industry or an economy turns multiple inputs, like labour, capital, materials, energy and purchased services into goods and services.

For example, if a meat processing company starts using smart sensors, automated cutting and real-time data analytics, and produces more meat with the same number of sheep and workers, its multifactor productivity has improved, meaning the system is more efficient. If the output per worker in a year improves, then the firm can make higher profits and pay better wages and salaries, which in turn increases the worker's living standards and overall prosperity.

It is important to note that the ways of thinking about and measuring productivity are evolving. For instance, the role that artificial intelligence (AI) is now playing in work is extending the concepts of labour productivity beyond human hours to include human-AI collaboration and system-level AI cooperation. Ideas about 'capital' now encompass intangible assets like data and its infrastructure, alongside physical and financial assets. Resource productivity is gaining more prominence as the need for sustainable and efficient use of physical resources, particularly energy, grows.

Our approach to productivity in this Briefing:

Productivity is often measured at a static, specific point in time, through output-to-input ratios. In this Briefing we focus more on how productivity evolves over time through dynamic processes, and influenced by innovation, skills development and structural changes.

Productivity is not just a measure of firm-level efficiency, it is a function of the broader economic system. This system is shaped by the structure of the economy, which reflects what an economy knows how to produce (its capabilities), and is influenced by geography, history and global market forces. Productivity depends on how well these capabilities are connected and coordinated across supply chains and networks. Efficient, well-structured systems enable resources to flow smoothly between firms, sectors and borders, supporting innovation and responsiveness.

Trade policy plays a critical role in this coordination by reducing barriers, lowering costs, improving connectivity, increasing competition and embedding local firms into global production networks. In this way, smart trade relationships and well-functioning supply chains are foundational to both firm-level productivity and overall economic competitiveness. As a result, this Briefing aims to explore these connected areas through the lens of productivity.

3. New Zealand's productivity – the story to date

This section of the Briefing explains that New Zealand's past and current productivity performance reflects the country's geography, international connections, economic structure and policy settings.

Key features of the New Zealand economy

New Zealand is a small, advanced open-market economy located in the South Pacific. Like all economies, New Zealand's economy has some unique features. It is shaped by a distinctive structure: a predominance of small firms, a service-heavy GDP, weak international connections and a strong reliance on biological exports. These features influence how productivity emerges and where its limits lie:

- **Small firm structure:** New Zealand's economy is dominated by small firms, with over 15 per cent of workers self-employed and most businesses employing fewer than 10 people. These firms often serve local markets and face constraints in scaling, specialisation, and investing in productivity-enhancing technologies.^{1 2}
- **Service-heavy economy:** Services contribute around 70 per cent of GDP.³ Many are labour-intensive and locally bound, making them harder to scale and less likely to drive rapid productivity growth.
- **Weak international connections:** New Zealand's geographic isolation and small scale limit its integration into global networks, reducing access to knowledge spillovers, collaboration and high value trade.
- **Manufacturing and biological processing:** Manufacturing has declined to around 7 per cent of GDP,³ with around 60 per cent linked to biological processing (eg food, wood, agritech).⁴ Including the wider bioeconomy, these products account for at least two-thirds of New Zealand's total exports of goods and services.⁵ Tourism's direct and indirect contribution to GDP is around 6 per cent based on recent information.⁶
- **Emerging export sectors:** High- and medium-high tech manufacturing contributes around \$8 billion in exports. Information and communication technology (ICT) exports have grown strongly, reaching an estimated \$3.5 billion in 2024. These sectors are knowledge-intensive but still relatively small.⁷
- **Māori economy growth and diversification:** The Māori economy is growing rapidly, with its GDP contribution rising from \$17 billion (6.5 per cent) in 2018 to \$32 billion (8.9 per cent) in 2023. Māori-owned assets have nearly doubled, from \$69 billion in 2018 to \$126 billion in 2023, and economic activity is diversifying beyond traditional sectors into professional and administrative services, reflecting innovation and capability development.⁸
- **Barriers to transformational growth:** Entrepreneurship, innovation, infrastructure and export orientation are key to productivity transformation, but harder to activate in a weakly connected, fragmented, small-firm economy without targeted support.
- **Strategic role of trade and supply chains:** For a geographically remote country with weak international connectivity like New Zealand, trade policy and supply chain efficiency are critical. FTAs help reduce barriers, harmonise standards and embed firms into global production networks enhancing both firm-level productivity and system-wide competitiveness.

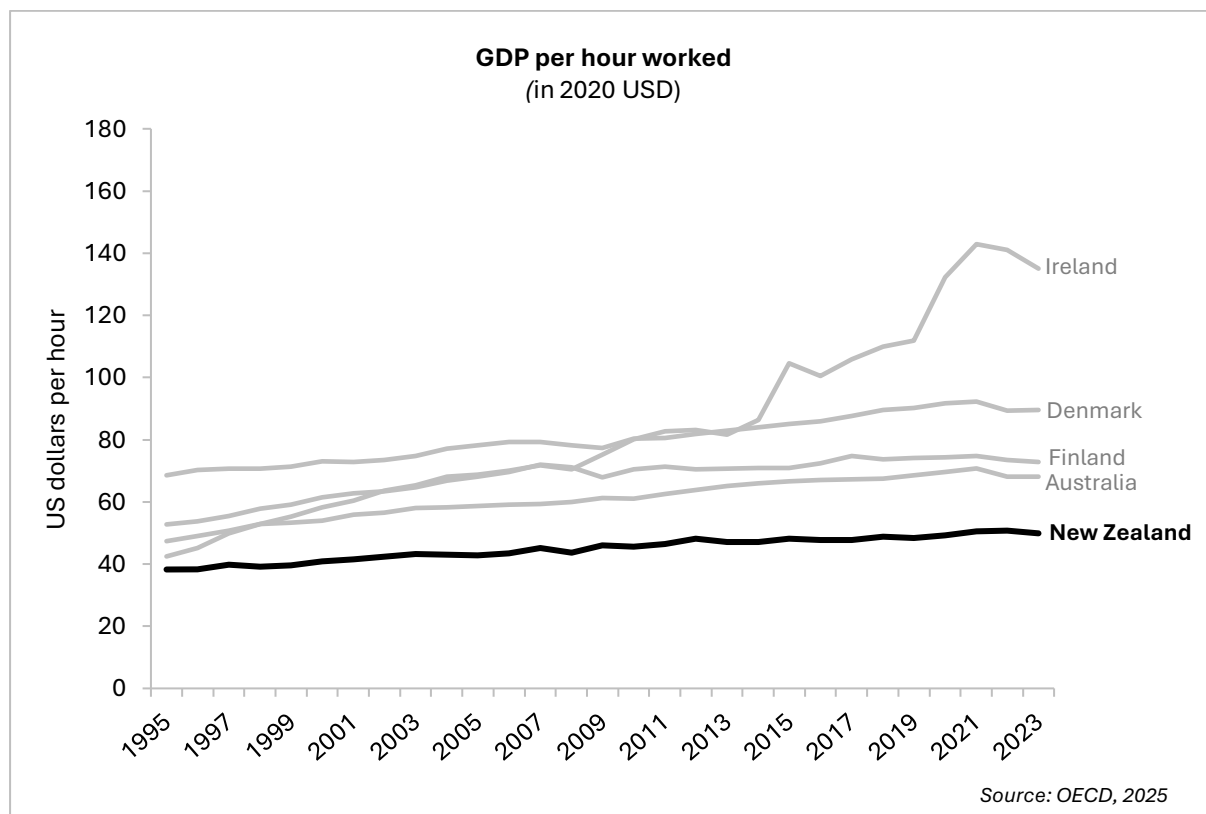


Insight: New Zealand's economic structure, dominated by small firms, services, and biological exports, shapes the country's productivity potential.

New Zealand's productivity lags other advanced economies

New Zealand's productivity has lagged other advanced economies for several decades (Figure 2). Much of the country's economic growth has been driven by increasing labour inputs (more people working more hours) rather than by improvements in efficiency or output per worker.⁹

Figure 2: New Zealand's labour productivity compared to other advanced economies.^{10 a}



Comparative data shows that both labour productivity and capital productivity remain below the Organisation for Economic Co-operation and Development (OECD) averages. According to the International Monetary Fund's (IMF) 2025 Article IV Report, New Zealand's GDP per hour worked was close to Scandinavian peers in 1970, but by 2022 it was 40 per cent lower, reflecting a widening productivity gap¹¹. The IMF also notes that New Zealand's capital intensity, capital stock per hour worked, is significantly lower than in comparable economies, limiting the productivity returns from labour and skills.

Despite high labour force participation and strong educational attainment, productivity growth has been weak. A key issue is skills underutilisation. Many workers are employed in roles that do not fully leverage their qualifications or capabilities. Structural constraints such as low capital

^a NB: Ireland's productivity figures are shaped by unique factors, including the entry of large multinationals. As a result, comparisons with Ireland should be viewed as indicative rather than definitive.

intensity, limited scale economies and weak innovation diffusion further reduce the impact of human capital investments.

New Zealand's small market size and geographic isolation also dampen competitive pressures and reduce incentives for firms to adopt productivity-enhancing technologies. The IMF highlights these factors as key contributors to low multifactor productivity growth, which reflects inefficiencies in how labour and capital are combined.

“Weak productivity growth poses a significant challenge for New Zealand’s long-term economic prospects. Low productivity growth partly reflects structural factors, including New Zealand’s remote geography and small markets, as well as the relatively large role of the tourism and agriculture sectors. However, it also reflects costs and incentives for investment and innovation, which in turn are shaped by features of the business environment and limited financing options.” – IMF report ¹¹



Insight: New Zealand’s productivity challenge is structural. Despite a well-educated and growing workforce, systemic constraints, low capital intensity, small firm size and weak innovation diffusion mean that inputs are not being fully leveraged.

Economic complexity has fallen

Productivity growth is typically linked to a shift towards higher value, knowledge-intensive and technologically-driven activities, yet New Zealand has moved in the opposite direction. From 2000 to 2023, New Zealand’s economic complexity ranking (based on the diversity and sophistication of its export basket) fell from 52nd to 68th out of 145 countries.¹² This decline reflects globalisation, technological change and the rise of knowledge-based industries.

Like many advanced economies, New Zealand has shifted toward services. While some are highly productive (eg ICT and finance), many others like tourism and hospitality are labour-intensive and lower productivity.⁹ The export sector has not surprisingly concentrated around New Zealand’s comparative advantage in biological materials (food and fibre), where it leads globally. These sectors benefit from strong demand, branding and preferential trade agreements, but face resource constraints and limited potential for automation or scale.¹³

Primary industries have seen the strongest productivity growth, supported by a robust science system and sustained investment. However, they remain less scalable than sectors like manufacturing or financial services.¹¹ Meanwhile, recent economic growth has been driven more by population increases (particularly through migration) than by productivity gains. Domestic investment has skewed toward residential property rather than productive activities like R&D, high-tech manufacturing or export-oriented services, contributing to low capital intensity and a less diversified, more vulnerable economy.¹⁴



Insight: New Zealand’s economy is not currently growing in complexity at scale. Improving productivity performance will require a shift toward higher value,

knowledge-intensive and technologically-driven activities and rebalancing investment toward productive sectors.

Higher productivity sectors are emerging

Some higher-productivity sectors are emerging in New Zealand, building on longstanding capabilities and geographic advantages. For example, value-added food and beverage exports reached \$8.8 billion in 2025, while high and medium-high tech goods generated \$8 billion in 2024 and ICT exports contributed \$3.5 billion.⁷

In the case of food and beverage, these gains reflect strengths in bioprocessing, logistics, regulatory expertise and food science, forming a foundation for diversification into adjacent industries such as infant formula, biopharmaceuticals, cosmetics, marine bioactives and innovative food preparations, all showing strong export growth and attracting investment. Infant formula is a specific example of this diversification shift, growing from \$387 million in 2015 to over \$2 billion in 2025, with a 10-year Compound Annual Growth Rate of 18 per cent.¹⁵ It highlights how capability upgrades in formulation, quality control and compliance can drive productivity and innovation.

These adjacent industries share core capabilities and offer scalable paths to diversification, with firm growth and rising investment signalling confidence in New Zealand's bio-based value proposition. Unlocking greater value from New Zealand's biological resources can enable a more sustainable, low-emissions bioeconomy, which strengthens resilient economic growth and supply chains while reducing waste and pollution.¹³

The Māori economy is also contributing to this productivity growth through increasingly diverse activity, especially in professional, scientific and technical services.⁸ Māori authorities and SMEs outperform the broader economy in employment, innovation, R&D and exports,¹⁶ and advance values-based governance that aligns with growing global demand for ethical, sustainable products.¹⁷ Māori and Iwi are forging trade links, supported by FTA Indigenous chapters and rising global interest in Indigenous knowledge and IP.¹⁸ Addressing barriers like limited capital and underutilised land through government partnership can unlock inclusive growth. This is important as Māori are projected to comprise 20 per cent of the workforce by 2040.⁸



Insight: High value adjacent industries and the growing Māori economy offer promising pathways for innovation, diversification, and both inclusive and environmentally sustainable productivity growth.

New Zealand's distant and dispersed geography constrain productivity

New Zealand is a small, geographically remote economy. For much of the 20th century, its distant location was offset by close economic ties with Britain, which provided a stable export market and strong institutional links. This arrangement ended with the UK's entry into the European Union (EU) in 1973, prompting New Zealand to reorient toward global markets. From the mid-1980s, New Zealand embraced neoliberal reforms in line with trends among other OECD economies of deregulation and trade liberalisation. This shift exposed New Zealand to

both the challenges and opportunities of international competition, though without the protection of a guaranteed market in Britain.

Around the world, as globalisation and technological change accelerated in the late 20th century, economic activity became increasingly concentrated in large, globally connected urban centres. These hubs benefit from dense infrastructure, skilled labour and fast information flows, all conditions that support knowledge-intensive and technologically-driven industries.

In contrast, New Zealand's small scale and geographic isolation limit its integration into these global networks, reducing access to knowledge spillovers, collaboration and high value trade. External distance also dampens market signals, making it harder for innovators to stay attuned to customer preferences, emerging consumer trends, shifting competitive dynamics and potential technological disruptions.^{9 19} These characteristics are features of a periphery economy.

Periphery versus core economy characteristics

New Zealand can be described as a 'periphery' economy, ranked second of 181 countries for geographic distance from markets across its overall flows of trade, capital, information and people. ²⁰	
Periphery economies demonstrate: • Geographic isolation from major markets • Lower levels of industrialisation and innovation • Dependence on primary industries and commodity exports • Lower wages, brain drain • Vulnerability to external economic shocks and decisions made elsewhere	Core economies demonstrate: • High levels of industrialisation and innovation • Strong infrastructure and connectivity • Concentration of capital and decision-making power • High GDP per capita and productivity • Dominance in global trade and finance network

In knowledge-based economies where value is driven by intangible assets like data, intellectual property and human capital, success depends on having strong innovation ecosystems and global connectivity. For New Zealand, these objectives of innovation and connectivity, are also a way of overcoming geographic disadvantages.



Insight: Globalisation has presented challenges and opportunities for New Zealand to overcome its geographic isolation. The rise of knowledge-based economies highlights the role that deeper integration into global innovation networks can play to overcome structural constraints.

New Zealand's internal geography plays a significant role in shaping productivity. Despite its small population of 5.4 million, the country spans a large land area – over a quarter larger than Denmark, Ireland, Israel, Singapore and Switzerland combined. This makes New Zealand best understood as a collection of small regional economies, each with distinct place-based climates, industries, capabilities, histories and partnerships with local iwi.

Most New Zealand firms are small and operate in insular markets, limiting their ability to scale, invest in capital, and connect with global frontier firms, constraining productivity growth. Critical market features such as a deep share-market, specialised equity analysts and industrial clusters are thin or missing, further limiting commercialisation and innovation.

This geographic dispersion also contributes to structurally higher costs and limited scale in infrastructure, transport and manufacturing. Supplying distant regional markets is expensive due to long distances and limited transport options. A tension exists between enabling firms to scale through mergers (which potentially reduces competition) and maintaining a competitive local market. These dynamics have important implications for policy design.



Insight: New Zealand is better considered as a network of regional economies rather than a single uniform one. Differences in firm size, industry mix and regional capabilities shape productivity outcomes and can call for place-based policy approaches.

International trade lifts productivity, but New Zealand's trade intensity remains low for a small open economy

After World War II, the global system was built to support stability and open trade. Over the past 50 years, major shifts, including the collapse of the Bretton Woods system in the 1970s and a wave of trade liberalisation in the 1980s, led to the creation of the World Trade Organization (WTO) in 1995. This institutionalised a rules-based trading system and the acceleration of global integration, enabling greater flows of trade, capital, people and knowledge.

In response to these changes, New Zealand repositioned its economy to embrace global markets. Successive New Zealand governments have pursued an active international trade policy agenda aimed at enhancing international connections and integrating the New Zealand economy into global markets and opportunities. New Zealand's international trade architecture – spanning multilateral, plurilateral, bilateral and unilateral approaches – has expanded access to international markets and supported productivity growth.

New Zealand signed its first FTA with Australia in 1983 and particularly since 2000 has developed an expanding network of FTAs. The importance of these agreements to New Zealand has grown significantly over the last 20 years, both as additional agreements have entered into force and as the countries have grown in importance as export markets for New Zealand. The value of New Zealand's exports covered by FTAs has grown from around 25 per cent in 2007 to more than 70 per cent of exports today.

For New Zealand, FTAs are not just about exports. They are strategic tools for embedding our firms into high-performing international production networks, ensuring greater domestic competition and lowering input prices, as well as expanding choice and lowering costs for New Zealand consumers.

While New Zealand's network of FTAs now covers around 70 per cent of our trade, it only covers around 62 per cent of global GDP. Demographic and economic trends suggest the global GDP coverage of New Zealand's existing FTA network will increase over the next decade. However, by 2050, global growth is expected to be driven by countries outside this network. Without further action, New Zealand's FTA coverage could fall below current levels (Figure 3).

Emerging economies are expected to lead future global growth. Expanding and deepening trade relationships with these countries, including in South East Asia and Africa, would open new

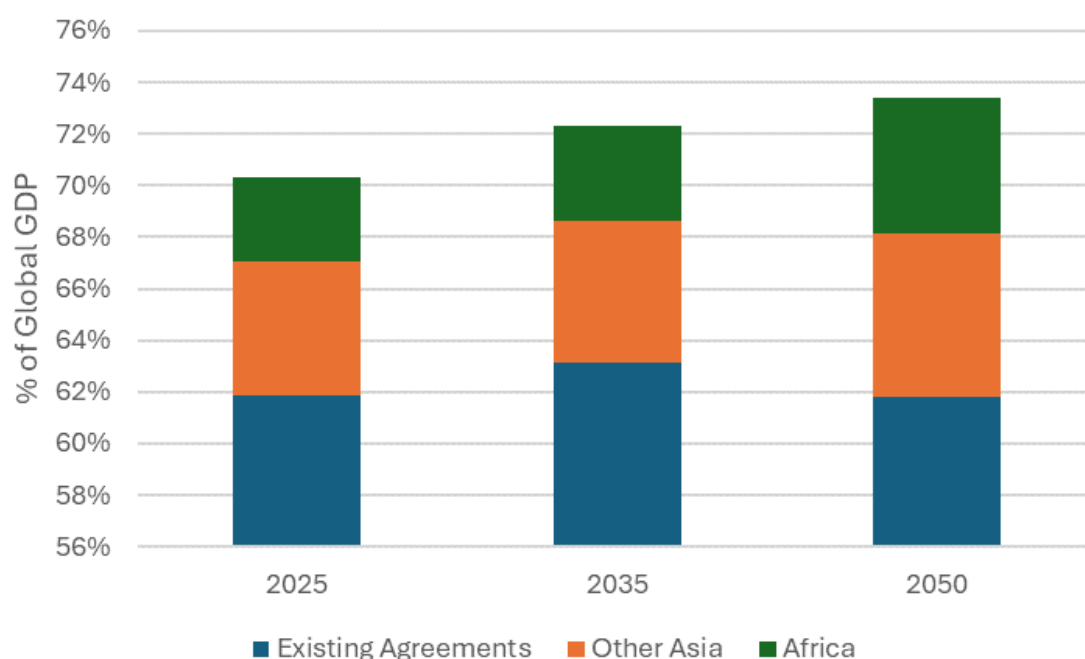
opportunities for New Zealand businesses, enhance resilience against geopolitical risks, and allow the country to benefit from these growing economies.

Another important pattern to note is that, although the value of New Zealand's exports has nearly doubled since 2007, exports have declined as a share of GDP (Figure 4). While this decline is a global phenomenon, this trend suggests a growing disconnect between trade performance and overall economic output.

Some New Zealand firms in advanced manufacturing have relocated parts of their production offshore to large industrial hubs in Asia and elsewhere, gaining access to deeper markets, specialised suppliers, skilled labour and lower costs. Similarly, services firms like software as a service (SaaS) providers (eg Xero) have established offshore subsidiaries to better serve global customers.

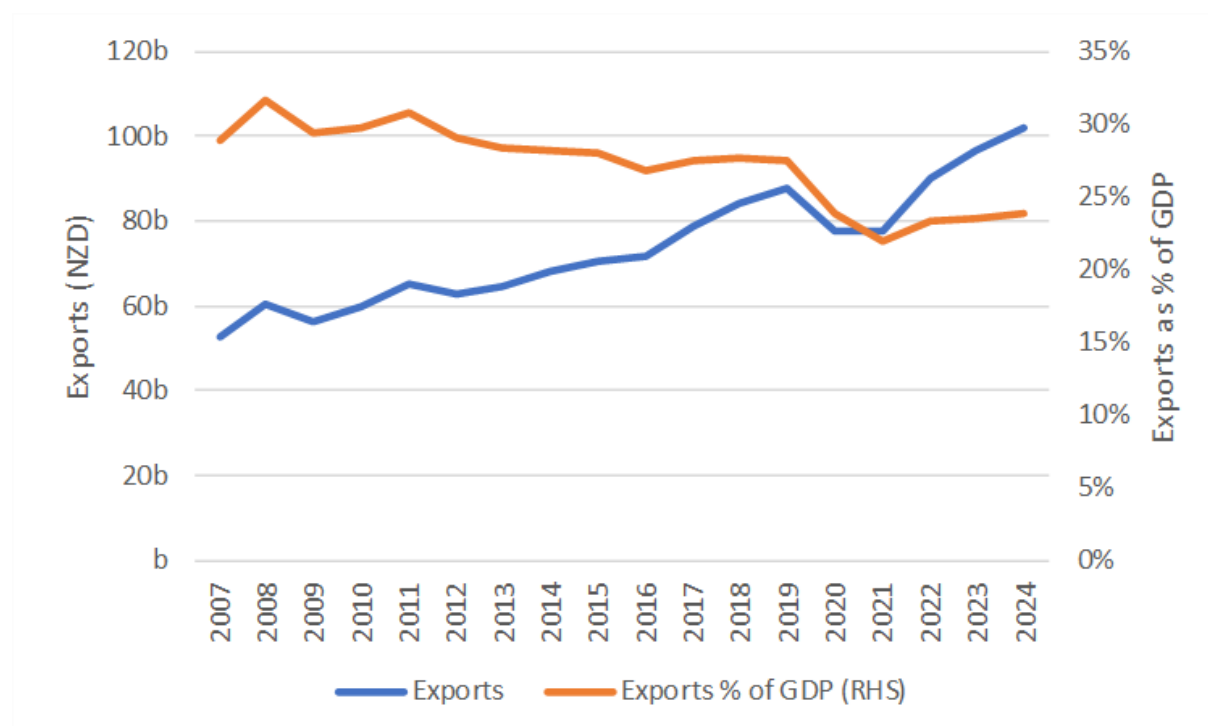
These strategies expand New Zealand's international commercial footprint and deepen global integration, but they are not fully captured in official export statistics. In particular, the measurement of services exports remains challenging and may understate the true extent of New Zealand's global economic engagement.

Figure 3: New Zealand FTA coverage of Global GDP.



Source: Economist Intelligence Unit, MFAT, Authors' calculations ^{21 22}

Note: The existing agreements include those signed with the UAE and the GCC, and the agreement currently being negotiated with India.

Figure 4: New Zealand's export performance.

Source: Statistics New Zealand. Authors' calculations.²³



Insight: To sustain productivity and remain competitive in a shifting global landscape, New Zealand's trade policy can look beyond securing market access to deepening integration, connecting firms, talent and institutions to global innovation ecosystems.

4. Global trends and pressures shaping future productivity

Significant global transitions are underway across multiple domains, including geopolitics, technology, energy and demography. These forces are reshaping the global operating environment in complex and often unpredictable ways. This Section outlines some of the changes happening now and ahead in these areas and their impacts on productivity and the economy.

Geopolitical tensions are rising, technological change is accelerating, climate disruption is intensifying, and demographic shifts are altering patterns of demand, labour and investment. Many of these changes are deeply interconnected, amplifying uncertainty about how the future will unfold. Old assumptions about stability, openness and linear progress may no longer hold.

Lifting New Zealand's productivity will require navigating an increasingly contested, volatile and fast-moving global landscape. The challenge is not only to respond to change, but to build the capability to adapt, connect and thrive in a less stable and less predictable world. For government, this means productivity goals must be underpinned by economic resilience.

A geopolitical transition to a 'multi-polar world'

The international system of rules and institutions established following World War II is giving way to a more contested global environment characterised by strategic competition between large economies and the undermining and reshaping of global rules and norms. Put simply, it is the most challenging and uncertain geopolitical environment New Zealand has faced in decades.

There has been a turning point away from decades of deepening trade liberalisation and economic integration, and an accelerating erosion and retreat from the global rules-based trading system.

Perceived risks associated with an interconnected global economy, together with an uneven distribution of the economic benefits from globalisation, have undermined political and societal support for free trade. The general trendline is towards regionalism, protectionism and economic nationalism, as well as a renewed emphasis on protective industrial policies for goods and services deemed sensitive for reasons of national and economic security. The locus for maintaining open trade is shifting from the global level to regional trade blocs and smaller coalitions of like-minded countries.

Growth in international trade has fallen from an average of 5.1 per cent in the 2000s to 4.6 per cent in the 2010s to 2.6 per cent in the 2020s.²⁴ International goods trade is forecast to grow at just 0.5 per cent in 2026, reflecting an increase in tariffs and acute levels of policy uncertainty.²⁵

Between October 2023 and October 2024, WTO members implemented trade-restrictive measures covering \$888 billion in trade, up from \$337 billion the previous year.²⁵

These trends are forecast to have a negative impact on global economic growth and productivity by adding inefficiency and uncertainty into the global economic system and raising costs for business. Further fragmentation in the global economic system along geopolitical or geographic lines in the period ahead would exacerbate these impacts.

As a small open trading nation reliant on global trade rules and supply chains, New Zealand's economy and future productivity will be impacted by these geopolitical trends. Rising protectionism and the undermining of global trade rules are likely to increase barriers, create uncertainty and add costs to New Zealand exporters. A slowing global economy may also dampen international demand for our goods and services. Domestically, access to goods and services may become more expensive and less reliable. Increased supply chain disruptions, including from increased incidences of conflict, pose potential risks around accessing international markets for our goods and services exports, as well as the cost of critical imports.

At the margins, there may be some positive impacts for productivity from these geopolitical shifts; for example, the geopolitical environment is driving increased defence spending, orientating public spending towards R&D that may in turn boost innovation and private investment over the medium-term. There may also be opportunities for New Zealand with global economic growth potential shifting towards parts of our wider region, such as South East Asia, at a time when regional supply chains are being prioritised.

Strategically aligned partners may see benefit in deepening trade and economic integration with New Zealand. A less secure global environment may increase the relative attractiveness of New Zealand as a destination for foreign direct investment (FDI). The use of subsidies in large economies may lower prices for New Zealand consumers in sectors where New Zealand lacks productive capacity, including in goods enabling the energy transition.



Insight: New Zealand faces a much less certain and more disrupted global trading environment that means productivity gains will also depend on resilience in the economy, as well as our agility and the capture of new opportunities as they arise.

A technology transition with physical, digital and biological realms increasingly merged

Technology can significantly enhance productivity, though its effectiveness depends on good implementation and absorptive capacity. Rapidly developing technologies, including AI and quantum computing, have potentially transformative opportunities, including for economic and trade growth and productivity. However, there are uncertainties as to the extent and form in which these opportunities may be realised.

Technologies related to the production and processing of primary products, including genetic, synthetic and industrial biotechnologies, also have important potential to impact on New Zealand's productivity.

Generative AI is estimated to increase productivity by 1.5 per cent by 2035 and close to 3 per cent by 2055, with growth strongest in the early 2030s and then declining as the technology becomes normalised.²⁶

Emerging technologies also pose sizable risks and challenges, including for the labour market and for social cohesion, as well as the potential for harm from malign actors (eg cyber-attacks and disinformation).

These technologies are expected to shape the labour market, with AI's disproportionate effect on higher-skilled tasks indicating New Zealand's advanced workforce may be more exposed to disruption, reinforcing the need for targeted upskilling and regulatory adaptation.²⁷

Without proactive support and investment to reskill and upskill the labour force, there is a risk of widening inequality and long-term unemployment for affected groups. Productivity gains are most sustainable when they are inclusive and when workers are supported through economic transitions, particularly in sectors undergoing digital transformation.

New Zealand's geographic distance, alongside the other size, scale and capability challenges, have tended to limit access to, and adoption of, advanced technologies that are critical for driving productivity growth.^{9 28} Our comparatively small and dispersed population has also hindered dynamic knowledge transfer and innovation relative to more densely populated and geographically connected countries.

New Zealand will need to overcome these constraints to harness the potential productivity gains from digital technologies, including AI and robotics. Adoption of these emerging foundational or 'general purpose' technologies which have broad applications across multiple economic sectors is key to improving competitiveness, productivity and efficiency.



Insight: Rapidly developing general purpose technologies could drive significant productivity gains, but will require deliberate investment, inclusive adaptation and systemic transformation across institutions, industries and workforces.

An energy transition to renewable energy sources and a low emissions global economy, with increasing physical impacts from climate change

A global energy transition is under way, with many economies recognising geostrategic advantage from leadership in clean energy, as well as the imperative to lower climate warming emissions. Record amounts of renewable energy are added annually, though fossil fuels remain dominant at 80 per cent of global energy supply.

The changing climate will impact economies significantly, and particularly if climate tipping points are reached. Yet proactive and stable policy approaches, while likely to cause temporary declines in labour productivity as firms and workers adjust to new incentives, are expected to improve productivity performance over the medium- to long-term, including through innovation and efficiency gains.^{29 30 31} Delays and reactive decisions will, however, weigh on productivity through poorly managed resource allocation, stranded assets and increased risks of shocks.

Global renewable electricity generation is forecast to increase by the end of this decade by almost 90 per cent relative to 2023. This would be enough to meet the combined power demand of China and the United States in 2030, however, will still only meet 20 per cent of global energy consumption.³²

New Zealand's access to, and adoption of, renewable energy technologies could play a key role in helping to build a resilient and productive economy in the period ahead. New Zealand is currently facing pressing energy supply challenges and may face difficult choices in selecting the appropriate technologies to meet current and future energy needs. The energy transition

pathway ahead is unlikely to be straightforward and could lead to disruptions to existing patterns of activity which will demand a considered approach.

New Zealand's emissions reduction pathway will change our pattern of economic activity. The output of some sectors will increase, and others decrease, with the distribution of changes impacted by adopted policies. Our distinctive geography, economy and environmental ecosystems create vulnerabilities to sea level rise, coastal erosion and extreme weather events. Economic challenges from changing weather patterns will be particularly pronounced for primary industries. There will however be new opportunities for growing crops in new areas, and potentially more productive yields for some sectors.

The overall impact will depend on the severity of warming and the effectiveness of New Zealand's adaptation efforts to minimise impacts and unlock climate-related opportunities. Along with actions we take domestically, New Zealand is also committed to building Pacific resilience to the impacts of climate change. Climate related events in other countries are also likely to impact our productivity performance through disruptions to regional or global supply chains, migration and financial flows.



Insight: A proactive and planned climate response and energy transition will involve short-term adjustment costs for firms and workers, but over time can unlock significant productivity gains through innovation, efficiency and resilience.

A demographic transition – population growth in emerging economies, alongside ageing and shrinking populations in many developed economies

Demographic shifts will redistribute economic weight across the globe and influence relative productivity performance between developed and developing economies. The developing world generally will experience a positive 'workforce demographic dividend' - a growing percentage of the working age population contributing to economic growth and productivity.

In contrast, the developed world, and a small number of developing countries such as China, will see a growing 'dependency ratio' through its aging population, weighing on economic growth and relative productivity performance. This trend is happening in New Zealand: there is now four working age people per retiree, and this is projected to fall to just two by 2065.³³

Some developed economies including Japan are already experiencing a shrinking population, while others will soon share this population trajectory. The EU's population for example is forecast to peak in 2026.

Around half of the total projected population growth out to 2050 is expected to occur in just eight countries: Democratic Republic of Congo, Egypt, Ethiopia, India, Nigeria, Pakistan, Philippines and Tanzania. Mirroring these population dynamics, economic weight is shifting to the largest emerging economies. China, India, Brazil, Russia, Indonesia, Mexico and Türkiye are expected to overtake the G7 in economic size in the 2030s.³⁴

Global demographic shifts will influence New Zealand's productivity through impacting on global flows of goods and services, capital, ideas and people. New Zealand's current profile of international connections indicates a strong reliance on countries and regions that are forecast

to have aging populations in the coming years, and relatively weaker connections to regions anticipated to see increases in their working age population.

Global population dynamics point to opportunities for New Zealand with economies in ASEAN, South Asia and Africa, including as a means for our trade and investment mix to evolve and grow. New Zealand's similar demographic trends to other advanced economies also create opportunities to collaborate on boosting productivity amid an aging population.



Insight: Shifting global demographics will impact economies and markets, with implications for international connections, trade, and productivity performance.

5. Contemporary economic development and a policy framework

As outlined in Section 4, global shifts are creating a complex mix of opportunities and challenges for governments aiming to lift productivity. In response, many governments are adopting contemporary approaches to economic development that enhance competitiveness and build new capabilities plus also address the risks and opportunities of global change.^{35 36} These changes are reshaping how productivity is pursued.

Modern strategies need to go beyond traditional models, focusing not just on improving efficiency in existing industries, but also on diversifying into more knowledge-intensive and technologically-driven sectors with higher productivity potential. These choices, particularly related to economic development and international trade, are the focus of this section.

Building capabilities for contemporary economic development

Modern economic development strategies recognise that lifting productivity requires a multi-pronged, capability-focused approach. This involves combining strong horizontal policy settings, such as sound macroeconomic management, open trade, robust institutions, and quality infrastructure, with targeted (vertical) interventions that enable emerging, high productivity industries.³⁷

This combined approach includes:

- **Maintaining a stable, enabling environment** for investment, innovation, and competition (horizontal settings)
- **Improving efficiency** across industry value chains through innovation and technology
- **Investing in new capabilities through targeted policies** (vertical levers) to help knowledge-intensive and technologically-driven industries scale and compete globally.³⁸

These approaches draw on economic fields of study such as innovation studies, complexity economics, and the endogenous growth theory, that view economies as dynamic systems that evolve through feedback, learning, and institutional adaptation. A key concept is path dependence; countries are more likely to succeed by expanding into industries adjacent to their existing strengths.³⁸

Several contemporary insights are particularly relevant for New Zealand:

- **Missing public inputs** such as infrastructure, research, skills, and institutions, can constrain productivity, especially for emerging sectors or technologies like AI, but also in areas where New Zealand retains long-standing comparative advantage.³⁹
- **Clusters and agglomeration** are critical for knowledge-intensive industries, which thrive on proximity, talent pooling, and rapid feedback loops, and **place-based strategies** can focus on regional strengths and constraints to unlock local potential.
- **Innovation is systemic**, not limited to high-tech sectors; it can occur across all parts of the economy.

Unlike the centrally planned models of the past, contemporary economic and industry development strategies are designed to be adaptive and respond to markets. Governments act as enablers, not directors, while firms and entrepreneurs lead the discovery of viable new

activities. Markets operate through trial and error and a diverse capability base enhances resilience.

Governments do not have all the levers when it comes to improving productivity, but policy choices aimed at leveraging and extending capabilities can make a real difference.

Approaches in small advanced economies: why openness matters

Of course, international reality is much more complex. Traditional protectionist industrial policy has made a comeback in recent times, particularly in larger economies in response to geopolitical tensions, supply chain vulnerabilities, green transitions and digital transformation. In contrast, small advanced economies (SAEs) like New Zealand benefit more from an open, rules-based multilateral trading system.

For this reason, traditional instruments, particularly firm-level subsidies, are rarely likely to form part of a sound economic policy framework for SAEs. Given size and lack of diversity in small economies, subsidies can act to distort domestic markets, preventing efficient economic outcomes by diverting resources from more productive sectors to less productive ones that may ultimately hinder longer term growth.

Moreover, direct government support, can come with a significant price tag and difficult and often poor policy choices. The fiscal costs of industrial policies must be financed via higher taxation, by cuts in government spending in other areas or borrowing from future generations. These trade-offs are more acute in small economies compared to larger ones, as larger countries have deeper fiscal pockets and greater domestic economic diversification.

On top of fiscal implications, sector-specific subsidies can also negatively affect producers in other countries, distorting international markets. This can lead to wasteful and harmful subsidy races as other governments respond in kind. This is an environment in which small economies cannot compete relative to larger economies in distorted global markets.

Because of the importance that open markets have for the long-term prosperity of SAEs, any approaches to economic development need to ensure that they do not act to undermine well-functioning global markets and rules-based trade. SAEs are therefore less likely to pursue or benefit from traditional protectionist industrial policy and instead are more likely to apply contemporary economic approaches that reflect their structural characteristics and constraints.

Approaches grounded in openness, adaptability, and capability development offer a more effective and sustainable path to long-term productivity and competitiveness. By focusing on building capabilities, economies can enhance both their productivity and resilience over time.



Insight: Productivity growth requires a mix of complementary levers and sustained policy frameworks and settings. This involves maintaining a stable and enabling environment, improving efficiency across existing value chains, and investing in the bespoke capabilities needed for new industries to thrive.

A policy framework for productivity

The framework below draws on contemporary economic approaches to guide the design of policies to enhance productivity (Figure 5). MBIE and MFAT have developed this framework to help articulate the range of levers that can be applied to support productivity in parts of the economy, and the evidence-based strategic assessment that should inform these choices. It aims to improve success and minimise failure in a global context of change.

The framework has been informed by work of OECD and others to enable deliberate and evidence-based policy approaches for industrial or economic policy initiatives.^{36 40 41} Our framework focuses on the strategic assessment and range of levers available and does not include other important steps such as evaluation.

Figure 5: Policy settings for productivity – a framework for identifying levers to enhance productivity potential in the economy

Government economic goals	Productivity	Security/Resilience	Other
Strategic assessment	Focus: Viable opportunities: sector, firm, place, technology	Dynamics: Innovation needs of emerging industries	Trends: Future outlook to identify threats and opportunities
Horizontal and vertical levers	Domestic		International
	Horizontal / Foundational - the 'must haves'	Vertical / Targeted - choices about which and how	Mixed levers
Choice of levers is informed by government economic goals and strategic assessment. Levers listed here are examples only.	Macroeconomic stability	Direction-setting, coordination	International rules, norms, institutions
	Tax settings, incentives, savings	Market intelligence and information	Trade and economic agreements
	Regulations, eg competition, finance	Capital investment, loans, grants	Regional economic integration
	Infrastructure, eg energy, water and IT	Regional clusters and networks	Investment attraction
	Education and science system	Innovation and sector R&D	Trade promotion
	Labour markets	Public procurement Skills and workforce Regulatory enablement Infrastructure	
For each vertical/targeted lever, use can be either: Strategic: Government invests significantly with coordinated, long-term vision, eg public-private partnerships, investment attraction and skills development. Supportive: Government provides targeted policies to catalyse industry development. Facilitative: Government creates enabling conditions with minimal direct investment, eg convening, regulatory reform and information sharing.			

Government economic goals

The upper part of the framework sets out the economic goals that a government may have at any time, such as growth, productivity and resilience. These goals set the context for efforts to lift productivity growth and guide the strategic approach and choice of levers. Clearly articulated goals influence both formal rules and informal norms, shaping how systems operate and fostering behavioural consistency across sectors.^{42 43} This clarity embeds shared values

into institutions, aligning incentives and enabling more effective governance and policy implementation.

Strategic assessment of focus, dynamics, and trends

The green layer of the framework indicates the strategic assessment needed to guide government's role, set out as three dimensions: Focus, Dynamics and Trends. Key questions for each of these dimensions are indicated in the table below, along with examples of analysis approaches through market, industry and strategic data and insight, and engagement^b.

Focus: Viable opportunities – sector, firm, place, technology	Dynamics: Innovation needs of emerging industries.	Trends: Future outlook to identify threats and opportunities.
What sectors or activities are high value, R&D and capital- intensive, and developing complex products/services?	What do emerging industries need to be internationally competitive, eg are there missing inputs, gaps in the supply chain, need for skills, bespoke regulations, international agreements, market access?	What is occurring or may occur in the global/domestic environment over next 5-10 years in terms of geopolitics, technological developments, energy transitions, and emerging areas of economic advantage and risk, that should inform policy?
Do we have advantages or capabilities that can be leveraged for growth?	What can be leveraged to drive innovation eg technology, capabilities of private and government sector, international connections?	What are the important areas of uncertainty?
Is there global demand with a large or growing market?	What spillover benefits are possible or sought?	
Is the New Zealand market developing through growth in local and foreign investment?		
Analysis through: Regular, granular market analysis, eg on firm formation, export growth, investment behaviour, and demand trends, to identify where the market is signalling growth opportunities. Trade data analysis, eg revealed comparative advantage analysis to identify economic or product complexity and diversification opportunities.	Analysis through: Systematic gathering of emerging industry innovation processes, sectoral case studies, global industry dynamics, and international comparisons. Engagement with and across business, policy, and science communities. System analysis.	Analysis through: Strategy and insights activities, including horizon scanning, scenario planning, and futures research. Whole-of-government approach may enable.

Strategic assessment relies on strong information flows: from granular market intelligence, to emerging technologies, to high level insights. These identify where momentum is building, opportunities are ready, and where targeted interventions could unlock further growth. Government's primary role here is to enable discovery, not dictate direction, but the strategic assessment using market, industry, and international analysis can inform the government's role, any selection of sectoral or other areas for focus, and lever choices.

^b More detail on analytical methodologies can be found in various sources, for example in the EQUIP toolkit on industrial policy (2024), and through approaches used in New Zealand (eg Coriolis, 2023) and elsewhere, (eg the UK to develop their Modern Industrial Strategy) – see reference list.

Horizontal and vertical levers are complementary tools for productivity

The lower part of the framework (Figure 5) displays examples of both horizontal and vertical levers. Horizontal levers, such as sound regulation, competition policy, and infrastructure (eg energy, water and information technology, as well as domestic and international transport networks), are widely agreed to be effective and less prone to market distortion or capture.⁴⁴ We need to keep working on these.

However, horizontal policies alone may not address sector-specific market failures or support emerging industries.³⁶ This is because new or emerging industries typically require institutional support and investment in bespoke knowledge and capabilities to gain traction. Vertical or targeted policies come in a vast range of types, well beyond what may be called sectoral grants or subsidies, influencing aspects such as firm performance, industry dynamics, or demand. A feature of these levers is that they can facilitate innovation, including diversification and growth.

There is more limited and mixed evidence on the effectiveness of targeted policies than there is for horizontal policies.⁴⁴ Evidence from overseas studies suggests they are more effective for young firms, for small rather than large firms, and may be particularly effective for technology-intensive exporting sectors, and emission reduction technology development.^{36 45}

Research methods are now considering the multiple rationales and impacts of targeted policies, and this is allowing clearer insights about their impacts. For instance, a 2025 econometric study found that South Korea's targeted manufacturing policies were associated with positive effects on productivity, learning by doing, spillovers, and downstream industries.⁴⁶

Choices about levers can be informed by the strategic assessment outlined above. Horizontal levers may need changes to address weaknesses in framework conditions. Vertical or targeted levers may be subject to more choices about how they are applied, for example, what mix of levers, and how active a role for government.



Insight: Both horizontal and targeted levers are needed for productivity growth. Targeted policies require careful design to avoid unintended consequences and ensure alignment with trade commitments.

Addressing market and coordination failures to unlock innovation

Market failures, especially in smaller, geographically dispersed economies like New Zealand, can hinder innovation by limiting access to commercialisation infrastructure, market information, and industrial clusters. These challenges are compounded by coordination failures, such as misalignment between education and industry or weak collaboration between firms and research institutions, that often require government intervention.

While public investment in R&D is important, its success depends in part on its scale (ie the quantum of funding) and its integration with complementary assets like capital, manufacturing processes, and regulatory expertise.⁴⁷ Innovation thrives when it builds on existing strengths, an approach known as development through adjacencies, which reduces risk and leverages shared infrastructure. Global evidence shows that coherent, well-coordinated policy is

essential to overcoming productivity challenges, whereas fragmented approaches can entrench inefficiencies.⁴⁸



Insight: Development through adjacencies reduces risk and can leverage shared knowledge, infrastructure, or skills. Clear, coordinated policies are essential to avoid locking in inefficiencies.

Managing risks and building resilience

Productivity-enhancing policies play a critical role in shaping economic resilience. Horizontal levers such as sound macroeconomic settings, open trade and strong institutions provide stability and adaptability, while targeted interventions can address specific vulnerabilities in areas like energy security, supply chains and digital connectivity.^{40 49 50} The Treasury's 2025 Long-term Insights Briefing explored the role of fiscal policy to help manage economic shocks and cycles and suggested New Zealand maintain policy settings that help keep the economy flexible and adaptable to change.⁵¹ For New Zealand, geographic isolation amplifies these challenges, making the strategic use of targeted levers particularly important. In a changing world context, a diverse range of capabilities also provides a reserve to respond to new or unexpected situations.

A resilient economy requires government to take a forward-looking approach – one that can anticipate and prepare for structural changes, including those driven by climate risks.⁵⁰ In New Zealand, maintaining this future orientation has proven challenging. When policy settings are fragmented or inconsistent, they risk reinforcing inefficiencies and obstructing transformative change. To support resilience and sustained productivity growth, policy must be coherent, adaptive and strategically aligned with long-term objectives.

However, the use of a wide range of levers increases implementation complexity and the risk of unintended consequences. In assessing the appropriateness of policy tools, policy makers also need to be aware of possible unintended negative impacts. These include curbing domestic competition, disincentivising innovation, increasing protectionism, and reducing contestability of markets, especially if they favour incumbents.

Free trade and open international markets have been key drivers of New Zealand's economic growth and resilience over recent decades. The use of targeted levers needs to be consistent with New Zealand's legal commitments in the WTO and through other trade agreements. Some kinds of industrial policy interventions can be enhanced by international cooperation to maximise their benefits. This can include international regulatory cooperation to promote interoperability of standards, or trade policy negotiations to mitigate distortive beggar-thy-neighbour policies.

International levers are integral to productivity performance

Improving an economy's international connectivity, including its trade and investment flows, is a key enabler for productivity performance. International trade provides static productivity gains by enabling firms to access larger higher value markets as well as lower-cost inputs. More importantly, international trade offers dynamic productivity gains, as firms reinvest profits into

innovation, scale up production and increase efficiencies, adopt new technologies and techniques, and build resilience through global competition and foreign investment.

Levers available to governments to enhance trade and international connectedness include support for international rules, norms and institutions; the negotiation of trade and economic agreements, including those that deepen regional economic integration; and active economic diplomacy, trade promotion and investment attraction. The use of these levers improves predictability through clear and enforceable rules, giving businesses the confidence to invest and trade internationally. It also creates opportunities for businesses that might not otherwise be available or visible. For SAEs, the first best lever has been a well-functioning international rules-based trading system, through the WTO, that provides certainty, a level of transparency about access levels, and a dispute settlement function.

The disintegration and fragmentation of the rules-based trading system over recent years, and the disabling of the WTO dispute settlement function, has led to an increased emphasis and reliance on the negotiation of trade rules through bilateral, regional and plurilateral FTAs. These include innovative agreements amongst smaller groups of likeminded countries that respond to emerging global issues and trends (discussed in Section 4) including digital trade⁵² and the interrelationship of trade, climate change and sustainability⁵³, as well as opportunities in indigenous trade.¹⁸ The broadening of FTA networks across a wide range of partners can also position SAEs to benefit from new and growing market opportunities that arise from demographic shifts.

Leveraging trade agreements for deeper economic integration

FTAs tend to remove nearly all market access barriers between the parties, such as restrictions on market entry, tariffs, and quotas, across all goods and services trade. Some but not all agreements also establish a base level of regulatory alignment and cooperation between the parties. Agreements that deepen economic integration between countries extend this cooperation, placing emphasis on coordination, alignment and/or mutual recognition of regulations, standards, and qualifications to facilitate the free flow of goods, services, capital, and labour across borders.

Economic gains from deeper integration tend to be weighted towards more complex, higher productivity sectors, as these sectors generally face higher regulatory and behind-the-border hurdles. Deeper economic integration, including at a regional level, therefore enables expansion and innovation in high productivity sectors by removing non-tariff barriers, increasing the flow of information and ideas, and accessing a wider set of economic capabilities. It also enhances access to a wider variety of imports, attracts investment, and facilitates the movement of skilled professionals.

For productivity benefits to accrue from trade and economic agreements, these should be well utilised and leveraged by both government and business. This may involve governments utilising dispute settlement mechanisms to enforce rights accrued under an agreement, as well as promotional work to ensure businesses are fully utilising tariff preferences and other benefits under an agreement. It also means regular reviews and re-negotiation of these agreements to ensure they stay current and relevant to New Zealand exporters.

Trade agreements need to be seen as part of a deliberate strategy to strengthen and deepen New Zealand's international connectivity. To this end, the focus of work needs to be not only on negotiating agreements, but also on ensuring their effective implementation, including regular reviews to modernise the agreements and meet 'best practice' expectations. Regulatory coherence and deepening connectivity through strategic diplomacy are therefore key tools for unlocking global opportunities. SAE governments also place emphasis on active economic and trade diplomacy, which often occurs within the frameworks established by trade and economic agreements and covers activities such as sharing of market intelligence with business, trade promotion and investment attraction.



Insight: Economic integration and regulatory alignment are not just trade enablers, they are strategic tools for boosting innovation, competitiveness, and resilience.

Modern economic approaches and trade policy are increasingly interdependent and mutually reinforcing

In a challenging and rapidly changing global environment, New Zealand's trade policy must continue to evolve to deliver sustained long-term productivity gains. Relying on traditional trade policy approaches is no longer sufficient and has not been for some time. The likelihood of securing significant new trade agreements is diminishing, and global dynamics are shifting.

New Zealand can adapt by improving the efficiency and leveraging of existing FTAs and seek to deepen and widen these agreements into 'non-classical' trade policy elements such as business law, competition policy, qualifications recognition and mutual recognition, and even adoption of standards, where appropriate. In short, trade agreements need to move beyond 'at-the-border elements' to 'behind-the-border' elements. To this end, policy makers should explore innovative trade policy tools. Stronger links to firms' dynamic capabilities – enabling them to adapt strategy and production – will be essential to help businesses respond to competitive pressures, seize opportunities, and sustain productivity growth.

Governments worldwide are increasingly aligning industrial strategy with trade policy and diplomatic efforts to strengthen both domestic growth and global positioning. Through focus in key sectors, countries aim to build competitive advantages that support exports and attract international investment. At the same time, trade policy leverages these strengths to open markets, negotiate favourable terms and build strategic partnerships. OECD analysis shows that aligning domestic regulations with international standards enhances competitiveness and strengthens innovation ecosystems.⁵⁴

Diplomacy also plays a crucial role in shaping global standards, managing economic risks and fostering trust. This integrated approach reflects a broader shift in economic policymaking, where domestic development and international engagement are seen as mutually reinforcing tools for national resilience and influence.



Insight: Domestic economic development policies and international trade policies should be coordinated, aligned and mutually reinforcing to best capture opportunities for productivity growth.

6. Insights from small advanced economies – case studies

Governments around the world are renewing their focus on targeted or vertical policy levers to respond to strategic imperatives such as boosting productivity and competitiveness, strengthening national security, and advancing the energy transition. While this shift is gaining prominence in larger economies, many SAEs have long employed vertical policies as a strategic tool for industry and economic development.

For New Zealand, the challenge is not just to deploy these levers effectively, but to tailor them to fit our unique economic structure, institutional settings, and resource base.

As a small, open economy, New Zealand faces distinct constraints and opportunities. This makes comparisons with other SAEs particularly valuable; not to replicate their models, but to understand what is possible and to reflect on options and choices that may be relevant to our interests. Small economies are inherently specialised; they cannot do everything and must prioritise. New Zealand often spreads its efforts across many small-scale initiatives – this has been described as a ‘sub-therapeutic dose’ approach that can lack the scale, coordination, and ambition needed to deliver transformational change.^{9 55}

Countries like Denmark, Finland, Ireland, and Singapore provide illustrations of how the strategic use of targeted policies can complement broad horizontal settings to accelerate innovation, enable knowledge diffusion and build capabilities across the economy. This can enable economies to develop by building on existing strengths and branching into adjacent and related industries to lift the level of productivity.

For example, these SAEs have over time become more diversified and export more complex products. Denmark has introduced 14 new export products over the past 15 years, Singapore 12, and Ireland seven. New Zealand has diversified into only two.⁵⁶

This section, drawing on a range of SAE analyses, explores the approaches of these four countries as case studies – identifying strategic goals, use of policy levers and examples of how these approaches have impacted productivity in each economy.^{57c}

A common feature across the economies studied is their deep economic integration into regional markets (eg the European Union, or ASEAN), at a greater scale than New Zealand’s only comparable model, the Single Economic Market (SEM) with Australia.

The section concludes with a set of insights that we think can inform New Zealand’s efforts to accelerate the growth of high productivity activities.

^c Including analysis for the Former Productivity Commission ‘Frontier Firms’ report (Skilling, 2020).

6.1 Denmark



Government economic goals

Denmark's economic strategy has undergone a significant transformation, from a passive industrial policy to a dynamic, systems-based approach that leverages its EU membership and actively fosters high productivity industries and firms. This evolution is anchored in three strategic pillars: green transition, digitalisation, and innovation, and supported by national frameworks like the Recovery and Resilience Plan (RRP) and sectoral roadmaps.

Strategic assessment of focus, dynamics, and trends

Focus: Viable opportunities – sector, place, technology

Traditional agriculture industry developed into bioenergy, agritech, and food-tech sectors. Denmark also built on strengths in shipping, pharma, and renewable energy.

Regional clusters in clean tech and advanced manufacturing were leveraged for green transition and export growth.

Dynamics: Innovation needs in emerging industries.

Emerging industries like carbon capture, biosolutions, and circular economy needed bespoke regulation, skilled labour, and international market access.

Innovation was driven by cluster organisations and Business Lighthouses, with spillovers into SMEs and regional hubs.

Trends: Future outlook to determine threats/opportunities

Climate change, EU green transition, and digitalisation are key drivers.

Uncertainty around energy security and global supply chains reinforced Denmark's focus on sustainability and resilience.

Green and digital ambitions also face challenges, including balancing rapid innovation with social and regional equity, and skills gaps.

Choice of levers to enable productivity growth

Domestic: Denmark supports productivity growth through a strategic mix of innovation funds, SME programmes, and cluster organisations. It builds deep ecosystems via Business Lighthouses and Innomissions, while regional Business Hubs offer flexible support. Denmark's 'triple helix' model – linking government, industry, and academia – is made possible by its strong public investment in education and research. Anchored in strengths like renewable energy, life sciences and advanced manufacturing, Denmark's green clusters and CO₂ initiatives boost competitiveness. Denmark prioritises areas with global relevance and builds clusters to achieve scale and resilience, including across borders – eg the strategic, long-term investment in the Øresund bridge (with Sweden) enabled a life-sciences 'Medicon valley' cluster to emerge.

International: Denmark is expanding its global footprint through a new development strategy that integrates trade, foreign policy, and diplomacy. The country's sustained productivity growth has been closely tied to its integration with the broader EU economy, benefiting from regional trade, a vast consumer market, innovation networks, and structural reforms supported through EU frameworks. As EU Council President in 2025, Denmark is prioritising competitiveness and green transition, positioning itself to influence regional trade and productivity agendas.

Firm-level example – Ørsted (CleanTech): Denmark's Innovation Fund supported Ørsted's transition from fossil fuels to global leadership in offshore wind through R&D grants and university partnerships. Public-private ownership and collaboration enabled rapid technology development and international scalability in renewable energy, while contributing to national economic and environmental resilience.

Denmark's deliberate use of 'triple helix' collaboration and cluster-based policy levers are examples for New Zealand. These are focused on areas of comparative advantage like agritech and sustainable food and supported by regional hubs and coordinated investment to boost productivity and global competitiveness.

6.2 Finland



Government economic goals

Finland has transformed its economy from one dominated by forestry, agriculture and fisheries to becoming a manufacturing and technology leader. It has pursued a long-term strategy focused on building a knowledge-based economy through sustained investment in R&D, innovation, and human capital, and leveraging its EU membership. After setbacks in the mid-2010s, it recommitted to innovation-led growth, with a national roadmap for research, development and innovation and a mission-based approach to economic transformation.

Strategic assessment of focus, dynamics, and trends

Focus: Viable opportunities – sector, place, technology

Leveraged its strong ICT and engineering base to expand into adjacent sectors like AI, robotics, and clean energy.

Regional clusters in digital manufacturing and sustainable forestry provided platforms for innovation.

Dynamics: Innovation needs of emerging industries.

Emerging industries required international competitiveness in AI, circular economy, and offshore wind. Gaps included skills, R&D investment, and international partnerships.

Innovation was driven by public-private ecosystems (eg Growth Engines), with spillovers into SMEs and regional economies.

Trends: Future outlook to identify threats/opportunities.

Global technological shifts (AI, green tech), EU climate goals, and post-Nokia economic restructuring shaped policy.

Uncertainty around global competitiveness and talent retention informed Finland's recommitment to innovation-led growth.

Choice of levers to enable productivity growth

Domestic: Finland's small size and peripheral location necessitated a shift from commodity exports to knowledge-intensive industries. Key levers include R&D investment (~3 per cent of GDP, with a target of 4 per cent by 2030), public-private partnerships, and targeted support for ecosystems through policies such as Growth Engines. Finland also uses challenge-based funding and strategic centres for science and technology to drive disruptive innovation, built on a strong foundation of public investment in education and research. Finland's forestry sector exemplifies how policy levers can be strategically applied to transform a traditional resource industry into a globally competitive tech and bioeconomy leader.

International: Finland's internationalisation strategy integrates trade, innovation and diplomacy to help firms expand globally, and focuses on matching Finnish capabilities with global opportunities, especially in sustainability and competitiveness. Finland's productivity trajectory reflects its integration into the EU economy and vast consumer market, with shared policy frameworks and structural reforms shaping its recovery and long-term competitiveness.

Firm-level example – Nokia (Tech/comm): Finland's strong R&D and public-private partnerships helped Nokia evolve from a forestry pulp company into a global tech leader. After its handset decline, Nokia pivoted to 5G infrastructure, backed by government innovation funding, EU-aligned policy, and early digitalisation and AI strategies. This transition also seeded Finland's startup ecosystem, with ex-Nokia talent founding new tech firms and capabilities.

New Zealand can learn from Finland's deliberate investment in R&D, education and innovation ecosystems, especially in transitioning primary sectors and developing weightless exports. A mission-led approach and strong public-private coordination has helped build frontier firms. Finland's innovation-led strategy also faces challenges similar to New Zealand, including talent retention, scaling frontier firms, and sustaining global competitiveness.

6.3 Ireland



Government economic goals

Ireland has evolved from an agriculture-based economy into a global hub for technology and pharmaceuticals, marked by the ‘Celtic Tiger’ era and a strong recovery post the 2008 financial crisis. Strategic, long-term reforms – such as reducing corporate tax rates, actively attracting US tech FDI, and leveraging EU membership – have attracted major global firms, positioning Ireland as a leading tech exporter with a skilled workforce and a preferred European base. Now, Ireland is shifting focus toward strengthening domestic capabilities and reducing reliance on foreign investment to sustain growth in high-potential export sectors. Political stability has supported consistent economic policy and planning throughout this transformation.

Strategic assessment of focus, dynamics, and trends

Focus: Viable opportunities – sector, place, technology

Ireland expanded from FDI-led manufacturing into high value adjacencies like medtech, fintech, and food innovation.

Regional specialisations in dairy, meat, and digital services were scaled through national networks.

Dynamics: Innovation needs of emerging industries.

Emerging industries needed stronger local R&D, talent pipelines, and diversification of export markets.

Innovation was supported through Technology Gateways and High Potential Start-Up programmes, with spillovers into local supply chains and research institutions.

Trends: Future outlook to identify threats/ opportunities

Global tax reform, Brexit, and shifting FDI patterns prompted Ireland to rebalance toward domestic enterprise growth.

Uncertainty around global trade and talent mobility shaped its diversification strategy.

Choice of levers to enable productivity growth

Domestic: Ireland uses a wide range of facilitative horizontal settings and productivity-enhancing tools, including over 170 support schemes such as R&D tax credits, innovation vouchers and tailored support for high-potential start-ups. The scale of investment in Ireland is significant (their Industrial Development Authority annual budget is NZ\$345 million). Economic agencies offer grants and equity investments, as well as low-cost credit to SMEs. Ireland supports 45 industry clusters leveraging regional innovation strengths. Institutions like the Health Innovation Hub and Innovative Partnerships Programme foster collaboration between industry, research, and healthcare. Targeted support has driven growth in sectors like food processing and pharmaceuticals, backed by research linkages and innovation tax incentives.

International: Ireland’s Global Ireland 2025 and Action Plan on Market Diversification expand trade resilience and global reach, leveraging diplomatic missions in over 100 cities, and a large, influential diaspora network, to promote Ireland as the English-speaking, common-law gateway to the EU. EU membership has supported Ireland’s productivity growth, enabling access to the Single Market and aiding economic resilience through coordinated fiscal and trade policies.

Firm-level example – Medtronic (FDI & Life Sciences): Ireland’s favourable corporate tax regime and targeted FDI incentives attracted Medtronic to establish a major innovation hub in Galway. Government focus on multinational engagement, skilled talent and EU market access enabled the firm to scale R&D and export globally.

Ireland’s experience in aligning facilitative horizontal settings (eg tax) along with a purposeful, targeted FDI approach and deeper regional integration through the EU has transformed Ireland’s economy. More recent experience in scaling local firms, building innovation infrastructure and fostering regional clusters offers valuable productivity-enhancing lessons for New Zealand.

6.4 Singapore



Government economic goals

Motivated by resource constraints, trade dependence, and the imperative of national resilience and security, Singapore has evolved from a low productivity entrepôt trade hub in the 1960s, into a high-tech, knowledge-based economy with globally competitive clusters in finance, logistics and advanced manufacturing. This shift was driven by strong long-term strategic planning focused on export-led industrialisation, attracting foreign talent and capital, and later, innovation-focused policies, supported by strong institutions and coordinated efforts between government, employers and unions. Singapore's long-term economic strategy has also benefited from its sustained political stability and leadership continuity, and ASEAN positioning.

Strategic assessment of focus, dynamics, and trends

Focus: Viable opportunities – sector, place, technology

Singapore built on its logistics and electronics base to expand into advanced manufacturing, precision engineering, and digital services.

Place-based capabilities were concentrated in innovation districts and industrial parks.

Dynamics: Innovation needs in emerging industries.

Emerging sectors like AI, robotics, and green manufacturing needed international standards, talent attraction, and regional integration.

Innovation was driven by Alliances for Action and transformation maps, with spillovers into SMEs and regional partners.

Trends: A future outlook to determine threats/opportunities.

Geopolitical tensions and supply chain reconfiguration have shaped Singapore's strategic posture.

Uncertainty around globalisation and trade fragmentation led to deeper regional engagement.

ASEAN digital integration offers new opportunities for innovation and regional collaboration.

Choice of levers to enable productivity growth

Domestic: Singapore supports productivity growth through a strategic mix of levers, including the Economic Development Board, targeted R&D incentives, startup and innovation programmes like Startup SG and Alliances for Action, and coordinated digitalisation and talent attraction efforts. It leverages State-Owned Enterprises and Government-Linked Companies in key sectors, while grants such as the Productivity Solutions Grant and Enterprise Development Grant foster local enterprise development. Advanced infrastructure, global partnerships, and industry clustering (especially in precision engineering and electronics) enable innovation and attracts investment within its compact geography. Recent schemes have focused on re-educating workers for future workforce disruptions, eg AI.

International: Singapore's approach is deeply international in orientation, with regional integration playing an important role in its economic vision. By advancing digital trade and supply chain connectivity through ASEAN agreements Singapore reinforces its position as a key node in global value chains, with proximity to large consumer markets.

Firm-level example – AvePoint (Enterprise software): Singapore's innovation strategy combines active government involvement with targeted investments in strategic sectors like deep tech and enterprise software. AvePoint leveraged this environment, benefiting from infrastructure, grants and collaboration with A*STAR to establish a regional R&D hub and scale operations across Asia.

Singapore has taken an enduring, integrated and responsive strategic 'top down' approach to refocus its economy. By combining innovation platforms, challenge-based initiatives, talent attraction, and regional partnerships, alongside strategic use of state-linked institutions, they have helped to scale frontier firms and build a more productive economy.



Key insights from SAE case studies

Adopt a coherent, long-term economic approach

The SAEs examined in this section maintain stable, long-term economic strategies that evolve but remain focused, even across changes of government. In contrast, New Zealand's economic policy has often been fragmented and agnostic, with limited strategic focus on productivity-enhancing sectors. A coherent, long-term approach with a focus on high productivity sectors is key to sustained economic performance and resilience in New Zealand, with SAEs demonstrating the need for this to be supported by clear governance, evaluation mechanisms, and cross-agency coordination. Without this, efforts risk being diluted and reactive rather than transformative, and we continue a bias towards things we have always done.

Prioritise internationally oriented sectors and clusters

SAEs drive productivity by concentrating on internationally competitive sectors – like Denmark's renewables, Ireland's food and pharma, and Singapore's advanced manufacturing – supported by strong ecosystems of firms, talent, and research institutions. With exports averaging 59 per cent of GDP in SAEs, New Zealand's share at just under 25 per cent is relatively low. This is compounded by limited FDI flows, which reduce exposure to global innovation frontiers. New Zealand could unlock greater value by identifying and backing high-potential sectors and regional clusters. The case studies illustrate how clusters can thrive when governments invest in shared infrastructure, innovation systems and international partnerships – enabling knowledge spillovers, talent pooling, and feedback loops through coordinated policy.

Support the growth of large, globally engaged firms

Large firms disproportionately contribute to productivity and internationalisation. Ireland and Singapore have actively scaled domestic firms and attracted FDI to build globally competitive companies. New Zealand's lack of large, internationally engaged firms is partly due to constraints in capital markets, governance structures (especially in cooperatives), and limited incentives for offshore expansion. To address these constraints, policy could support capital access, reform governance models and incentivise offshore growth. This would help build globally competitive firms that can anchor innovation ecosystems and drive export-led growth.

Regional integration, strategic internationalisation, and trade diplomacy

SAEs have increasingly aligned international engagement with domestic economic goals to boost competitiveness, productivity and resilience. Strategic internationalisation and trade diplomacy have helped them to promote key sectors, attract FDI and integrate wider climate and development objectives. Regional integration plays a critical role – eg Finland, Denmark, and Ireland benefit from EU membership, with most trade occurring within the internal market. Over 70 per cent of Singapore's trade is within the Asia Pacific, leveraging regional frameworks to reduce trade friction and compliance costs. Regulatory harmonisation within these blocs supports innovation and global value chain integration. New Zealand can learn from these models by aligning trade and international engagement with domestic economic priorities. Regulatory coherence and strategic diplomacy are key tools for unlocking global opportunities.

7. New Zealand policy settings for productivity growth – case studies

New Zealand has used a mix of horizontal and vertical levers to support productivity growth. This section provides four case studies of areas in which this has been done to illustrate application of the framework introduced in Section 5.

The first three case studies are examples of where New Zealand governments have used vertical levers to support different sectors over time:

- **7.1 Dairy** – selected because this has had a broad range of targeted government interventions over many decades.
- **7.2 Space and advanced aviation** – selected because it is a new and rapidly growing sector where government has played a key facilitative role.
- **7.3 Biomanufacturing** – selected because it is an emerging sector, building on existing capabilities and strengths, where the government to date has played a more limited facilitative role.

These case studies are illustrative only and are not intended to imply that these sectors are exemplars or recommended for government action. Collectively they show the range of approaches government could adopt when considering the use of targeted interventions. Common themes and key insights of the three sector case studies are then discussed.

The fourth case study (7.4) explores an application of the international levers in the framework: the **Trans-Tasman Single Economic Market (SEM)**. This illustrates a mix of horizontal settings and vertical policies, and opportunities to enhance productivity through deeper international integration. Key insights from this case study are then presented.

7.1 Dairy

- Major New Zealand export sector with enduring comparative advantage.
- Depth of capabilities (eg farming, processing, logistics), enabled through an extensive range of government targeted support over many decades.
- Capabilities that can be leveraged to grow high value adjacent products.



Credit: Shutterstock

Since the late 19th century, successive governments have recognised the importance and future potential of the dairy industry to the New Zealand economy for growth, exports and innovation. They have provided sustained support to develop the sector through investments in infrastructure, research and innovation, enabling international trade and investment and establishing regulatory frameworks. The performance of the dairy industry today is driven by public and private sector efforts, often working collaboratively to improve productivity, maintain competitiveness, respond to global market shifts and address sustainability challenges.

New Zealand's dairy industry accounts for about a quarter of the country's exports and New Zealand is the largest dairy exporter in the world by value.⁵⁸ Through this, New Zealand has established an enduring comparative advantage in dairy exports and other related products.

Strategic assessment of focus, dynamics, and trends

Focus: Viable opportunities – sector, place, technology

From exporting butter and cheese in the early days, New Zealand has developed deep and diverse capabilities in the dairy industry. This has enabled it to expand into multiple high value adjacent products, such as whey protein, lactoferrin and infant formula.

This expansion has enabled the development of further adjacent products, for example in biomanufactured products such as dairy-derived bioactives, nutraceuticals and pharmaceuticals (see also 7.3). New Zealand is developing new capabilities in these areas and is experiencing rapid export growth.

It has also enabled adjacencies across the supply chain, such as agritech and farm management systems, logistics and cold chain services.

Dynamics: Innovation needs of emerging industries.

New Zealand's dairy industry is built on a network of capabilities including farming, processing, logistics, research and regulation.

Capabilities have taken time to develop and indicate the pace of industry change is generally measured in decades.

International partnerships connect domestic capabilities to global markets.

New Zealand dairy industry has attracted significant global investment. Seven of the top ten global dairy companies have operations in New Zealand.

The cooperative business model allows a long-term

Trends: Future outlook to identify threats/opportunities.

The dairy industry poses significant environmental challenges. Livestock produce methane which contributes to climate change. Intensive farming leads to nutrient runoff that can pollute waterways. Changes to farming through new technologies and practices are starting to enable fewer environmental impacts, eg through the use of biofertilisers.

Advances in precision agriculture, sensor networks, and advanced processing tech are expected to drive further yield growth (eg milk per cow).

Shifting global demand for sustainable, functional, and high value nutrition is accelerating investment in emissions reduction, bio-based products and adjacent health and nutrition industries.

focus though can limit innovation.

Choice of levers to enable productivity growth

The table below provides illustrative examples of the sector specific levers, domestic and international, governments have used to support the development of the dairy industry.

Underpinning these targeted levers are horizontal/foundational settings for the economy, such as macroeconomic stability, tax settings (eg the R&D tax incentive), infrastructure, and regulations which have been adapted over time in response to changing circumstances. Government's use of international levers incorporates both horizontal (economy-wide) and vertical (sector-specific) elements, hence indicated as 'mixed' in the table below.

Domestic Vertical/Targeted	International Mixed
Direction-setting, coordination - Ministry for Primary Industries (MPI) - New Zealand Dairy Board (until 2001)	International rules, norms and institutions - WTO Agreement on Agriculture - WTO Ministerial Decision on Agricultural Export Competition
Market intelligence and information Insights work programme by MPI	Trade and economic agreements Free Trade Agreements, eg China, EU, UK, CPTPP
Capital investment, loans, grants - Primary Sector Growth Fund - Sustainable Food and Fibre Futures fund - Primary Growth Partnership fund	Regional economic integration Bilateral and regional agreements, eg SEM, AANZFTA
Innovation and sector R&D - Dairy New Zealand's levy-funded R&D - Riddet Institute - Food Innovation Network	Investment attraction NZTE and Invest NZ have a focus on dairy
Regulatory environment - Dairy Industry Act 1892 - Commodity Levies Act 1990 - Dairy Industry Restructuring Act 2001	Trade promotion - Trade missions - NZTE support for exporters
Skills and workforce - Lincoln University and Massey University (eg Agricultural College) - Farm advisory services contracted and delivered by MPI	
Infrastructure Co-funding for irrigation	

Domestic levers not used with dairy:

- Regional clusters and networks
- Public procurement

KEY:

Strategic: Government invests significantly with coordinated, long-term vision, eg public-private partnerships, investment attraction and skills development.

Supportive: Government provides targeted policies to catalyse industry development.

Facilitative: Government creates enabling conditions with minimal direct investment, eg convening, regulatory reform and information sharing.

7.2 Space and advanced aviation

- An emerging and rapidly growing sector.
- Government has played a critical enabling role to develop the sector by providing a regulatory framework and through continuing to build on international agreements.
- Government plays other facilitative and supportive roles but to a lesser extent compared to other sectors (eg dairy).



Credit: Shutterstock

The Government established the New Zealand Space Agency in April 2016 in response to plans by New Zealand founded company Rocket Lab to locate its launch site in New Zealand. The Outer Space and High-altitude Activities Act 2017 was enacted to establish a comprehensive regulatory framework for space and high-altitude activities in New Zealand, enabling rocket launches. A review of the Act in 2022 found that New Zealand had adopted a permissive but responsible regime, balancing innovation with international compliance and risk management.

In 2024 the Government released the New Zealand Space and Advanced Aviation Strategy, which sets out a mission to double the size of these sectors by 2030. The strategy sets out five objectives focused on developing space capabilities via a national mission, establishing a world-leading regulatory environment, unlocking trade and investment, skills, and innovation.

In 2024, the economic contribution of the space sector was estimated at \$2.47 billion (0.58 per cent of GDP) and that of advanced aviation was \$0.48 billion (0.11 per cent of GDP). New Zealand’s space sector grew by 53 per cent in the five years to 2024, a year-on-year growth of 8.9 per cent, outpacing global space sector growth, albeit off a low base.^d

Strategic assessment of focus, dynamics, and trends		
Focus: Viable opportunities – sector, place, technology	Dynamics: Innovation needs of emerging industries.	Trends: Future outlook to identify threats/opportunities.
The Southern Hemisphere location and geographic isolation is ideal for launches and testing.	Strong existing technical base in aviation, engineering, advanced materials and manufacturing, with Christchurch and Auckland the key hubs.	Autonomous flight systems, advanced propulsion, and satellite miniaturisation are converging, providing strategic opportunities.
Rapid growth of the commercial space industry required a regulatory framework to manage space activities safely and responsibly.	Strategic international partnerships and emerging global capability-building in the US and Europe help bolster New Zealand’s competitiveness in space and advanced aviation.	Reduction in launch costs driving growth in low orbit activities.
A large anchor company, Rocket Lab, provided the scale required to enter the international space sector,	New Zealand’s space sector benefits from flexible enabling regulation, and international	Growth in satellite deployment driven by satellite communications constellations (eg Starlink) is expected to continue.
		Innovation and investment in space capabilities driven by

^d Deloitte (2025). There is considerable overlap between space and advanced aviation activities and so some double counting.

stimulating activity in advanced aviation and space by an increasing number of players.

partnerships, but faces intense global competition.

growing demand for advanced aviation R&D and testing sites, dual-use technologies.

Choice of levers to enable productivity growth

The table below provides illustrative examples of the levers governments have used to support the development of the space and advanced aviation industry.

Underpinning these targeted levers are horizontal/foundational settings for the economy, such as macroeconomic stability, tax settings (eg the R&D tax incentive), infrastructure, and regulations which have been adapted over time in response to changing circumstances.

Government's use of international levers incorporates both horizontal (economy-wide) and vertical (sector-specific) elements, hence indicated as 'mixed' in the table below.

Domestic Vertical/Targeted	International Mixed
Direction-setting, coordination Space and Advanced Aviation Strategy	International rules, norms and institutions Active engagement for space and advanced aviation, including through key government-to-government relationships
Market intelligence and information Innovation for growth: Charting the space and advanced aviation sectors by Deloitte (published by MBIE)	Trade and economic agreements - Artemis Accords with NASA - US-New Zealand Space Framework Agreement with NASA
Innovation and sector R&D Catalyst Fund support for New Zealand-NASA research partnership in earth observation	Investment attraction Supported through overseas posts and Ministerial visits
Capital investment, loans, grants Tāwhaki National Aerospace Centre	Trade promotion - Trade missions - Support through NZTE
Regulatory environment Outer Space and High-altitude Activities Act 2017	
Infrastructure Some infrastructure support for Rocket Lab and at Tāwhaki	
Skills and workforce Scholarships and prizes	
Public procurement Signalled for space capabilities in the Defence Industry Strategy	
Domestic levers not used for space and advanced aviation: Regional clusters and networks	

KEY:

Strategic: Government invests significantly with coordinated, long-term vision, eg public-private partnerships, investment attraction and skills development.

Supportive: Government provides targeted policies to catalyse industry development.

Facilitative: Government creates enabling conditions with minimal direct investment, eg convening, regulatory reform and information sharing.

7.3 Biomanufacturing

- An emerging opportunity for New Zealand, building on strong capabilities in agriculture, forestry, production of food, health products, energy, industrial chemistry, and life sciences.
- Government is enabling development of the sector by providing a regulatory framework and research funding.
- Government is less active using other levers.



Biomanufacturing is the use of biological systems, such as plant and animal cells or micro-organisms (eg yeast, bacteria), to produce commercially valuable products, such as pharmaceuticals (eg vaccines), food ingredients (eg enzymes), cosmetics, bioplastics and biofuels. It is sometimes referred to as biotransformation and uses tools of biotechnology and sometimes also biodiscovery to identify compounds with potential.

An emerging sector in New Zealand and internationally, innovation in biomanufacturing is being enabled by developments in both biotechnology and AI. Biomanufacturing has the potential to accelerate productivity growth, drive diversification of products and sectors, plus improve environmental sustainability through substitution of synthetic and fossil-fuel based inputs.

Strategic assessment of focus, dynamics, and trends		
Focus: Viable opportunities – sector, place, technology	Dynamics: Innovation needs of emerging industries	Trends: Future outlook to identify threats/opportunities
Builds on New Zealand’s strong food and fibre sector, which provides source material, and leverages the country’s biochemistry, technology and engineering, climate, and health sciences research capabilities. Wide ranging consumer products adjacent to food and fibre sector, eg in nutraceuticals, sports nutrition, cosmetics and pharmaceuticals, as well in construction and energy. Regional specialisations are emerging, eg Canterbury in pharmaceuticals, Rotorua / Bay of Plenty in forestry-based biomanufacturing, Waikato in dairy biotech and Nelson in marine bioactives.	Strong R&D base with collaborations across Public Research Organisations, universities and industry. Specialisms in synthetic biology, precision fermentation and Ribonucleic Acid (RNA) technologies. Need for pilot scale infrastructure, such as large volume bioreactors, to bridge lab-scale and commercial production. Role for strategic international partnerships, science diplomacy and business to business relationships.	Climate change, consumer trends, food/energy instability are increasing demand for sustainable bioproducts, alternative peptides, enzymes, and biofuels. Convergence with digital (eg AI) and nanotechnologies is shortening development time and enabling advanced ecosystem solutions such as carbon capture, energy reuse, and waste management, and personalised therapeutics. Rapid pace of innovation makes it difficult to predict which technologies will be successful.

Opportunities for Māori enterprises utilising Mātauranga Māori and a kaupapa Māori lens.

Choice of levers to enable productivity growth

The table below provides illustrative examples of the levers governments have used to support the development of the biomanufacturing industry.

Underpinning these targeted levers are horizontal/foundational settings for the economy, such as macroeconomic stability, tax settings (eg the R&D tax incentive), general science system funding and infrastructure, and regulations which have been adapted over time in response to changing circumstances.

Government's use of international levers incorporates both horizontal (economy-wide) and vertical (sector-specific) elements. There are a range of international levers applicable to the emerging biomanufacturing sector (for example, WTO agreements on intellectual property, sanitary and phytosanitary matters, as well as New Zealand's FTA network), however these levers are not deliberately targeted towards supporting the sector.

Domestic Vertical/Targeted	International Mixed
Market intelligence and information Emerging and future platforms in New Zealand's bioeconomy reports by Coriolis (published by MBIE)	International rules, norms and institutions Cartagena Protocol on Biosafety
Innovation and sector R&D - Strategic Science Investment Fund platform for RNA development - Catalyst Fund support for New Zealand-Singapore Future Foods Research Programme	
Regulatory environment Gene Technology Bill	

Domestic levers not used for biomanufacturing:

- Direction-setting, coordination
- Capital investment, loans, grants
- Regional clusters and networks
- Skills and workforce
- Infrastructure
- Public procurement

KEY:

Strategic: Government invests significantly with coordinated, long-term vision, eg public-private partnerships, investment attraction and skills development.

Supportive: Government provides targeted policies to catalyse industry development.

Facilitative: Government creates enabling conditions with minimal direct investment, eg convening, regulatory reform and information sharing.



Key insights from the sector case studies

Government's role in enabling sector growth – varied approach across sectors

The sector case studies show that New Zealand has adopted different approaches for these different sectors of the economy in terms of both the breadth and depth of vertical/targeted levers used. In all cases, sectors have been supported by horizontal/foundational levers, which have been adapted over time in response to changing circumstances.

Targeted government interventions can also support sectoral development, often providing 'public' inputs that only the government can do, eg regulatory frameworks, international agreements, infrastructure investments, and public procurement.

This suggests that Government support can scale-up over time as new sectors and opportunities emerge. Often this starts by the government providing enabling regulation, which over time could expand into providing a broader range of targeted/vertical interventions.

Long-term impact and adjacent growth opportunities

The dairy sector case study suggests that sustained, targeted support over time can help build enduring economic strengths and long-term export value. Through continuous capability development, the sector has maintained global competitiveness as well as unlocked adjacent opportunities (eg biomanufacturing) that extend beyond its traditional boundaries.

Today's performance reflects a history of collaboration between public and private actors, working together to lift productivity, adapt to shifting global markets, and respond to sustainability pressures. This experience may offer insights for how other sectors could evolve, particularly where long-term commitment and cross-sector partnerships are encouraged.

Leveraging existing strengths and capabilities (including place-based)

The case studies show the value of building on existing strengths and capabilities. Natural advantages like geography and climate have enabled the development of the space sector. Unique know-how developed from learning-by-doing over many decades plus new knowledge created through scientific research have supported the dairy sector, and the emergence of biomanufacturing.

The case studies suggest some gaps in New Zealand's place-based and cluster-oriented approaches, especially when compared to SAE peers, though this may reflect our focus on sectors in these case studies rather than a lack of potential. Nascent regional specialisations suggest there is untapped potential to develop these to foster innovation, though dispersion and coordination challenges likely remain.

7.4 Single Economic Market – Trans-Tasman and beyond

- One of New Zealand’s most developed and complex trading relationships.
- Built off Closer Economic Relations (CER), deeper integration initially focused on specific sectors before becoming comprehensive in nature.
- The SEM could act as a model of regional economic integration, which could be expanded further into the region.



The Trans-Tasman Single Economic Market (SEM) between New Zealand and Australia is one of the world’s most deeply integrated bilateral economic relationships outside a formal political union. Originating from the 1983 Closer Economic Relations (CER) Trade Agreement, the SEM was formally launched in 2004 to reduce border frictions and regulatory complexity. It enables the free movement of people, mutual recognition of qualifications and standards, and coordination in areas beyond traditional trade agreements, such as business and competition law, technical regulations and conformity assessments.

Australia is New Zealand’s second-largest trading partner and its largest source of foreign investment. The Trans-Tasman Mutual Recognition Arrangement (TTMRA), a key component of the SEM, allows goods and professionals to operate across both countries with minimal regulatory barriers. Together, these arrangements create a seamless business environment across the Tasman, enabling firms and individuals to treat New Zealand and Australia as a single economic space. This is an advanced model of economic integration that goes beyond trade liberalisation to foster trust, efficiency, productivity and shared opportunity.

Strategic assessment of focus, dynamics, and trends		
Focus: Viable opportunities – sector, place, technology	Dynamics: Innovation needs of emerging industries.	Trends: Future outlook to identify threats/opportunities.
The SEM is a key element of New Zealand’s international economic strategy, enabling: • Free movement of goods, services, capital, and people between New Zealand and Australia. • Mutual recognition of standards and qualifications, reducing compliance costs and improving market access. • A shared business environment, allowing firms	The SEM is underpinned by a dense network of institutional and regulatory capabilities which seek to align regulatory approaches across as much of the economy as possible. These mechanisms are supported by strong public-private collaboration, with governments, industry bodies, and firms working together to maintain and evolve the SEM.	The SEM is evolving to address modern challenges such as digital trade, climate resilience and regional economic security. eg through work to reduce barriers to collaboration in science, technology and research across the Tasman, including through the Trans-Tasman Innovation Ecosystem (Trans-Tasman Roadmap to 2035) Expanding the SEM to include other partners over time could

to scale across both markets efficiently.

The SEM supports industry-led growth in sectors such as financial services, professional services, education and consumer goods.

The SEM also benefits from deep trade and diplomatic ties, and shared values around non-discrimination, transparency, rule of law, and open markets.

amplify the SEM's economic and strategic value, positioning it as a regional model for economic cooperation and a platform for broader Indo-Pacific integration.

Choice of levers to enable productivity growth

There are a range of targeted levers used for the advancement of the SEM:

- Direction-setting, coordination, partnerships, such as the annual Australia New Zealand Leaders' Meeting
- Market intelligence and information, such as the Australia New Zealand Leadership Forum
- Trade and economic agreements, such as the CER Agreement
- Regulatory enablement, such as the TTMRA
- Skills, workforce, such as the Trans-Tasman Travel Arrangement
- Investment attraction, such as the Protocol on Investment
- Public procurement, such as the Australia and New Zealand Government Procurement Arrangement
- Infrastructure, such as the Trans-Tasman Seamless Travel Group or work to support Digital Infrastructure for Trade.

For this case study we considered that all these levers were used actively in New Zealand targeted at SEM, and all at a 'facilitative' level of effort. In keeping with the framework laid out in this Briefing, by facilitative we mean Government creates enabling conditions with minimal direct investment, eg, convening, regulatory reform and information sharing.

Levers not used with the SEM are: Capital investment, loans, grants; Regional clusters and networks; Innovation support and sector R&D.

The extent of targeted policies, the mechanism by which they are implemented, and the funding applied, varies significantly from country to country. The benchmarking used here indicates 'similar in scale and intent' but not necessarily comparable in the specifics of the policy.



Key insights from the international SEM case study

- The SEM is a vehicle to economically integrate New Zealand with its nearest largest neighbour. This helps to mitigate the disadvantages of New Zealand's geographic distance and small scale, to strengthen internationally connectivity, and to lift productivity.
- Historical regulator-to-regulator cooperation within the SEM has delivered substantial productivity benefits, including harmonised standards, reduced business costs, increased labour mobility and enhanced investment flows. However, further integration involves more complex areas, including services and digital trade and potentially sovereignty-sensitive policies.

- Expanding this model to high value, regulation-intensive sectors (eg pharmaceuticals, aerospace and advanced manufacturing) could unlock productivity gains by reducing compliance barriers and enabling more predictable market access.
- The SEM's flexible governance and initially targeted initiatives (eg joint innovation funds and sector-specific pilots), support collaboration in emerging industries and help firms adapt to global shifts. This dual approach strengthens economic resilience and dynamic capability.
- Future expansion to third partners (ie to individual ASEAN members such as Singapore, and then to ASEAN more broadly – see box below) could amplify the SEM's impact, embedding New Zealand more firmly into regional supply chains and attracting investment. This would require careful alignment of legal frameworks, standards, and regulatory systems, specifically tailored to partners.

Strategic expansion: ASEAN as a potential partner

While the SEM has focused on deepening Trans-Tasman bilateral integration, there is potential to expand it to new partners, with ASEAN emerging as a compelling candidate.

ASEAN is a dynamic and fast-growing region, projected to account for 8 per cent of the global population and 5 per cent of global GDP by 2050. It is progressing toward its own single market vision under the ASEAN Economic Community (AEC) 2045 agenda.

Aligning SEM principles with ASEAN's integration trajectory could create a combined market of over 800 million people, offering significant scale for forward-looking regulatory cooperation in areas such as AI, green economy, and fintech.

New Zealand, Australia and ASEAN already share a strong foundation through the AANZFTA, which has recently been upgraded to improve trade in services, e-commerce and reduce non-tariff barriers. However, with 99 per cent of goods already entering duty-free, further gains may depend on deeper integration, particularly in complex services, digital trade and regulatory alignment.

New Zealand and ASEAN (including with individual members) are already engaged in extensive regulatory cooperation, both formally and informally. This includes through provisions in AANZFTA, RCEP, CPTPP, DEPA and our bilateral trade agreements, such as with Singapore and Malaysia, but also through informal regulatory networks. These arrangements demonstrate that regulatory cooperation between New Zealand and ASEAN is already active and could be scaled up through a structured SEM-style framework.

ASEAN is now the destination for nearly 10 per cent of New Zealand's total exports, with growth concentrated in dairy and tourism. To unlock further value in high value services and innovation-driven sectors, a more integrated SEM-style framework could be explored. A SEM incorporating Australia and ASEAN would, already cover more than a quarter of New Zealand's exports, with the possibility for accelerated growth.

A SEM-style approach with ASEAN would likely differ from New Zealand's existing SEM with Australia. Its specific components would need to reflect the diverse economic contexts of individual ASEAN members and, like the Australian SEM, could evolve over time. Some members – such as Singapore – may offer particularly promising opportunities to explore an early SEM-style expansion into the region.

This SEM style approach would also position New Zealand to better navigate regional fragmentation, demographic shifts, and emerging economic centres in South East Asia.

8. Lifting New Zealand's productivity performance in a changing world: insights and choices [seeking public feedback]

This draft Briefing has presented analysis and key insights to the question: How can we accelerate the growth of high productivity activities in the New Zealand economy in a changing world?

In a more disrupted and uncertain global economy, resilience and adaptability are necessary underpinnings for economic growth. That means adopting technology and building a policy environment that helps us compete on capabilities, not just products. A mix of levers is needed to fully develop high productivity activities and provide flexibility; no one lever is sufficient. Other peer SAEs are doing this well, and we need to catch up.

New Zealand's trade will need to evolve and adapt to significant global shifts. While our FTAs have delivered strong benefits, exports are falling as a share of GDP. This signals the importance not only of opening markets but also helping firms to innovate, adopt new technologies and scale globally. Deepening regional economic integration, expanding into emerging markets and supporting complex sectors through smarter regulatory cooperation can enable this.

To recap, a summary of our insights:

- New Zealand's productivity challenge is structural and persistent, shaped by small firm size, low capital intensity, and limited innovation diffusion. Despite a well-educated workforce, these systemic constraints mean inputs are not fully leveraged, limiting productivity growth.
- New Zealand faces a less certain and more disrupted global trading environment that means productivity gains will also depend on resilience and adaptability in the economy and timely capture of new opportunities as they arise.
- Improving New Zealand's productivity for the long-term will require growing the proportion of high complexity, knowledge-intensive activities in the economy. This includes rebalancing investment and enablement toward productive sectors and supporting the development of high value, technology-driven industries and exports.
- Government should continue to develop the effectiveness of horizontal enabling policies along with deliberate use of vertical targeted interventions, domestic and international. Strategic assessment can help identify how skills and innovation settings, infrastructure and institutions can meet the distinct needs of emerging sectors and activities, particularly those with high growth potential but limited existing ecosystems.
- The approach will also need to reflect New Zealand's unique context, making use of our capabilities, clusters of regional economic strengths, and the success of the Māori economy. A one-size-fits-all approach will not leverage our areas of opportunity. Targeted support of high productivity, high-complexity sectors and exports through deliberate, capability-led development will be key.

- Deeper regional economic integration is a strategic tool for productivity growth, enabling closer connections to international markets, value chains and innovation ecosystems. Trade policy can go beyond market access to focus on strategic internationalisation and regulatory alignment, supporting the development and scaling of high-productivity sectors.

How might we better identify sectors with higher productivity and growth potential?

One of the important strategic choices that government may want to take in progressing these insights is where and how to focus government effort to accelerate productivity.

Earlier in the document we have shown that over time New Zealand's economy has shifted to lower complexity. This has contributed to our poorer productivity performance compared with other SAEs. Recent reports have drawn attention to the idea that, rather than continuing a broad-based approach, New Zealand could concentrate investment in a few high value industry ecosystems where it has a strong competitive advantage into the future.⁵⁹

Being more deliberate and strategic about our targeted vertical interventions (as well as maintaining the quality of horizontal levers) can help address this. But it is important that any focus is on areas (sectors or activities) that are high productivity/high complexity, so that over time these types of activities make up a greater proportion of the New Zealand economy into the future. Any selection needs to be based on a granular analysis of the market similar to that undertaken, for example, by institutional investors.

The framework presented in this Briefing (Section 5) provides high level guidance for this process through questions about 'Focus' such as:

- **Nature of sector/activity:** Is the sector or activity high productivity, paying high wages? Is it R&D- and capital-intensive, producing complex products, scalable in New Zealand?
- **New Zealand's competitive advantages /capabilities:** Do we have the existing nascent capabilities (skills, firms, infrastructure and technical expertise) to make success in this sector or activity a realistic prospect? Does it have diversification potential, ie are there opportunities to move into adjacent higher knowledge intensity, higher productivity activities from this sector?
- **Global demand:** Is there a significant market opportunity? Is the global market large, or niche (playing to New Zealand strengths) and growing, and/or is there a premium for quality that New Zealand can grasp?
- **New Zealand market development:** Is there growth in firm numbers or size in New Zealand? Is this sector or activity attracting local and foreign investment?

A positive position against these criteria will identify sectors/activities with high productivity and growth potential that could provide a basis for focused efforts. Other considerations will also be relevant to consider, for example:

- the broader goals the sector or activity can contribute to, such as resilience
- a future outlook that can signal possible opportunities and risks and how this sector can have a growth pathway that is robust to future uncertainties
- barriers to growth that could be addressed through interventions.

Your feedback

We want to hear from you before we develop the final part of our Briefing on overall insights, strategic choices and policy implications. We welcome your comments. Some questions to reflect on could include:

1. Do you have feedback on any of the insights presented in this Briefing? A summary of the insights is on the preceding pages, and more detailed insights are presented throughout the draft – look for the ‘lightbulb’ icon.
2. Reflecting on the framework presented in Section 5 of the Briefing, do you have any other suggestions for how government could identify and enable high productivity sectors or activities with growth potential? For example, what factors could be taken into account, or what process do you suggest for analysis or engagement?
3. Where are the opportunities for New Zealand to better connect and integrate with global and regional markets, value chains and innovation networks, particularly in the Asia Pacific? What role could the expansion of the Single Economic Market to the wider region play in New Zealand business growth and productivity strategies?
4. Do you have any other feedback on how New Zealand can successfully accelerate the growth of high productivity activities, in a changing world? What may be the strategic choices that New Zealand will need to make?

9. Glossary

Absorptive capacity: the ability of an organisation or economy to recognise, assimilate, and apply new knowledge and technologies; considered crucial for maximising the benefits of technological advancements.

Adjacencies: Industries, technologies, or capabilities that are closely related to existing strengths, enabling easier diversification or innovation due to shared knowledge, infrastructure, or skills.

Capabilities: The embedded knowledge, skills, technologies, infrastructure, and institutional arrangements that enable a country, region, or sector to produce specific goods and services competitively. In the New Zealand bioeconomy context, capabilities span across the supply chain, from genetics and feed inputs, through production and processing, to logistics, branding, and market access.

Clusters and agglomeration: Geographic concentrations of interconnected firms, skilled labour, research institutions, and support services that foster innovation, productivity, and competitive advantage through proximity and collaboration.

Commercialisation: The process of turning an idea, product, or service into something that can be sold in the market.

Dynamics: The patterns and processes of change over time in economic systems, including innovation, competition, and structural transformation.

Dynamic capabilities (of firms): The ability of firms to adapt, integrate, and reconfigure internal and external competencies to address rapidly changing environments.

Economic fields of study:

- **Innovation studies**, focuses on the processes of invention and innovation, the role of institutions, firms, and networks, and the impact of innovation on productivity, competitiveness, and societal wellbeing.
- **Endogenous growth theory**, pioneered by Paul Romer in the 1980s, explains long-term economic growth as being driven by internal factors such as investment in human capital, innovation, and knowledge creation, especially through knowledge spillovers that enhance productivity across the economy.
- **Complexity economics** is an approach to economic analysis that views the economy as a dynamic, evolving system made up of diverse, interacting agents, emphasising feedback loops, adaptation and the role of networks, innovation, and learning in shaping outcomes
- **New Economic Geography** explains how economic activity concentrates in certain regions due to increasing returns, transport costs, and larger market size. It highlights the emergence of core-periphery patterns, where prosperous urban centres (cores) often host high productivity clusters of firms and workers, while outlying areas (peripheries) may lag behind.
- **Urban economics** includes study of how geographic concentration of firms and workers, often referred to as agglomeration or clusters, can lead to productivity gains.

Economic complexity: In economic development, refers to the diversity and sophistication of a country's productive capabilities and the interconnections among industries, technologies, and institutions.

Economic integration: The process by which countries reduce trade barriers and coordinate economic policies to facilitate the free flow of goods, services, capital, and labour across borders.

Equity analysts: Professionals who evaluate financial data, market trends, and company performance to provide investment recommendations and assess economic prospects.

Feedback loops: Circular processes where outputs of a system influence future inputs, reinforcing or dampening economic trends, innovation, or policy outcomes.

Industrial clusters: Groups of related industries located in close proximity that benefit from shared infrastructure, labour pools, and knowledge spillovers.

Knowledge-intensive activities: Economic activities that rely heavily on expertise, research, and innovation, often involving high levels of education and R&D investment.

Knowledge spillovers: A process that occurs when ideas, skills, or innovations unintentionally benefit others nearby, boosting innovation and productivity. These spillovers diminish with distance, making clusters and urban density especially powerful for sharing tacit knowledge and accelerating economic growth.

Path dependence: Refers here to the tendency of countries to diversify into industries that are closely related to existing capabilities.³⁸ In small economies like New Zealand, early specialisation in biological exports has shaped industrial development by reinforcing capabilities in food and fibre production, processing, and export, and constraining diversification into unrelated sectors.

Resilience: The capacity to anticipate, absorb, and recover from disruptive events while maintaining core functions and adapting in ways that promote learning and long-term thriving.⁵⁰

Small, advanced economies: Countries with relatively small populations but high levels of income, innovation, and institutional capacity, often reliant on specialised exports and agile policy frameworks. New Zealand participates in the Small Advanced Economies Initiative which is a collaboration with Denmark, Finland, Ireland, Israel, Singapore, and Switzerland to carry out research and share information to inform the policies of these small economies.

Static vs dynamic gains (from trade): Static gains from trade refer to immediate efficiency improvements from resource reallocation based on comparative advantage and global price signals. Dynamic gains encompass long-term benefits such as innovation, technological diffusion, capability development, and enhanced resilience through competitive adaptation.

Trade architecture: The institutional and policy frameworks that govern international trade, including agreements, regulations, and dispute resolution mechanisms.

- **Unilateral:** Trade actions or policies undertaken by a single country without coordination or agreement with other nations.
- **Bilateral:** Trade agreements or relationships between two countries, often involving negotiated terms for market access and cooperation.

- **Multilateral:** Trade arrangements involving multiple countries, typically under international organisations like the WTO, aimed at reducing barriers and promoting global trade norms.
- **Plurilateral:** Agreements among a subset of countries within a larger group, allowing willing participants to advance trade liberalisation or cooperation without requiring consensus from all members.

Trial and Error: A well-established idea in both Austrian economics and institutional economics. Friedrich Hayek and Israel Kirzner emphasised that markets are decentralised discovery processes, where prices signal information and guide adjustments.

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