

Our future economy

Long-term opportunities and challenges for Aotearoa New Zealand

Briefing for the incoming Prime Minister and Government

October 2023



Introduction

As Aotearoa New Zealand's economy fights the headwinds of low productivity, low wages, inflation and the cost-of-living crisis, it must also reduce dependence on carbon-heavy industries by stepping up “weightless” exports. At the same time it needs to meet our expectations of greater resilience, sustainability and social justice.

Key points

- Long-term thinking is needed to reach our economic, social, cultural and environmental goals.
- A balance must be struck between free-market and redistributive policies.
- Our livestock-farming and high-volume tourism economic staples must adapt to climate-change pressures.
- Technology will be key in expanding the “weightless” economy and improving overall economic efficiency.
- We must diversify the economy and increase productivity while recognising the expectations of greater resilience, sustainability and social justice.
- An industrial policy that builds on agglomeration effects is needed.

Context

Climate change and increasing inequalities pose significant threats to our economic model. Quite apart from ethical imperatives to act now, an inevitable global shift against the consumption of carbon-intensive goods and services will have a big effect on agriculture and tourism.

We should move ahead with necessary changes rather than have them imposed through a sudden loss of markets in environmentally conscious trading blocs. Geographical reality will limit what we can do to restructure the economy for future resilience. Equally, our small size should allow us to be nimble, co-ordinated and early adopters of technology.

The march of technology continues unabated around the globe opening up new possibilities for those wealthy enough to afford them. These are particularly obvious in education and health, two sectors of the economy in which the state has traditionally strived to provide equitable access and uptake.

The advent of artificial intelligence will see increasing automation not only of routine jobs but also of complex tasks, jeopardising existing jobs and changing the nature of work (see [Artificial intelligence](#)). Such disruption will need to be accompanied by social, educational and economic adjustment and will herald policy challenges.

Substantial investment will be necessary to ensure the next generation of workers benefit from technology rather than be replaced by it or see their living standards fall. The nature of education will need to undergo substantive change (see [The future of education](#)). If the state cannot fund investment in equitable and inclusive education then successive waves of technological advances will mostly benefit the children of the wealthy who can afford them.

Towards a future-facing knowledge-underpinned economy

Historically, publicly funded research and innovation in the primary sector and its uptake by its worker-owners – the original Kiwi small-business operators – set our economy's course. The same will be true of future economic progress, albeit the private sector's engagement will be very different.

Many of our home-grown businesses are already pushing the frontiers of knowledge by developing new ideas and processes in IT, medicine, agritech, and manufacturing. But we have yet to reach a critical mass of labour and capital in these sectors such that it catalyses further entrepreneurship and thus creates the capacity to market globally and earn at scale.

Multinational companies (MNCs) are core to global innovation systems (see [Research, science and innovation ecosystem](#)) yet they have little or no productive or research footprint in New Zealand unlike in other small, advanced economies. Attracting MNCs, their talent and their foreign direct investments to New Zealand will be critical for diversification the economy and expansion of its “weightless” component, including knowledge production, innovation, and high value-added services. New Zealand has had a surprisingly xenophobic approach to such partnerships – but we must engage globally or we will lose.

Agglomeration economies

International studies highlight the role of cities as hubs of innovation, although parochialism has prevented this from being a major part of New Zealand’s economic strategy. Cities exist because they are productive. Copenhagen accounts for 43 percent of Danish GDP but only 35 percent of the total population. The efficiencies derived from firms and households being in close proximity are referred to as agglomeration effects. These include deeper and wider labour markets, greater specialisation in the supply of inputs to production and knowledge spillovers through local networks. Firms in the same industry often cluster together in specific cities to take advantage of the benefits of such agglomeration, providing an incentive for other firms in the same industry (“localisation economies”) and firms from other industries (“urbanisation economies”) to pile in. Such processes create a self-reinforcing positive feedback loop.

Auckland is already more productive than other parts of New Zealand but still has low efficiency compared with other global cities (Maré & Graham, 2013). A city of the scale that Auckland might aspire to is likely to engender both localisation and urbanisation economies, whereas smaller more specialised cities are more likely to benefit from localisation economies (see [Tāmaki Makaurau Auckland](#)). However, to date New Zealand has largely avoided making decisions to promote such innovation hubs. Instead the assumption has been that regional development is a sufficient driver of economic development. Regional development is clearly desirable but to compete in a technologically progressive world an innovation strategy that fosters knowledge-intensive hubs needs to be seeded.

Succeeding in the knowledge economy over the next 50 years will almost inevitably require further development of our largest and most internationally positioned city into a hub for knowledge-intensive businesses. This approach does not ignore focused opportunities for knowledge production in other cities but it is hard to imagine a knowledge-intensive New Zealand that does not have Auckland – its only international city of scale – as its prime knowledge hub. This needs to be complemented by industry-specific clusters in other cities. Clusters are best formed organically from the decisions and actions of individual businesses but the environment needs to be created for them to thrive and be effective. This is where clear industrial and urban strategies and smart policy development are needed.

New Zealand has long relied on overseas markets not only for its products but for the capital and labour required to develop the economy. The shift towards cities as the centre of the modern economy requires a change in the way we understand how countries compete in global markets. For New Zealand to compete with Australia to retain and attract people and capital, Auckland must have equivalence in perceptions to Melbourne, Sydney, Singapore, and London. The policy changes needed to bring this about will have spillover benefits to other New Zealand cities and regions. Regional development cannot be considered independently of urban policy. Significant changes need to occur in our urban geography, education system, cultural and social amenities and fiscal and tax policies to create the conditions for knowledge-based clusters to grow.

Planning and funding questions are raised by the increased population that underpins agglomeration, which will require infrastructure such as roads, mass transport, sewerage systems and water supplies. The short-termism of much of our urban planning is increasingly obvious with horizontal infrastructure in a relatively parlous state. A range of options can be explored to fund infrastructure upgrades and

extensions, potentially including betterment taxes in those areas that benefit most from new infrastructural investments (Coleman & Grimes, 2010).

Building both up and out to enable population growth can potentially entail significant congestion costs undermining the appeal of working in the city and exacerbating carbon emissions. Densely populated cities with ample public transport tend to have a lower carbon footprint¹.

Smaller towns and cities around the country can share in the benefits of knowledge agglomeration by contributing to the ecosystem businesses that underlie and support the knowledge-based economy. Many such firms are ancillary to a knowledge-based export sector, benefiting indirectly from knowledge clustering. Examples of these firms include logistics hubs and call centres. Such businesses can find it more profitable to set up outside the main centres, making it critical for regional and local government to adopt policies to accommodate them, having been being pulled out of Auckland. Further, transportation improvements between Auckland and neighbouring Hamilton, Tauranga and Whangarei open up additional opportunities for ancillary businesses to locate where the cost of living is cheaper.

The long-term location of the Auckland port and the use of any available land has significant planning implications not only for that city but elsewhere. The resolution of this issue needs to be strategic, not determined by local or short-term political considerations. The downstream consequences for many industries and people of any decision will be significant.

Education, higher education and research

Universities play a central role in the knowledge economy in the creation through research of new ideas and processes. They also educate much of the workforce of those companies that put research and development at the heart of their business. Indeed access to a suitable workforce is a key criterion for any major company in making an investment. To support economic growth through private-sector innovation, policies will be required that reorient research and the education sector towards this goal.

Upgrading our tertiary sector (see [Higher education](#)) to be a more active participant in the ecosystem of ideas and innovation will require concentrated and strategic investment by government in tertiary institutions, leveraging existing areas of international-quality expertise and scaling them up significantly to cultivate industry clusters. Such resources will also help universities recruit top academics from the global talent pool. The presence of key thought leaders in academia is important for major companies and investors in a country or region.

Equally greater attention should be paid to building the creative sector and to promoting technical education (which need not require university-base education).

It is accepted by virtually every advanced country that balanced public and private sector investment in research and development is core to economic growth as well as for positive environmental and social outcomes. Our public funding of research and development lags behind other OECD countries. New Zealand government expenditure on research and development was 0.6 percent of GDP in 2017 whereas the governments of Singapore, Denmark, Switzerland and Korea invest well over 1 percent of GDP. Private-sector investment grows in response to public-sector investment. Despite oft-stated political support over the past decade for increased R&D investment we remain well below the level needed.

In addition New Zealand's industry structure and firm size constrain private sector R&D spending (Crawford, 2007). Most of our firms are too small to undertake significant research and we have few firms in R&D-intensive sectors such as pharmaceuticals and defence.

A transition to a knowledge intensive economy will require prioritising research and development expenditure in areas of pre-existing expertise or expertise that will spring from identified potential.

1 <https://transport2030.org>

National research strategies and their overall co-ordination are at the centre of government in most advanced countries often via a prime-ministerial/ presidential advisory board (see [Research, science and innovation ecosystem](#)).

Advancing the innovation economy can be assisted with incentives that encourage the transfer of knowledge from the public to the private sector. Universities have been more innovative than Crown Research Institutes (CRIs) in this, allowing staff and students to share the upside of their discoveries, while CRIs do not.

Our tertiary institutions will not be able to produce creative scientists, programmers and engineers in the numbers required to staff knowledge clusters if the education system does not impart the necessary skills and insights to emerging high school students. This requires investment at all levels of the education system including where it all begins in early childhood education (see [The future of education](#)).

With changes in the nature of work inevitable as a result of technological and sociological change, specialised educational institutes that meet the needs of workers looking to retrain and re-enter the workforce will be required. Singapore has taken a lead in this by setting up a lifelong learning Institute.

Tax

How New Zealand will balance its understanding of fairness and equity is an open question. The answer varies by ideological world view and is reflected in partisan politics. But maintaining social cohesion and developing a long-term economic strategy will require better consensual understandings. Put tritely, it can be seen as very different views on striving for equality of opportunity versus equality of outcome by different sections of our society, but it is much more nuanced than that.

We are concerned in this report with those aspects that relate to expanding the economy and responding to mega-trends such as climate change, environmental degradation, increasing urbanisation, the changing nature of work and rising inequality. Tax reform is necessary to incentivise sustainable consumption and investment patterns, ensure gains from agglomeration and urbanisation are not overconcentrated and to mitigate against rising inequality resulting from the changing nature of work and increasing returns to specific qualifications. The rise of the gig economy and transnational earnings in a weightless-export economy transacted using digital currencies may create further challenges for traditional income-based government revenue collection.

A comprehensive carbon tax would provide a clear price signal to households, firms, and the government to invest in more sustainable technologies and production processes and to adopt more sustainable consumption patterns. Such a tax needs to be integrated into New Zealand's broader energy policy aimed at achieving environmental, economic and social targets. Incremental carbon-tax increases towards a target rate would give market participants time to alter behaviour and investment patterns without the new impost affecting financial stability. Policy credibility will be critical to generating early behaviour change and will require across-the-aisle political commitment.

Policies to enhance technological change can be expected to exacerbate existing inequalities in labour earnings between the high and the low skilled. Further adjustments to our tax-transfer system may be necessary to ensure the gains from technological advances are shared fairly.

Attracting investment

Multinational companies account for most private R&D worldwide. It is critical that we attract and retain multinationals. Much of the policy platform outlined here can help to do that, by creating the foundations for knowledge ecosystems and providing workforces with affordable and desirable locations in which to live. Carefully directed support for businesses that complement and scale-up expertise in our tertiary and corporate sectors should be considered.

New Zealand could also capitalise on its reputation for leadership, stability, cohesiveness, environmental sensitivity and an excellent pandemic response. Our broader creative and cultural environment is also impressive but needs continual investment (see [Our place in the world](#)). But those with deep pockets eyeing opportunities from abroad face obstacles. Prohibitions on foreign investment in residential property and restrictions on other forms of foreign direct investment should therefore be revisited to encourage entrepreneurs who create new businesses in New Zealand to put down roots.

The lack of a clear industrial, technology and innovation strategy and of an industrial policy is a further impediment. The clearer we are as a nation about our long-term goals for environmental sensitivity, social justice and renewal of our status as an exemplar of liberal democracy in the best sense of the term the more attractive we will be.

The labour market

The broader long-term implications of international worker mobility on our labour market need to be better understood. A clear population strategy is needed that co-ordinates policy across demographic, workforce, immigration, environmental, housing and urban domains. And it must be protected from short-term political vicissitudes.

Policies to support agglomeration and innovation rely on attracting high-skilled workers to our shores and enhancing our education system. However, immigration policy must be co-ordinated with housing and urban policies to ensure migrants have a roof over their heads and utility infrastructure can support population increases. A population strategy must also co-ordinate with environmental policy to accommodate a growing population in a sustainable manner.

Over the longer term these issues cannot be separated from those arising from the effect of technology on the future of work and the predictable demographic changes ahead. There also remains the unresolved issue of a longer-lived population with a retirement age that is increasingly unrealistic for many. We need a much better understanding of the drivers of ongoing structural change in the labour market that pre-dated Covid and will persist beyond the pandemic.

Long-term thinking required

The policy platform outlined here spans many functions and levels of government. Policy co-ordination and long-term thinking in these various domains will be critical (see [Enhancing policy formation](#)). Central government must take an active role in co-ordinating sectors and actors with strategic intent. But avoiding partisanship will be critical. Such growth requires time and we need to be clear about the path we are following over the long term – beyond the political cycle – as business and investors abhor uncertainty.

Strategy has not been a strong suit in New Zealand policy making, nor – with exceptions – has genuine interaction occurred between policy makers, academia, business leaders and the wider community. We are at an inflection point that provides an incentive to transform our economy in ways that allow our social and environmental futures to flourish. This takes time and a co-ordinated strategy bought into by many parts of government and society. Our citizens have ambitions that cannot be achieved without economic growth. Ultimately that is dependent on a flourishing, ambitious and innovative private sector.

Actions for consideration

- **Seek long-term consensus on what New Zealanders regard as a fair and balanced political economy.**
- **Develop a clear industrial policy.**
- **Develop and promote policies that support agglomeration particularly for Auckland.**
- **Develop a long-term carbon-pricing strategy.**

- **Develop an institute for lifelong learning.**
- **Develop a comprehensive set of strategies to develop the weightless economy encompassing education, immigration, research and development and attraction of multinational companies.**
- **Encourage the agriculture sector to look to technology so it can adapt to climate-change-driven consumer and market demands.**

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Our name, Koi Tū, was gifted by Ngāti Whātua Ōrākei. It means ‘the sharp end of the spear’. Like our namesake, Koi Tū aims to get to the heart of longterm issues challenging our future.

This document was developed as part of a comprehensive briefing to the incoming prime minister and government. The full document is available informedfutures.org/briefing-to-incoming-government-2023

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