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# NEW ZEALAND

## SELECTED ISSUES

May 2025

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## SELECTED ISSUES

April 29, 2025

Approved By
**Asia and Pacific Department**

Prepared by Monica Petrescu, with contributions from Dan Zheng and guidance from Evan Papageorgiou.

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# NEW ZEALAND'S PRODUCTIVITY CHALLENGE[1]

*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. The current juncture, with price pressures normalizing and an incipient economic recovery underway, presents an opportunity for a multi-pronged reform agenda to address this productivity challenge. This Selected Issues paper explores New Zealand's productivity growth in a cross-country perspective, reflects on business dynamism in New Zealand and its implications for productivity, and considers some of the factors shaping the costs and incentives for investment and innovation towards a more productive economy Section A evaluates trends in productivity growth in New Zealand and peer advanced economies in recent decades, both on aggregate and at the sector level; it also considers drivers of productivity growth and the interplay of capital and labor inputs. Section B evaluates business dynamism in New Zealand relative to peers, with a focus on the experience of young, high-growth firms with the potential to make meaningful contributions to productivity growth. Section C discusses the availability and range of financing options for New Zealand's firms. Section D considers impediments to business dynamism and productivity growth that emerge from regulatory frameworks, the pace of innovation and technological diffusion, and infrastructure gaps. Section E provides some policy recommendations to address the obstacles to productivity growth identified in previous sections.*

## A. Productivity Growth and Factors of Production

**1. This section examines trends in productivity growth in New Zealand and peer advanced economies in recent decades**. It considers the balance between labor and capital inputs and drivers of labor productivity growth. It also reflects upon changes in labor productivity and employment across sectors, and to what extent New Zealand's experience differs from that in other advanced economies. Topics explored align with and are intended to complement recent analyses from the New Zealand Treasury and Productivity Commission on these matters.[2]

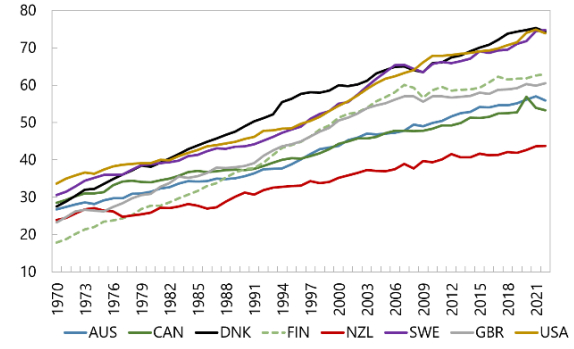
**2. Productivity growth in New Zealand has been lagging that in peer advanced economies (AEs)**. Prior to the COVID-19 pandemic, many advanced economies, including New Zealand, experienced a prolonged productivity growth slowdown, reflecting a broader structural transformation in the global economy. This slowdown compounded pre-existing productivity growth challenges in New Zealand. Over the past five decades, labor productivity growth in New Zealand has lagged that in peer AEs, resulting in a widening gap between New Zealand's GDP per hour worked and that in peers. As a result, by 2022, GDP per hour worked was well below levels in comparable economies. For example, while New Zealand's GDP per hour worked was close to levels

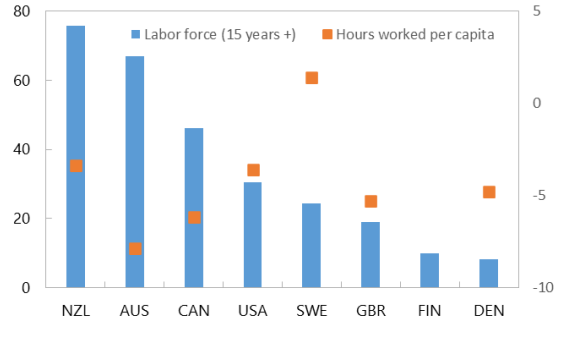
[1] Prepared by Monica Petrescu with contributions from Dan Zheng.

[2] See particularly The productivity slowdown: implications for the Treasury's forecasts and projections; Achieving New Zealand's Productivity Potential; and New Zealand Productivity Commission Annual Reports, 2018-2023.

in Scandinavian peers (Denmark, Finland, Sweden) in 1970, it was on average 40 percent lower by 2022.

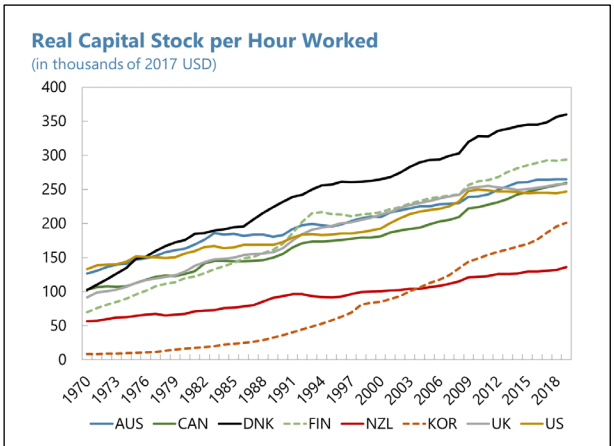
**3. With slow labor productivity growth, New Zealand's economic expansion has been supported by rapid growth in labor inputs**. Growth in total hours worked in New Zealand over the last 30 years has been higher than in most AE peers, reflecting rapid expansion of the labor force; this expansion can be linked to both increased labor force participation and strong inward migration flows. Individual worker inputs fared similarly to those in other economies, with the decline in per capita work hours in New Zealand close to the median observed in peers over the same period. Put differently, New Zealand's workforce has not witnessed the same efficiency gains as workforces in AE peers (has not been 'working smarter'), but it has compensated for this with adding more workers at a faster pace.




Source: OECD and IMF staff calculations.

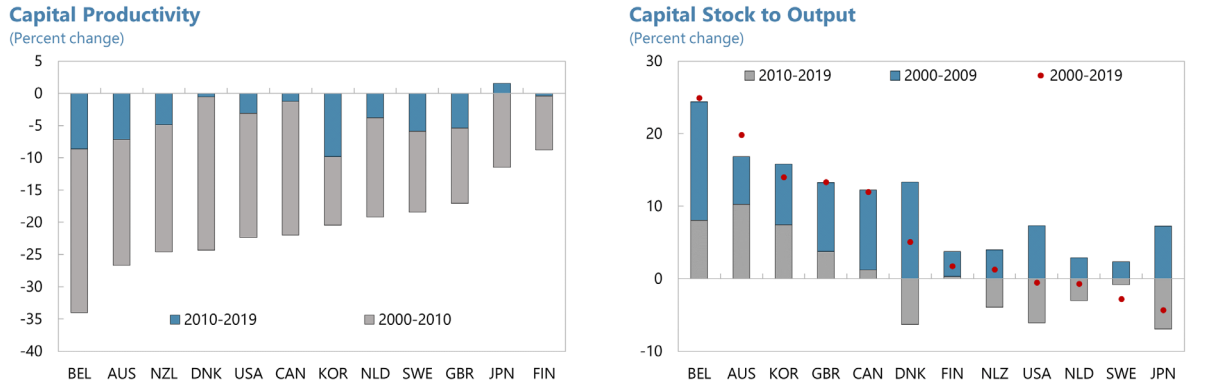
**4. At the same time, New Zealand's capital intensity has remained low relative to peers**. Measured as real capital stock per hour worked, capital intensity in New Zealand was already below levels in most peers in 1970, and has since grown at a slower pace, with the gap in capital intensity relative to peers expanding. While business investment in New Zealand, particularly after the GFC, has been comparable to that in many OECD countries, growth in capital intensity has not kept up with the pace observed in peers due to the more rapid growth in the labor force. Conversely, countries with a lower growth in labor force, such as Denmark and Finland, saw a much faster increase in capital stock per hour worked. By 2019, capital stock per hour worked in New Zealand was half of that in Australia and Finland, and 60 percent below levels in Denmark. Several factors have been proposed to explain relative capital shallowness in New Zealand, including




Source: OECD and IMF staff calculations.

higher long-term interest rates, leading to overall higher cost of capital (including both for machinery and equipment and for nonresidential construction), and small and insular markets (see Conway, 2016; Conway & Orr, 2003; Gemmell (2014); Hall and Scobie (2005); de Serres, Yashiro & Bouhol, 2014).

**5. Capital productivity has declined, despite limited capital deepening**. Capital productivity captures how efficiently capital is used to generate output. [3] In the twenty years prior to the COVID-19 pandemic, capital productivity declined across advanced economies; in many cases this reflected capital deepening and a relative shift from labor to capital in the production process, driven by availability of cheaper technologies. In New Zealand, however, the total decline in capital productivity over this period was higher than in most peer AEs, despite not seeing as much capital deepening. Among peers AEs, only Belgium and Australia saw larger drops in capital productivity than New Zealand. Yet in Australia and Belgium, as well as in several other peers, declines in capital productivity were concurrent with an increase in the capital-stock-to output ratio and with a more rapid increase in capital stock per hour worked (both consistent with capital deepening). In contrast, capital stock per hour worked grew slowly in New Zealand (see above), and the capital stock to output ratio remained nearly flat between 2000 and 2019 (rising slightly over 2000 to 2010, with gains subsequently unwound over 2010 to 2019). Thus, the relatively large fall in capital productivity in New Zealand is unlikely to be fully explained by capital deepening; a relative decline in the efficiency with which capital was used in conjunction with labor inputs also likely played a role.




Source: OECD and IMF staff calculations.

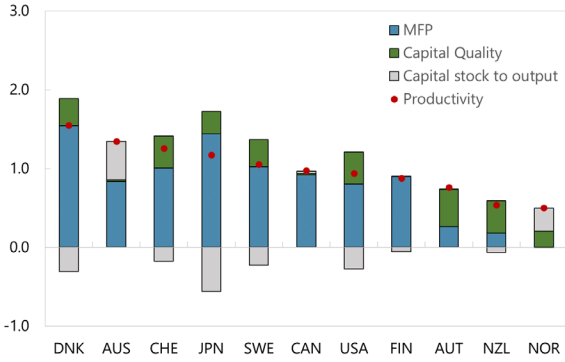
## Drivers of Labor Productivity Growth

**6. Softer labor productivity growth than in peers in recent years reflects both weaker multi-factor productivity growth and low capital intensity in New Zealand**.

[3] Capital productivity is measured as the ratio between the volume of output, measured as GDP, and the volume of capital input, defined as the flow of productive services that can be drawn from the cumulative stock of past investments, such as machinery and equipment. These services, provided by capital goods to the production process, are known as capital services. See pdtvy-2018-en.pdf

- Growth in labor productivity (GDP per unit labor input) can be decomposed into contributions from capital intensity (capital per unit output), capital quality (composition of capital, which captures changes in volume of capital between assets with different relative marginal productivities), and multifactor productivity (MFP).[4] MFP captures the part of GDP growth that cannot be explained by changes in labor and capital inputs (in effect, the residual), and reflects the overall efficiency with which labor and capital inputs are used together in the production process; MFP can be driven by, *inter alia*, technological advances, network effects, spillovers, economies of scale, and competition dynamics.

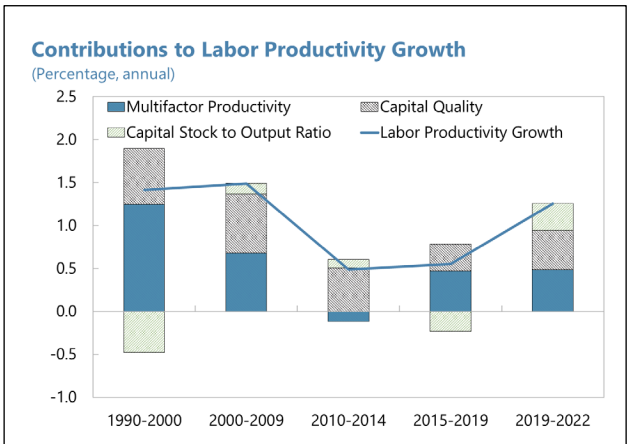
- Over the decade prior to the COVID-19 pandemic, New Zealand's MFP growth was lower than in peers (except Norway), driving most of the difference in labor productivity growth. Lower MFP growth could be consistent with limited economies of scale and low competition. It is also consistent with recent findings of slow technological diffusion and lagging frontier firms in New Zealand. [5]



Source: OECD and IMF staff calculations.

- Over the same period, the contribution of capital stock to labor productivity growth in New Zealand was small and negative, consistent with limited capital deepening. The contribution of capital quality to productivity growth in New Zealand and most AEs was positive in the decade prior to the COVID-19 pandemic, as the composition of capital stock rebalanced between sectors.

**7. In the decades prior to the COVID-19 pandemic, MFP growth in New Zealand has been volatile, driving overall trends, while slow growth in the capital stock has generally been a drag to productivity growth**. In the period 1990-2000, New Zealand's labor productivity growth was driven primarily by growth in MFP, alongside contributions from capital quality. In the succeeding years, the contributions of MFP to labor productivity growth gradually declined, turning negative by 2010-2014. The contribution of MFP picked up in 2015-2019, though remained below pre-GFC levels. Overall, in the 30 years prior to the



Source: OECD and IMF staff calculations.

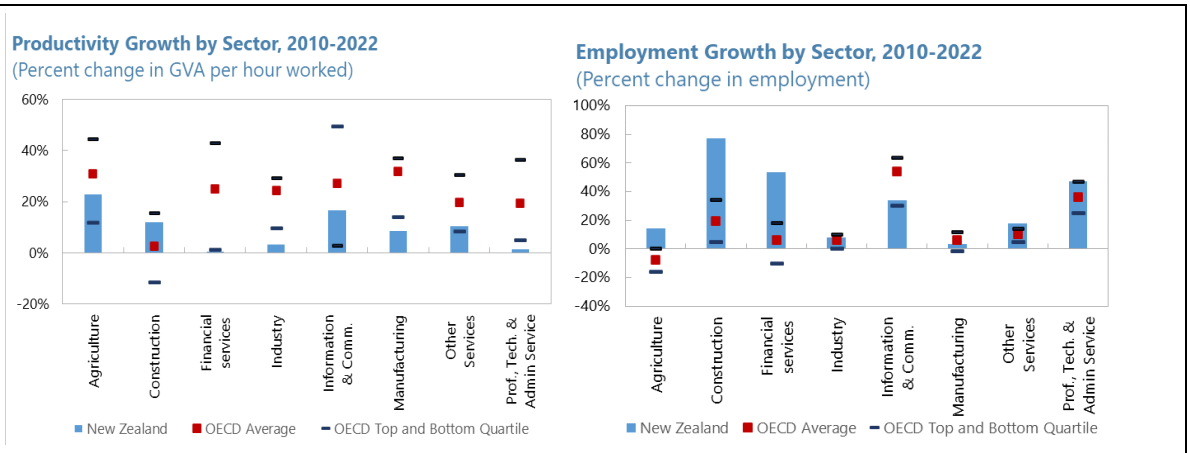
[4] See OECD-Productivity-Statistics-Methodological-note.pdf. Multifactor productivity is also referred to as total factor productivity (TFP) in the literature.

[5] See New Zealand firms: reaching for the frontier; Conway (2016); (further references to be added)

COVID-19 pandemic, contributions from capital intensity to productivity growth in New Zealand were negative, as capital deepening did not keep pace with labor force growth. Extrapolation from post- pandemic trends is likely not appropriate; although MFP rose, the unique period of quarantine and restrictions in migration saw a fall in employment larger than that in GDP across many AEs, boosting labor productivity; however, productivity growth in New Zealand has since returned to long-run trends. [6]

## Productivity at the Sector Level

**8. Productivity growth in New Zealand has been low relative to peers across most sectors**. From 2010 to 2022, labor productivity growth in New Zealand was below the OECD peer[7] average in agriculture, information and communication (ICT), and some services sectors. Productivity growth in New Zealand was in the bottom quartile among OECD peers for financial services, industry, manufacturing, and professional & technical services sectors over the same period. The only sector where productivity growth in New Zealand was above the OECD average over this period was the construction sector. New Zealand's productivity growth challenge thus does not appear to be confined to a few sectors, but to reflect broader issues across the economy.




Source: OECD and IMF staff calculations.

**9. The reallocation of employment in recent years in New Zealand has not supported stronger labor productivity growth**. From 2010 to 2022, employment growth was stronger in New Zealand than in OECD peers in several sectors with lower average labor productivity, including the agricultural sector, the construction sector, and some service sectors (including tourism-related sectors). At the same time, employment growth in the information and communication sector—a sector with high average labor productivity—was near the bottom quartile of peers. Mathematically, the relatively stronger expansion of employment in lower productivity sectors comes at the cost of

[6] The reasons for the temporary boost to the measured level of labor productivity are unclear and could reflect higher levels of capital per worker, or that firms reduced the hours of the least productive staff first, or simply measurement error due to the unprecedented volatility in quarterly GDP. See Cook et al (2024).

[7] The peer sample excludes Colombia, Mexico, and Chile.

lower average labor productivity growth relative to peers. At the same time, the contribution to New Zealand's aggregate productivity growth from the reallocation of labor inputs toward financial services and professional services over 2010 to 2022 was partly limited by the lack of labor productivity growth in these sectors.

**10. Sectoral trends and labor reallocation patterns highlight an important trade-off embedded in New Zealand growth strategy**. A further deepening in key growth sectors—tourism and agriculture—which have low labor productivity and more limited productivity growth prospects would likely lower prospects for overall productivity growth, even as it would allow New Zealand to capitalize on the natural advantages it has in these sectors. Diversification into other sectors with higher labor productivity could present challenges but would likely improve productivity growth prospects in the long run. Labor reallocation towards higher-productivity sectors alone is unlikely to be sufficient to sustain long-run productivity growth and would need to be accompanied by efforts to unlock continued productivity growth within these sectors.

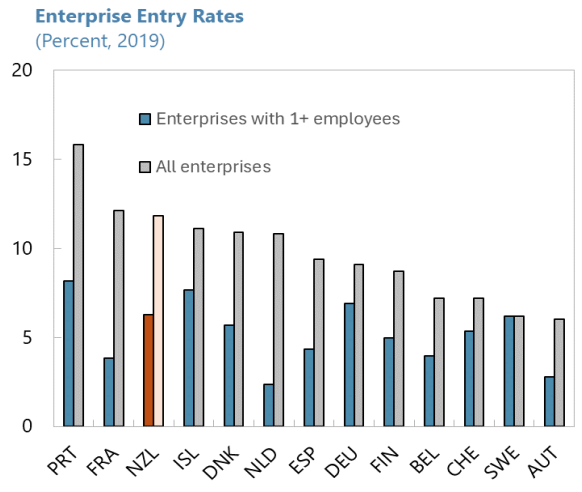
## B. In Search of New Zealand's Gazelles

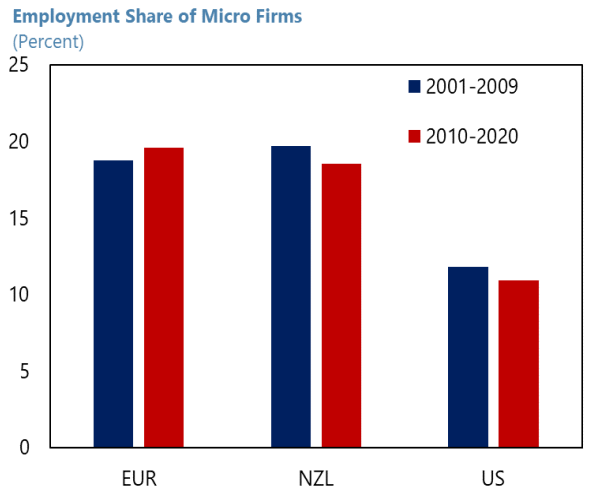
**11. This section considers business dynamism in New Zealand relative to peers, with a focus on the experience of young, high-growth firms**. The analysis of young, high-growth firms relies on a panel of firm-level balance sheet data from Orbis and mirrors the approach of recent work conducted by the IMF on productivity challenges across Europe.[8] Analysis in this section is somewhat limited by data availability, and focuses on firms established over the period 2008-2018. Further exploration of this topic could benefit from the use of administrative data or a longitudinal business survey.

**12. Weak business dynamism is one aspect of New Zealand's labor productivity challenge**. New Zealand has relatively high enterprise birth rates (12 percent in 2019) as compared to European peers; however, this partly reflects high entry rates of firms with no employees, which make up over 80 percent of enterprise births in New Zealand. Once the sample is narrowed to firms with at least one employee, enterprise birth rates in New Zealand are closer to 6 percent, closer to birth rates those in many European peers, where business dynamism is a long-standing challenge. Moreover, the employment share of micro firms (those with ten or fewer employees) is high in New Zealand (and in Europe) compared to the US, suggesting barriers to growth for small firms.

**13. The rate at which young, high-growth firms emerge in New Zealand has been relatively limited compared to peers**. Young, high growth firms—frequently referred to as 'gazelles' in economic literature—are identified as firms that see 20 percent growth in sales (adjusted for inflation) over at least one three-year period when they are under ten years old, from a

[8] See Europe's Declining Productivity Growth: Diagnoses and Remedies, part of the October 2024 Regional Economic Outlook for Europe and Adilbish et al., (2025). The definition of young, high-growth firms is slightly different in this paper, with gazelle definition based on size rather than employment.




Source: OECD DynEmp; CompNet; Stats NZ, and IMF staff calculations.

base of at least USD100,000 in 2015 real terms**.** Since the global financial crisis (GFC), birth rates of gazelles in New Zealand (as a share of all new firms established) have been below the median observed in peer AEs (Figure 1, panel 1). At around 13 percent, gazelle birth rates in New Zealand were below levels observed in Australia, Finland, or Sweden, but above levels observed in the Netherlands or Denmark. Potential drivers of low business dynamism and the low emergence of gazelles in New Zealand are explored in sections C and D.

**14. Young, high-growth firms in New Zealand have been concentrated in a few sectors**. Over 2008 to 2018, new gazelles in New Zealand were primarily concentrated in the financial and real estate sector. The share of new gazelles in this sector was higher in New Zealand than in most peers, even as the sector saw lower overall productivity growth (see previous section). At the same time, the share of new gazelles in ICT and professional and technical services, which include hi-tech, high-productivity sectors dependent on innovation, has been lower in New Zealand than in peers (Figure 1, panel 2). These trends suggest investment and innovation incentives may be misaligned between sectors in New Zealand; trends could also be a symptom of the high propensity to save in real estate.

**15. New Zealand's young, high-growth firms have the potential to boost productivity**. The average revenue product of capital (ARPK) —reflecting capital productivity—for larger older firms in New Zealand followed a steady and gradual downward trend between 2008 and 2021 (Figure 1, panel 3). At the same time, ARPK of New Zealand's gazelles, albeit more volatile (likely due to the nature of the sample) was on average two times higher than that of larger, older firms, and did not show signs of decline. A similar dynamic could be observed in other AEs, where the ARPK of gazelles was on average 1.6 times higher than that of larger, older firms, with the latter seeing a flat ARPK over this period.

**16. Availability and affordability of financing is essential for young, high-growth firms**. Gazelles rely on ample and affordable financing to growth, with financial constraints having

ramifications for business dynamics and ultimately productivity. The experience of gazelles in New Zealand differs from that in other AEs in this realm, with financial constraints manifesting at different stage and scales.

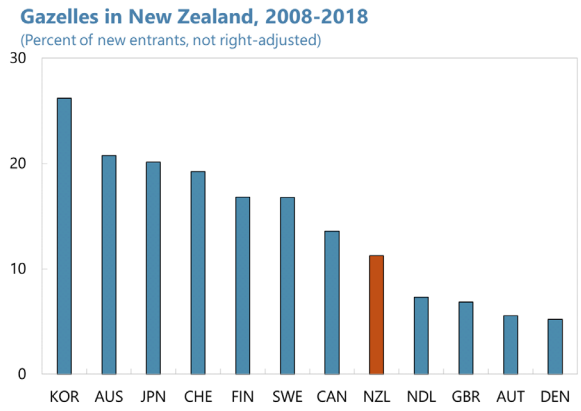
- *Gazelles tend to be more highly leveraged than larger older firms.* In the years immediately after establishment, New Zealand's youngest gazelles were significantly more leveraged (around 15 percentage points) than older, larger firms.[9] Young gazelles in other AEs were also more leveraged than older, larger peers, but the difference was slightly smaller (only around 6 percentage points). In New Zealand, the differences in leverage with larger, older firms decline gradually and disappear as more years pass since a gazelle's establishment (Figure 1, panel 4).[10] However, the same trend is not observed in other AEs, where gazelles continue, on average, to rely on higher leverage than peers. This suggests that while young promising firms in New Zealand do appear to have relatively adequate access to financing immediately after establishment, they may not have adequate access to financing as they grow.

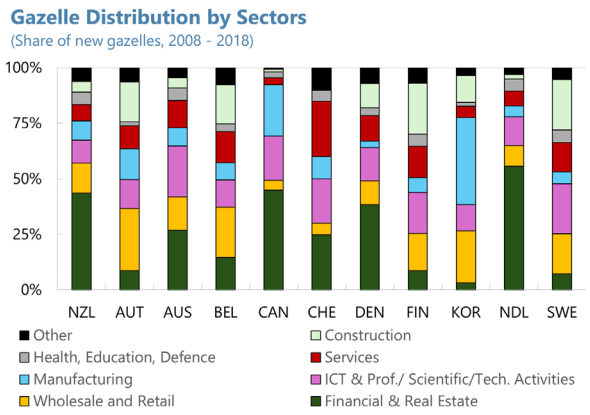
- *New Zealand's gazelles benefit from favorable financing terms.* In the first three years after formation, New Zealand's gazelles benefit from more favorable financing terms (around one percentage point lower net effective interest rates on debt) than larger older firms (Figure 1, panel 5). As New Zealand's gazelles grow older, however, the net effective interest rates they pay catch up with those of larger, older firms—and even become higher after ten years post-establishment. At the same time, gazelles in other AEs do not benefit from favorable financing terms, facing higher net effective interest rates than larger, older peers throughout the first 15 years post-establishment. These trends imply that access to financing at favorable terms supports the emergence of young high-growth firms in New Zealand, unlike in peers. However, it appears that in New Zealand, while financing constraints are relatively more limited upon establishment, these emerge and strengthen as gazelles grow older and larger (despite their success). These constraints potentially limit the ability of young promising firms' ability to compete with more established firms and to disrupt sectoral dynamics.

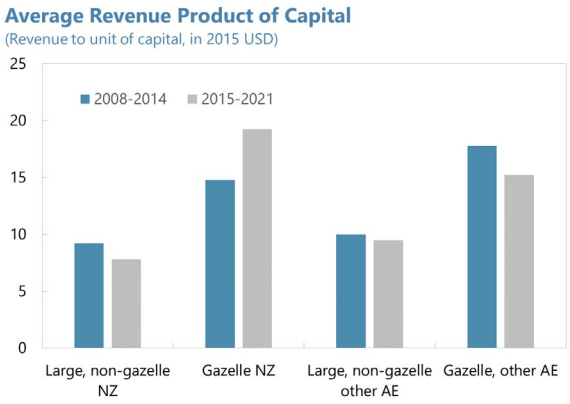
[9] Leveraged is defined as total debt to total assets.

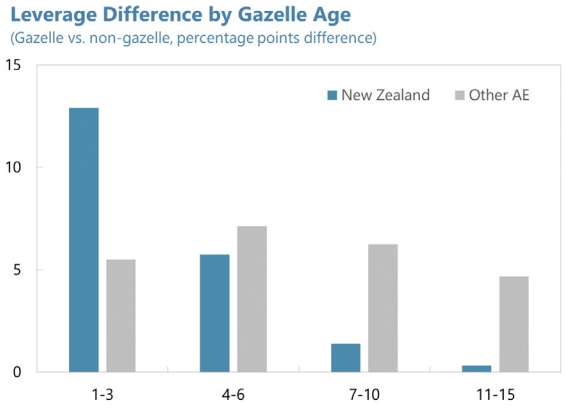
[10] Figure 1, panels 4-6 are based on regressions that control for time fixed effects.

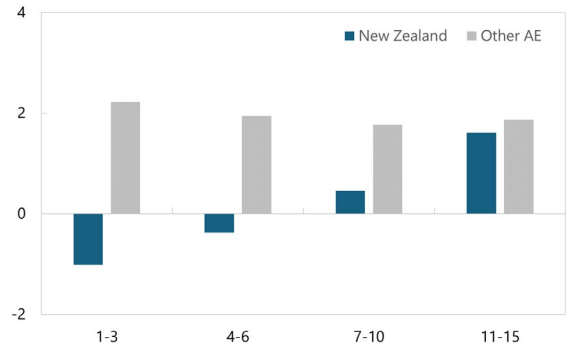
## Figure 1. Young, High Growth Firms

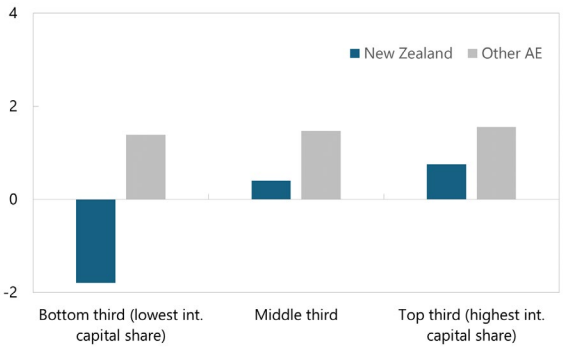



*Note: Other AE includes Austria, Australia, Belgium, Canada, Denmark, Finland, Korea, the Netherlands, Sweden, and Switzerland. The sample used contains 163 gazelles out of a total of 1450 firms established in New Zealand between 2008 and 2018, and over 200,000 gazelles from nearly 1.3 million firms established in other AEs. The sample contains 530 large old non-gazelles in New Zealand and around 400,000 in other AEs.*

*Source: Orbis data and IMF Staff calculations.*

- *In New Zealand, gazelles with high intangible asset shares face disproportionate financing constraints*. In New Zealand, gazelles with fewer intangible assets appear to benefit from lower

financing costs relative to larger, older firms with similarly low reliance on intangible assets. However, firms with a higher share of intangible assets appear to face higher financing costs than larger, older firms with similar shares of intangible assets (0.75 percentage points higher net effective interest rates for gazelles in the top tercile of intangible assets; Panel 1, figure 6). Theis suggests the presence of higher financial constraints on firms in sectors with less tangible assets, which may in part limit the emergence of young-high growth firms in hi-tech sectors, with implications for productivity growth (given these sectors are also among the more productive).

The experience of gazelles in New Zealand suggests financial barriers to expansion for promising young firms, which are explored further in Section C. New Zealand's youngest gazelles experience benefits in terms of financing costs and ability to leverage relative to older, larger firms; these benefits are limited to the very early years after establishment and are not seen in peers. These dynamics may be partly explained by a high propensity of small firms in New Zealand to use real estate as collateral for borrowing, which can allow for higher leverage at lower cost initially but loses relevance as gazelles scale up rapidly and require more debt than can be obtained via this method. As gazelles in New Zealand grow, financing constraints appear to strengthen.

## C. Financing Availability

**17. Availability of financing is critical to enhance business dynamism and ultimately productivity growth**. As illustrated in Section B, young, fast-growing firms often require ample financing, but may face constraints in accessing it, especially beyond the first years after establishment. Strong reliance on bank credit and limited availability of a broader range of financing options is likely playing a role in restricting private sector development and ultimately slowing productivity growth in New Zealand. This section considers the role of equity and debt markets, private financing, and overseas investment in New Zealand relative to other AEs.

**18. New Zealand's equity and debt markets are underdeveloped compared to those in other advanced economies**.

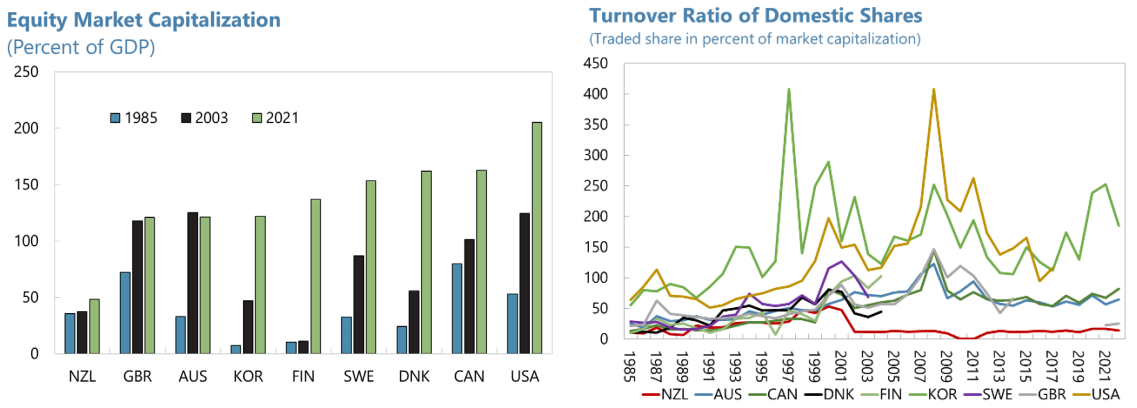
- *Equity markets*: New Zealand's stock market capitalization remains lower than for peers, with limited growth; the stock market also sees significantly lower trading volume and turnover ratios than peers (Figure 2, panels 1, 2, and 3). Market concentration is high, with the 50 largest stocks accounting for approximately 90 percent of total market capitalization and the top 10 stocks representing more than half. Unlike the largest companies in the US, which are predominantly technology firms driving innovation and productivity, New Zealand's largest listed companies are concentrated in sectors such as utilities, healthcare, and services. In recent years, New Zealand, much like other AEs, witnessed a slowdown in IPOs. Surveys have indicated the existence of a 'two-tier' market, with concentration of retail investors in larger, more liquid,

stocks.[11] As a result of these trends, the equity market appears to play a relatively limited role in supporting private sector development, especially for younger, smaller firms or in high-growth industries.

- *Debt markets*. The size of corporate debt markets in New Zealand has been expanding rapidly, with capitalization on the NZX debt exchange tripling in nominal terms over the last decade, to almost NZ$60 billion (Figure 2, panel 4). However, at under 15 percent of GDP, corporate bonds markets are small relative to other advanced economies, but also smaller than in regional EMs, including Thailand and Malaysia. Moreover, retail debt remains predominant, with less liquid wholesale securities—which can be essential for companies looking to make sizeable investments at lower costs—growing very slowly.

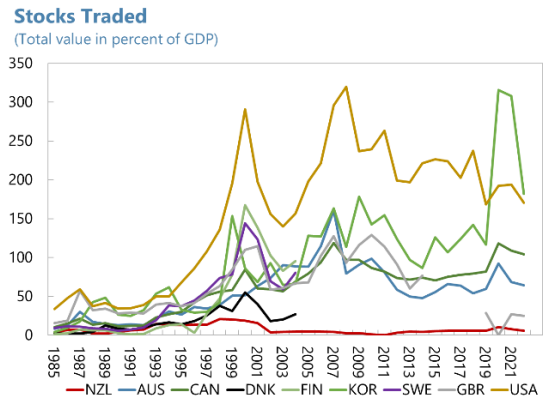
**19. The role of private capital in New Zealand remains limited**. Private capital has been growing in recent years, albeit unevenly. Venture capital investment activity picked up sharply in 2021 and has remained strong since, reaching a 10-year high in 2023, with over NZD380 million invested. Moreover, over the past decade, venture capital in New Zealand has been heavily focused on the IT/software and technology sectors, which could have high benefits for productivity growth and innovation. However, venture capital investment in New Zealand remains low relative to levels seen in peer AEs (see New Zealand 2025 Article IV Staff Report Figure 8, panel 6). At the same time, growth in mid-scale and large investment activity has been less consistent. Top-end private equity investments declined in number and size in 2023 (Ernst & Young, 2024). Mid-market investment boomed in 2020-2021 but dropped off in 2022 and has not fully recovered to previous peaks. Moreover, mid-market investments in New Zealand continue to be funded primarily from Australian and New Zealand-domiciled funds, with investments from the rest of the world still limited.

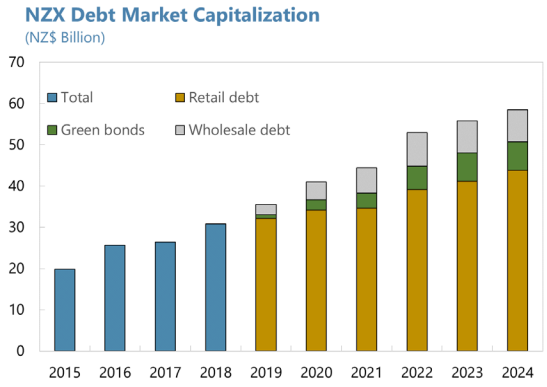
**Figure 2. Equity and Debt Markets**

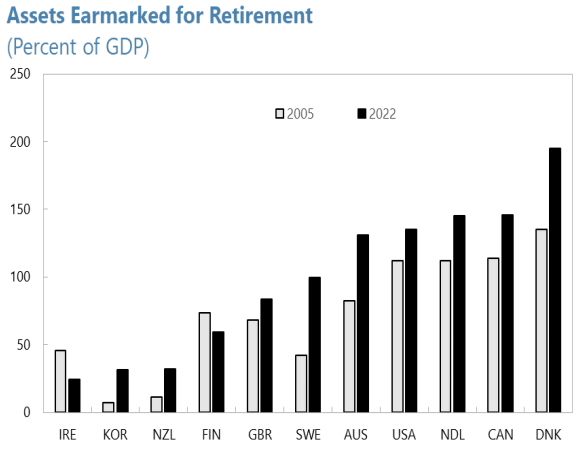


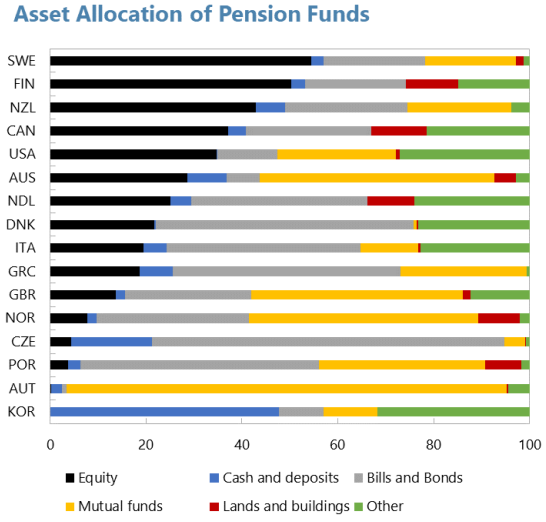

[11]See Growing New Zealand's Capital Markets, 2029. These trends have been linked by some analysts with conservative interpretations by brokers of financial advice rules in the decade following the global financial crisis, as well as with lengthy and complex disclosure requirements. In 2023, the Financial Markets Authority issued a guidance note clarifying the approach to applying and enforcing regulation around financial advice about financial products purchased for investment purposes.

**Figure 2. Equity and Debt Markets** (Concluded)



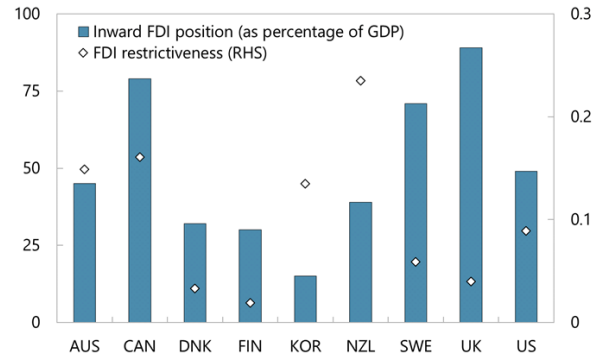




Source: OECD, NZX, World Bank Development Indicators and IMF staff calculations

**20. New Zealand's laggard capital market development may be linked to the limited pool of private pension savings**. The introduction of private pensions systems, or systems where individuals allocate a part of their savings to private mutual and investment funds, has led to capital market deepening in several economies, including Australia, Chile, Poland, and Sweden, by increasing demand for various asset types. In New Zealand, the pool of private pension savings remains limited relative to that in most AE peers, reflecting the universality of the Superannuation scheme (see New Zealand 2025 Article IV Staff Report, ¶39) and the propensity to put savings in real estate. The introduction and expansion of KiwiSaver in recent years has helped create a pool of domestic savings, raised the share of households with savings accounts, and ultimately fueled some of the pick-up in capital market growth. However, with assets earmarked for retirement just under 50 percent of GDP in 2022, and still well below levels in most peers, there is significant scope for boosting private savings outside the real estate market, which could in turn help accelerate capital market deepening (Figure 2, panel 5).

**21. Investment of pensions funds in a broader range of assets could fuel credit availability for different types of enterprises**. In recent years, prudential and other regulatory reforms in Europe and the UK have encouraged pension funds to explore investments in less liquid assets to diversify their risk profile and meet solvency requirements. However, in New Zealand, pensions assets remain more heavily concentrated in equities and other liquid assets (cash and deposits) than in peers (Figure 2, panel 6). This likely reflects different liquidity management settings. In New Zealand, rules that allow investors to easily transfer schemes between KiwiSaver managers, and requirements around daily unit pricing for KiwiSaver portfolios, may disincentivize KiwiSaver managers from investing in less liquid assets, including bonds and private assets.

**22. Strict regulations have historically reduced the role of foreign direct investment (FDI) in New Zealand's economy**. New Zealand's foreign investment screening regime has been historically one of the most restrictive among AEs, according to the OECD's FDI Regulatory Restrictiveness Index. Inward FDI has thus been lower than in many peer economies (as percent of GDP), despite an open trade account and significant exports. In the past, New Zealand's overseas investment regime (currently being reformed) implied significant administrative burdens for investors, who were required to demonstrate that their investment would provide substantial benefits to New Zealand. While the approval process was lengthy and potential cumbersome, rejection rates were however low. Streamlining approvals for FDI could help increase availability of financing, but also increase exposure to global ideas and practices.



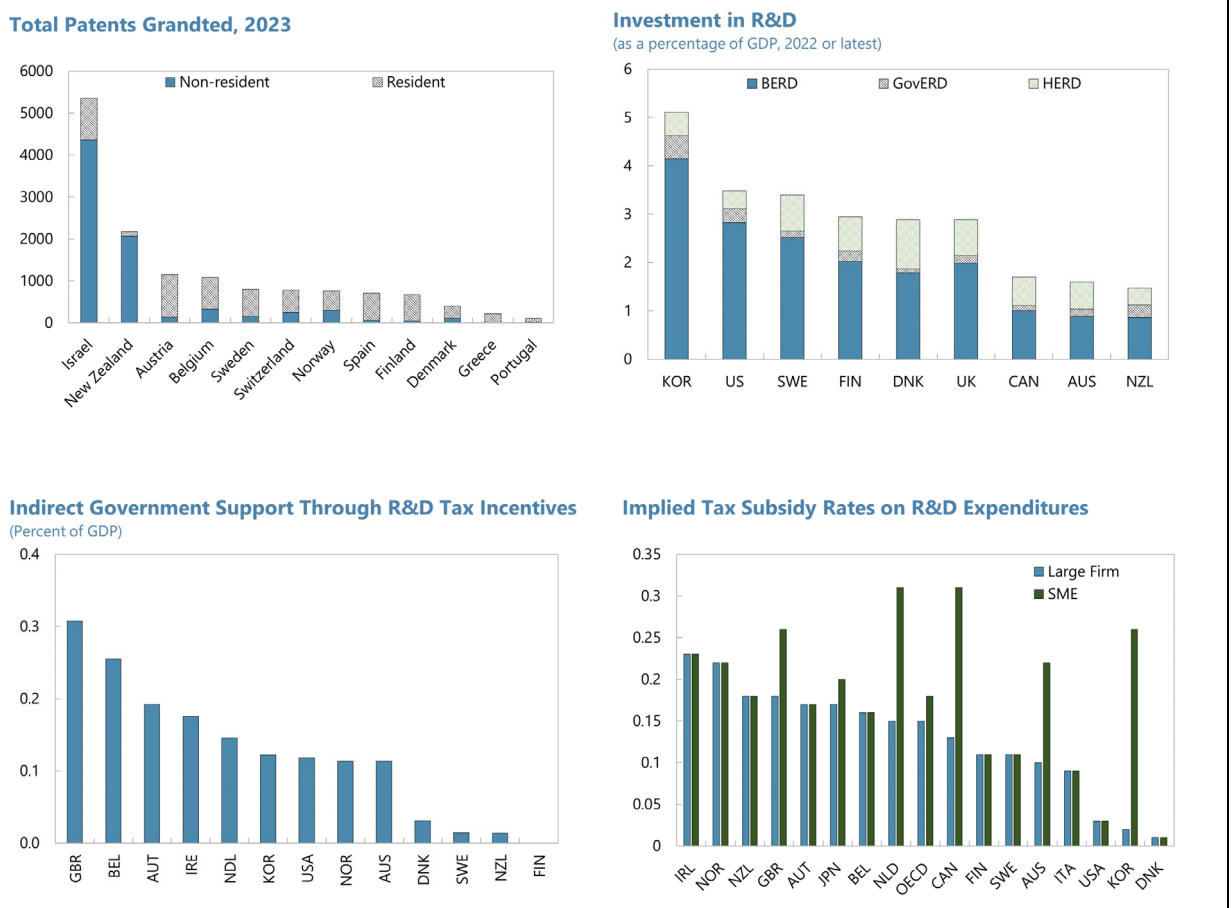
Source: OECD and IMF staff calculations.

## D. Constraints to Expansion, Innovation, and Competition

**23. This section considers various non-financial barriers to productivity growth for New Zealand's firms**. Barriers are considered in a cross-country setting, with focus primarily on barriers to business dynamism and areas that can be targeted with policy reform. Low rates of innovation and competition, as well as regulatory restrictions and infrastructure gaps, are explored.

**24. Innovation in New Zealand is weak**. The Productivity Commission estimated that the product innovation rate in New Zealand has been declining for both larger businesses (with over 100 employees) – from 33% in 2007 to 27% in 2021 – as well as for medium-sized businesses (with 50-99 employees) – from 27% to 22% over the same period (NZPC, 2024). Soft innovation is also visible in patent numbers: while the total number of patents issued in New Zealand in recent years compares favorably to the number issued in peer European AEs, a large majority of New Zealand patents were issued to non-residents (Figure 3, panel 1). The number of patents issued to residents in New Zealand on the other hand was low relative to that in peers.

## Figure 3. Innovation and R&D




Source: OECD, World Intellectual Property Organization, and IMF staff calculations.

**25. Low innovation is consistent with low R&D**. Economic literature has extensively documented the importance of R&D for accelerating the speed of innovation and of convergence to the global productivity frontier (see, e.g., Andrews and Westmore, 2014; Griffith et al, 2004). Moreover, recent analysis shows that R&D spending does not contribute to productivity growth if it is concentrated only in large businesses – with older, larger firms often investing to maintain market dominance rather than push the boundaries of innovation (Akcigit, 2025) In New Zealand, total R&D investment has lagged that in peers, driven primarily by low investment by businesses (BERD; Figure 4, panel 2). Low BERD may in part be linked to limited R&D tax incentives –only introduced in New Zealand in 2019, and for which spending remains below levels in peers (Figure 4, panel 3). Moreover, unlike in many peers, the R&D implied tax subsidy is not higher for small and medium enterprises (SMEs; Figure 4, panel 4). Given their size, the administrative cost of applying for R&D incentives can at times be large for SMEs; at the same time, SMEs have been shown to be especially important for productivity enhancing innovation (see Owalla et al., 2022). Government spending on BERD in New Zealand increased slightly in the decade prior to the pandemic, but has since declined, with focus shifting toward incentivizing firm R&D; this trend follows patters observed earlier in the rest of the OECD (IMF 2024). At the same time, public research is generally found to have the largest "bang for

the buck," with more than one additional dollar in total R&D per dollar of fiscal cost; this is not surprising, as public research funding tends to focus on fundamental research, which has high knowledge spillovers benefiting more sectors in more countries, and for a longer time than applied research by firm (IMF 2024). Weak innovation in New Zealand is consistent with observed low MFP growth, a lower share of gazelles in ICT and professional and technical services sectors, and financing constrains for gazelles with a high share of intangible assets.

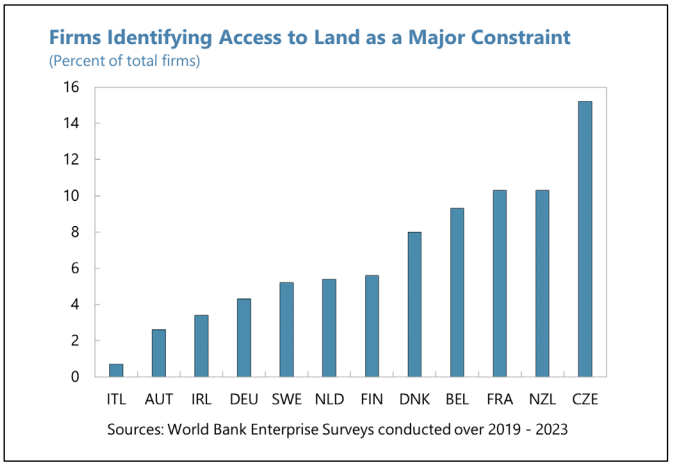
**26. Slow diffusion of new technologies could be hampering productivity growth**. The efficient and speedy diffusion of new technologies and business practices from the most productive global firms to the most advanced firms in a country (domestic frontier firms) and ultimately to other domestic firms is key to productivity growth. While productivity growth for global frontier firms has been strong, diffusion to New Zealand has lagged. The productivity of firms at the New Zealand frontier was found to be less than 50% of the small-advanced economies frontier, based on data up to 2016 (NZPC, 2021). This could reflect several factors. Weak competition has been shown to slow the process through which best-practice production techniques are adopted in industries behind the global frontier (see Conway et al., 2006). Few international connections or limited openness to foreign investment could also slow knowledge diffusion to domestic frontier firms.[12] At under 10 percent, the very small share of firms holding internationally-recognized quality certifications in New Zealand – a share much lower than in peer AEs – likely reflects limited international exposure. Insufficient incentives for R&D investment may also play a role, as firms may need to make such investments to successfully adopt new technologies into their production processes. New Zealand's existing low capital stock (section A) and the low diffusion of technology can be viewed as joint challenges which imply that innovation in New Zealand involves investment in innovative forms of capital and adoption of new technologies embedded in physical capital or codified in intangible capital.


**27. Insufficient competition may be compounded by weak business dynamism, contributing to slow productivity growth**. International experience has shown competition to be one of the most important drivers of long-term growth in productivity (e.g., Nickell, 1996; Blundell, Griffith, and van Reenen, 1999; Aghion et al. 2004). New Zealand's economy is predisposed to higher market concentration – which creates the potential for more limited competition – as small size and geographic remoteness make entry for foreign firms less profitable. Low business dynamism– including low entry and challenges to expansion for young firms, as described in section B – can also

[12] See (Conway, 2016) for a discussion of policy options to improve international connections.

weaken competition. The share of New Zealand firms which report that they are constrained by competition from rivals when setting prices is lower than in other advanced economies (Figure 4, panel 1); while market concentration does not always preclude robust competition, limited constraints in price setting are a clear signal of weak competition. The limited scale of competition in select sectors in New Zealand have been brought into focus in recent years, including in market studies from the Commerce Commission.[13]

**28. The softer approach to competition policy, as well as regulatory barriers, may have reduced competition and affected business dynamism, with ramifications for productivity**. Economic literature suggest competition policy can have a strong positive effect on multifactor productivity growth (see, e.g., Buccirossi et al, 2013). Historically, New Zealand's competition policy framework was more permissive than in many advanced economies, with fewer restrictions and more exemptions in regulating mergers, anticompetitive agreements, and abuse of dominance. This framework was partly upgraded and more closely aligned with international practices in recent years, but some gaps remain. For example, New Zealand has remained one of only three AEs with a voluntary merger notification regime (along with Australia – which is planning a shift to a mandatory pre-merger notification regime from January 2026 – and the United Kingdom). In recent decades, as market concentration has grown globally, countries with a mandatory merger notification regime have generally seen higher productivity growth than those with a voluntary regime (although this does not necessarily imply causation). In some cases, a voluntary notification regime may be insufficiently strict to deter the erosion of competition and ultimately productivity. Separately, the pro-competitiveness of product market regulation in New Zealand continues to compare unfavorably with peers, according to OECD measures, primarily reflecting weaker scores on the implied administrative and regulatory burdens, barriers to trade and investment, and regulation impact evaluation (in the later, specifically around interaction with stakeholders in the evaluation process).




**29. Access to land and infrastructure gaps remain impediments to firm productivity and growth**. With complex planning and lengthy consent processes, access to land remains a challenge for firms in New Zealand. In the World Bank Enterprise survey, firms in New Zealand report access to land as a major constraint at a significantly higher rate than firms in peer AEs. Persistent large infrastructure gaps in New Zealand also pose a challenge for productivity; infrastructure quality is critical for reaping the benefits from innovation into overall economic growth, with economic literature finding significant

[13] The Commission identified significant deficiencies to competition in retail fuel, retail grocery, residential building supplies, and personal banking services sectors.

evidence of links between infrastructure and MFP.[14] Moreover, recent evidence from Europe suggests that gains from digitalization are larger for firms located in regions with better digital infrastructure and faster internet speeds, implying public investment in such infrastructure can help amplify the effect of advanced digital technology in boosting productivity (European Investment Bank, 2024). Infrastructure gaps in New Zealand reflect both the need for new projects but also the need to maintain and upgrade existing resources: for example, in the World Bank Enterprise survey nearly half (47.3 percent) of firms in New Zealand report experiencing internet disruptions, a higher share than in peer AEs.

## Figure 4. Competition


Note: Panel 1 depicts the share of firms answering they cannot increase prices more than competitors without losing customers. Data as of 2023.
Source: OECD, World Bank Enterprise Survey, and IMF staff calculations.

[14] See, e.g., Productivity impacts from improved broadband—Firm-level analysis; Wan and Zhang (2018); Yeaple and Golub (2007).

## E. Policy Implications

**30. Broad-based reforms are needed to tackle New Zealand's low productivity growth**. These include:

- **Deepening capital markets**. Incentivizing the accumulation of private savings outside of real estate, together with a more permissive capital investment framework for pension savings, could pave the way to deepen capital markets, ultimately broadening the range of credit available to firms. Potential policies include incentivizing greater savings in KiwiSaver – including by making them compulsory, increasing the contribution rate (currently set at a 3 percent default minimum for both employer and employee), or both (see New Zealand 2025 Article IV Staff Report, ¶13).[15] Removing the tax advantage associated with housing investment could also help incentivize private pension or other savings. Moreover, pension reforms targeting strategic shifts in asset allocation could support a more diversified investment approach by KiwiSaver managers, fostering the development of both illiquid asset markets, and improving access to finance for a broader range of market players. Liquidity management settings could be better aligned with international practices; for example, EIOPA rules allow investment into illiquid assets, but require, inter alia, adequate liquidity buffers, risk assessments, and that investments have a productive cash flow. Adjusting KiwiSaver liquidity management settings could help allow and encourage fund managers to invest in bonds or private capital (whether venture capital, mid-market investments or larger scale private equity) to benefit a broader range of firms. Lastly, administrative burdens and other obstacles to issuing equity or debt could be reviewed and reduced where possible, while retaining the integrity and quality of assets listed. The ongoing Capital Markets Reforms are a welcome step in this direction, and planned analysis by the RBNZ on capital market depth could help inform future policies.

- **Boosting innovation** will be essential for strengthening MFP growth. Overall, public research, R&D tax incentives, and research grants are consistently found to be the most cost-effective tools to boost innovation (IMF, 2024). In this context, assessing the efficiency of R&D tax credits, with a view to ensure access across a broad range of firms, is warranted. Specifically, R&D tax incentives should be adequately calibrated to encourage innovation also for SMEs, to avoid concentration of R&D in larger firms only; larger incentives or reduced administrative burdens for smaller firms may be appropriate. The drawback of tax incentives, however, is that private sector R&D decisions may not adequately address the complex knowledge spillovers associated with innovation. Maintaining government investment in science and technology, with focus on research platforms where New Zealand firms have a proven track record and global visibility, could help improve the returns to investment. Encouraging increased international connections, including through more openness to foreign investment, as well as strengthening domestic

[15] Even if home bias in KiwiSaver investments remains low, a share of new savings in KiwiSaver will still be expected to remain in domestic capital markets.

connections across the innovation system could facilitate faster and more efficient technological diffusion.[16]

- **Enhancing business dynamism** will likely require reforms to policies and regulations that affect competition. Recent years have seen a significant shift in competition policy in New Zealand, including rewriting Section 36 of the Commerce Act to broaden the definition of anti-competitive behavior in a manner aligned with international standards, and empowering the Commerce Commission to conduct market studies. To guard against the excessive consolidation of market power going forward, the ongoing review of the Commerce Act should continue to upgrade competition policies in line with international best practices. It will also be important to provide the Commerce Commission with adequate tools to tackle changing markets in a digital age. Given that the pro-competitiveness of market regulation continues to compare unfavorably with peers, there is scope to review regulatory and governance arrangements with a competition lens.

- **Policies to reduce barriers to land use and FDI, and improve infrastructure**, could also help improve the business environment and boost productivity. Ongoing efforts to replace the RMA have the potential to streamline planning processes and reduce impediments to land use, thus supporting business development. Tax policy could also be adjusted to incentivize the efficient use of land. Ongoing reforms to the screening regime for overseas investment can unlock additional funding and increase international openness; moving to a risk-based screening regime in most investment categories should reduce the administrative burdens for foreign investors. Bridging the wide infrastructure gap and maintaining existing capital stock can help improve firm prospects. Recent efforts to fast-track approvals for critical projects, attract private sector investment for infrastructure, and develop a long-term stable pipeline, could help accelerate this process (see New Zealand 2025 Article IV Staff Report, ¶29).

- **Other policies to support innovation and technological diffusion include public investments in education and physical and digital infrastructure.** Upgrading digital infrastructure and skills can enable the economy to share in the productivity gains from advanced digital technologies, including AI (OECD 2022). While education spending matters, the quality and adaptability of education system are most critical (IMF, 2024). Targeted fiscal incentives can also be designed in a revenue-neutral way to help foster the uptake of new technologies, lifting productivity across firms (IMF, 2024).

**31. An ambitious structural reform agenda is already underway in New Zealand to tackle the productivity challenge**. Policies should continue to be designed based on thorough cost-benefit analyses. Broad buy-in around the most critical reform areas, and careful coordination between agencies, could help smooth implementation and ensure reforms deliver expected benefits.

[16] See (Conway, 2016) for a discussion of policy options to improve international connections.

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