

ECONOMICS DEPARTMENT**IMPROVING WELL-BEING THROUGH BETTER HOUSING POLICY IN
NEW ZEALAND****ECONOMICS DEPARTMENT WORKING PAPERS No. 1565****By Andrew Barker**

OECD Working Papers should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

Authorised for publication by Isabell Koske, Deputy Director, Country Studies Branch, Economics Department.

All Economics Department Working Papers are available at www.oed.org/eco/workingpapers

JT03450652

OECD Working Papers should not be reported as representing the official views of the OECD or of its member countries. The opinions expressed and arguments employed are those of the author(s).

Working Papers describe preliminary results or research in progress by the author(s) and are published to stimulate discussion on a broad range of issues on which the OECD works.

Comments on Working Papers are welcomed, and may be sent to the Economics Department, OECD, 2 rue André-Pascal, 75775 Paris Cedex 16, France, or by e-mail to eco.contact@oecd.org.

All Economics Department Working Papers are available at www.oecd.org/eco/workingpapers.

On 25 May 2018, the OECD Council invited Colombia to become a Member. At the time of preparation the deposit of Colombia's instrument of accession to the OECD Convention was pending and therefore Colombia does not appear in the list of OECD Members and is not included in the OECD zone aggregates.

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

© OECD (2019)

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for commercial use and translation rights should be submitted to rights@oecd.org.

ABSTRACT/RESUME

Improving well-being through better housing policy in New Zealand

New Zealand's housing supply has not kept pace with rising demand, including from net immigration. Affordability has worsened, particularly for low-income renters. Government action is underway to allow new housing through initiatives such as the Urban Growth Agenda, KiwiBuild and the Housing and Urban Development Authority, but further steps are needed to improve well-being. Clear overarching principles for sustainable urban development and rationalisation of strict regulatory containment policies would allow the planning system to better respond to demand for land. Incentives for local governments to accommodate growth could be increased by giving them access to additional revenue linked to local development. More user charging and targeted rates would also help to fund infrastructure required to service new housing. Government delivery of affordable housing through KiwiBuild should be re-focused towards enabling the supply of land to developers, supporting development of affordable rental housing and further expanding social housing in areas facing shortages.

This Working Paper relates to the 2019 OECD Economic Survey of New Zealand (<http://www.oecd.org/economy/new-zealand-economic-snapshot/>).

JEL Classification: I38, O18, R21, R31, R38, R52

Keywords: housing market, house prices, land-use and rental regulations, housing supply, infrastructure, housing affordability, residential mobility, well-being, social housing, property tax

Renforcer le bien-être en améliorant la politique du logement en Nouvelle Zélande

L'offre de logements n'a pas suivi la hausse de la demande en Nouvelle-Zélande, notamment alimentée par un solde migratoire positif. L'accessibilité financière de l'immobilier d'habitation s'est dégradée, notamment pour les locataires aux revenus modestes. Des initiatives des pouvoirs publics sont en cours pour permettre une augmentation de l'offre de logements neufs, telles que le programme pour la croissance urbaine (Urban Growth Agenda), le programme KiwiBuild et la mise en place d'une autorité pour le développement urbain, mais des mesures complémentaires s'imposent pour améliorer le bien-être. Des principes directeurs clairs en matière de développement urbain durable et une rationalisation des dispositions réglementaires strictes limitant l'étalement des villes permettraient au système d'urbanisme de mieux satisfaire la demande de terrains. On pourrait inciter davantage les collectivités locales à accompagner le développement urbain en leur donnant accès à des recettes supplémentaires liées au développement local. Un recours accru aux redevances d'utilisation et aux prélèvements ciblés faciliterait également le financement des infrastructures requises par les logements neufs. Les pouvoirs publics devraient réorienter les efforts déployés via KiwiBuild pour offrir des logements abordables, de manière à améliorer l'offre de terrains destinés aux promoteurs immobiliers, à accroître l'offre de logements locatifs abordables, et à renforcer encore le logement social dans les zones confrontées à des pénuries.

Ce Document de travail se rapporte à l'Étude économique de la Nouvelle Zélande 2019 (<http://www.oecd.org/fr/economie/nouvelle-zelande-en-un-coup-d-oeil/>).

Classification JEL : I38, O18, R21, R31, R38, R52

Mots clefs : marché du logement, prix des logements, réglementation de l'utilisation des sols et de l'immobilier locatif, offre de logements, infrastructures, accessibilité financière du logement, mobilité résidentielle, bien-être, logement social, impôt sur le patrimoine

Table of Contents

Improving well-being through better housing policy in New Zealand	5
Housing is an important determinant of well-being.....	5
Housing affordability has worsened	6
Increasing the responsiveness of housing supply	14
Avoiding policy measures that unnecessarily fuel demand	24
Supporting low-income renters.....	26
Endnotes.....	33
References.....	33

Tables

Table 1. Potential long-term impact of housing market policies on labour productivity	13
Table 2. Affordable housing policies in New Zealand.....	14
Table 3. Government subsidies to assist with home ownership	26
Table 4. NZ social housing stock, number of dwellings 2017	28
Table 5. Rental assistance payments in New Zealand.....	30

Figures

Figure 1. House price growth	7
Figure 2. Housing costs for households	8
Figure 3. The homeownership rate is just below the OECD average.....	9
Figure 4. Housing affordability for owners has been supported by low interest rates	9
Figure 5. Most low-income renters face very high housing costs	11
Figure 6. Factors driving house price growth.....	12
Figure 7. Restrictions on foreign direct investment in construction are substantial.....	21
Figure 8. KiwiBuild original planned delivery and progress to date (dwellings)	23
Figure 9. Homelessness is high and social housing stocks are low.....	28
Figure 10. Spending on housing allowances and number of recipients are high ¹	31

Boxes

Box 1. Simulation of the potential impact of structural reforms	13
Box 2. The Urban Growth Agenda.....	15
Box 3. The KiwiBuild Programme.....	22

Improving well-being through better housing policy in New Zealand

By Andrew Barker¹

Housing is important for well-being (section 3.1). Low supply responsiveness, low interest rates and strong population growth due to migration (Chapter 2) have contributed to rapidly increasing house prices in New Zealand. Affordability is now poor by international comparison, which is a key comparative well-being weakness (Chapter 1). Low-income renters have been severely affected (section 3.2). Policy measures are recommended to improve well-being, with a focus on increasing housing supply responsiveness and outcomes for low-income renters (sections 3.3 to 3.5). Macro-prudential restrictions imposed by the Reserve Bank to protect financial stability also affect affordability (see Key Policy Insights).

Housing is an important determinant of well-being

Apart from meeting the basic need for shelter, housing provides a foundation for family and social stability, facilitates social inclusion and contributes to health and educational outcomes, access to services and a productive workforce. How land is used for housing shapes the immediate environment as well as transport and resource use.

International research shows a connection between housing satisfaction and life satisfaction, self-esteem and perceived sense of control (Coates, Anand and Norris, 2015^[1]) as well as a link between physical housing condition and subjective well-being (Clapham, Foye and Christian, 2017^[2]). Living in poor-quality or overcrowded housing is strongly correlated with a range of health problems including respiratory conditions, exposure to toxic substances and injuries (Rohe and Lindblad, 2014^[3]). Adults who experienced housing deprivation when they were younger remain more likely to suffer from ill health (Marsh et al., 2000^[4]) and inadequate housing adversely affects children's educational outcomes (Cunningham and Macdonald, 2012^[5]). Residential segregation may cut off segments of the population from opportunities to participate in societal progress (OECD, 2016^[6]). Unaffordable housing can trigger various forms of deprivation, such as poor nutrition, and is associated with other trade-offs that can harm health (Pollack, Griffin and Lynch, 2010^[7]). Increasing property prices benefit owners, who tend to be wealthier, at the expense of renters.

¹ Andrew Barker is an Economist in the Country Studies Branch of the Economics Department of the OECD; email: andrew.barker@oecd.org. The author would like to thank Alvaro Pereira, Isabelle Koske, Vincent Koen, Christophe André and David Carey, all of whom work in the Economics Department of the OECD, Robert Ford (former OECD Economics Department Director), Marissa Plouin (Directorate for Employment, Labour and Social Affairs, OECD) and NZ government officials for their valuable comments and suggestions. Special thanks are due to Isabelle Luong (Economics Department, OECD) and Valéry Dugain (consultant) for excellent research and statistical assistance and to Sisse Nielsen and Carolina Gonzalez (Economics Department, OECD) for excellent technical preparation.

Access to good-quality affordable housing is therefore a means to promote social policy goals that include prevention of poverty and social exclusion, better access to health, education and social capital, and labour market inclusion. Reflecting its importance for well-being, housing outcomes are one of twelve indicator topics under the New Zealand Living Standards Framework (Chapter 1). In addition to its distributional consequences, housing also affects other indicators, notably the environment, health, income and consumption, jobs and earnings, safety, social connections and subjective well-being. More evidence would be needed to evaluate the incremental effect of housing policy reform on the full range of well-being indicators. Analysis of the effects on subjective well-being of easing supply constraints and increasing security of tenure for renters would be particularly valuable to complement the Social Investment Agency (2018^[8]) study of social housing, which exploited the rich and innovative Integrated Data Infrastructure database available to NZ-based researchers.

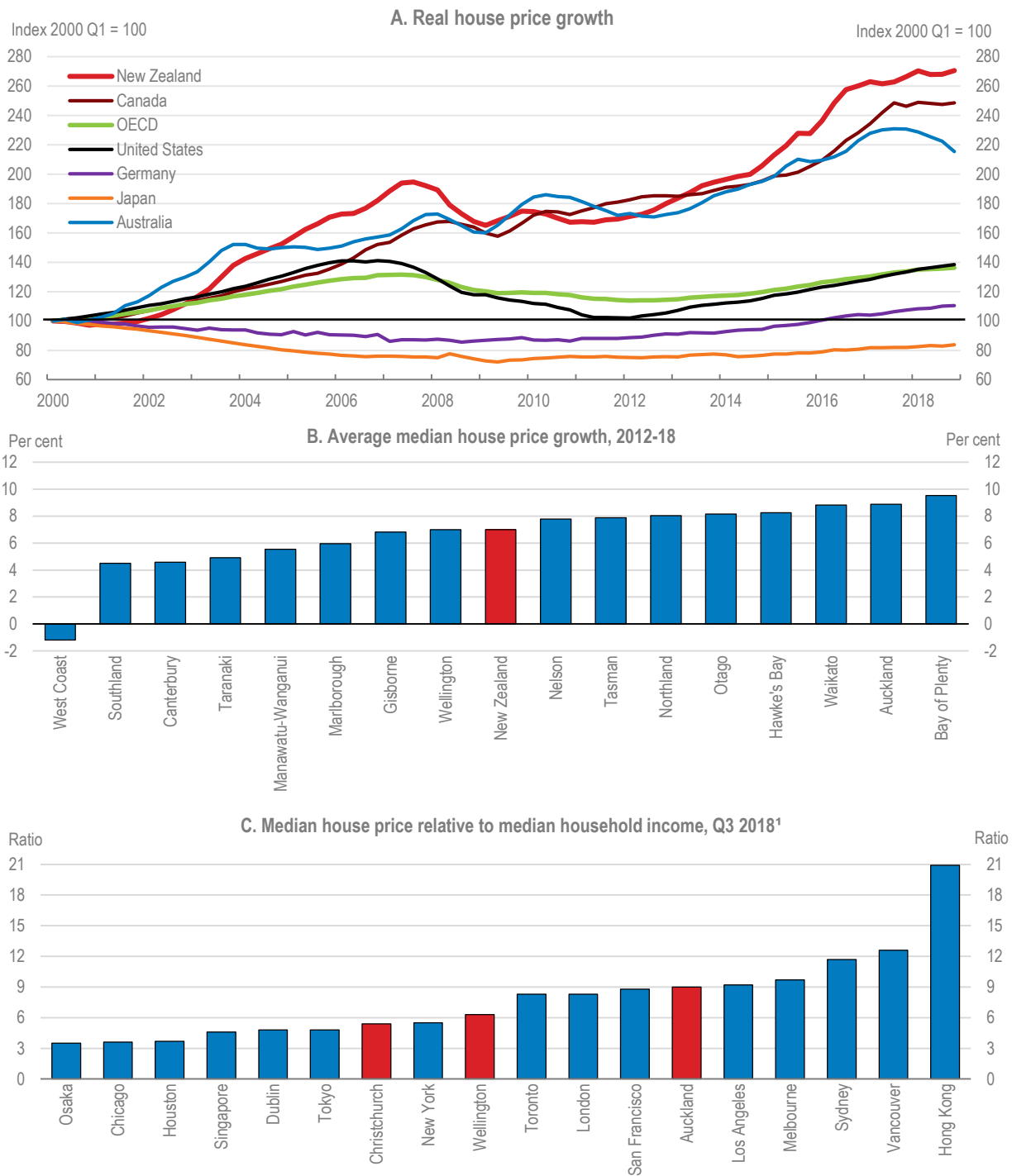
Evidence is mixed on the well-being benefits of owning rather than renting (Clapham, Foye and Christian, 2017^[2]). Despite a correlation, there is a lack of convincing evidence that homeownership causes better health, and benefits need to be weighed against the potential for financial obligations to cause greater stress. Labour mobility may be lower and thus unemployment higher among owner-occupants than renters (Oswald, 1996^[9]; Caldera Sánchez and Andrews, 2011^[10]). Evidence is also mixed on the effects of homeownership on children's educational outcomes, with some earlier studies possibly mistaking selection differences in who becomes a homeowner with the effect of homeownership itself (Holupka and Newman, 2012^[11]). Homeownership is one way to save for retirement and provide protection against rent increases, but can divert households from other forms of wealth-building (Salvi del Pero et al., 2016^[12]) and the evidence that home ownership is a superior vehicle for long-term wealth accumulation is mixed (OECD, 2011^[13]).

Housing affordability has worsened

House prices in New Zealand have soared, outstripping income growth (Figure 1, panel A). Ratios of house prices to incomes and to rents now far exceed their long-term averages. Prices have risen most in Auckland (panel B), where the ratio of median prices to incomes is now comparable to or larger than in many much larger foreign cities (panel C). Average prices have been largely flat in Auckland since late 2016, but have continued to increase elsewhere in New Zealand.

Housing costs are a higher share of income than in most OECD countries, though data issues mean New Zealand's exact ranking is unclear. National accounts data indicate that New Zealanders spend the highest share of income on housing among OECD countries (Figure 2, panel A). These data incorporate imputed estimates of rental prices for owner-occupied housing, which are biased upward because rental properties used as a proxy are not stratified by location, giving a higher weight to Auckland where rental properties are both more common and more expensive. A sensitivity test, involving a 20% reduction in imputed rents, would still see New Zealand among the top few countries for housing costs, although no longer an outlier. Actual expenditure on housing appears more internationally typical (panel B), but in this case is biased downward because a gross rather than disposable measure of income is used. The size of this bias is considerable, as the gap between gross and disposable income is between 6% and 23% at the average wage (which is close to the median household income for renters) depending on family size and structure (OECD, 2018^[14]). Differences in the types of mortgages available and therefore repayment schedules also affect cross-country comparability of actual expenditure on housing.

Figure 1. House price growth

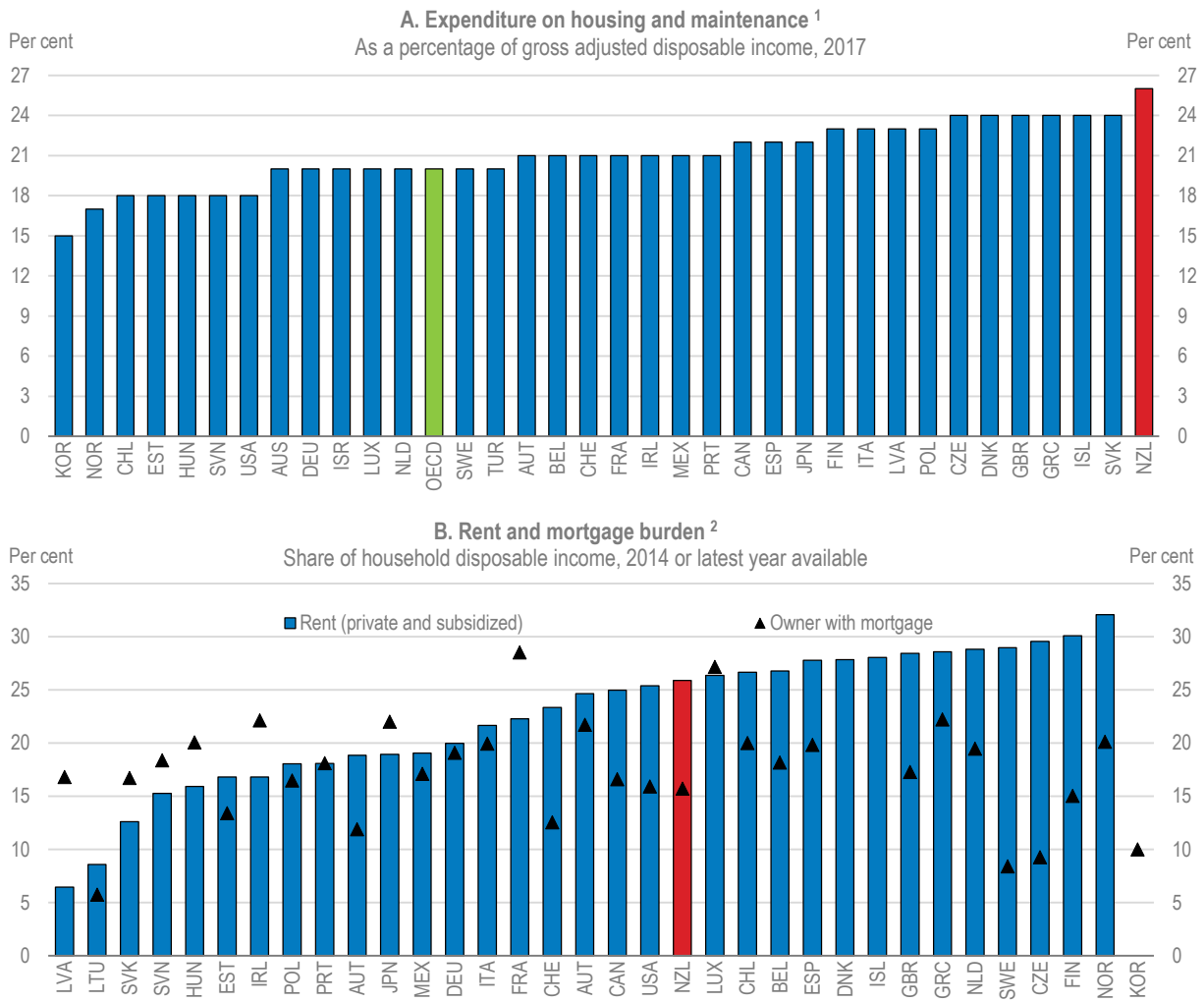


1. For Osaka and Tokyo, data refer to Q3 2017.

Source: OECD, *Economic Outlook database*; Real Estate Institute of New Zealand; *Demographia (2019), 15th Annual Demographia International Housing Affordability Survey: 2019*, <http://www.demographia.com/dhi2019.pdf>.

StatLink  <https://doi.org/10.1787/888933949556>

Figure 2. Housing costs for households



1. Includes actual and imputed rents for housing, expenditure on furnishings and equipment, maintenance and repair of the dwelling. Imputed rents are likely to be biased upward for New Zealand because rental properties used as a proxy are not stratified by location, giving a higher weight to Auckland where rental properties are both more common and more expensive.

2. Median of the mortgage burden (principal repayment and interest payments) or rent burden (private market and subsidized rent). In Chile, Mexico, New Zealand, Korea and the United States gross income instead of disposable income is used due to data limitations.

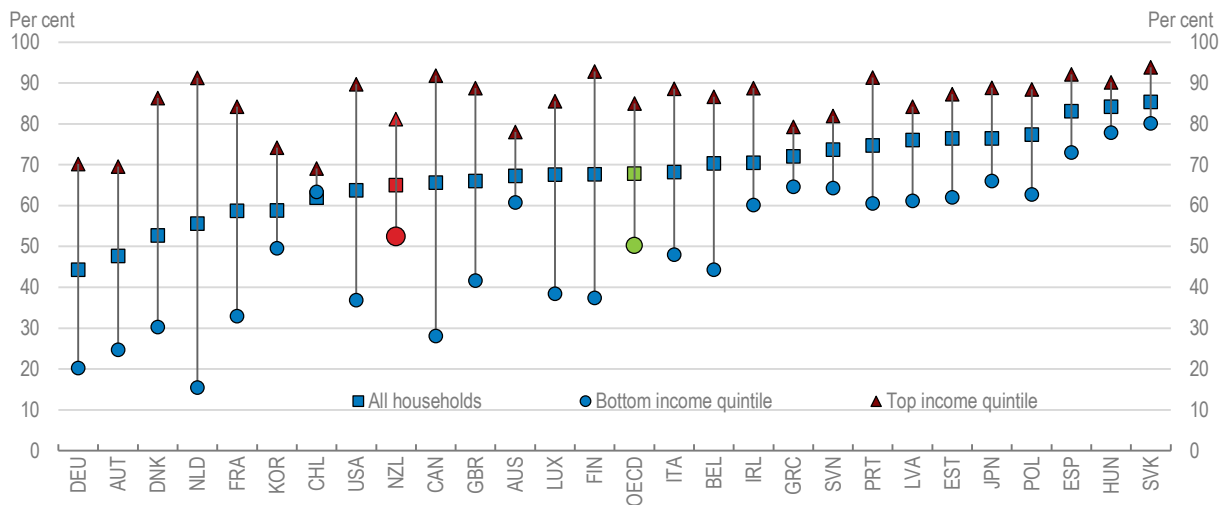
Source: OECD (2017), *How's Life?* and OECD, *Housing Affordability Database*.

StatLink  <https://doi.org/10.1787/888933949575>

Low-income renters have been severely affected

Around half of people with low incomes own their own home (Figure 3). For owner-occupiers, low interest rates have contributed to price growth but also reducing financing cost, so that affordability remains better than immediately preceding the global financial crisis, even in Auckland¹ (Figure 4). Affordability could deteriorate rapidly, however, if interest rates were to rise from recent record lows as around two-thirds of outstanding mortgage balances are scheduled to be re-priced within the next two years.

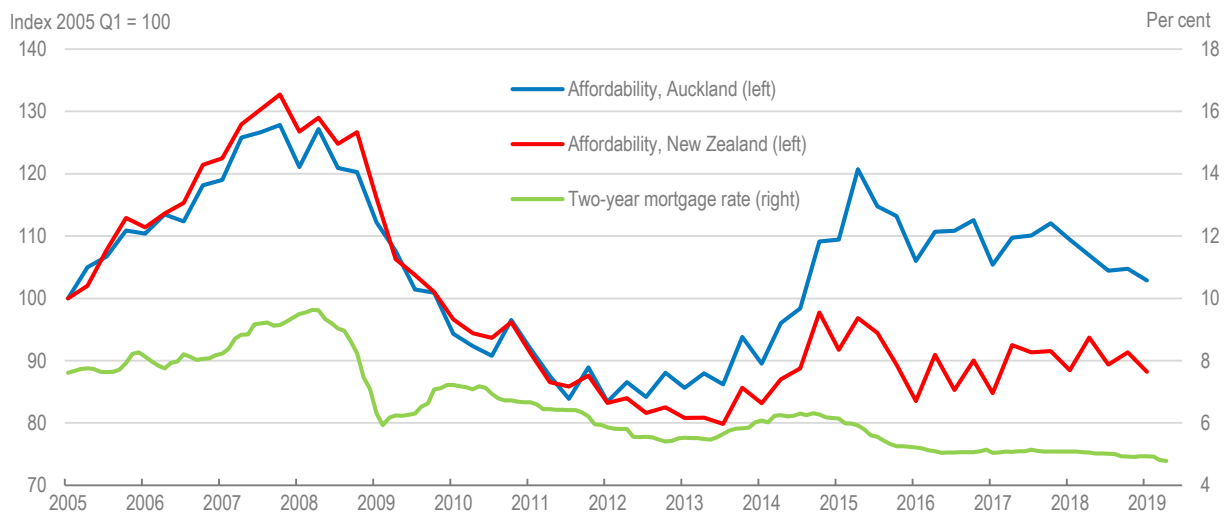
Figure 3. The homeownership rate is just below the OECD average



Source: OECD, *Wealth Distribution database (WDD)*.

StatLink  <https://doi.org/10.1787/888933949594>

Figure 4. Housing affordability for owners has been supported by low interest rates



Note: The affordability index defined by the Massey University Real Estate Analysis Unit takes the ratio of the weighted mortgage interest rate as a percentage of median selling price to the average wage. The lower the index, the more affordable the housing.

Source: Massey University Real Estate Analysis Unit, *Home Affordability Report*, various quarterly reports, http://www.massey.ac.nz/massey/learning/colleges/college-business/school-of-economics-and-finance/research/mureau/mureau_home.cfm.

StatLink  <https://doi.org/10.1787/888933949613>

The burden of high housing costs has fallen disproportionately on those with lower incomes, with the majority of low-income renters spending more than 40% of their gross income on housing (Figure 5). Housing costs averaged 45% of income for the bottom fifth of households aged under 65 in 2017, up from under 40% in the early 2000s and 23% in

1990 (Perry, 2018^[15]). Around one in 10 New Zealanders live in a crowded household, just above the median for OECD countries (Statistics NZ, 2018^[16]; OECD, 2017^[17]).

Māori have poor housing outcomes

Compared with people from European backgrounds, Māori are four times as likely to live in crowded homes and around five times as likely to be homeless (Statistics NZ, 2018^[16]; Twyford, 2018^[18]; Amore, 2016^[19]). People from Pacific or Asian backgrounds also suffer high rates of crowding and homelessness. The government has recently established a dedicated Minister and unit for Māori Housing and is investigating initiatives to reduce barriers to building on Māori land. These include difficulties in using Māori land as security for finance, zoning restrictions, getting agreement from shareholders in land blocks and poorly coordinated or communicated government responses (NZ Productivity Commission, 2012^[20]). Analysis across OECD countries with substantial indigenous populations highlights the need to recognise indigenous land rights and facilitate economic development through measures such as transferable long-term leasing of land parcels and support for land consolidation that overcomes problems of fragmentation (McDonald, forthcoming^[21]).

Housing quality is low

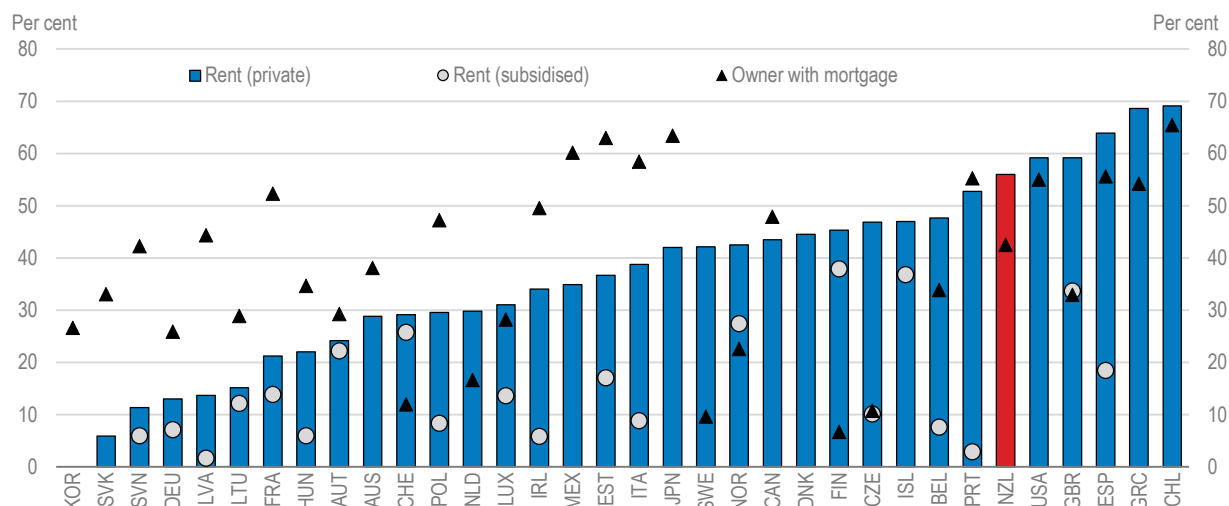
About 30% of NZ homes are poorly insulated and a quarter of homeowners and half of renters report problems with dampness or mould (OECD, 2017^[22]). Around 7% of adults report a need for immediate repairs and maintenance on the property they live in, with rental houses twice as likely to be poorly maintained (BRANZ, 2017^[23]; Treasury, 2018^[24]). Cold, leaky and damp wooden houses are common, partly owing to the abundance of forests and the historic risk of building masonry and stone buildings on a fault line. New Zealand has the highest rate of respiratory illnesses in the OECD (one in four people suffer from asthma), and 40 000 hospital admissions per year could be avoided (IEA, 2017^[25]). Prevention and remediation of indoor dampness and mould are likely to reduce health risks and thereby improve well-being (Teasgood et al., 2017^[26]).

A number of factors have contributed to unaffordability

Strong demand in the presence of weak supply responsiveness has been responsible for rapid price escalation. Increasing incomes have pushed up demand but can only explain a small part of price growth as the house-price-to-income ratio has risen sharply (Figure 6, panel A). As noted above, mortgage interest rates are low, which combined with greater access to credit has increased demand for owner-occupied and investment properties. Non-resident buyers have also contributed to demand for NZ housing, although their share of overall purchases (3%) is small (Statistics NZ, 2018^[27]). High immigration and relatively low net outward migration of NZ citizens has led to strong net immigration recently (Chapter 2), boosting demand for housing. A synthesis of evidence from eight OECD countries suggests that a 1% increase in the population of a city due to immigration can be expected to raise rents by 0.5% to 1% and house prices by twice as much (Cochrane and Poot, forthcoming^[28]). Analysis of New Zealand between 1962 and 2006 indicates a larger, 10% increase in house prices from a 1% increase in population, with a key explanation being the inability of NZ housing construction to rapidly respond to new demand from immigration (Coleman and Landon-Lane, 2007^[29]). Another possible explanation – immigration pushing up house prices through higher expectations about house prices – is also related to weak supply responsiveness as the supply response conditions expectations and thus speculative demand.

Figure 5. Most low-income renters face very high housing costs

Share of population in the bottom quintile of the income distribution spending more than 40% of disposable income on mortgage and rent, by tenure, 2014 or latest year available



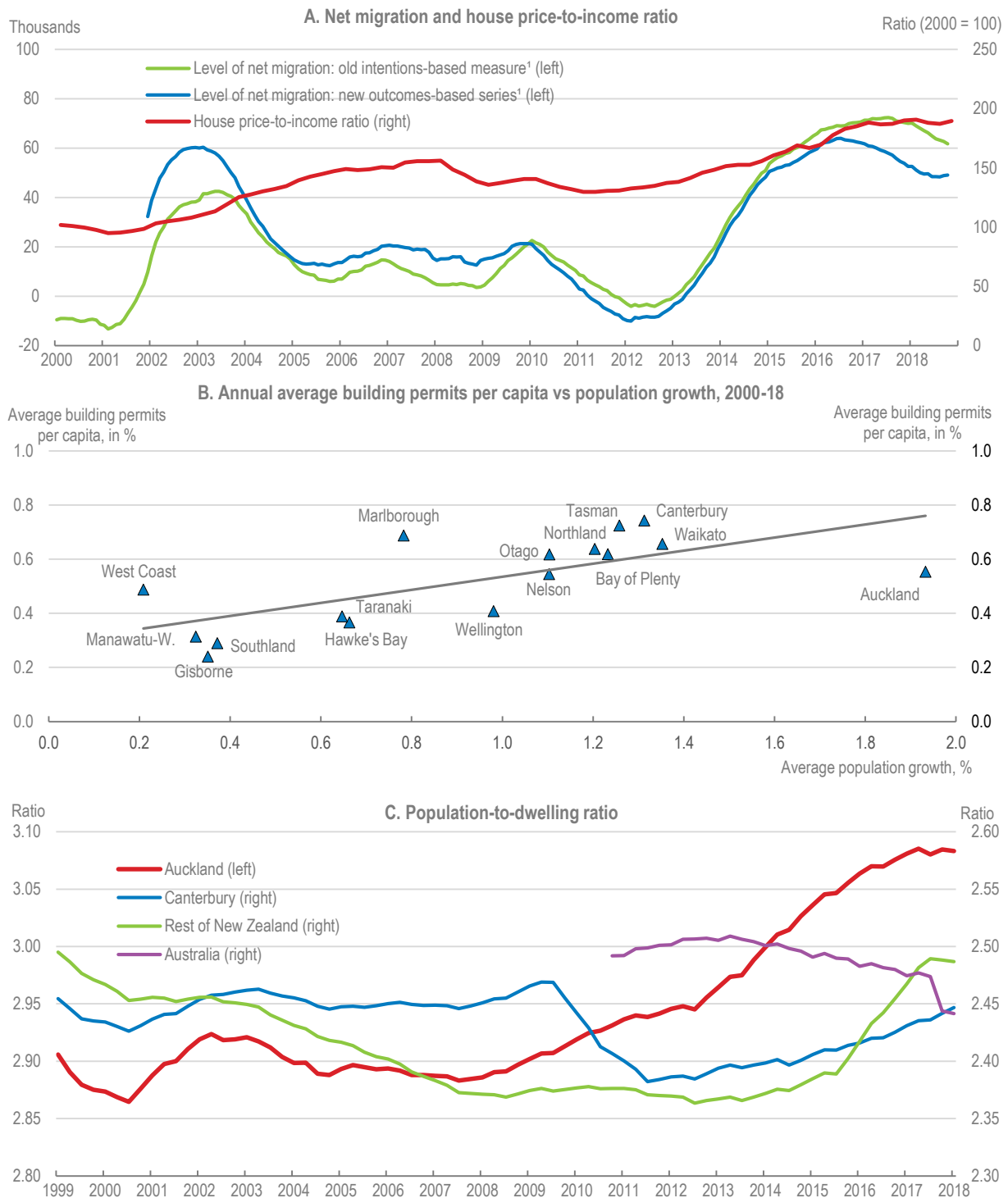
Note: In Chile, Mexico, New Zealand, Korea and the United States gross income instead of disposable income is used due to data limitations.

Source: OECD, *Housing Affordability database*, Figure HC1.2.3, <http://www.oecd.org/social/affordable-housing-database.htm>.

StatLink  <https://doi.org/10.1787/888933949632>

The supply response has been constrained by restrictive and complex land-use planning, infrastructure shortages and insufficient growth in construction-sector capacity (OECD, 2017_[30]). In aggregate, New Zealand has intermediate housing supply responsiveness, higher than in many European countries but well below that in North America and some Nordic countries (Caldera Sánchez and Johansson, 2011_[31]). Supply has failed to keep up with rapid population growth in Auckland in particular (Figure 6, Panel B). The shortage in Auckland is estimated at around 40 000 to 55 000 dwellings (Coleman and Karagedikli, 2018_[32]). Unlike in Australia, the population-to-dwelling ratio has increased despite an ageing population that would, all else equal, be expected to reduce the average number of people per household (Panel C). The important role of planning restrictions in high house prices is evident from the nearly nine times ratio that existed between the price of land just inside and outside Auckland's (former) Metropolitan Urban Limit (NZ Productivity Commission, 2012_[20]). Across all five of New Zealand's largest cities and after correcting for other factors, land zoned for urban use close to the rural-urban boundary is valued at least twice as highly as similar rural land (MHUD, 2018_[33]). One study estimates that land use constraints could be responsible for 56% of the price of an Auckland home, based on the difference in the value of land depending whether it can have a house on it (Lees, 2017_[34]). Unresponsive housing supply has been identified as the most important policy factor holding back NZ labour productivity due to skills mismatches (Adalet McGowan and Andrews, 2017_[35]).

Figure 6. Factors driving house price growth



1. Cumulative data for the past four quarters. Before June 2014, the outcomes-based series has been extended using Stats NZ's discontinued experimental series.

Source: Stats NZ; Australian Bureau of Statistics; OECD, *Economic Outlook database*; Reserve Bank of New Zealand (2015), *Financial Stability Report*, May, Figure 4.3 updated.

StatLink  <https://doi.org/10.1787/888933949651>

Supply constraints have disproportionately affected construction of affordable housing. Land prices have risen more than construction costs, encouraging the construction of high-end housing: as of 2014, only around 17% of newly built houses were valued below the median for the existing stock, down from half in 1990 (NZ Productivity Commission, 2015^[36]). Upward pressure on land prices on Auckland’s urban fringe has had a much larger impact on prices at the lower end of the market.

The remainder of this chapter focuses on long-term policy changes that would enhance well-being by improving housing affordability. New Zealand has a number of policies supporting affordable housing, with the majority favouring home ownership (Table 2). The importance of distributional outcomes for societal well-being (due, in part, to diminishing marginal benefits as income increases) points to targeting support towards low-income renters. Targeting those with low incomes would assist the government with its priority to reduce child poverty. Increasing housing supply elasticity, while protecting environmental outcomes, is critical to increase affordability for both owner-occupiers and renters and to improve distributional outcomes. Increasing supply responsiveness also offers a potential boost to productivity that is estimated to more than offset negative effects on productivity from recommendations that increase tenure security – and thus serve distributional goals – but could constrain residential mobility (Box 1).

Box 1. Simulation of the potential impact of structural reforms

The potential impact of some of the reforms proposed in this chapter can be gauged using simulations based on historical relationships between public policy and labour productivity across OECD countries. The effect of housing policies on labour productivity is estimated based on their effect on residential mobility, which contributes to reducing labour market skills mismatches. The simulations do not account for other channels through which housing policies might affect growth, abstract from detail in the policy recommendations and do not reflect New Zealand’s particular institutional settings.

Table 1. Potential long-term impact of housing market policies on labour productivity

	Change in labour productivity
	Per cent
(1) Increase responsiveness of housing supply	1.1
(2) Constrain rent increases for sitting tenants based on market rates	-0.4
(3) Increase security of tenure for renters	-0.2
Total	0.5

Note: Illustrative policy changes assumed for each measure are as follows: (1) The gap with the leading OECD country (the United States) is halved. (2) The indicator of rent control is increased by 0.4 units (3) The indicator of tenant-landlord regulations is increased by 0.5 units.

Source: OECD calculations based on Adalet McGowan, M. and D. Andrews (2017), “Skills mismatch, productivity and policies: Evidence from the second wave of PIAAC”, *OECD Economics Department Working Papers*, No. 1403.

Table 2. Affordable housing policies in New Zealand

Category	Policy instrument	Targeting
Homeownership subsidies	KiwiSaver HomeStart Grant	Homeowners
	KiwiSaver first-home withdrawal	Homeowners
	Welcome Home Loan	Homeowners
	Kainga Whenua	Māori homeowners
	KiwiBuild	Homeowners
	Non-taxation of imputed rent	Homeowners
	Non-taxation of capital gains	Homeowners
Housing allowances	Accommodation supplement	Tenure neutral
Social rental housing	Income-related rent subsidies	Social renters
	Expansion of social rental stock	Social renters
Rental support and regulation	Non-taxation of capital gains	Landlords/renters
	Tenancy law	Renters

Source: Typology based on Salvi del Pero et al. (2016^[12]).

Increasing the responsiveness of housing supply

A lack of national guidance on how local governments should implement the Resources Management Act (the primary land-use legislation) in urban settings and how to reconcile it with planning requirements under the Local Government Act and Land Transport Management Act has led to unnecessarily restrictive and complex land-use regulations (OECD, 2017^[22]). Desirable development has been held back, particularly in fast-growing areas, because the planning system under-recognises potential benefits and suffers from a bias towards the status quo (NZ Productivity Commission, 2017^[37]). There are examples in other OECD countries of successful reforms that specifically expedite planning in urban areas, such as the 2007 Act Facilitating Planning Projects for Inner Urban Development in Germany.

The National Policy Statement on Urban Development Capacity 2016 (NPS UDC) requires local governments to provide sufficient development capacity, and to enable urban environments to develop and change. The requirement to monitor price efficiency is also valuable, though monitoring published to date does not clearly show differences in land prices across zones. Moreover, the NPS UDC fails to provide principles for sustainable urban development or practical guidance on how to reconcile planning processes under the three major acts. While the NPS UDC calls for local governments to plan sufficient infrastructure provision, councils lack incentives to accommodate growth due to infrastructure funding issues (discussed below). Work underway as part of the central government's Urban Growth Agenda shows promise in rectifying deep-seated urban planning problems through steps to improve infrastructure funding and financing, enable growth (both up and out), define clear principles for quality urban environments and provide a framework for spatial planning (Box 2). By seeking to reduce a broad range of barriers to new supply, the Urban Growth Agenda is a substantial step in the right direction, but further detail is needed on specific policy measures and their implementation to assess the Agenda's likely success in achieving its ambitious objectives.

The Auckland Unitary Plan, most of which became operative in late 2016, allows greater densification and some expansion of urban development limits. It represents a major step forward in spatial planning, integrating land use, housing, transport, infrastructure and other urban planning issues. Local opposition to specific development from those with vested interests was managed by frontloading consultation through an independent hearing

panel that took a broader perspective (this has also been successful in Australian cities, notably in Brisbane). There remains scope to increase density in Auckland around light rail investment and, once storm water investment catches up, in single housing zones immediately surrounding the central business district.

Box 2. The Urban Growth Agenda

The Urban Growth Agenda (UGA) is a medium- to long-term plan to increase the housing market's capacity to respond to demand, bringing down the high costs of urban land and its development to improve housing affordability. The primary focus is on land and infrastructure markets, where the UGA aims to remove barriers to supply. Through accommodating and managing growth, the UGA also aims to improve choices around the location and type of housing, improve access to employment, education and services, assist greenhouse gas emission reduction and enable quality-built environments while avoiding unnecessary urban sprawl. To achieve these objectives, the UGA consists of five interconnected pillars of work.

1. **Infrastructure funding and financing:** provide a broader range of funding mechanisms for net beneficial bulk and distribution infrastructure; expand local authority borrowing capacity; rebalance development risk from local authorities to the development sector; and develop alternate financing mechanisms such as special purpose vehicles separated from the local authority with debt serviced by revenue from the properties.
2. **Urban planning:** reform planning regulation, methods and practice to allow growth up and out; define clearly what is meant by quality urban environments and ensure that councils consider the positive impacts that developments can have on amenity (through a new National Policy Statement on Urban Development); and facilitate a better understanding of the costs and benefits from urban development.
3. **Spatial planning:** embed within the urban development system a pro-growth spatial planning framework that facilitates better co-ordination of the spatial dimensions of decision making around key issues such as zoning, infrastructure and environmental protection; in the near term, advance partnerships with local government to advance spatial planning.
4. **Transport pricing:** investigate congestion pricing options for Auckland through the joint Auckland and central government project "The Congestion Question"; price the full marginal costs of growth infrastructure; and consider a range of options aimed at a more sustainable and equitable future transport revenue system.
5. **Legislative reform:** ensure that regulatory, institutional and funding settings are collectively supporting the UGA objectives.

Compact urban development offers a number of benefits, with 69% of more than 300 published analyses worldwide finding positive effects (Ahlfeldt et al., 2018^[38]). Agglomeration economies generated by cities are an important factor in knowledge diffusion and thus productivity growth, and population density has been a strong predictor of economic performance in European countries (Ahrend and Schumann, 2014^[39]). Low-density urban sprawl undermines agglomeration benefits through longer travel times within a city if jobs fail to disperse in line with housing, higher fiscal costs of supplying infrastructure and public services (Adams and Chapman, 2016^[40]; Ahlfeldt et al., 2018^[38]),

higher transport emissions (though greater use of electric vehicles would reduce this effect) and loss of environmental amenities within and at the borders of urban areas. On the other hand, density can have negative implications for open space preservation, traffic congestion, health and self-reported well-being (Ahlfeldt et al., 2018^[38]). Supporting infrastructure and high quality urban design are important to alleviate negative perceptions of density. For example, in Vancouver density is promoted but views of mountains and water are protected. Public parks and green spaces in urban centres are an essential element supporting quality of life in a compact city; physical or visual access to green spaces, water, or natural light has a surprisingly powerful direct impact on subjective wellbeing (O'Donnell et al., 2014^[41]).

Population density in Auckland is higher than in Australian and North American cities with similar populations, but lower than in most European equivalents (Demographia, 2018^[42]). NZ cities have low levels of public transport infrastructure and use by developed world standards, with nine out of ten commutes in Auckland by car. Recently completed bus lanes and in-progress rail network expansion are expected to deliver considerable efficiency gains through agglomeration benefits and encouraging more suburban dwellers to commute to higher-paying central business district jobs (Hazledine, Donovan and Mak, 2017^[43]). Developing effective urban transport networks is important to connect people in disadvantaged communities and expand opportunities for socio-economic mobility (OECD, 2018^[44]). An OECD study is currently underway modelling the potential to decarbonise urban mobility in Auckland through land use and transport policies (Tikoudis, Udsholt and Oueslati, forthcoming^[45]).

Strict regulatory containment policies such as explicit density limits, minimum lot and apartment sizes and restrictions on multi-dwelling units impede densification, affordability and innovation. Regulation should be better aligned with prevention of the most important external costs. Specifically, external effects on neighbours would be better managed through clearer rules about overshadowing and the bulk and location of buildings (NZ Productivity Commission, 2015^[36]). Concerns about increased rainfall runoff due to lower urban permeability would be better addressed more directly through green space requirements, which could be adjusted as stormwater systems are upgraded. Restricting the development of multi-dwelling units through single-use zoning is particularly costly, as it prevents land use from adapting to social and economic changes. Avoiding single-use zoning has facilitated strong residential construction activity in Japan, where there are generally no restrictions on multi-dwelling units and maximum building heights are determined according to a formula that depends on the distance of a building to the adjacent road (OECD, 2017^[46]). Increasing the price of on-street parking to reflect its true social cost would remove the need for minimum parking requirements (OECD, 2018^[47]), which increase house prices and rents (Lehe, 2018^[48]).

More systematic use of pricing mechanisms to internalise external costs would be a better way to shape development. One-off development contributions are levied to recoup infrastructure investment costs, but do not generally reflect the true cost of infrastructure, particularly the higher cost of servicing greenfield investment at the urban fringe. For example, Auckland Council estimates bulk infrastructure costs of roughly NZD 140 000 per dwelling (USD 100 000) for greenfield areas, which far exceeds development contributions (Auckland Council, 2017^[49]). Recently phased-out financial contributions should be re-introduced along with clearer principles on their intended use as an economic instrument to offset environmental costs of new development.

Allowing some orderly expansion of urban boundaries can work in conjunction with removal of barriers to densification to ease housing affordability challenges. Providing the option of development up or out – with cost-reflective charging for access to infrastructure services and policy measures to control environmental effects – allows residents to choose the best solution for their own well-being. The outcomes from this choice can be seen in Auckland, where the majority of the increase in building consents following the Unitary Plan has been for brownfield sites where greater density is now allowed (Auckland Council, 2018^[50]). In areas of low density, governments need to focus on suitable transport models such as on-demand services and sharing, and encourage interchanges between different transport modes such as park-and-ride facilities. In Finland, for example, the development of multi-modal travel chains has been enabled through reforms to harmonise legislation and open access to data (Finnish Government, 2018^[51]). On-demand shared services and their alignment with other policy tools such as pricing, regulation, land-use and infrastructure design have the potential to replace private car trips and thus reduce emissions, congestion and the need for parking space in Auckland, while providing more equitable access to opportunities. Replacing 20% of Auckland car trips with shared mobility services is estimated to deliver a 15% reduction in total distances driven and carbon dioxide emissions (ITF, 2017^[52]). Lack of parking availability, under-pricing of parking and poor local connections have held back the success of park-and-ride in Auckland (Tan, 2018^[53]).

Land ownership in New Zealand is fragmented, so failure to aggregate small holdings of land tends to push development out to the urban fringe (NZ Productivity Commission, 2015^[36]). The establishment of a national housing and urban development authority (Kāinga Ora – Homes and Communities) is a promising initiative that will assist with land amalgamation in specific areas. In addition to taking over Housing New Zealand's role as a public landlord, Kāinga Ora – Homes and Communities will operate in areas with significant redevelopment potential and have the capacity to override planning barriers, plan and build infrastructure, levy charges to cover infrastructure costs and assemble parcels of land for development, including through compulsory acquisition under the Public Works Act. Compulsory acquisition of land for construction of housing is possible in 58% of OECD countries covered by the 2016 Land Use Governance Survey (OECD, 2017^[54]) and is valuable as a backstop to avoid the incentive for individual landholders to hold out for above-market compensation. Infrastructure funding issues for local government, as discussed below, are likely to be less of a problem in areas redeveloped by Kāinga Ora, as most costs can be more easily apportioned and passed on to those within the development project area (notwithstanding challenges associated with apportioning costs of upstream bulk infrastructure constraints).

Augmenting infrastructure funding and financing for local government

Councils² bear the bulk of infrastructure costs, but have limited ability to recoup costs except through development contributions, user charges, or rates charged to residents. Across the OECD, local governments have been found to respond to such fiscal incentives through the types of planning policies implemented, which can create inefficient land use patterns (OECD, 2017^[46]). While in theory growth in New Zealand can pay for itself over a period of time, in practice this proposition comes with significant risk for councils and the financial gain rarely eventuates, particularly where some infrastructure is required in advance of development (Morrison Low, 2017^[55]). Financing (where the upfront money comes from) and funding (who eventually pays, for example through taxes or user charges) are both fundamental to any solution. Financing problems are currently more binding as

key high-growth councils are constrained by contractual requirements to meet Local Government Funding Authority borrowing covenants, as well as their own borrowing covenants. The structure and norms of the local government sector worsens this constraint as councils find it difficult to credibly commit to not fully underwrite any special borrowing arrangements outside of general obligations debt, for example if project-specific revenue bonds were issued and linked to a specific infrastructure project. Funding mechanisms are also critical, however, as existing residents have an incentive to oppose development where they are liable for funding.

The problems that councils face in paying for infrastructure are well recognised and a key focus of the Productivity Commission's current inquiry into local government funding and financing. Responses to date have not solved the funding and financing issues. The Housing Infrastructure Fund, for example, provides financing for high growth councils to accelerate infrastructure provision, but in the form of loans that count towards council general obligations debt. Crown Infrastructure Partners Limited was created to help enable project financing without any special public powers. However, this model cannot apply more generally when public infrastructure has significant spill-over benefits that cannot be captured without additional public powers to compel levies.

The Urban Growth Agenda recognises the need for more user charging for transport infrastructure. However, its proposals to rebalance risk from councils to the development sector will only support new supply insofar as developers are well-placed to control risks and target charges for recovery of infrastructure costs. This is most likely to be the case in large greenfield developments without substantial ongoing planning or other regulatory risks.

More user charging would be fairer in terms of 'user pays' and could also reduce infrastructure spending. Direct charging for road use will lead to more efficient use and also help inform where new roads go. The joint Auckland and central government project "The Congestion Question" is a promising initiative, though implementation of user charging will be challenging and thus needs to proceed prudently through policy trials. The national rule that tolls can only be levied on new roads with feasible untolled alternative routes should be removed to facilitate progress. Volumetric charging for water and wastewater should be introduced more widely and in high growth regions should be based on the full long-run marginal cost of supply – short-run marginal cost pricing achieves greater immediate allocative efficiency, but is not dynamically efficient under expanding demand and encourages over-consumption by failing to signal the cost of incremental investment. Auckland is the only area where volumetric charges are routinely applied for water and wastewater. Even there, volumetric charges do not fully reflect long-run marginal costs, requiring an Infrastructure Growth Charge on new customers, which skews recovery of costs towards new users and is significant enough (over NZD 10 000 per unit) to dissuade development. The problem here is not the existence of development contributions to pay for development-specific infrastructure, but the need to charge an additional fee to make up for low volumetric charges: a new unit would incur an Infrastructure Growth Charge whereas increasing water use by the same volume (on a new garden, for example) would not, despite the same expansion of trunk infrastructure requirements. A positive example is Tauranga City Council's introduction of water meters and volumetric charges, which significantly reduced demand for water and allowed infrastructure upgrades to be delayed (NZ Productivity Commission, 2017^[37]).

Giving councils access to a tax base linked to local economic activity (such as income or goods and services tax) would improve the fiscal dividends they receive from growth.

Germany is an example of a devolved planning system where central government grants are linked to local population and tax revenue, which incentivises municipalities to allow growth, contributing to more affordable housing (Evans and Hartwich, 2005^[56]).

Councils cannot currently apply targeted rates to just the value “uplift” that occurs following new infrastructure development. This barrier should be removed, though implementing value uplift capture can be challenging and lead to vigorous debate about how much of a value change can be ascribed to government actions. In Australia, value uplift charges intended to recover infrastructure costs have often not been sustainable politically (Australian Productivity Commission, 2014^[57]). An alternative way to capture increases in land value associated with infrastructure investment would be to shift the base for council rates to unimproved land value (Figueiredo, forthcoming^[58]). While some councils already do this, the majority, including those in each of the five largest cities, base rates on capital values. Shifting the base for rates to land value would also encourage development and density, be less damaging to economic growth, and may even be more progressive and thus equitable (NZ Productivity Commission, 2018^[59]). Rates should also be extended to developable central government-owned land to encourage development and increase revenue for councils.

Broadening the range of financing options available to councils would also be beneficial. Public-Private Partnerships (PPPs) can offer benefits through access to private technology, innovation and experience managing commercial risks, as well as enhanced incentives to deliver projects on time and within budget. However, costs can include hidden contingent liabilities for government, higher transaction costs and contracting difficulties. Assessing risks and determining where to assign them is a complex task that requires substantial capacity in the procuring agency, which is lacking at the local government level. Project-specific infrastructure bonds, through special purpose vehicles or privately-owned vehicles as part of the proposed role for Kāinga Ora – Homes and Communities, are a viable option for large projects with external ratings and where longer duration finance is needed (OECD, 2015^[60]). However, project-specific bonds may have a higher cost of financing if separated from council general obligations debt. Servicing such debt with revenue from the new properties in a development helps ensure that the beneficiaries pay, but is likely to be more complicated in situations (such as brownfield development) where existing residents also gain. Another means to make financing easier would be to relax the requirements for lending from the Local Government Financing Agency, as recent assessments have not identified serious concerns about the overall level of council debt (NZ Productivity Commission, 2018^[59]). The new independent New Zealand Infrastructure Commission, Te Waihanga, announced by the national government should be well-placed to support councils in broadening the range of financing sources they draw from.

Reforming the slow and prescriptive building consenting process

As in several other OECD countries including the United Kingdom and Canada, New Zealand uses a system of joint and several liability for building, whereby two or more parties liable for the same loss or damage because of separate wrongful acts can each be held up to 100% liable for the loss. The potential negative consequences were evident during the leaky homes crisis, where councils, often the “last person standing”, were held responsible for an average of 45% of adjudicated costs despite their share of responsibility being around half that level. Overall costs to councils between 1992 and 2020 have been estimated at several billion NZ dollars (Price Waterhouse Coopers, 2009^[61]). Between 2008 and 2018, building consent authorities are estimated to have faced total payments of NZD

1.1 billion from residential building defect cases, with their burden in analysed cases increased by 170% due to the inability to collect shares from other liable parties (Sapere, 2018^[62]). The Law Commission (2014^[63]) recommended against moving to proportionate liability due to the risk for consumers of uncollectable shares as well as the difficulty of establishing the appropriate share of responsibility for all parties. However, this analysis failed to fully consider the role of joint and several liability in causing building consent authorities to be excessively risk averse, as highlighted by the NZ Productivity Commission (2012^[20]) and more recently by Auckland Council (2018^[64]; 2017^[65]). Proportionate liability would improve incentives for consenting authorities by better aligning their liability with their responsibility and desired behaviour. Consumers' interests can be protected through other means, such as a strengthened building warranty or insurance scheme.

Left to the market, building insurance needed to complement a system of proportionate liability suffers from adverse selection due to insurers' incomplete information. A number of OECD jurisdictions, including Belgium, France and Israel, have made building insurance mandatory to cover the risk of defects up to 10 years after completion. The Australian state of Victoria, which combines proportionate liability with mandatory insurance for work exceeding AUD 16 000, provides a useful template but also illustrates the importance of monitoring building insurance markets: the market was served by five competing private sector insurers until all but one announced they would cease issuing building insurance and a government statutory authority was forced to step in. While a competitive market for building insurance is preferable, given the small size of the market and inherent risks associated with long-tail liability there may be a need for government-backed insurance that satisfies competitive neutrality. The other valuable lesson is the need to streamline agency responsibility for building insurance (Parliament of Victoria, 2010^[66]).

Individual building consent authorities must be satisfied on reasonable grounds that the proposed building work will comply with the building code and have a preference for products and systems known to meet the code. A conservative approach to new products may hamper innovation (Auckland Council, 2017^[65]). Building consenting authorities will face further challenges with more construction of pre-fabricated housing, which is one potential technological solution to New Zealand's poor construction industry productivity. Proposed reforms have the potential to increase efficiency through mandatory information requirements for building materials and a regulatory framework for modern methods of construction, including pre-fabrication. If these steps are insufficient, authorities could consider a centralised building materials register that leverages approvals in countries with similar climates and earthquake risks (such as Japan or western Canada and the United States), or reallocating building consenting to a central authority.

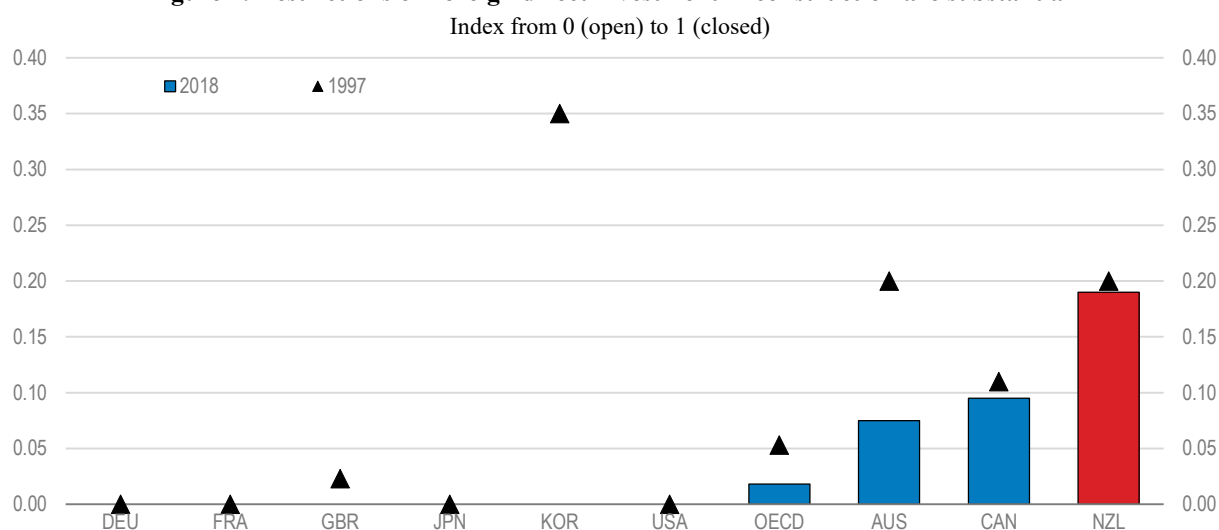
Increasing productivity in the construction industry

Productivity in the NZ construction industry is low relative to comparable countries, pushing up construction costs. A 10% decrease in construction costs is estimated to reduce long-run house prices by around 8% (Grimes et al., 2013^[67]), though the pass-through of construction costs into house prices is lower when supply is inelastic (Evans and Guthrie, 2012^[68]). If and when implementation of the Urban Growth Agenda increases the supply of developable land, construction industry efficiency will become even more important. Low productivity in construction largely stems from insufficient competition in specific markets, poor management skills and sluggish adoption of new technology (OECD,

2017^[30]). High barriers to foreign direct investment (Figure 7) combine with remoteness and small market size to dissuade entry of foreign firms. Entry of foreign firms could promote competition, open up access to global supply chains, as well as bring in much-needed technological, skills and managerial quality transfers. The 2017 *Survey* recommended narrowing screening of foreign investment while continuing to reduce compliance costs and improve predictability, a Commerce Commission market study of the construction industry, and (as subsequently implemented) extending suspension of anti-dumping actions on residential building materials. Since the release of the 2017 *Survey*, the government has launched its Skills Action Plan, which aims to increase productivity through better skill development and matching. The Construction Sector Accord signed in April 2019 aims to strengthen the partnership between government and the industry through measures such as better risk management and allocation, better procurement practices and pipeline management, and improved building regulatory systems and consenting.

A ban on housing purchases by foreign residents passed in August 2018 aims to improve housing affordability, but will also have implications for construction of new housing. Effects on affordability are likely to be small, as only around 3% of home sales are to foreign buyers (Statistics NZ, 2018^[27]). The ban risks holding back foreign direct investment and thus construction industry productivity. Compliance costs and uncertainty are now higher for foreign developers (excluding those from Australia and Singapore), as they are required to divest after completion of any development of less than 20 units.

Figure 7. Restrictions on foreign direct investment in construction are substantial



Note: The FDI restrictiveness index is zero for Germany, France, Japan and the United States in 1997 and 2018.
Source: OECD, *FDI Regulatory Restrictiveness Index database*.

StatLink  <https://doi.org/10.1787/888933949670>

Better targeting KiwiBuild

The government is taking a more active role in increasing housing supply through KiwiBuild (Box 3). Once the programme ramps up, the number of affordable new dwellings is planned to exceed one third of the total dwellings consented nationally in recent years. Whether KiwiBuild is successful in increasing supply will depend on whether it is able to deliver additional dwellings that private markets would otherwise not have delivered, by overcoming planning, infrastructure and construction industry constraints or delivering higher density development. Given the current lack of spare capacity in the construction

industry, particularly in Auckland, some crowding out of private activity is inevitable: the Reserve Bank has estimated that half to three quarters of the KiwiBuild contribution to residential investment until the end of 2022 will be offset by crowding out of private investment (RBNZ, 2019^[69]). The programme also has the potential to provide benefits from smoothing historically highly variable construction activity across the economic cycle, which contributes to low industry productivity, but this will only become apparent during a downturn.

By focusing solely on home ownership, KiwiBuild is not well-directed at enhancing well-being. As noted above, the links between well-being and housing ownership are weak, and those in greatest need are renters without sufficient income or wealth to buy their own house. The annual income limits for buyers of KiwiBuild homes are NZD 120 000 for singles and NZD 180 000 for couples (or other multi-party buyers), meaning that only the top 8% of potential first home buyers do not qualify (Twyford, 2018^[70]). The small number of houses supplied to date have been oversubscribed, so a ballot system was used initially to ration demand; one of the first ballot winners estimated a windfall capital gain of NZD 70 000 (Hooton, 2018^[71]). Irrespective of the exact figure, the need for a ballot means that there is a wealth transfer from the government to relatively well-off home buyers who are (with some constraints) subsequently allowed to sell the home at its market price.

Box 3. The KiwiBuild Programme

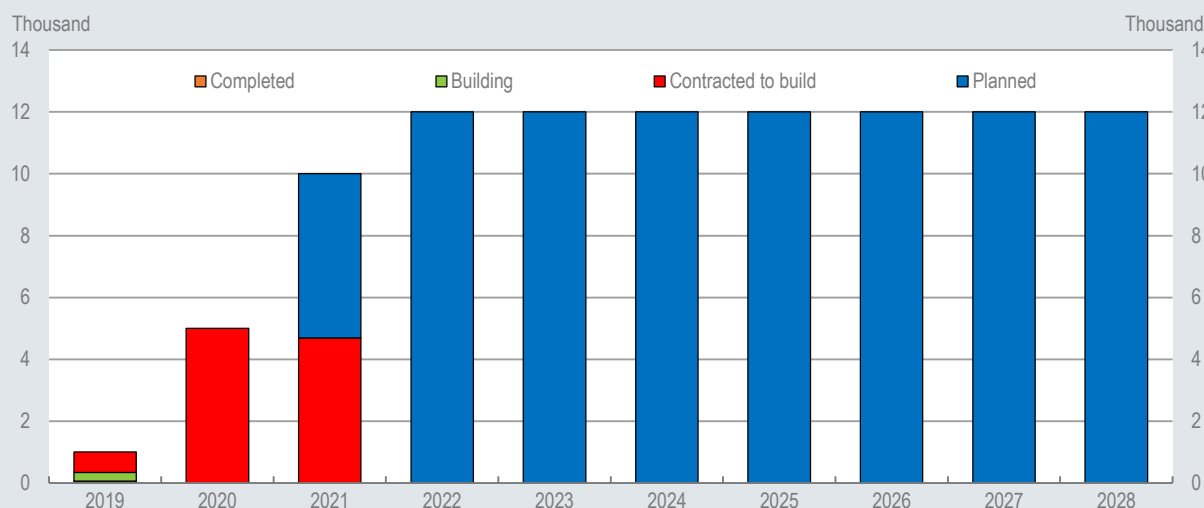
KiwiBuild is a recent NZD 2 billion programme that aims to deliver 100 000 modestly priced homes over 10 years (Figure 8). The objectives are to increase supply of new housing in areas with shortages, increase home ownership and catalyse change in the residential construction sector by providing the sector with confidence to invest in skills and workforce and through initiatives such as increased use of prefabrication and modular housing. The homes, half of which are to be in Auckland, are aimed at first-home buyers and will be delivered at affordable prices using four main mechanisms.

- Government underwriting or purchasing of new homes off the plans that the private sector or others are leading. Four-fifths of new KiwiBuild homes in 2019 and half in 2020 are planned for delivery this way.
- Government acquisition of suitable vacant or under-utilised Crown and private land and sale to developers, subject to conditions around the share of affordable dwellings.
- Undertaking major urban redevelopment projects, via Kāinga Ora – Homes and Communities, in partnership with iwi (indigenous communities), councils and the private sector.
- Identifying and leveraging opportunities through existing government-led housing initiatives, such as those being undertaken by Housing New Zealand.

Initiatives to streamline planning and consenting processes through the Urban Growth Agenda and Kāinga Ora will support delivery of KiwiBuild homes. Accommodation

Supplement payments (discussed below) provide a demand-side incentive for the delivery of affordable housing once supply can more easily respond.

Figure 8. KiwiBuild original planned delivery and progress to date (dwellings)



Note: Based on original planned delivery profile – interim targets have since been dropped. Progress as of February 2019. All dwellings for which building work is underway are assumed to be delivered in 2018-19. Enough contracted dwellings are assumed to be delivered to meet the 2018-19 target and remaining contracted dwellings delivered in 2019-20 and 2020-21. Years shown correspond to the end of fiscal years, which run from 1 July to 30 June.

Source: Ministry of Housing and Urban Development.

StatLink  <http://dx.doi.org/10.1787/888933949689>

The government is not well-placed to take on the allocation role and holding risks it has assumed under the main KiwiBuild delivery mechanism used to date. As described above, constraints around planning, consents and infrastructure have held back delivery of new housing supply. These are areas where market failures are pervasive and government involvement is critical. Allocating scarce government housing expertise elsewhere entails large opportunity costs. Once built, markets are much better placed to allocate housing to buyers; shortages have arisen due to a lack of supply, rather than allocation problems. By underwriting or purchasing new homes, government is taking on substantial risk that could blow out the fiscal cost of KiwiBuild if housing markets were to fall or if the developments chosen are not wanted. Developers are far better placed to manage market risks and determine which developments are likely to be successful.

Other OECD countries have policy measures to promote delivery of affordable housing that do not involve the same fiscal risks or hands-on allocation role. Canada's National Housing Co-Investment Fund provides low-cost loans and/or financial contributions to support and develop mixed-income, mixed-tenure, mixed-use affordable housing. This scheme is squarely targeted at delivery of affordable rental housing, with a 20 year commitment required to keep rents for a minimum of 30% of units below 80% of the Median Market Rental rate (Canada Mortgage and Housing Corporation, 2018^[72]). France operates a highly diversified and complex system of subsidies and allowances to incentivise developers to deliver housing for both affordable rental and home ownership (Calavita and

Mallach, 2010^[73]). In Germany, the supply of affordable housing is increased through public subsidies in conjunction with inclusionary zoning, with rental housing generally targeted (Granath Hansson, 2017^[74]). Austria provides direct construction subsidies and has been successful in maintaining housing affordability, although the high share of residential construction eligible for subsidies has impeded targeting (Scanlon, Whitehead and Fernandez Arrigoitia, 2014^[75]).

KiwiBuild should be refocused on supplying land by aggregating fragmented land holdings and de-risking development sites to make it feasible for developers to step in. Examples of risks that governments can be better placed to manage than developers include using compulsory acquisition powers (at market rates) under the Public Works Act, restoring contaminated soil and upgrading or assessing uncertain underground infrastructure assets. Subsidies to private and not-for-profit developers should be used to incentivise delivery of affordable housing that would otherwise be under-provided. Priority should be given to financial support for the delivery of affordable rental housing, with requirements for dwellings to be leased at a specified discount to market rents. The precise approach under KiwiBuild delivery mechanisms other than “buying off the plans” is not yet clear, but the planned shift towards other delivery mechanisms offers an opportunity to refocus the programme in this way.

Avoiding policy measures that unnecessarily fuel demand

Tax settings favour investment in housing

The non-taxation of imputed rent³ on owner-occupied housing and capital gains biases household portfolios towards housing and has contributed to rising house prices. Housing investors can offset interest expenses against rents and other income sources, although offsetting against other income sources would be disallowed under government proposals to ringfence rental losses. Combined with the absence of capital gains tax on rental properties held for five years or more (recently increased from two years) unless there was an intention to make a capital gain, this inflates property valuation by over 50% for an investor with an 80% mortgage (OECD, 2011^[13]). Owner occupiers benefit less when they have a large mortgage as they are unable to deduct mortgage expenses, but property valuation for an unmortgaged owner-occupier is inflated by more than 100% due to the non-taxation of imputed rent. New Zealand is unusual among OECD countries in having no comprehensive capital gains tax, although most countries exclude the primary residence. Because nominal interest income and dividends are taxed, the absence of a capital gains tax raises the relative returns to assets with good prospects for price appreciation, such as housing, farm land and, to a lesser extent given high dividend payout rates and the thin domestic market, equities.

The house price effects of introducing a comprehensive capital gains tax would be curtailed if it did not apply to primary residences, as in the Tax Working Group (2019^[76]) proposal. Lower post-tax returns for investors would contribute to lower house prices and higher rents as investors pass through costs to renters. (The proposed ringfencing of rental losses can be expected to have a similar effect, though a smaller number of landlords would be directly affected.) Demand from potential owner occupiers would increase due to higher rents and lower returns on alternative investments now subject to capital gains taxation, such as equities. The cooling effect on house prices is thus likely to be small.

Some incremental changes to taxation of housing are warranted. Restoring building depreciation for multi-unit residential developments would increase the supply of this type

of housing and support greater densification in urban areas. However, this would also exacerbate under-taxation of housing, so the case would be stronger if a capital gains tax was introduced. Another issue is the incentive for landholders on city fringes to withhold land from development for up to 10 years to avoid tax on sale where at least 20% of the gain can be attributed to zoning or other specified changes (Tax Working Group, 2018^[77]). This could be resolved by removing this tax and relying on land taxes (as discussed above in relation to council rates) or targeted rates as less distortionary means of value capture. The government has identified repealing the ten-year rule as a high priority and has asked the Productivity Commission to consider a tax on vacant residential land as part of its inquiry into local government funding and financing.

Eliminating poorly targeted home ownership subsidies

Further support is provided through subsidies and government-backed access to loans with small deposits (Table 3). Financial assistance for home ownership is middling among OECD countries (OECD, 2017^[17]), excluding the cost of KiwiSaver first-home withdrawal for which data are unavailable. Home ownership subsidy schemes seek to increase home ownership by assisting low- and moderate-income households to purchase their first home. Tenure-neutral objectives, such as housing affordability and quality, would be more useful. As noted above, well-being benefits of home ownership are much less certain than from access to quality affordable housing more generally. The main economic argument for subsidising owner occupation is that homeownership may give rise to positive spillovers for society, such as wealth accumulation, better (external) property maintenance, community engagement and voting behaviour. On all of these issues there is competing evidence and establishing causality is difficult (Andrews and Caldera Sánchez, 2011^[78]).

Furthermore, New Zealand's programmes to facilitate the transition to home ownership have generally failed to help large numbers of households purchase a first home (NZ Productivity Commission, 2012^[20]). Subsidies can be self-defeating by pushing up the price of houses commonly purchased by first-home buyers, particularly where the supply response is weak. Associated wealth transfers have adverse consequences for distribution and thereby well-being.

The government should rationalise support for first-home buyers, as multiple policy tools seek to meet broadly the same objective. The KiwiSaver HomeStart Grant has some valuable features: it is means tested and available to people who have previously owned a home but are in a similar financial situation to a first-home buyer. However, its targeting does not necessarily align with locations of greatest housing need, as house price caps restrict support in areas with high housing costs. Around one in ten homes bought with a HomeStart subsidy were in Auckland in 2016, while one third of the population and half of people in crowded households lived there (Housing NZ, 2018^[79]).

As noted in the 2011 *Survey*, the option for KiwiSaver members to withdraw balances to purchase a first home undermines incentives to diversify household portfolios away from housing and is poorly targeted, as those with higher incomes have higher balances. Welcome Home Loans work against macro-prudential controls (from which they are exempted) by allowing loans with high loan-to-value ratios, pushing risk back onto the government and adding to the overall fiscal cost. The benefits for lower-income households, who are at greater risk of default anyway, are questionable in a context where prices have been rising fast for some time and could fall sharply. Administrative costs are likely to be high relative to the benefits, given weak take-up.

Shared equity arrangements can increase access to home ownership for those with lower incomes, but also transfer risk away from those best able to control it (homebuyers) and carry greater complexity and administrative cost than HomeStart Grants. Consideration should be given to whether funding would be better directed towards improving health, education and distributional outcomes through supporting the broader housing needs of low-income households, in particular through more support for private and social rentals.

Table 3. Government subsidies to assist with home ownership

Programme (year of commencement)	Support available	Means testing	Take-up
KiwiSaver HomeStart Grant (2007)	NZD 3 000 to 5 000 depending on duration of contributions (NZD 6 000 to 10 000 for purchase of a new home)	Income <85 000 or <130 000 for couples Regionally-specific house price cap (400 000 to 600 000 for existing houses) Asset test for previous home owners	16 712 in 2016-17
KiwiSaver first-home withdrawal (2007)	Can withdraw member and employer contributions, returns on investment and member tax credits, subject to keeping a minimum balance of NZD 1 000	Asset test for previous property owners	33 000 in 2016-17
Welcome Home Loan (2003)	Smaller deposit requirement (10%), with risk for lender underwritten by Housing NZ	Income <85 000 or <130 000 for couples Regionally-specific house price cap (400 000 to 600 000 for existing houses) Asset test for previous home owners	1 381 in 2016-17
Kainga Whenua (2010)	Lenders mortgage insurance to help Māori to achieve home ownership on multiple-owned land	No – income caps removed in 2013 – although only available to people that have no other access to finance	17 since introduced in 2010

Source: Housing New Zealand, *Ways we can help you to own a home*, <https://www.hnzc.co.nz/ways-we-can-help-you-to-own-a-home/>; Housing New Zealand, *Annual Report 2016/17*, <https://www.hnzc.co.nz/assets/Publications/Corporate/Annual-report/HNZ16117-Annual-Report-2017.pdf>; KiwiSaver, *KiwiSaver Funds Withdrawn*, <https://www.kiwisaver.govt.nz/statistics/annual/withdrawals/>.

Supporting low-income renters

Renters on average have lower incomes than owner-occupiers and spend a greater share of their income on housing (Section 3.1.2). Rental quality and security of tenure is low, with 12 month tenancies most common and an average rental duration of 2 years and 3 months (Johnson, Howden-Chapman and Eaquad, 2018^[80]). This is only slightly lower than the average rental duration in England, but far below an average 11 years in Germany (IPPR, 2018^[81]). By comparison, 70% of owner-occupiers in New Zealand have been in their current property for five years or more (Statistics NZ, 2015^[82]), while tenants are expected to stay an average of 17 more years in social housing (MSD, 2017^[83]). Although renters might reasonably be expected to move more often than owners (with advantages for labour mobility), duration of tenure has been found to be associated with better outcomes, notably for children (Galster et al., 2007^[84]). Older renters are particularly vulnerable to tenure insecurity, may need modifications to meet their needs and have a greater need for warm, comfortable and functional housing more generally; the number of older renters is set to rise with ageing of the population and decreasing home ownership rates (James and Saville-Smith, 2018^[85]). Tenants would be better served by a rental market in which they have greater choice over if and when they move house.

Tenant-landlord regulation should be improved, in particular by increasing security of tenure and thus social and family stability. New Zealand ranks equal fifth lowest among 31 OECD countries for the restrictiveness of rental control and tenure security requirements (Kholodilin, 2018^[86]). Proposals currently under consultation would go some way to

improving security of tenure through limiting the frequency of rent increases, extending notice periods and tightening the conditions around which landlords can end a tenancy (MBIE, 2018^[87]). In Germany and the Netherlands, security of tenure is strong for tenants who meet their contractual obligations (contracts are typically open-ended and sale of the dwelling is not a valid reason for termination) but this has not been a considerable disincentive to rental investment, as it has fostered long-term demand for renting and stable incomes for landlords (de Boer and Bitetti, 2014^[88]).

One missing component is some restriction on rent increases in line with market rates, for example, as measured by local residential bond tenancy data. This would avoid landlords increasing rents to capture the benefits to an established tenant of remaining in the same dwelling and the use of rent increases as a means of eviction. However, restrictions should not serve to push rents below market rates, as such forms of rent control are detrimental to residential mobility and do not deliver long-term lower rents as they impede new supply (Andrews, Caldera Sánchez and Johansson, 2011^[89]). While rent that substantially exceeds market rates is already disallowed, this requires comparison across properties, controlling for differences such as location, size, condition and facilities. Restricting rent increases for sitting tenants would be simpler and more effective. Germany has fostered a successful private rental sector through leaving initial rents effectively unregulated and tying subsequent increases to local reference rents, with greater increases permitted in proportion to any renovation expenditure (de Boer and Bitetti, 2014^[88]).

The government has recently announced healthy homes standards for rental homes, which introduce minimum requirements for insulation, heating, ventilation, draught stopping, moisture ingress and drainage. Policy measures to increase minimum standards for rental homes should apply the regulatory principles developed by the NZ Productivity Commission (2014^[90]), which set out when regulation should be principles-based, outcomes-based, prescriptive or process-based. Recent policy changes should be evaluated and adjusted in due course, as improving rental quality remains critical. Relevant to the natural capital component of well-being, substantial improvements in the energy efficiency of buildings (new and existing) are likely to be needed to get emissions on to a trajectory consistent with Paris Agreement targets (Climate Action Tracker, 2016^[91]).

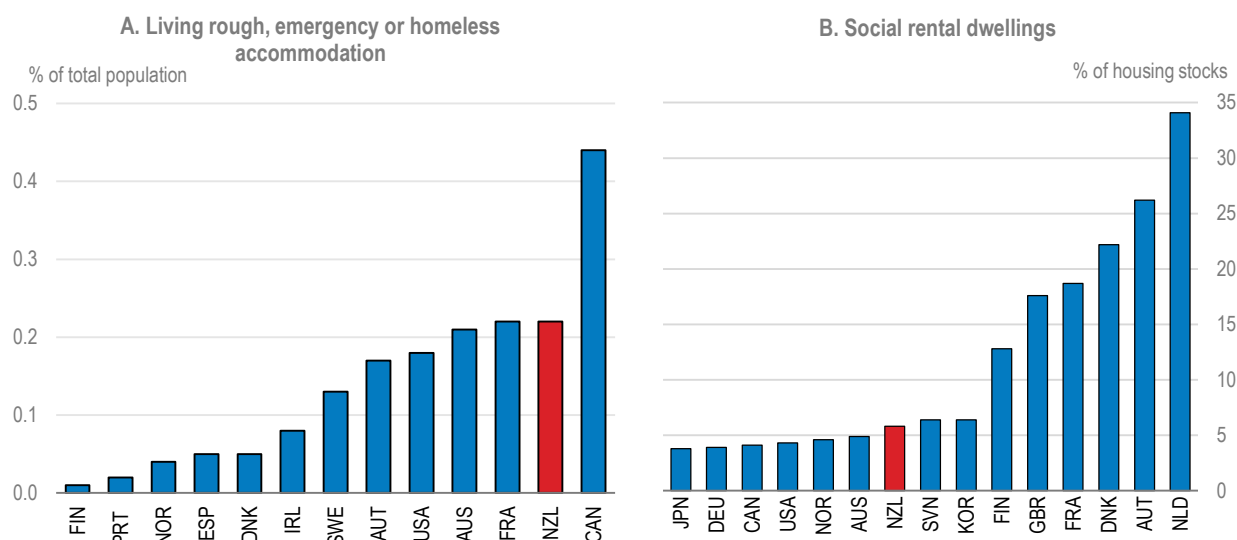
Increasing the supply of social housing

Social housing supply is low by international comparison and there are poor outcomes for at-risk groups, including overcrowding, low quality housing and high homelessness (though international comparability here is highly problematic – Figure 9). Homelessness has increased during the past decade, as in most OECD countries, although the lack of consistent data for New Zealand makes it difficult to identify trends in a timely fashion. The share of homeless people increased from 0.8% in 2006 to 1.0% in 2013 with an increase in households temporarily sharing with others (Amore, 2016^[19]). Drivers of homelessness are many and varied, but deteriorating access to affordable housing has been a contributing factor (Cross-Party Inquiry on Homelessness, 2016^[92]).

The government-owned Housing New Zealand Corporation (Housing NZ) owns and manages the majority of social housing dwellings (Table 4). This role will be taken over by Kāinga Ora, once established. Unaffordability of private rentals has increased pressure on social housing, with the waiting list more than doubling to 10 700 in the two years to December 2018 (MSD, 2018^[93]). Over three quarters of those on the waiting list have been assessed at the highest level of housing need. Social housing cannot remedy the overall affordability problems but plays an important role at the bottom end of the market by

providing non-discriminatory access, security of tenure and targeting for those suffering multiple or severe disadvantage. Budget 2019 included NZD 197 million to strengthen the Housing First programme and fund an additional 1044 places. Similar programmes in US cities have increased residential stability, with additional gains in health and well-being.

Figure 9. Homelessness is high and social housing stocks are low
2015 or latest year available



Note: Definitions of homelessness and the methodology for measuring it vary by country. New Zealand's numbers are based on the census, whereas many other countries use surveys of relevant social support agencies, which are less likely to identify homeless people. Data in Panel A exclude people living in institutions, in non-conventional dwellings or temporarily sharing with another household due to lack of suitable alternatives, which are included in the total homeless population for some countries. New Zealand has a relatively large proportion of people temporarily sharing with another household, but in part this reflects the census approach and a broader definition to that used in other countries. For example, Australia applies stricter rent and income thresholds for those sharing temporarily to be considered homeless. For details, see <https://www.oecd.org/els/family/H3-1-Homeless-population.pdf>.

Source: OECD, *Affordable Housing database*, <http://www.oecd.org/social/affordable-housing-database.htm> and national sources underlying the database.

StatLink  <https://doi.org/10.1787/888933949176>

Table 4. NZ social housing stock, number of dwellings 2017

	Housing NZ	Councils	NGOs and others	Total
Receiving income-related rent subsidies	58 500	0	4 800	63 300
Not receiving income-related rent subsidies	4 400	7 700	7 900	15 300
Total social housing	62 900	7 700	12 700	83 300

Source: A. Johnson et al. (2018), *A Stocktake of New Zealand's Housing*.

Increases in the supply of social housing beyond those underway are necessary. Placement in social housing can improve well-being through marked improvements in health (Baker, Zhang and Howden-Chapman, 2010^[94]), a lower number of remand and prison sentences, and increases in children's access to education (Social Investment Unit, 2017^[95]). Housing

conditions generally improve for people placed into social housing in New Zealand (though feelings of safety deteriorate), with the well-being benefit of increased life satisfaction potentially exceeding the cost of provision (Social Investment Agency, 2018^[8]). While the government plans to expand social housing by 6400 units over four years, this will be insufficient to meet current demand from those with highest need on the waiting list. Redevelopment at greater density and with a broader mix of housing types as in the Tamaki Regeneration offers promise as a means to achieve densification while reducing social segregation. To ensure that redevelopment responds to citizens' needs, they should be systematically surveyed at the outset of any project.

Further entry of community housing providers should be encouraged through allowing competition with Housing NZ on a level playing field when developing new supply. The community housing sector, comprising iwi and non-governmental organisations, is small and fragmented but has had some successes such as the Waimahia housing development in South Auckland. More community housing would add to choice, offer opportunities for tenants to benefit from their own efforts by eventually purchasing their dwelling and can attract additional resources into housing, for example through private donations and co-operative funds. However, it may be challenging for community housing suppliers to develop sufficient scale in a country with low population and wide geographic spread. Rather than transfer stock from Housing NZ, which does not deliver any net increase in supply and undermines its scale and scope, the government should (as since 2014 for Auckland and since 2018 elsewhere) continue to allow community housing providers to access income-related rent subsidies on the same basis as Housing NZ. Capital grants and favourable loans, which can help community housing providers overcome financing difficulties, are used in a number of countries that have been successful in delivering social housing through non-government organisations, such as Austria and France, but there has been a trend away from such support in many other OECD countries. The development of a long-term strategy for social housing and clearer expectations of quality, quantity, and availability as recommended by the Controller and Auditor General (2017^[96]), would provide greater investment certainty for community housing providers.

Efficient and well-targeted allocation of social housing is essential. In general, targeting is good in New Zealand. While many "high-risk" applicants on the waiting list are likely to have greater needs than a large proportion of those already in social housing, wait times are short at a median 77 days. Regular tenancy reviews have contributed by helping ensure that those whose circumstances have improved sufficiently have moved to other forms of tenure. The government has recently broadened the list of exemptions from tenancy review to exempt all tenants where they or their partner have children aged 18 or under in their care or are themselves aged 65 or over; 81% of social housing tenants are now exempt. This broadening does not appear to be justified by the outcomes of those who have recently moved out of social housing following tenancy review, 89% of whom no longer received any accommodation support after 12 months and only 3% of whom subsequently returned to social housing (Twyford, 2018^[97]).

Housing NZ's independence and funding based on the gap between income-based and market rents provides transparency about the annual costs to taxpayers. While Housing NZ and the Ministry of Social Development have strengthened their approaches to sharing information, they still need to work more closely together (Controller and Auditor-General, 2017^[96]), for example with regard to efficient provision of broader social services to social housing tenants. As the Treasury has noted, financing new social housing out of normal Crown debt rather than independent borrowing by Housing NZ would reduce borrowing costs, strengthen fiscal control and be more appropriate given the absence of genuine

financial risk transfer. However, Housing NZ would need to retain enough certainty around financing flows to support investment. As recommended in the 2011 *Survey*, Housing NZ could improve long-term financial viability as well as efficiency incentives by removing water rate subsidies for tenants paying market rents.

The role of Accommodation Supplement payments

New Zealand spends a relatively large share of GDP on housing allowances through the Accommodation Supplement (AS), which is available to eligible renters and own-occupiers (Table 5; Figure 10, panel A). Payments increased further from 1 April 2018, and are projected to exceed 0.5% of GDP in the 2018-19 fiscal year. This was the first increase in AS payment rates since 2007. A relatively large share of the population receives AS payments, particularly among the third quintile (panel B). This is due to high maximum payment rates as well as relatively gradually phasing out of payments at a rate of 25 cents in the dollar above an income threshold. Families with incomes of up to NZD 96 000 can still be eligible to receive some AS payments.

Table 5. Rental assistance payments in New Zealand

	Available to	Means tested	Number of recipients, June 2018 quarter	Annual fiscal cost, 2018 forecast (NZD millions)
Income-related rent subsidy	Social housing tenants paying below market rents	Yes	64 312 households	889
Accommodation Supplement	Renters and owner-occupiers not in social housing	Yes	284 686	1 208
Temporary Additional Support	Those needing assistance to cover essential living costs for up to 13 weeks	Yes	58 763	212 ¹
Transitional Housing	People in need of warm, dry and safe short-term accommodation	Yes	2 341 places	70.8 ²
Emergency Housing Special Needs Grant	Individuals and families unable to access transitional housing places	Yes	10 879	34.0

1. Extrapolation based on expenditure in the first half of 2018.

2. Average annual cost over five years.

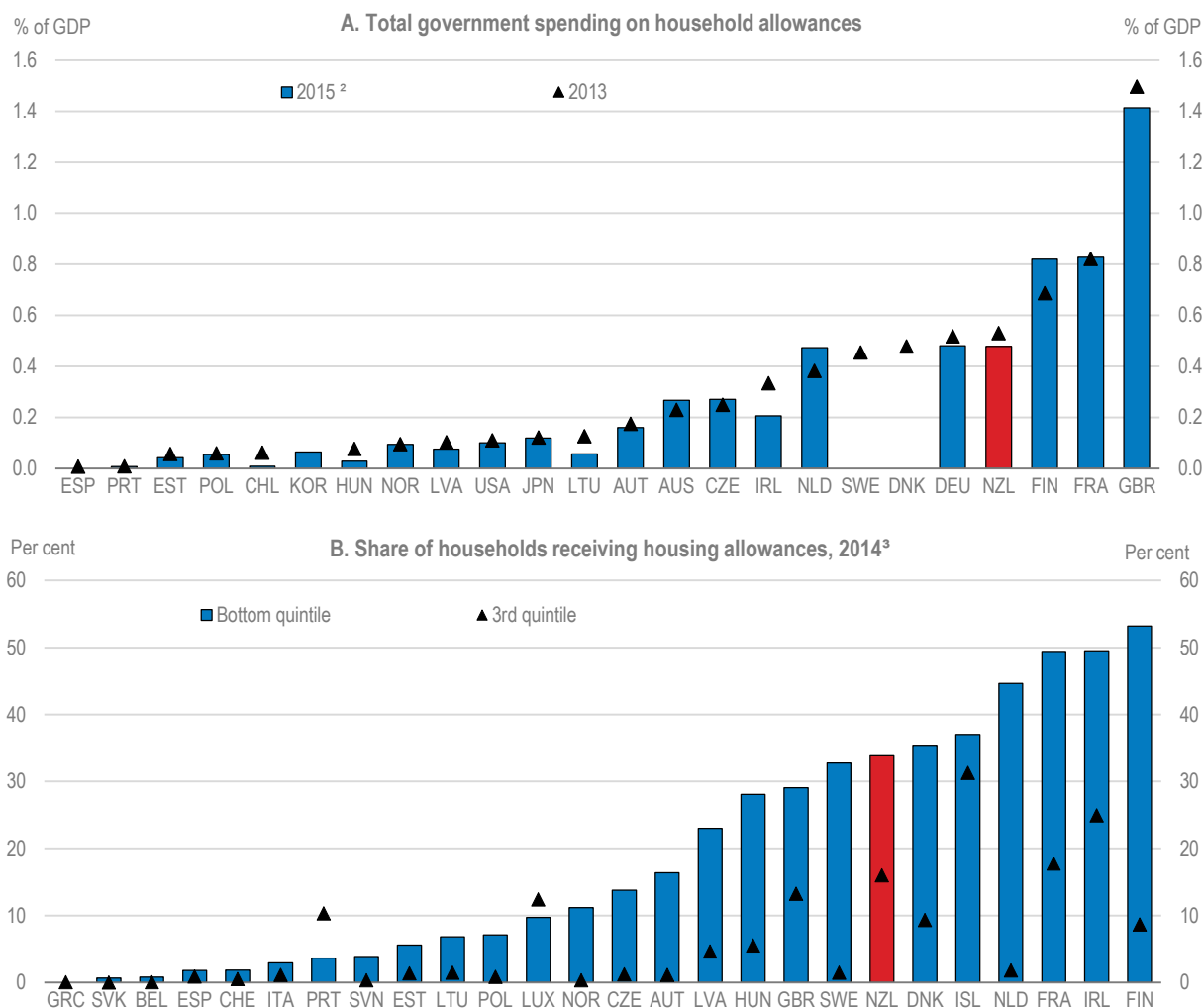
Source: Ministry of Social Development (2018), *Housing Quarterly Report*, June; NZ Government (2018), *Budget Economic and Financial Update*.

The maximum Accommodation Supplement payable to a family living in Auckland is just over NZD 15 000 per year, comparable to the average cost of income-related rent subsidies for social housing tenants of NZD 13 000. There can, however, be discrepancies in certain cases. For example, a single person living in Auckland and earning the maximum for social housing eligibility would spend 33% of her gross income on income-related rent if she was in social housing, compared with 52% after AS payments if she was paying the average lower quartile private rental. Housing allowances do not reduce residential and labour mobility the way social housing can, and facilitate targeting of benefits, but around one third of the benefits have been estimated to accrue to landlords through higher rents (Hyslop and Rea, 2018^[98]). In turn, higher prices for houses rented to those receiving AS will provide an incentive for investment in affordable housing, but this will only deliver benefits if development is able to respond.

The government should review the rate of AS payments within the next few years, taking into account changes in rents and any improvement in supply responsiveness as a result of planning and infrastructure reforms. There may be scope to better target AS payments to

those in need by phasing out payments more rapidly with increasing income, but effects on employment incentives need to be considered. There might also be a need to increase payment rates in areas with high rents – notably Auckland – but refocusing Kiwibuild towards provision of rental housing may reduce this need.

Figure 10. Spending on housing allowances and number of recipients are high¹



1. Includes support for owner occupiers and renters. Also includes support for social housing tenants where this occurs through housing allowances, as in the United Kingdom.
 2. Year of reference of 2015 data is actually 2014 for France, 2014-15 for the United Kingdom and missing for Denmark and Sweden. For more detail, see footnotes in Figure PH 3.1.1 in Source.
 3. Quintiles are based on the equivalised disposable income distribution. Low-income households are households in the bottom quintile of the net income distribution.
 Source: OECD, *Affordable Housing database*, Figures PH3.1.1 and PH3.3.1, <http://www.oecd.org/social/affordable-housing-database.htm>.

StatLink  <https://doi.org/10.1787/888933949708>

FINDINGS (main findings in bold)	RECOMMENDATIONS (key recommendations in bold)
Increasing the responsiveness of housing supply	
Unnecessarily restrictive and complex land-use regulations have inflated land and house prices, disproportionately affecting construction of affordable housing.	Replace strict regulatory containment policies (such as restrictions on multi-dwelling units, minimum lot sizes, density controls and minimum parking requirements) with clear rules around overshadowing, building size according to location and green spaces.
National guidance is lacking on how local governments should implement the Resources Management Act in urban settings and how to reconcile it with planning requirements under the Local Government and Land Transport Management Acts.	Through the Urban Growth Agenda, provide clear overarching principles for sustainable urban development. Support widespread adoption of initiatives that have been successful in the Auckland Unitary Plan, such as spatial planning and upfront consultation.
Local governments bear the bulk of infrastructure costs, but have limited ability to recoup costs except through development contributions or rates charged to residents. They thus have a fiscal incentive to resist population growth through restrictions on planning or building.	Increase user charging for water and roads, and remove barriers to greater use of targeted local taxes on property value increases resulting from changes in land use regulation or from infrastructure investment. Give councils access to additional revenue linked to local development and shift the tax base for local government rates to unimproved land value.
Councils rely on a narrow range of financing options for infrastructure and in many cases are constrained by lending covenants imposed by the Local Government Funding Authority.	With support from the new infrastructure body, broaden the range of infrastructure financing options available to councils through greater access to public-private partnerships and project-specific bond issues.
Joint and several liability incentivises building consent authorities to be excessively risk averse. Individual council certification of building materials is inefficient and can create a barrier to innovation.	Consider moving to a system of proportionate liability for the building sector, with consumers protected by mandatory backstop building insurance overseen by a single central government agency. Introduce government-backed provision of building insurance on a competitively-neutral basis if a viable market cannot be sustained with private sector insurers alone.
Construction of new affordable housing through KiwiBuild will only increase overall supply if planning, infrastructure and construction industry constraints are overcome. Targeting is poor and the government has taken on risks better borne by developers.	Re-focus KiwiBuild on enabling the supply of land through aggregating fragmented land holdings and de-risking development sites. Give greater priority to new rental housing. Cease underwriting or purchasing homes and end the government's role in allocating houses to buyers. Provide subsidies to developers to provide affordable housing where necessary.
Avoiding policy measures that unnecessarily fuel demand	
Home ownership subsidies have failed to help large numbers of households purchase a first home, contribute to higher house prices and have adverse distributional consequences.	Review government support for home ownership beyond that available through the tax system. Phase out Kiwisaver first-home withdrawal and Welcome Home Loans.
Supporting low-income renters	
Security of tenure for renters is low and there is no constraint on the ability of owners to raise rents for sitting tenants.	Tighten conditions for landlords to end a tenancy, as planned, and cap annual rent increases in line with local market rent growth.
Low-income renters have been particularly badly affected by declining housing affordability. Social housing stocks are low by international comparison and waiting lists are growing.	Increase social housing provision in areas with shortages, including through expanding partnerships with non-governmental organisations and reallocating funding from KiwiBuild.

Endnotes

- ¹ An alternative measure shows marginally worse housing affordability for potential first home buyers in Auckland in March 2017 than in 2008 (MBIE, 2018^[99]).
- ² The term “councils” is used here to refer collectively to New Zealand’s 78 regional, district, city and unitary councils, which form the local government sector.
- ³ Imputed rent is the economic benefit gained by owner-occupiers from living in their own home. Non-taxation of this source of income makes the tax treatment of owner-occupied housing more favourable than that of other forms of investment.

References

- Adalet McGowan, M. and D. Andrews (2017), “Skills mismatch, productivity and policies: Evidence from the second wave of PIAAC”, *OECD Economics Department Working Papers*, No. 1403, OECD Publishing, Paris, <http://dx.doi.org/10.1787/65dab7c6-en>. [35]
- Adams, M. and R. Chapman (2016), “Do denser urban areas save on infrastructure? Evidence from New Zealand territorial authorities”, *Policy Quarterly*, Vol. 12/4, <http://dx.doi.org/10.26686/pq.v12i4.4637>. [40]
- Ahlfeldt, G. et al. (2018), “Demystifying Compact Urban Growth: Evidence from 300 Studies from Across the World”, *OECD Regional Development Working Papers*, No. 2018/03, OECD Publishing, Paris, <http://dx.doi.org/10.1787/bbea8b78-en>. [38]
- Ahrend, R. and A. Schumann (2014), “Does Regional Economic Growth Depend on Proximity to Urban Centres?”, *OECD Regional Development Working Papers*, No. 2014/7, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jz0t7fxh7wc-en>. [39]
- Amore, K. (2016), *Severe Housing Deprivation in Aotearoa/New Zealand*, He Kainga Oranga/Housing & Health Research Programme, University of Otago. [19]
- Andrews, D. and A. Caldera Sánchez (2011), “The Evolution of Homeownership Rates in Selected OECD Countries: Demographic and Public Policy Influences”, *OECD Journal: Economic Studies*, Vol. 2011/1, http://dx.doi.org/10.1787/eco_studies-2011-5kg0vswqpmg2. [78]
- Andrews, D., A. Caldera Sánchez and Å. Johansson (2011), “Housing Markets and Structural Policies in OECD Countries”, *OECD Economics Department Working Papers*, No. 836, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5kgk8t2k9vf3-en>. [89]
- Auckland Council (2018), *Auckland Economic Quarterly: August*, Chief Economist Unit. [50]
- Auckland Council (2018), *Auckland Economic Quarterly: February*, Chief Economist Unit. [64]
- Auckland Council (2017), *Auckland Future Urban Land Supply Strategy*, July. [49]

- Auckland Council (2017), *Mayoral Housing Taskforce Report*, Prepared for the Mayor of Auckland, <https://ourauckland.aucklandcouncil.govt.nz/media/13136/auckland-mayor-housing-taskforce-report.pdf>. [65]
- Australian Productivity Commission (2014), *Public Infrastructure*, Inquiry Report, Canberra, <https://www.pc.gov.au/inquiries/completed/infrastructure/report>. [57]
- Baker, M., J. Zhang and P. Howden-Chapman (2010), *Health Impacts of Social Housing: Hospitalisations in Housing New Zealand Applicants and Tenants*, Housing and Health Research Programme, University of Otago, <http://www.healthyhousing.org.nz/publications>. [94]
- BRANZ (2017), *2015 House Condition Survey: Comparison of House Condition by Tenure*. [23]
- Calavita, N. and A. Mallach (2010), *Inclusionary Housing in International Perspective*, Lincoln Institute of Land Policy. [73]
- Caldera Sánchez, A. and D. Andrews (2011), “To Move or not to Move: What Drives Residential Mobility Rates in the OECD?”, *OECD Economics Department Working Papers*, No. 846, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5kghtc7kzx21-en>. [10]
- Caldera Sánchez, A. and Å. Johansson (2011), “The Price Responsiveness of Housing Supply in OECD Countries”, *OECD Economics Department Working Papers*, No. 837, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5kgk9qhrmn33-en>. [31]
- Canada Mortgage and Housing Corporation (2018), *National Housing Co-Investment Fund - New Construction Stream*, <https://www.cmhc-schl.gc.ca/en/nhs/national-housing-co-investment-fund-new-construction-stream>. [72]
- Clapham, D., C. Foye and J. Christian (2017), “Housing, Theory and Society The Concept of Subjective Well-being in Housing Research”, *Housing, Theory and Society*, Vol. 35/3, pp. 261-280, <http://dx.doi.org/10.1080/14036096.2017.1348391>. [2]
- Climate Action Tracker (2016), *Constructing the Future: Will the Building Sector Use its Decarbonisation Tools?*, CAT Decarbonisation Series. [91]
- Coates, D., P. Anand and M. Norris (2015), “Housing, happiness and capabilities: A summary of the international evidence and models”, *Open Discussion Papers in Economics*, Vol. 81. [1]
- Cochrane, W. and J. Poot (forthcoming), “Effects of immigration on local housing markets”, in Kourtit, K. et al. (eds.), *The Economic Geography of Cross-Border Migration*, Springer Verlag. [28]
- Coleman, A. and O. Karagedikli (2018), *Residential construction and population growth in New Zealand: 1996-2016*, Reserve Bank of New Zealand, Wellington, <https://www.rbnz.govt.nz/-/media/ReserveBank/Files/Publications/Discussion%20papers/2018/dp18-02.pdf?revision=674c0a80-0353-4808-a10e-5b27dc633da3>. [32]
- Coleman, A. and J. Landon-Lane (2007), *Housing Markets and Migration in New Zealand, 1962-2006*, RBNZ Discussion Paper Series, Wellington. [29]

- Controller and Auditor-General (2017), *Using Information to Improve Social Housing Services*, [96]
<https://oag.govt.nz/2017/social-housing/docs/social-housing.pdf>.
- Cross-Party Inquiry on Homelessness (2016), *Ending Homelessness in New Zealand*, [92]
https://d3n8a8pro7vhmx.cloudfront.net/nzlabour/pages/4725/attachments/original/1476053092/CPHI_report_final.pdf?1476053092.
- Cunningham, M. and G. Macdonald (2012), *Housing as a Platform for Improving Education Outcomes among Low-Income Children*, Urban Institute: What Works Collaborative. [5]
- de Boer, R. and R. Bitetti (2014), “A Revival of the Private Rental Sector of the Housing Market?: Lessons from Germany, Finland, the Czech Republic and the Netherlands”, *OECD Economics Department Working Papers*, No. 1170, OECD Publishing, Paris, [88]
<http://dx.doi.org/10.1787/5jxv9f32j0zp-en>.
- Demographia (2018), *World Urban Areas*, 14th Annual Edition, [42]
<http://www.demographia.com/db-worldua.pdf>.
- Evans, A. and O. Hartwich (2005), *Bigger Better Faster More: Why Some Countries Plan Better than Others*, Policy Exchange, London. [56]
- Evans, L. and G. Guthrie (2012), *US House Prices: The Role of Fundamentals*, SSRN, [68]
<http://dx.doi.org/10.2139/ssrn.1852186>.
- Figueiredo, L. (forthcoming), “Land Value Capture: Framework and Instruments”, OECD, Paris. [58]
- Finnish Government (2018), *Act on Transport Services to Cover the Entire Transport System*, Ministry of Transport and Communications Press Release. [51]
- Galster, G. et al. (2007), “The impact of parental homeownership on children’s outcomes during early adulthood”, *Housing Policy Debate*, Vol. 18/4, pp. 785-827, [84]
<http://dx.doi.org/10.1080/10511482.2007.9521621>.
- Granath Hansson, A. (2017), “Promoting planning for housing development: What can Sweden learn from Germany?”, *Land Use Policy*, Vol. 64, pp. 470-478, [74]
<http://dx.doi.org/10.1016/J.LANDUSEPOL.2017.03.012>.
- Grimes, A. et al. (2013), *A New Zealand Regional Housing Model*, Motu Economic and Public Policy Research, Wellington, <https://motu.nz/our-work/urban-and-regional/regions/a-new-zealand-regional-housing-model/>. [67]
- Hazledine, T., S. Donovan and C. Mak (2017), “Urban agglomeration benefits from public transit improvements: Extending and implementing the Venables model”, *Research in Transportation Economics*, Vol. 66, pp. 36-45, [43]
<http://dx.doi.org/10.1016/J.RETREC.2017.09.002>.
- Holupka, S. and S. Newman (2012), “The effects of homeownership on children’s outcomes: Real effects or self-selection?”, *Real Estate Economics*, Vol. 40/3, pp. 566-602, [11]
<http://dx.doi.org/10.1111/j.1540-6229.2012.00330.x>.

- Hooton, M. (2018), “KiwiBuild fiasco predicted right here”, *NZ Herald*, [71]
https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12152784.
- Housing NZ (2018), *Financial Products Quarterly Report*, Housing New Zealand Corporation, [79]
<https://www.hnzc.co.nz/assets/Publications/Corporate/Financial-products-quarterly-report/Quarterly-Financial-Products-Report-31-March-2018.pdf>.
- Hyslop, D. and D. Rea (2018), *Do Housing Allowances Increase Rents? Evidence from a Discrete Policy Change*, Motu, <http://www.motu.org.nz>. [98]
- IEA (2017), *Energy Policies of IEA Countries: New Zealand 2017 Review*, International Energy Agency, [25]
<https://webstore.iea.org/energy-policies-of-iea-countries-new-zealand-2017-review>.
- IPPR (2018), *Lessons from Germany: Tenant Power in the Rental Market*, [81]
<https://www.ippr.org/publications/lessons-from-germany-tenant-power-in-the-rental-market>.
- ITF (2017), *Shared Mobility Simulations for Auckland*, International Transport Forum, Paris, [52]
<https://www.itf-oecd.org/shared-mobility-simulations-auckland>.
- James, B. and N. Saville-Smith (2018), *Tenure Insecurity and Exclusion: Older People in New Zealand’s Rental Market*, National Science Challenges: Building Better Homes, Towns and Cities. [85]
- Johnson, A., P. Howden-Chapman and S. Eaqub (2018), *A Stocktake of New Zealand’s Housing*, [80]
 Report commissioned by the Minister of Housing and Urban Development.
- Kholodilin, K. (2018), *Measuring Stick-Style Housing Policies: A Multi-country Longitudinal Database of Governmental Regulations*, DIW Berlin Discussion Papers 1727, [86]
<http://www.diw.de/discussionpapers>.
- Law Commission (2014), *Liability of Multiple Defendants*, Report 132, Wellington. [63]
- Lees, K. (2017), *Quantifying the Impact of Land Use Regulation: Evidence from New Zealand*, [34]
 Sense Partners report for Superu, Ministerial Social Sector Research Fund.
- Lehe, L. (2018), “Minimum parking requirements and housing affordability”, *The Journal of Transport and Land Use*, [48]
<http://dx.doi.org/10.5198/jtlu.2018.1340>.
- Marsh, A. et al. (2000), “Housing Deprivation and Health: A Longitudinal Analysis”, *Housing Studies*, Vol. 15/3, pp. 411-428, <http://dx.doi.org/10.1080/02673030050009258>. [4]
- MBIE (2018), *Latest Results for the Housing Affordability Measure (HAM)*, Ministry of Business, Innovation and Employment, [99]
<https://www.mbie.govt.nz/info-services/housing-and-property/sector-information-and-statistics/housing-affordability-measure/latest-results>
 (accessed on 7 December 2018).
- MBIE (2018), *Reform of the Residential Tenancies Act: Discussion Document*, [87]
<https://www.hud.govt.nz/assets/Residential-Housing/Tenancy-and-Rentals/Residential-Tenancies-Act/Reform-of-Residential-Tenancies-Act-1986-discussion-document.pdf>.

- McDonald, C. (forthcoming), *Linking Indigenous Communities to Regional Development*, OECD Centre for Entrepreneurship, SMEs, Regions and Cities. [21]
- MHUD (2018), *Urban Development Capacity Dashboard*, Ministry of Housing and Urban Development, <http://urban-development-capacity.mbie.govt.nz/> (accessed on 5 April 2019). [33]
- Morrison Low (2017), *Net Costs of Growth to New Zealand Local Authorities*. [55]
- MSD (2018), *Housing Register - December 2018*, Ministry of Social Development, <https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/statistics/housing/index.html#LatestresultsndashnbspSeptember20181>. [93]
- MSD (2017), *Social Housing Valuation Report 2015*, Ministry of Social Development, Wellington, <https://www.msd.govt.nz/about-msd-and-our-work/publications-resources/evaluation/social-housing-valuation/index.html>. [83]
- NZ Productivity Commission (2018), *Local Government Funding and Financing*, Issues Paper, Wellington, <https://www.productivity.govt.nz/inquiry-content/3819?stage=2>. [59]
- NZ Productivity Commission (2017), *Better Urban Planning*, Final Inquiry Report, Wellington, <https://www.productivity.govt.nz/inquiry-content/2682?stage=4>. [37]
- NZ Productivity Commission (2015), *Using Land for Housing*, Inquiry Report, Wellington, <https://www.productivity.govt.nz/inquiry-content/using-land>. [36]
- NZ Productivity Commission (2014), *Regulatory Institutions and Practices*, Inquiry Report, Wellington, <https://www.productivity.govt.nz/sites/default/files/regulatory-institutions-and-practices-final-report.pdf> (accessed on 11 April 2019). [90]
- NZ Productivity Commission (2012), *Housing Affordability*, Final Inquiry Report, Wellington, <https://www.productivity.govt.nz/inquiry-content/1509?stage=4>. [20]
- O'Donnell, G. et al. (2014), *Wellbeing and Policy*, Legatum Institute, <https://whatworkswellbeing.org/product/commission-on-wellbeing-and-policy-report/>. [41]
- OECD (2018), *A Broken Social Elevator? How to Promote Social Mobility*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264301085-en>. [44]
- OECD (2018), *Rethinking Urban Sprawl: Moving Towards Sustainable Cities*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264189881-en>. [47]
- OECD (2018), *Tax-Benefit Model and Policy Database*, <http://www.oecd.org/social/benefits-and-wages.htm>. [14]
- OECD (2017), *Affordable Housing Database*, <http://www.oecd.org/social/affordable-housing-database.htm> (accessed on 14 December 2017). [17]
- OECD (2017), *Land-use Planning Systems in the OECD: Country Fact Sheets*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264268579-en>. [54]

- OECD (2017), *OECD Economic Surveys: New Zealand 2017*, OECD Publishing, Paris, [30]
http://dx.doi.org/10.1787/eco_surveys-nzl-2017-en.
- OECD (2017), *OECD Environmental Performance Reviews: New Zealand 2017*, OECD [22]
 Publishing, Paris, <http://dx.doi.org/10.1787/9789264268203-en>.
- OECD (2017), *The Governance of Land Use in OECD Countries: Policy Analysis and [46]
 Recommendations*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264268609-en>.
- OECD (2016), *Making Cities Work for All: Data and Actions for Inclusive Growth*, OECD [6]
 Publishing, Paris, <http://dx.doi.org/10.1787/9789264263260-en>.
- OECD (2015), *Infrastructure Financing Instruments and Incentives*, OECD Publishing, Paris, [60]
<http://www.oecd.org/finance/private-pensions/Infrastructure-Financing-Instruments-and-Incentives.pdf>.
- OECD (2011), *OECD Economic Surveys: New Zealand 2011*, OECD Publishing, Paris, [13]
http://dx.doi.org/10.1787/eco_surveys-nzl-2011-en.
- Oswald, A. (1996), *A Conjecture of the Explanation for High Unemployment in the [9]
 Industrialised Nations: Part I*, Warwick University Economic Research Paper No. 475.
- Parliament of Victoria (2010), *Inquiry into Builders Warranty Insurance*, Legislative Council [66]
 Standing Committee on Finance and Public Administration, Melbourne.
- Perry, B. (2018), *Household Incomes in New Zealand: Trends in Indicators of Inequality and [15]
 Hardship 1982 to 2017*, Ministry of Social Development, Wellington.
- Pollack, C., B. Griffin and J. Lynch (2010), “Housing affordability and health among [7]
 homeowners and renters”, *American Journal of Preventative Medicine*, Vol. 39/6, pp. 515-521, <http://dx.doi.org/10.1016/j.amepre.2010.08.002>.
- Price Waterhouse Coopers (2009), *Weathertightness - Estimating the Cost*, Report for the [61]
 Department of Building and Housing, Wellington.
- RBNZ (2019), *Monetary Policy Statement: February 2019*, Reserve Bank of New Zealand, [69]
 Wellington, <https://www.rbnz.govt.nz/monetary-policy/monetary-policy-statement/mps-february-2019>.
- Rohe, W. and M. Lindblad (2014), “Reexamining the social benefits of homeownership after the [3]
 foreclosure crisis”, in *Homeownership Built to Last: Balancing Access, Affordability and Risk After the Housing Crisis*, Brookings Institution Press.
- Salvi del Pero, A. et al. (2016), “Policies to promote access to good-quality affordable housing in [12]
 OECD countries”, *OECD Social, Employment and Migration Working Papers*, No. 176, OECD Publishing, Paris, <https://dx.doi.org/10.1787/5jm3p5gl4djd-en>.
- Sapere (2018), *Liability outcomes in the building sector – glimpses from available data*, Report [62]
 to the Ministry of Business, Innovation and Employment, <http://www.mbie.govt.nz/dmsdocument/4960-liability-outcomes-in-building-sector>.

- Scanlon, K., C. Whitehead and M. Fernandez Arrigoitia (2014), *Social Housing in Europe*, John Wiley & Sons, New York. [75]
- Social Investment Agency (2018), “Measuring the Wellbeing Impacts of Public Policy: Social Housing”.
- Social Investment Unit (2017), *Social Housing Technical Report: Measuring the Fiscal Impact of Social Housing Services*, <http://www.siu.govt.nz>. [95]
- Statistics NZ (2018), *Living in a Crowded House: Exploring the Ethnicity and Well-being of People in Crowded Households*, <https://www.stats.govt.nz/reports/living-in-a-crowded-house-exploring-the-ethnicity-and-well-being-of-people-in-crowded-households>. [16]
- Statistics NZ (2018), *Property Transfer Statistics: June 2018 Quarter*, <https://www.stats.govt.nz/information-releases/property-transfer-statistics-june-2018-quarter>. [27]
- Statistics NZ (2015), *2013 Census of Population and Dwellings*, <http://archive.stats.govt.nz/Census/2013-census.aspx>. [82]
- Tan, L. (2018), “Auckland Transport plans for more Park and Ride parking ‘a long way short’ of demand”, *NZ Herald*, https://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=12112966. [53]
- Tax Working Group (2019), *Future of Tax: Final Report Volume 1 - Recommendations*, <https://taxworkinggroup.govt.nz/sites/default/files/2019-02/twg-final-report-voli-feb19.pdf>. [76]
- Tax Working Group (2018), *Future of Tax: Interim Report*, <https://taxworkinggroup.govt.nz/resources/future-tax-interim-report>. [77]
- Teasgood, T. et al. (2017), *Housing and Wellbeing*, What Works Centre for Wellbeing, Sheffield. [26]
- Tikoudis, I., T. Udsholt and W. Oueslati (forthcoming), *Decarbonising Urban Mobility with Land Use and Transport Policies*, OECD Environment Directorate, Paris. [45]
- Treasury (2018), *Living Standards Framework - Dashboard*, <https://nztreasury.shinyapps.io/lstdashboard/> (accessed on 23 January 2019). [24]
- Twyford, P. (2018), *Extending Public Housing Tenancy Review Exemptions*, Office of the Minister of Housing and Urban Development, Wellington. [97]
- Twyford, P. (2018), *KiwiBuild Eligibility Criteria: Background Information*, Housing and Urban Development Minister, Wellington. [70]
- Twyford, P. (2018), *New Minister and Unit for Māori housing*, Office of the Minister for Housing and Urban Development, Wellington. [18]