

## EXECUTIVE SUMMARY

FINAL REPORT NO. 371

# Inquiry into population, migration and agglomeration



**From the AHURI Inquiry:** Inquiry into population growth, migration and agglomeration

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**Related reports and documents**

Leishman, C., Bond-Smith, S., Liang, W., Long, J., Maclennan, D. and Rowley, S. (2021) *Relationships between metropolitan, satellite and regional city size, spatial context and economic productivity*, AHURI Final Report No. 357, Australian Housing and Urban Research Institute Limited, Melbourne, <https://www.ahuri.edu.au/research/final-reports/357>, doi: 10.18408/ahuri31222.

Gurran, N., Forsyth, A., Darcy, M., Searle, G., Buckle, C. and Zou, S. (2021) *Population growth, regional connectivity, and city planning—international lessons for Australian practice*, AHURI Final Report No. 362, Australian Housing and Urban Research Institute Limited, Melbourne, <https://www.ahuri.edu.au/research/final-reports/362>, doi: 10.18408/ahuri7322301.

James, A., Rowley, S., Davies, A., Ong ViforJ, R. and Singh, R. (2021) *Population growth and mobility in Australia: implications for housing and urban development policies*, AHURI Final Report No. 365, Australian Housing and Urban Research Institute Limited, Melbourne, <https://www.ahuri.edu.au/research/final-reports/365>, doi: 10.18408/ahuri8122101.

Nygaard, C., Parkinson, S. and Reynolds, M. (2021) *Agglomeration effects and housing market dynamics*, AHURI Final Report No. 366, Australian Housing and Urban Research Institute Limited, Melbourne, <https://www.ahuri.edu.au/research/final-reports/366>, doi: 10.18408/ahuri5122401.

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- Emma Flockhart, Department of Social Services
- Sidesh Naikar, Department of Social Services
- Katharine Hole, Infrastructure Australia
- Oliver Richards, Infrastructure Australia
- Simon Hunter, NSW Department of Planning, Infrastructure & Environment
- John Brockhoff, Planning Institute of Australia
- Michael Buchan, SA Housing Authority
- Joe Noon, SA Housing Authority
- Llewellyn Reynders, VIC Department of Infrastructure

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# Executive summary

## Key points

- Area and individual-level unemployment are important determinants of people moving home. Housing considerations are also a major driver of both labour mobility and location-choice decisions that households make, and it is clear that housing tenure plays a particularly strong mediating role in such decisions. In addition, there are important interactions between urban amenities, the relocation decisions of more productive workers, and economic outcomes.
- There are strong lifestyle and life-cycle effects that help explain why people move—particularly to regional cities and areas—and the COVID-19 pandemic has accelerated this trend.
- Agglomeration increases productivity at the city scale for US cities, but the evidence is weaker for European and Australian cities. Below the metropolitan scale, there is stronger evidence that benefits also apply to Australian cities.
- Density is also important, but the effects are stronger at the larger of the sub-metropolitan spatial scale examined. This suggests that agglomeration effects operate most strongly below the metropolitan scale, but above the neighbourhood level.
- Agglomeration benefits in the form of higher wages apply to Australian cities, and are not fully offset by higher housing costs—but the benefits apply disproportionately to higher-income groups. Agglomeration economies may therefore play an important role in widening inequalities.

- Productivity gains begin to arise at relatively small city scale (100,000 population) and become stronger with city size and density. Policy should emphasise investment in major infrastructure for regional areas and cities, and satellite cities, which have already been identified as locations of population and economic growth.
- A number of unique international approaches to planning for growth could be adapted to the Australian context. However, regional and satellite cities perform best when integrated in highly connected networks, which emphasises the need for increased support for transport connectivity between major and regional / satellite cities.
- There is a clear connection between economic diversification and further economic growth—particularly economic development aligned to knowledge-industry activities. These opportunities are not heavily location-dependent. We encourage targeted support designed to capitalise on these growth opportunities.
- There is strong potential for strategies that seek to support economic and population growth in ‘second order’ Australian cities by focussing on particular local or regional strengths.
- There are interactions between the provision of infrastructure and household-move decisions—particularly in relation to the perceived importance of lifestyle factors influencing move decisions. However, infrastructure investment is lumpy, and needs to take place before promoting locations for population growth.
- Policies designed to promote city scale, density and inter-city connectivity must be balanced by policy options that expand affordable rental supply in Australia’s inner urban areas, and the development of diverse and affordable rental housing in regional areas in order to support mobility of lower-income workers.

## Research questions and key findings

This Inquiry examined theoretical, international and Australian case-study evidence and econometric modelling results designed to investigate the likely optimal size of Australian cities, and the scale at which productivity benefits are likely to arise.

The concept of ‘agglomeration economies’ is central to the research questions posed by the Inquiry. Agglomeration economies may arise for a range of different reasons, and we explore the arguments in greater detail later in the report. At a simple level, they can be understood as the combination of cost savings, efficiencies and increased market potential that benefit firms when they locate in more heavily populated cities, higher-density cities or cities with a greater diversity of firms, economic sectors and individuals (workers). Agglomeration economies are also applicable at regional level, and may vary widely in scope and importance between economic sectors.

Four Inquiry-level research questions were examined:

1. What are the key drivers of population growth and mobility in Australia, and what do the identified effects imply for housing and urban development policies seeking to facilitate and respond to population change?
2. At what population and geographic scales do agglomeration economies begin to alter the economic productivity of cities, and at what stage do these advantages begin to slacken off or give rise to diseconomies?
3. How are Australian urban and regional governance frameworks planning for and responding to economic and population growth, and what can be learned from international experience?
4. How can the benefits of agglomeration economies be quantified in the Australian context? This includes evaluation of housing market effects, employment density, market potential, traffic congestion / commuting times / pollution and wellbeing, and differences between household types or socio-economic groups.

The Inquiry found that agglomeration economies occur through three principal processes:

- labour pooling
- shared-input markets
- technological spillovers.

In theory, these processes improve the matching between employment opportunities and workers' skills, lower production costs and increase productivity through accelerating knowledge exchange. As cities become larger or denser, these processes should increase productivity.

The econometric evidence shows that agglomeration increases productivity at the city scale for US cities, but the evidence is weaker for European and Australian cities. When moving below the metropolitan scale, there is stronger evidence that benefits also apply to Australian cities. The evidence suggests that benefits begin at a fairly small scale (above 100,000 population) and increase disproportionately thereafter. There is no evidence of diseconomies arising from scale.

The evidence is that density is also important, but the effects are stronger at the larger of the sub-metropolitan spatial scale examined. This suggests that agglomeration effects operate most strongly below the metropolitan scale, but above the neighbourhood level. However, after controlling for firm and individual-level characteristics, the estimates of agglomeration advantages are much lower than in earlier reported studies.

This suggests strong potential for strategies that seek to support economic and population growth in ‘second order’ Australian cities by focussing on particular local or regional strengths.

Housing considerations are a major driver of both labour mobility and location-choice decisions that households make, and it is clear that housing tenure plays a particularly strong mediating role in such decisions. This may reflect the inherent insecurity of private renters, the role of high transaction costs for owners, or some combination of these factors. Importantly, high transaction costs contribute to a lack of labour-market mobility on the part of Australian workforce, with knock-on consequences for the efficient functioning of labour markets.

There is an appetite for movement between metropolitan and regional areas, and within regional areas, suggesting that policies enabling mobility will benefit regional housing and labour markets. Household moves are triggered by more than dwelling and locational preferences, but reflect employment, health, education, recreational and lifestyle-related services.

The evidence suggests that unemployment is an important determinant of people moving home—both individual unemployment and the area level of unemployment. Australians are more likely to move long distance from regional to metropolitan areas as a result of a need to be closer to their place of employment or study. Metropolitan-to-regional moves also occur, but are more likely to be prompted by lifestyle considerations.

A review of international approaches to planning for economic growth reveals a number of unique approaches that could be adapted to the Australian context. These include:

- polycentric development of satellite cities linked to major metropolitan centres
- regional development of a network of decentralised centres linked to technology clusters
- identification of designated growth centres within an economic diversification strategy.

Overall, the Inquiry findings suggest that it is important to ensure that local housing supply can respond quickly to shifts in population demand. This requires both state and local governments to implement land-release and infrastructure strategies that can quickly respond to demand shifts. In the case of metropolitan areas, housing supply needs to be responsive enough to meet the housing needs of workers and jobseekers in job-rich areas.

However, it is also important to reflect on the premise that, even if agglomeration economies deliver higher productivity and hence higher wages, this does not mean that public policy decisions should necessarily seek to move people or jobs from one place to another.

There is no prior theoretical reason (or empirical evidence) to support the idea that gains from agglomeration fully offset (or more than offset) economic losses made elsewhere when economic activity is moved through intervention.

The evidence from this Inquiry also suggests that, while agglomeration benefits in the form of higher wages apply to Australian cities—and are not fully offset by higher housing costs—the benefits apply disproportionately to higher-income groups. Yet, the impact on housing costs is likely experienced across the entire income distribution. This suggests that agglomeration economies may play an important role in widening inequalities.

We found that there are probably important interactions between urban amenities (widely defined), the relocation decisions of more productive workers, and economic outcomes. In other words, business start-ups, entrepreneurial activity and the migration of higher productivity workers are likely to be endogenous processes.

In addition, there are strong lifestyle and life-cycle effects that help explain why people move—particularly to regional cities and areas—and the COVID-19 pandemic is seen to have accelerated this trend.

There are interactions between the provision of infrastructure, and household-move decisions, particularly in relation to the perceived importance of lifestyle factors influencing move decisions. However, infrastructure investment is lumpy and needs to take place before promoting locations for population growth.

Analysis of successful regional, satellite and growth-centre cities suggests that there are some common characteristics. These include:

- historic connections to primary industries
- recent restructuring of economies
- diversification into health and social care, retail and education.

Economic development initiatives targeting technology sectors, and the influence of university campus operations, are also important factors.

Population projections and transportation planning and infrastructure play an important role in forming funding and planning trajectories, but unambitious approaches are seen to undermine the potential for growth in regional and satellite centres.

## Policy development options

We propose four principal policy development opportunities, reflecting on the results of this Inquiry.

First, we note both that productivity gains appear to arise at relatively small city scale (100,000 population) and become stronger with city size and density. We suggest the policy should emphasise investment in major infrastructure for regional areas and cities and satellite cities that have already been identified as locations of population and economic growth.

Second, reflecting that regional and satellite cities perform best when integrated in highly connected networks, we encourage increased support for transport connectivity between major and regional / satellite cities—but we also emphasise that these policies must be offset by other policies designed to maintain or improve housing affordability.

Third, there is a clear connection between economic diversification and further economic growth—particularly economic development aligned to knowledge-industry activities. These opportunities are not heavily location-dependent. We encourage targeted support designed to capitalise on these growth opportunities.

Fourth, we note from the research evidence and the expert advice from our Inquiry Panel members that it is generally much easier from a policy perspective to move people than to move jobs. We also note the strong role that tenure and housing affordability play in both facilitating and impeding labour-market mobility in Australia. We therefore advise policy options that expand affordable rental supply in Australia's inner urban areas, and the development of diverse and affordable rental housing in regional areas in order to support mobility of lower-income workers.

We also note that an Inquiry of the scale reported in this Final Report, together with its complexity, inevitably throws up additional unanswered questions that may call for future research activities. In the case of this Inquiry, the research method was designed and much of the work undertaken prior to and during the COVID-19 pandemic. This complicates the interpretation of the results and increases the need for further research activities. The research summarised in this report suggests that there are many alternative options for planning for population change and migration in Australia.

There are several remaining and new research questions:

- What are the net overseas migration (NOM) scenarios beyond 2021? When, realistically, will significant flows of migrants return to Australia, and what are the implications for economic development and planning?
- What are the longer-term implications of large-scale flows of returning Australians on labour markets, housing markets and costs, and on the economy? And to what extent do the socio-economic, demographic and household wealth characteristics of such households matter in terms of impacts to the Australian housing system?

- Are the regional housing market trends, and trends of decentralisation within cities, temporary phenomena triggered by the pandemic, or are they likely to persist for longer? What are the implications for housing markets and costs, and for job creation?
- How will patterns of commuting, interstate migration, labour mobility and teleworking change after the pandemic ends? Are there particular implications for regional and outer-urban suburban housing markets? Will patterns revert to previous patterns, or will they exhibit a permanent change?
- To what extent does the provision of infrastructure, including digital connectivity, facilitate effective spatial movement of jobs in addition to—or rather than—people?

## The study

This Inquiry Final Report provides a synthesis of research findings from a suite of interrelated research activities conducted during AHURI's Inquiry into Population, Migration and Agglomeration. We found that NOM is associated with positive impacts on economic productivity.

However, labour productivity is complex, and is driven by a range of different factors. Recent debate has emphasised the potential role of agglomeration economies, which in turn suggests that the spatial organisation of labour and housing markets is key to Australia's future prosperity. Agglomeration economies matter in terms of the determination of economic productivity, and the attractiveness of places to workers and migrants.

Agglomeration economies include:

- labour pooling
- shared-input markets
- technological spillovers.

Other reasons put forward in the literature for the existence of positive agglomeration economies include the following:

- Positive (non-zero) transportation costs mean that denser areas offer an advantage or reduce relative transport costs.
- Very dense areas of economic activity offer opportunities for a higher degree of specialisation (or division of labour).

The role of housing outcomes and their influence on productivity has until now been lightly studied—particularly adverse housing-system outcomes such as lack of affordable housing opportunities, low diversity of housing choices, and long commute times. However, there are some exceptions. For example, Gurran, Phibbs et al. (2015) summarise the four main impacts of housing as:

- labour-market mobility
- labour-market participation and employment
- urban congestion
- indirect costs—such as the pressure that high housing costs exerts on wage demands.

Gurran, Phibbs et al. (2015) also note growing disparity between housing markets that offer accessibility to capital city employment markets, and outer metropolitan and regional areas. Whelan and Parkinson (2017) find that unemployed people, underemployed people and private renters have higher mobility and lower reservation wages than home owners and employed people. Van den Nouwelant, Crommelin et al. (2016) note escalating commuting times and a growing mismatch between low-income employment and low-income housing opportunities, with a knock-on impact to economic productivity (see also MacLennan, Randolph et al. 2019). Gurran, Forsyth et al. (2021) find that lower-income renters, who make up a critical sector of the urban workforce, experience high rates of housing stress, endure long commutes, or have lower rates of labour-market engagement, reflecting a shortage of affordable accommodation in employment centres.

Further population growth and continued importing of human capital from abroad may be a source of additional agglomeration benefits and productivity gains. However, population growth also requires infrastructure investment and responsive housing development to avoid developmental bottlenecks, inequality and reduced community wellbeing. This has raised debate about the economic and social benefits and costs of alternative urban transition and population distribution strategies.

The Inquiry was structured to include a range of quantitative and qualitative research methods, largely embedded within four supporting research projects (SRPs). James, Rowley et al. (2021) carried out analysis of census data, housing aspirations survey data and key-actor interviews. Nygaard, Parkinson et al. (2021) and Leishman, Bond-Smith et al. (2021) are heavily based on statistical information—particularly on econometric analysis of secondary data. Meanwhile, Gurran, Forsyth et al. (2021) is based on a combination of international case-study evidence, Australian key-actor interviews and Australian case studies.



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