



The Changing Demography of New Zealand: Economic Consequences

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Background

Recent decades have seen an increasing concentration of population and economic activity within cities, both in New Zealand and globally. Auckland has become the dominant urban area within New Zealand to a degree unprecedented in our history. Between 1976 and 2006, Auckland's urban area population rose from 0.74 million to 1.21 million, and its proportion of New Zealand's population rose from 23.7% to 30.0%. These figures compare with Auckland's 14% of New Zealand's population in 1926 (Grimes and Tarrant, 2013). Auckland's growth has been part of a general northward drift in population. Hamilton has become clearly established as New Zealand's fourth largest city while, by 2006, both Tauranga and Napier/Hastings had populations that approximately equalled that of Dunedin.

High value industries have increasingly become centred on the northern cities. Between 1991 and 2006, Auckland's share of employment within knowledge intensive sectors increased at a faster pace than in Wellington, Christchurch, Hamilton or Dunedin. Over the same period, Hamilton experienced the greatest increase of these five cities in the proportion of its workforce employed within medium/high-tech manufacturing (Grimes, Le Vaillant and McCann, 2011).

One factor contributing to Auckland's growth is that the city is the dominant location in which immigrants choose to live, while emigrants are sourced from across the country. With New Zealand continuing to experience net inward migration over the cycle, these migration patterns raise the

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share of population that is located in Auckland. Auckland also has a younger age structure than other major cities in New Zealand, contributing to stronger population growth. Both the migration trends and the natural population increase have implications for the ethnic and skills composition of Auckland and of New Zealand as a whole.

The increasing dominance of Auckland within New Zealand has important economic consequences. Evidence indicates that productivity (adjusted for sectoral composition) is higher in Auckland than in other New Zealand cities (Mare and Graham, 2013). This finding is consistent with international evidence that there are positive returns to agglomeration. These positive returns mean that larger cities have (on average) higher productivity than smaller cities. However, in order to reap these productivity gains, the productive advantages stemming from the co-location of firms and skilled workers within larger cities need to outweigh disadvantages caused by congestion and other growth-related problems within those cities (Grimes, 2014). In order to facilitate Auckland's continued expansion, considerable infrastructure investment and substantial housing investments are required (Auckland Council, 2013). Furthermore, Auckland is only a moderately-sized city in Australasian terms, and the globalisation of activity means that, in economic terms, Auckland can be viewed as only a subsidiary city within the Australasian city hierarchy (Grimes et al, 2011).

Developments over 2006 - 2013

The results of the 2013 census have proved useful in confirming whether the trends, summarised above, have continued over the most recent period. Since 2006, New Zealand's second and third largest cities have both faced challenges. In particular, Christchurch has suffered through natural disaster, while Wellington has faced a greater constraint on government-sector employment. Meanwhile, New Zealand's total population grew only modestly; the country's 2013 population was 5.3% above that in 2006, representing an average growth rate of just 0.7% p.a.

Statistics New Zealand (SNZ) has in the past adopted "urban area" definitions to categorise functional population centres that are based on commuting relationships rather than on administrative boundaries. Grimes and Tarrant (2013) used these data along with other SNZ data to compile an urban population database for 60 New Zealand urban areas for every tenth year from 1926 to 2006. Here, we concentrate on updated developments between 2006 and 2013 for the largest 31 towns that correspond to the SNZ urban areas.² These urban areas comprise all New

² In some cases, multiple SNZ urban areas are combined to create a single city in the database; for instance, the northern, western, central and southern Auckland zones are combined to create "Auckland".

Zealand towns that had a population of at least 10,000 in 1996. We examine whether the trend towards concentration of the country’s population in the larger northern cities, evident prior to 2006, continued through to 2013. The 2006 urban area definitions have been held constant in the updating.

Of the 31 towns, 21 are in the North Island and 10 are in the South Island.³ We divide the North Island towns into those in the “Northern North Island” being those towns that are north of (and including) Whakatane.⁴ All other North Island towns are listed as Southern North Island.⁵

Figure 1: New Zealand Regional Urban Area and “Other” Populations

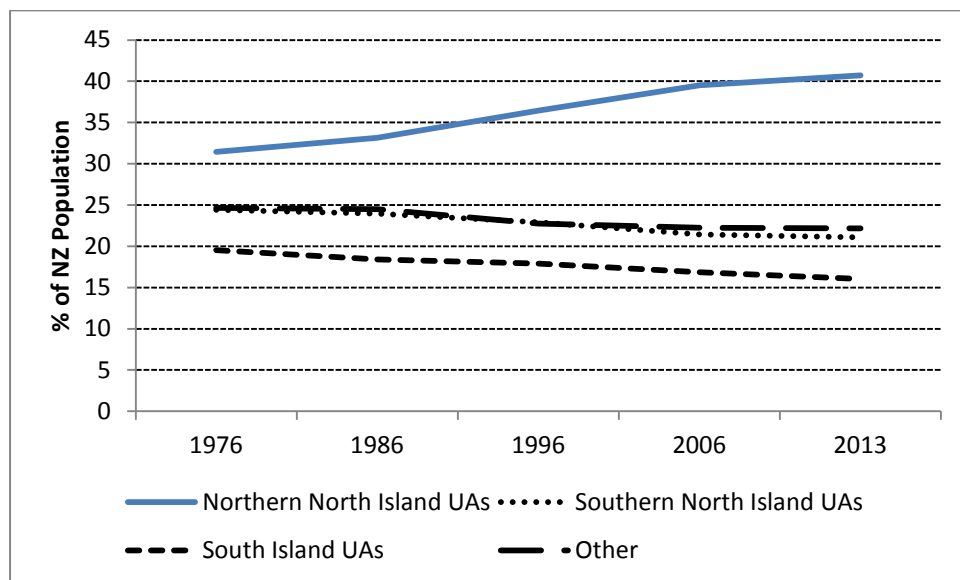


Figure 1 graphs the population of each of these three categories plus the residual population of New Zealand, labelled Other. The figure demonstrates that over each decade⁶, the combined population of the Northern North Island urban areas increased as a percentage of New Zealand’s population, while the percentage represented by each of the other three categories declined over each decade.

³ The 10 South Island urban areas (in order of 2013 population) are: Christchurch, Dunedin, Nelson, Invercagill, Blenheim, Timaru, Ashburton, Oamaru, Greymouth, Gore. Note that Queenstown is not in the database as its population was too small in the earlier years of the database to be included.

⁴ Northern North Island towns (in order of 2013 population) comprise: Auckland, Hamilton, Tauranga, Whangarei, Pukekohe, Whakatane.

⁵ Southern North Island towns (in order of 2013 population) comprise: Wellington, Palmerston North, Hastings, Napier, Rotorua, New Plymouth, Kapiti, Whanganui, Gisborne, Taupo, Masterton, Levin, Fielding, Tokoroa, Hawera.

⁶ Given that all data prior to 2006 is on a decadal basis, for simplicity we refer to the 2006-2013 inter-censal period also as a “decade”.

Thus the prior trend towards concentration of the country's population in the larger northern centres has continued over the past decade.

In absolute terms, each of the four categories shown in Figure 1 increased in population between 2006 and 2013, with the South Island urban areas increasing by 0.4%, Southern North Island urban areas increasing by 3.6%, Northern North Island urban areas increasing by 8.5%, and Other by 5.1%. Thus, while each category had an increase in population over the decade, the fastest increase was observed in the Northern North Island urban areas.

Of the 31 urban areas, only four areas – Auckland, Pukekohe, Hamilton and Tauranga – increased their share of the New Zealand population by at least 0.05 of a percentage point. Each of these areas has increased its share of the New Zealand population over every decade since 1976. All four areas are in the Northern North Island. Only one other urban area's population share (Nelson) was higher in 2013 than in any period from 1976 to 2006. Thus (apart from Nelson's steady growth) the trend towards concentration of population in the 'golden triangle' bounded by Tauranga, Hamilton and Auckland continued through to 2013.

In economic terms, if agglomeration economies are positively related to city and regional populations (as the international and New Zealand evidence suggests), this continued concentration of population in the golden triangle can be expected to yield an economic benefit in terms of increased productivity. However, the fact that this growth is dispersed across 200 kilometres between Tauranga and Auckland makes the issue of connectivity between these centres of importance. Tauranga and Auckland have the North Island's two major ports, while Auckland has the major international airport. Other key social infrastructure facilities exist throughout the region, with three major host universities (plus satellite campuses of other universities), polytechnics, and major base hospitals.

Given that over 40% of the country's population lives in these northern urban areas (including Whangarei, which also has a major port), issues of connectivity between the cities is of national importance. A key policy issue highlighted by the urban growth trends is therefore the importance of ensuring that infrastructure links within and between these urban areas is of the quality required to reap the productivity benefits from agglomeration. By themselves, the population trends do not reveal how well the infrastructure decisions match the growth patterns. They do, however, highlight the need to ensure that coordinated infrastructure planning and investment is undertaken for the golden triangle and is given national priority in order to enhance the nation's productivity.

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