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Margins Matter

Revising New Zealand's Population Map

Discussion Paper



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Abstract

This paper explores changes in New Zealand's population geography, including inter-regional movements and international settlement patterns. It places the residential preferences revealed by these movements in a national setting and examines them at the city and district, metropolitan and local levels. It relates recent Census-based evidence on population change to experience elsewhere, to employment trends, and to lifestyle issues to suggest that decentralisation will become a more important force. Auckland's primacy will continue for the foreseeable future. But questions are raised over the level at which that primacy is sustained as an emerging decentralisation is evident in different growth rates among local council areas both within Auckland Region and between the region and other parts of New Zealand.

The paper analyses the components of recent population change. The evidence suggests that population expectations founded on "the drift north", slow growth in the south, structural disadvantages facing Wellington, rural depopulation, and the primacy of Auckland need revision. The resurgence of second tier and provincial cities, the revitalisation of the rural periphery around major urban areas, and burgeoning lifestyle settlements, both in the shadow of urban areas and beyond, are new facets of New Zealand's population geography.

This paper has not brought all the evidence together, and the propositions it contains may need to be tested further. Nevertheless, they raise some interesting policy issues, both for the major metropolitan areas and for smaller peripheral and provincial towns and cities.

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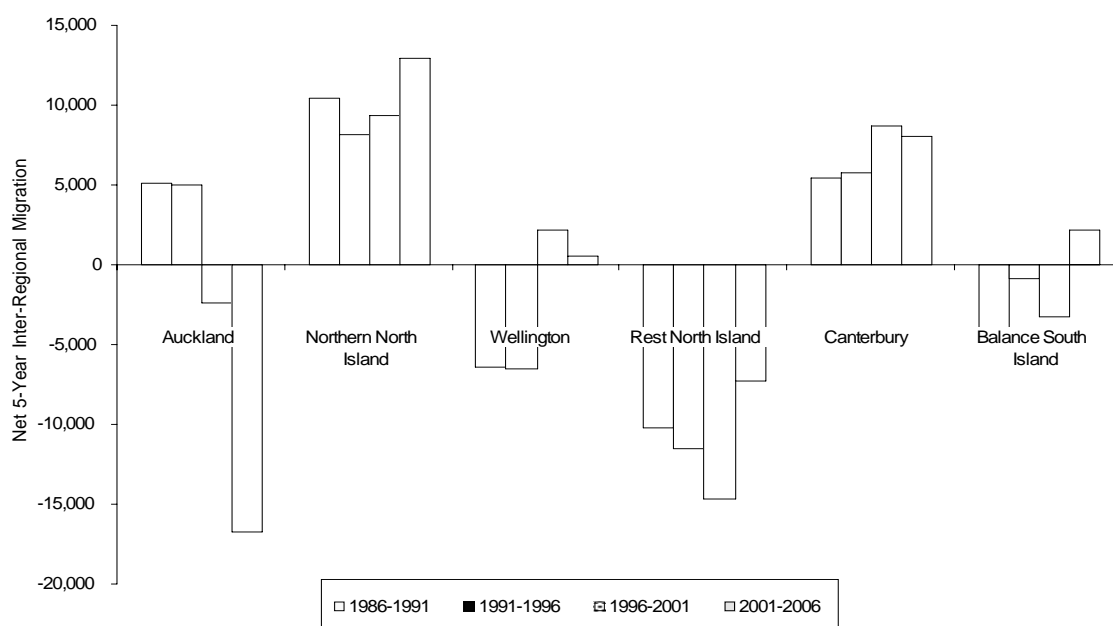
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1 Introduction

The New Zealand population map has been undergoing subtle but significant changes over the past 15 years. This was signaled in the 1996 Census when, apparently for the first time in the century, Auckland lost more people to the rest of New Zealand than it gained over a five year period (Poole et al., 2005).

Subsequent Census results confirm that this was a turning point. The drift to Auckland Region had reversed, and became a significant loss between 2001 and 2006. At the same time, gains to other parts of the north (Northland, Waikato and Bay of Plenty regions) accelerated (Figure 1).

Figure 1: Inter-Regional Migration, New Zealand 1986-2006



Source: Pool et al. (2005); and derived from 2006 Census, Statistics New Zealand

Yet, these changes, and a host of other more localised shifts in residential preferences, settlement patterns, and the nature and location of employment are yet to fully enter the thinking of the policy analysts and planners who influence where people can live and work. A traditional preoccupation with the demographic and economic dominance of Auckland still masks emerging population movements which require changes in how we approach development, resource, and environmental issues throughout New Zealand.

Looking back, we see that Auckland’s long-standing gains from internal migration have been on the decline since the 1980s. Canterbury and Wellington, in contrast, have gained (although less so in the last five years). Losses in the rest of the country either moderated (in the rest of the North Island) or reversed (balance of the South Island).

This turn-around sits over a range of demographic shifts which will have significant long-term national, regional, and local impacts, some of which are the subject of this paper.

Objectives

The components of change in New Zealand's population geography explored in this paper raise questions about future growth and begin to build an evidential base for revising our thinking about regional and local development.

Planning for land and resource use commences with consideration of future demand. Local population growth or decline dominates the resource and environmental issues that planners and policy makers commonly deal with. Expectations for future population movement throughout New Zealand are based, as often as not, on perceptions of recent history and a tendency to project "more of the same".

Sub-national, cohort-ageing based projections produced by Statistics New Zealand have become an important component of spatial planning over the past twenty years. Regional and district cohort forecasts push medium-term, age-specific trends in fertility and mortality and established patterns of net migration into the future in a systematic and easily replicated way using a number of core assumptions.

While they are generally an adequate basis for planning during periods of continuity, and can pick up short-term shifts in actual outcomes through regular updating, cohort projections are likely to be less appropriate when directional shifts emerge. This may be critical to the long-term outcomes with which local planning is increasingly concerned under the rubric of sustainability. In turn, predicting long-term population trends depends increasingly on predicting migration, the most uncertain and volatile of the demographic drivers. Yet, the numbers indicate that internal migration is currently undergoing a significant directional shift.

This paper explores the nature of this shift. It first examines inter-regional movements more closely, placing the changing residential preferences reflected in migration trends in a national setting. It then explores the components of population change at city, district, metropolitan, and local levels, before discussing their implications for policy, planning and resource management.

The Source Data

The principal source of data comprises the table showing where people lived on census night 2006 and where they lived five years earlier. This table enables us to estimate at district and regional level net movements between places within the country, arrivals from overseas, and gains from births in the interim. Additional data is used to build a picture of the broader changes that these responses reveal. This includes information from other Census tables on usually resident populations on Census night, whether people live in the same residence in 2006 compared with 2001, information on registered deaths over the inter-censal period, employment numbers, and international long-term migration.

Differences in the coverage, treatment, and presentation of data mean that analysis is subject to measurement error – which in this case relates particularly to the accuracy of the census responses and coding, and to under-enumeration as a result of missing or faulty responses. If this error is consistent from place to place, our conclusions should stand, although individual numbers are unlikely to be precise. Our interpretation of the numbers therefore focuses on the consistency or otherwise of the shifts identified with experience elsewhere and with other sources of information.

2 Emerging Dimensions of Regional Growth

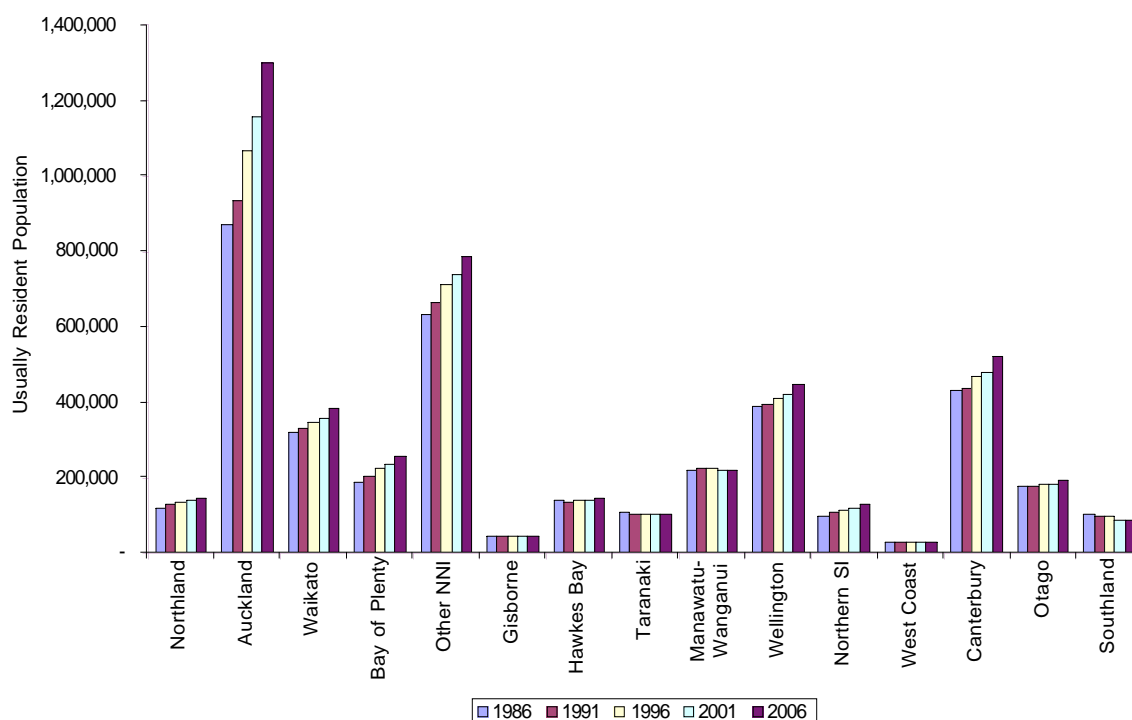
Despite the reversal in internal migration flows (Figure 1), Auckland remains the country's dominant region (Figure 2). Its share of total population was almost 33% in 2006, compared with 27% twenty years earlier. This primacy continues to grow; in 2006

Auckland had 3.2 times the population of Wellington, New Zealand's second largest urban area. This compares with 2.9 ten years earlier¹.

This pattern will not change substantially in the near future, if only because Auckland will continue to attract a large share of overseas immigrants and because it's relatively young age structure, related to its role as a destination for immigrants, will sustain a higher rate of natural increase than the rest of New Zealand.

However, there are no guarantees that it will sustain historical rates or levels of growth, or continue to outstrip the rest of the country as much as in the recent past. Moreover, policy and planning for development is driven in large part by what is happening *at the margin* – in localities undergoing significant *relative* change, as well as in metropolitan areas where capacity pressures associated with the *magnitude* of growth continue to dominate.

Figure 2: Regional Population Distribution 1986-2006



Source: Census of Population 2006, Statistics New Zealand

On this basis, the reversal of internal migration is particularly significant for growth in regions that have lagged in the past. But, it also has long-term implications for Auckland in terms of the magnitude of growth to be planned for and its share of growth, both of which are likely to fall.

There are already early signs of this. Between 1996 and 2001, Auckland accounted for 76% of national population growth. This dropped to less than 50% over the next five years, its lowest level in at least 20 years. While still enough to increase the region's share of the national total (anything above its current share of population is enough), the moderation compared with the preceding five years is significant.

At the national level, it is also significant, that only one region, Southland, declined in the most recent period, compared with six over the previous five years. Even then,

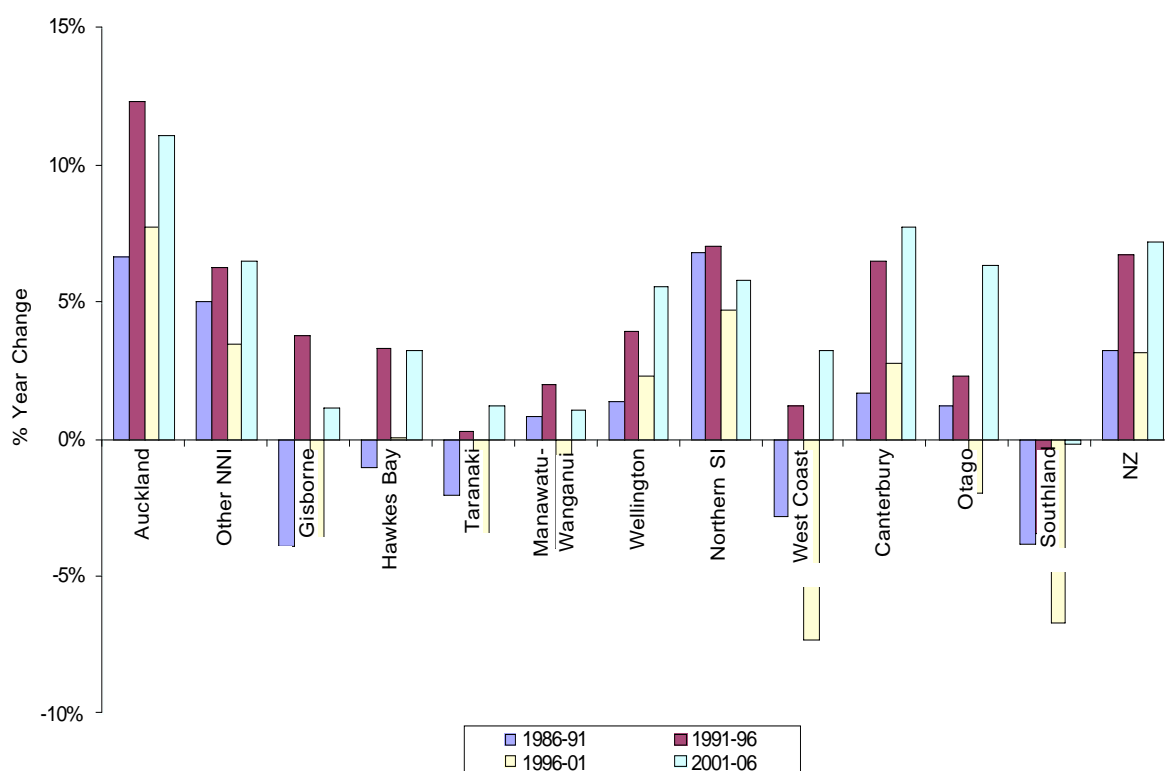
¹ This treats the four contiguous cities of North Shore, Waitakere, Auckland, Manukau and Papakura District as the Auckland metropolitan area and the four contiguous cities of Porirua, Lower and Upper Hutt, and Wellington as the Wellington metropolitan area.

Southland's population fell by only 0.1%, a net loss of 100 people over five years (well within likely response and enumeration error), a stark contrast with the 7,000 net loss over the preceding five-year period (Figure 3).

Places like the West Coast and Otago in the South Island, and Taranaki, Gisborne, Hawkes Bay and Manawatu in the North experienced a population turn-around. The northern North Island (Northland, Waikato and Bay of Plenty) and northern South Island (Tasman, Nelson and Marlborough) enjoyed steady growth throughout the period.

Is this new tendency towards more widely distributed growth an aberration? Or does it reflect a significant departure from a previously entrenched trend towards population concentration? The evidence on inter-regional migration suggests that changing residential preferences of New Zealanders may favour this second interpretation. If it is a departure, then it points to a moderation of Auckland's primacy, with significant consequences for population-related and economic policies and plans within the region, and, especially, elsewhere.

Figure 3: Regional Population Growth Rates, 1991-2006



Source: Census of Population 2006, Statistics New Zealand

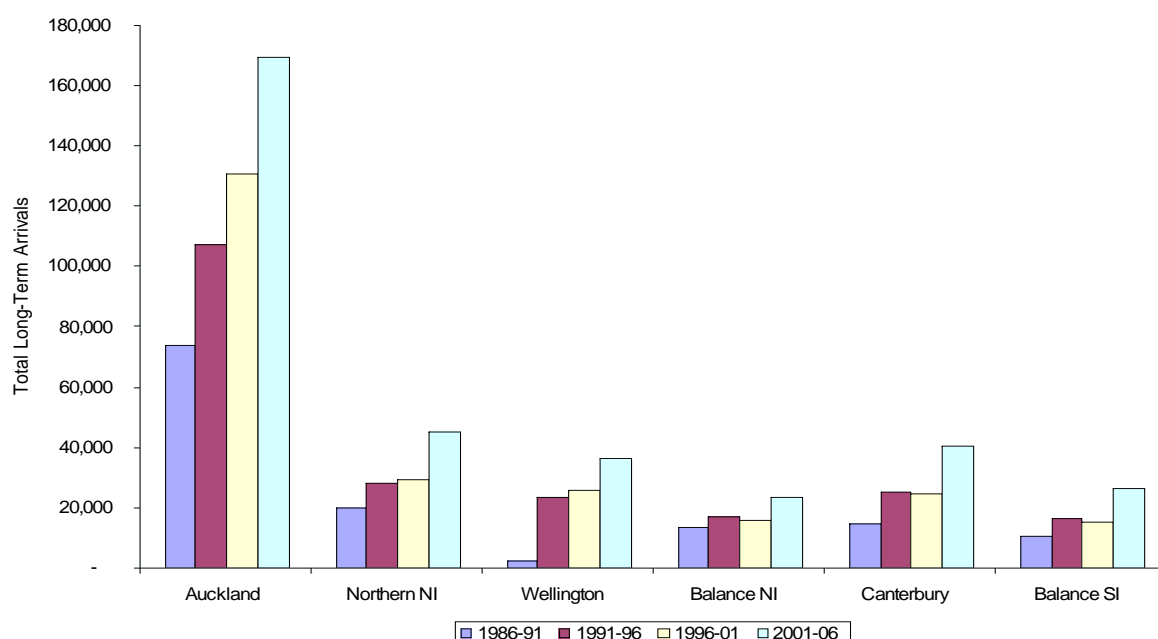
3 The Contribution of International Migration

International migration trends add weight to the argument that population is redistributing at the margins: more people previously living overseas settled in provincial New Zealand between 2001 and 2006 than previously (Figure 4). A preference for settlement in Auckland remains, but accounted for only 49% of international arrivals over the five years to 2006, compared with 54% over the previous five years. In fact, all the regional divisions in this analysis experienced significant gains from long-term immigration, as greater numbers of arrivals appear to have opted for secondary destinations.

It is not clear how far this tendency might develop in the future. As New Zealanders returning from overseas age, or return towards the end of their career paths, they may favour centres other than Auckland. Similarly, people born overseas may increasingly

look beyond Auckland when they arrive, responding to the same sort of decentralising forces as New Zealanders.

Figure 4: Regional Destinations of International Migrants, 1986-2006



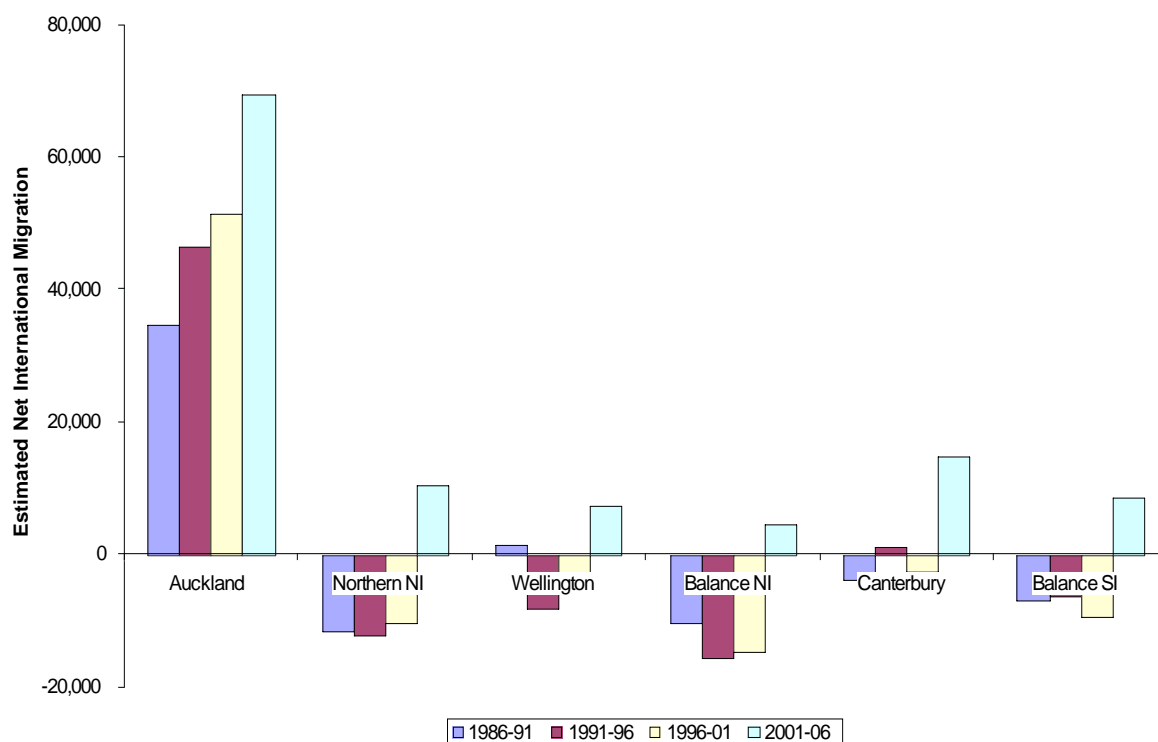
Source: Census of Population 2006, Statistics New Zealand

International arrival numbers tell only half the story. The difficulty in telling the other half is that people who leave New Zealand are not counted in the subsequent census. This makes it hard to pin down the *net* impact of international population movements.

Following Pool et al. (2005), regional losses to emigration are estimated as the difference between known gains from natural increase, overseas arrivals, and internal migration (as described above) and the change in usually resident population between the two Censuses. The international emigration figures derived in this way are deducted from the number of people in each region who were living overseas five years earlier to estimate a net international migration figure. (The uncertainties surrounding this estimation method are considered in Appendix 1)

Auckland Region remains dominant in terms of international migration (with net gains easily offsetting internal migration losses). However, other parts of New Zealand were also boosted by international gains over the past five years, reversing a prior pattern of net losses (Figure 5). Canterbury, the rest of the South Island and Northern North Island stand out. This may well reflect the historically high level of gains from overseas over the period. Nevertheless, if sustained, this shift calls for a rethink of population projections. If, for example, the average age of New Zealanders returning home is increasing, their career paths are more advanced than in the past, and their economic status is ahead of the balance of the population, they might be expected to pursue the lifestyle options that underlie some of the decentralisation occurring among existing residents.

Figure 5: Net International Migration Gains and Losses, 1986-2006



Source: Estimated from the Census of Population 2006, Statistics New Zealand

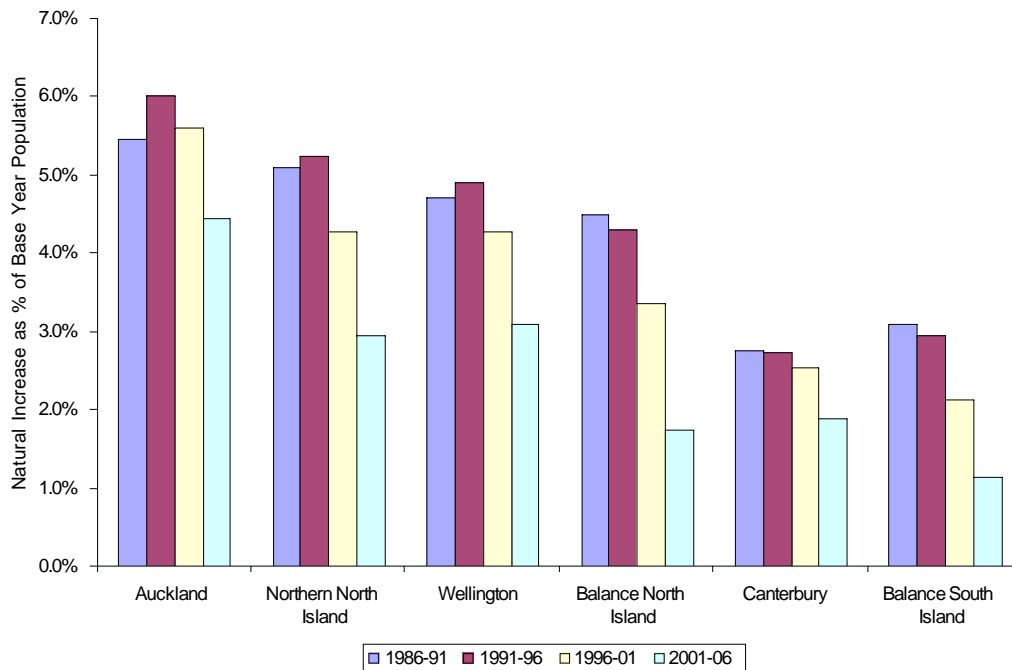
4 Natural Increase – A Declining Influence?

The contribution of natural increase to each area’s growth is estimated by deducting the record of registered deaths by area (Statistics New Zealand) from births (persons “not born” in the “Residence Five Years Ago” table). There is an implicit assumption that the number of children born between censuses moving into a region is the same as the number moving from it. This is likely to over-estimate natural increase in areas losing population to migration and underestimate it in areas gaining. The effect will be to slightly reduce the contrast between these two types.

The natural increase for Auckland estimated in this manner was 59,950 between 1991 and 1996, or a 5.6% gain relative to the 1991 population. Between 2001 and 2006 the figure was down to 51,630, or 4.5% of the 2001 population.

Gains from natural increase remain higher in Auckland than elsewhere reflecting its relatively youthful population and the impact of a substantial international migrant component. However, the rate of natural increase can be expected to fall further in Auckland as elsewhere. The actual numbers are also likely to continue to decline as the shares of people in child-bearing cohorts stabilise and in older groups increase. Consequently, migration movements will play an ever more important part in shaping the distribution of future population

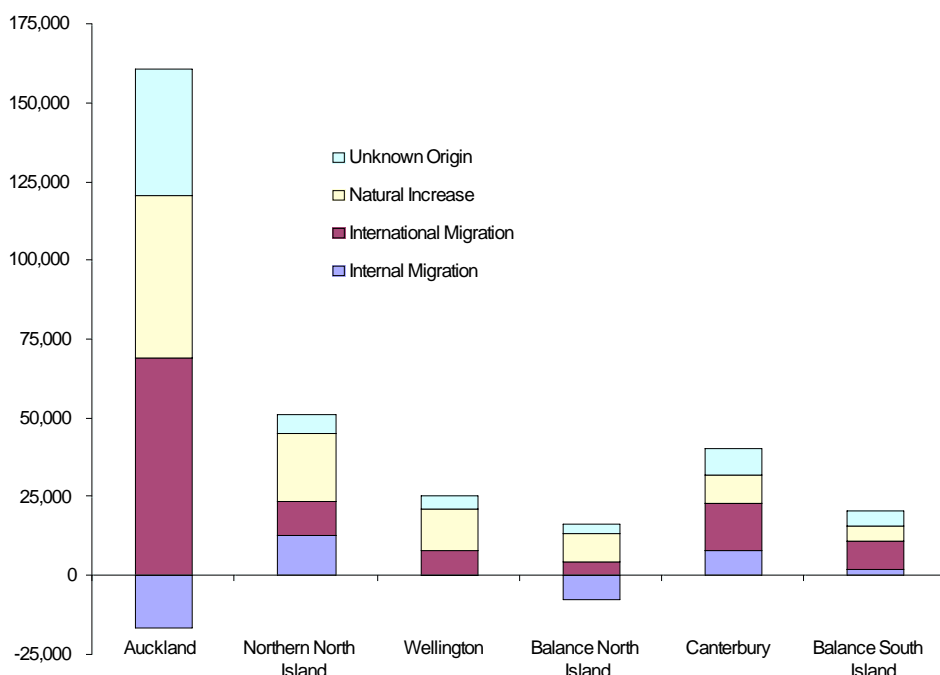
Figure 6: Natural Increase as a Percentage of Base Year Population, 1986-2006



Source: Estimated from the Census of Population 2006, Statistics New Zealand

The share of growth due to natural increase is influenced by the performance of other drivers (Figure 7). For example, international migration accounted for 48% of Auckland Region's growth, and natural increase only 36%. However, in areas with lower levels of international migration gain, natural increase remained important, accounting for 42% of growth in the Northern North Island, 52% in Wellington, and 100% in the balance of the North Island. Despite lower rates, regions with smaller gains from migration remain dependent on natural increase to sustain growth.

Figure 7: Components of Population Change, 2001-2006



Source: Estimated from the Census of Population 2006, Statistics New Zealand

5 Population Redistribution – the Big Picture

Despite Auckland maintaining its primacy through international migration between 2001 and 2006, there is change afoot. Auckland's growth, more than ever, depends on international gains as more resident New Zealanders move to other parts of the country. At the same time, more international arrivals appear prepared to settle beyond Auckland. And, while there is still a drift to the north, this now encompasses areas outside Auckland, and is matched, at least in proportional terms, by resurgence in the south.

With internal and international migration playing a bigger part in shaping settlement, it is useful to consider the drivers of these forces, and how they might influence future population distribution and, especially, an emergent tendency towards decentralisation.

The Drivers of Population Decentralisation

Several forces drive population decentralisation which, in turn, takes different forms.

Drivers include changing lifestyle preferences, associated in part with population ageing, and a greater ability to exercise residential choice because of growing affluence; employment flexibility because of new business and organisational models; technical innovation, especially in communications, requiring less face-to-face contact in business; the decentralisation of employment; and housing affordability.

The forms include exurban development, with suburbs leap-frogging the city edge and locating within the nearby rural environment (Daniels, 1999), dispersed, rural-residential development, with very low-density housing distributed across former farm land beyond the urban fringe; the establishment of new settlements or the rapid expansion of existing ones in rural or coastal areas; the revival of rural villages and towns with growth no longer dependent on servicing farming; and the recovery and growth of second- and third-tier cities ("provincial cities" in a New Zealand context) that today can offer the services and amenities of first tier cities, with lower costs.

Different forms of decentralisation occur at varying distances from major cities. Exurban settlement may depend on long-distance commuting to established employment centres, for example. In contrast, small towns undergoing resurgence may have little immediate connection to major cities. Their resurgence may be based on new forms of investment and business and increased local demand as a result of growth in lifestyle, recreational and visitor activities, rather than on a recovery of traditional rural services. Traditional services should benefit, though, as a result of a greater depth and diversity of demand, with their renewed viability benefitting and greater choice in turn benefitting established households and business.

Decentralisation as a force underlying population distribution is not new (e.g., US Department of Housing and Urban Development, 1971). However, several features make it noteworthy today, and lead to the expectation that it will have even more influence on our urban and traditionally non-urban landscapes in the future:

- In a more cosmopolitan society, diverse housing preferences are underpinned by a growing variety of individual and household means and motives, resulting in a diversity of forms.
- Decentralisation transfers urban behaviours, expectations and values into country areas where already over the past twenty years traditional values based on the independent, family farm have been diluted by land use and ownership changes, and as the new information technologies break down rural isolation.
- Landscapes traditionally associated with production (agriculture and forestry) are being transformed into landscapes associated with consumption (passive and active recreation, lifestyle activities and entertainment), or a combination of the two (the archetype being vineyards and wineries offering consumer services ranging from tasting and purchasing, through catering, accommodation to entertainment).

- Today, relocation to the countryside may be driven as much (or more) by choice of a preferred living environment (pull factors) as by a rejection of the negative aspects of big city life (push factors).
- At the other end of the spectrum, technical advances are reducing the advantages of agglomeration in large cities for many activities. As a result, the cost and lifestyle disadvantages associated with large and increasingly congested urban areas may encourage organisations in sectors as diverse as manufacturing, importing and distribution, and education to decentralise or establish satellite operations;
- There may also be diminishing labour advantages in the cities, both as the costs of urban living and low levels of unemployment push employment costs up. Non-urban areas may offer increasing lifestyle incentives to critical employees.

These drivers are consistent with an apparent increase in decentralising tendencies, and suggest that it may well accelerate in the foreseeable future.

Development on or beyond the urban edge reflects just one facet of a wider movement towards discontinuous settlement outside urban areas, in localities where people can access the services and amenities cities offer while living in a less urbanised environment. This access may be through decentralisation of services and amenities of the sort traditionally associated with city life, occasional trips into the city, or through long-distance commuting.

Decentralisation is pushing well beyond the metropolitan fringe, though, to localities which assume relatively higher levels of local self-sufficiency than those associated simply with peri-urban development. It can take place through movement to largely rural areas, bush, coastal and lakeside settlements, or through the revival of country towns and seaside villages.

This discussion suggests a much broader palette to decentralisation than the more or less homogenous suburban expansion widely denigrated as “urban sprawl”. Two particular shades that have been analysed in depth in the United States, Australia and, to a lesser extent, Europe include “rural rebound: and “sea change”, described below.

The American Experience: Rural Rebound

The United States has a growing history of decentralisation, which takes a number of forms, including frostbelt-sunbelt migration, and fluctuates over time (McArdle, 1999; An et al., 2002). Of particular note has been the “rural rebound” evident since the 1980s. The reasons for cited this include a rejection of the intensity of urban life, a preference for the lifestyle opportunities afforded by rural areas, the growth of lifestyle, recreational, cultural and tourism opportunities, the availability of low cost housing, both to retirees and to people on lower incomes, cultural association, and growing employment outside the urban areas, including increasing manufacturing opportunities (Johnson and Comartie, 2006).

The rural rebound is also attributed to the greater integration of non-metropolitan areas into production and transport systems, and the falling dependence on extractive industries. Rural areas may become more “urbanised” in terms of functions, even as their rural character is reinforced in the landscape by the more intensely maintained plantations, orchards, vineyards, and ancillary buildings of the new settler culture.

The population of rural counties in US grew by 5.9% over the five years to 1996 (Johnson, 2006). Substantial growth among non-metropolitan areas in the 1990s (3.5 million) occurred as migration outflows from rural to metropolitan areas fell and inflows rose. This gain contrasted with a loss of 1.4 million in the previous decade. Favoured destinations include the Mountain West, the Upper Great Lakes, the Ozarks, and rural areas in the Northeast.

This “rural rebound” is selective, though, and has been sustained in large part in the last few years by an association with recreational areas and retirement amenities. “Strengthening deconcentration” is not seeing people return to farming. Instead, they

“are scattering across the landscape in ‘farmettes’, trailer parks, houses along country roads, and even in subdivisions much like those in suburban America. The new arrivals are a mixed lot: retirees, blue collar workers seeking jobs in the new factories, ‘lone eagle’ professionals using the new information technologies to conduct business from remote locations, disenchanting urbanites seeking refuge from urban life, and many others. ...

“Driving the revival is a potent blend of economic, social, and technological forces. Improvements in communications, technology and transportation have sharply reduced the ‘friction of distance’ Rural areas are now much less isolated than they were only a few decades ago. Satellite technology, fax machines, are among the most familiar aids ...

“Some trends suggest that the rural revival may continue for a long time. The aging of the affluent baby boom generation suggests that there will be a plentiful supply of retirees well into the future. And the revolution in communications, the improvement of transportation, and the evolution of the organization of work are all unlikely to be reversed.” (Johnson and Beale, 1998)

Greater differentiation among US regions is a sign of national deconcentration (Frey, 2002). The “new sunbelt” regions, 13 states in the south and west, grew by 24% over the 1990s. Their growth reflects the traditional draw-card of favourable weather and lifestyle. Sunbelt regions are characterised not by the “*pricey, congested, commuting towns of more urbane metropolises*” but by “*more peaceful, family-friendly communities ... outer suburban areas, exurban rural counties, and smaller metropolitan centres*”.

In North Carolina, with “*unprecedented demographic change ... [with] more people ... moving into the state’s 75 rural counties than ... leaving them*”, strong growth in rural areas is attributed in part to the decline of urban manufacturing and the growth of foot-loose service industries. Rural business locations are more attractive to new businesses, on the one hand, while offering increased lifestyle choices to potential settlers, on the other. The latter “*reflects Americans’ growing desire for relatively open space, lower cost of living, and scenic amenities*”, supported by “*the increased popularity of rural retirement destinations and the greater mobility of workers*” (Renkow, 2000)

The growth of tourism and recreation activities has also been identified as bringing significant employment and income benefits to rural areas among other things (AERS, 2005). Alongside the increasing lifestyle appeal of non-urban areas, then, changing investment patterns are restoring their commercial viability.

The Australian Experience: Sea Change

Pressure for exurban living is greatest in the temperate and subtropical coastal areas of developed nations. There are some long-standing examples, such as Florida and the Mediterranean coasts of Europe. More recently, the phenomenon has been subject to scrutiny in Australia, where sea change is the most obvious manifestation of a more general shift back to the country in (the parallel but smaller move to the bush being labeled “tree change”), beyond the commuting limits that define traditional peri-urban and exurban settlement.

A comprehensive analysis of non-metropolitan housing markets in Australia between 1991 and 2001 demonstrated that:

“Australia’s non-metropolitan dwelling stock grew by 21.6 per cent, or over half a million dwellings, with the fastest growth (of approximately 25-36 per cent) being concentrated in the coastal areas and regional cities. ... The coastal fringe throughout almost all of Australia generally experienced high growth of more than twenty per cent (except for

western Tasmania and King Island). ... Peri-urban areas and regional centres also had rapidly growing dwelling stocks.” (Wulff et al., 2007, 2- 3)

This movement is identified strongly with the retiring baby boom generation (e.g., Financial Demographics, 2005; KPMG, 2005). Burnley and Murphy (2004) identify a number of the planning implications, even raising the possibility that the scale of movement into alternative centers might reach the point where it takes some pressure off the dominant metropolitan centres as well as reviving regional growth. Others, however, raise the prospect that signs of net migration flows from Sydney to Brisbane or, more generally, from New South Wales to Queensland, raises problems of human capital loss from the former (Blakely et al., 2007).

The process has been selective, though. Inland regions still struggle with population decline, while coastal regions and nearby rural areas are experiencing a population explosion. The key driver is the amenity of the destination locations, potentially creating conflict between their residential desirability especially to ageing baby boomers, and the challenge of retaining their natural appeal and environmental integrity.

Burnley and Murphy signal the need for effective growth management policies given the often-sensitive nature of the environments people wish to live in. They argue that:

“Growth in itself is not intrinsically any more of a problem in sea change localities than it is in the cities. Rather, it is the way in which it is managed, and the professional, technical, and political capacities of those charged with managing it that matters” (page 219).

Two groups underpin this repopulation: those seeking a particular lifestyle, and exercising free choice in doing so, and those forced into rural areas for lower living costs.

Hugo (2000) has shown longer-standing gains in country towns, with 44.1% growth from 1966 to 1996, increasing their share of the Australian population from 20.5% to 23.7%. He concludes that this is likely to continue. The rate of increase was lower in rural areas (25.9%) than in country towns, while growth rates also vary substantially within each of these two categories. The areas to gain most surround metropolitan areas, or were “the well watered east coast and southwest coast” and “some resort and retirement areas”.

Hugo notes the growing importance of pre- and post-retirement migration in supporting non-metropolitan growth. McKenzie (2000) reinforces this in a study of regional populations in Victoria. Continuing out-migration of young people into metropolitan areas and inward movement of older people could accelerate population ageing in the former, presumably creating a set of social challenges to match the environmental challenges of rapid growth in small communities and sensitive environments.

The public policy issue is how to cope with this new form of growth taking place in often-sensitive environments and transforming settlements that in the past had mainly rural service or holiday destination roles (e.g., Gurren, Squires and Blakely, 2006; Standing Committee on Public Works, 2005).

6 Decentralisation in New Zealand

While the regional shifts outlined in Section 2, above, are significant and symptomatic of changing demographics, international experience of population change in developed societies calls for a more refined view of recent settlement patterns. The growing popularity of lifestyle localities, decentralisation in and around metropolitan areas, and the resurgence of selected smaller cities and towns calls for greater attention if the consequences are to be anticipated, let alone managed.

This section examines recent New Zealand trends using territorial local authority (TLA) data for the inter-censal periods, 1996-2001 and 2001-2006 to determine which of the processes outlined above are in play. Again, the focus is on relativities rather than absolute increments; it is growth or decline relative to the established base which

determines planning or policy requirements for a locality and determines the impacts of growth on the existing community and environment.

The first point to make is that shifts in the usually resident population between 1996 and 2006 indicate a significant jump in growth rates in the second five-year period virtually across the board (Figure 5). This, in part, reflects the significant gain from international movements outlined above.

Figure 8: TLA Population Shifts, 1996-2006, (a) High Growth

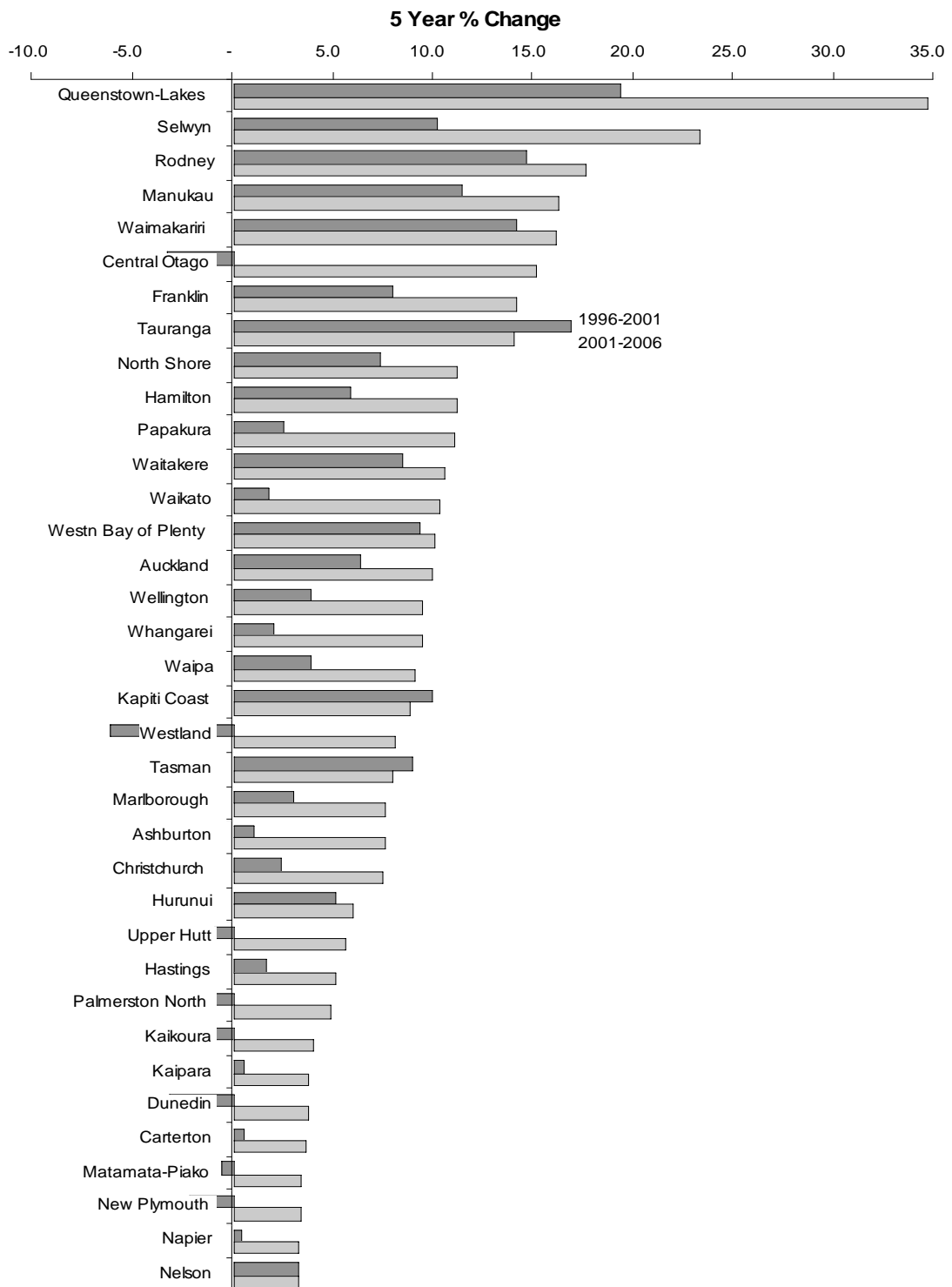
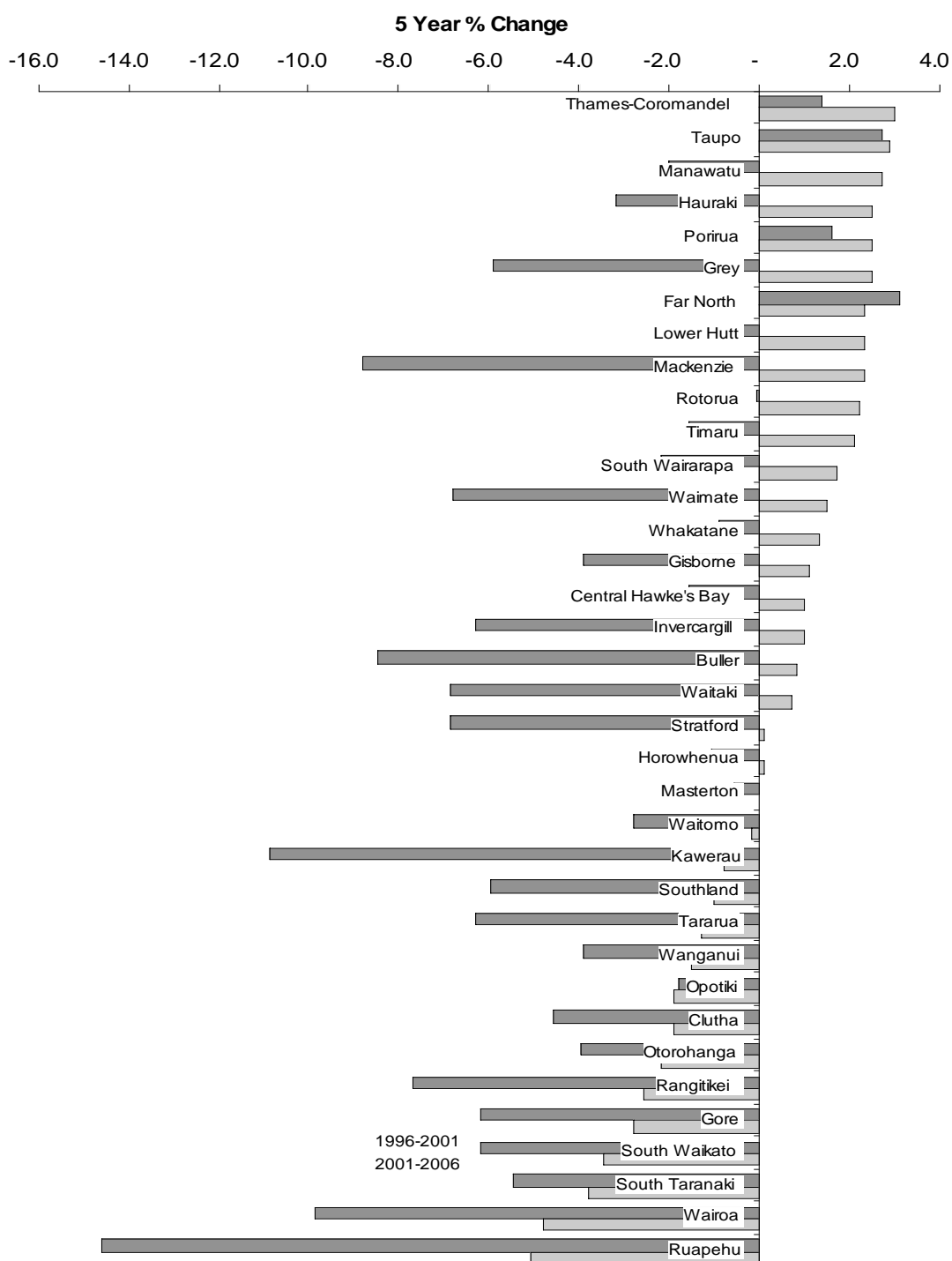


Figure 8 (Contd): TLA Population Shifts, 1996-2006, (b) Low Growth



Where decline continued (in some 15 TLAs), it was generally less pronounced than over the previous five years. Indeed, 24 districts experienced turnarounds, some of them substantial. Several South Island TLAs moved from significant population loss to significant population gain, with Central Otago standing out, together with Mackenzie, Grey and Westland districts.

A small number of councils, Tauranga, Kapiti Coast, Tasman, and the Far North, recorded a slow down over the period. The first three of these had been among the growth leaders in the previous five years, and may be encountering capacity constraints.

The same may be true of the Far North, although it had not experienced quite such strong growth previously.

The second point that stands out is the strong growth of lifestyle-oriented, urban-edge districts, and provincial cities, providing evidence of relatively diverse decentralisation.

In the lifestyle category, Queenstown Lakes and Central Otago districts in the South Island grew particularly strongly. Selwyn and Waimakariri in Canterbury and Rodney and Franklin in Auckland regions stand out in terms of urban edge and exurban growth. The secondary cities of Hamilton (and adjoining Waikato District), Tauranga (and adjoining Western Bay of Plenty) and Whangarei (including the rural part of the District) reflect the provincial revival, the first two growing well ahead and Whangarei matching the growth of Auckland and Wellington cities.

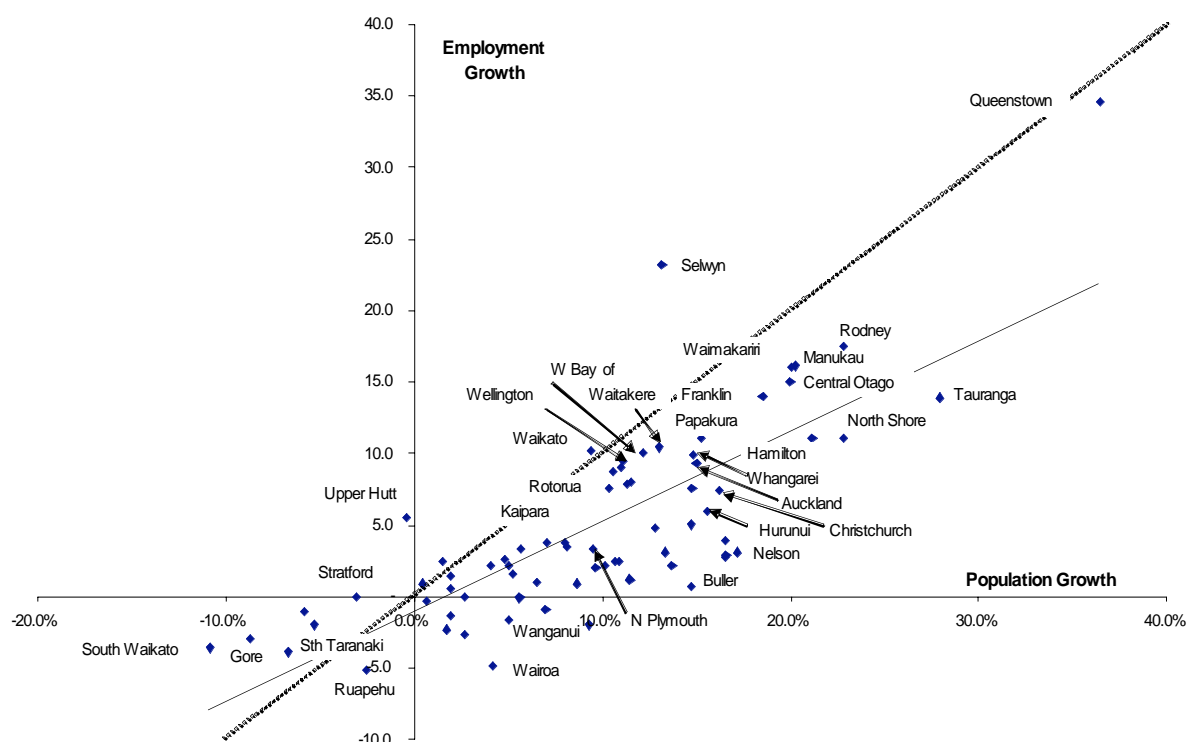
7 The Role of Employment Growth

The growth of employment opportunities is either a driver of population decentralisation or a precondition to sustaining it. A review of the rates of growth in employment and population by TLA over the past five years shows a close association between the two (Figure 9). No attempt has been made to take account of timing differences between employment and population growth, or even to impute causality (jobs may both precede or follow population).

However, the evidence does suggest that fast growth on one is associated with fast growth on the other: increases in employment and residential growth go hand in hand. The implication is that decentralisation is not simply a matter of lifestyle choices among ageing and retirement cohorts, but also reflects changes in the labour market.

In Figure 9, a perfect association between rates of employment and population growth would see all points falling on the dashed line, running 45° through the origin. The “best fit” (solid) line, which describes the actual, relatively weak, relationship ($r^2=0.62$) has a lower slope, indicating that population growth rates tend to be higher than employment growth rates. This is more pronounced for centres falling below the best-fit line.

Figure 9: Employment and Population Growth 2001-2006



The graph indicates that employment and population growth rates are running hand-in-hand in Queenstown Lakes District and among the cluster of very slow growing districts close to the origin of the graph. These are generally small or “under-populated” districts, like Waimate and Waitaki in the South Island, and Tararua in the North.²

Areas in which population growth is clearly running ahead of employment include North Shore and Franklin, which contrast with nearby Manukau, Auckland and Rodney. The first two appear to be reinforcing their commuter belt roles and the latter three their employment roles. The growth of Rodney is significant in this respect. As an established lifestyle destination on the edge of the Auckland metropolitan area, it is beginning to sustain that role with growing local employment. In Christchurch City population growth is running ahead of employment growth compared with adjoining Waimakariri and Selwyn districts. The implication is that population decentralisation is now accompanied by employment decentralisation within Canterbury Region.

Places like Kaikoura, Marlborough, Nelson and Buller, Taupo and Thames-Coromandel, Napier and Hastings, and Whakatane experienced between 11% and 15% population growth, but employment growth of only 1 to 5%. The implication is that their growth has been driven by lifestyle factors more than has been the case in other localities.

While employment and population growth are clearly related, there are other drivers of the latter. Three other variables have been considered here.

The first comprises the lifestyle and housing preferences of an ageing population. The possible impact of this has been analysed by measuring changes in the aged:child ratio by local council. This divides the number of people in an area aged over 60 years by the number aged less than 15 years. In an ageing population, the ratio will exceed 1.0. In a youthful population it will be significantly less than 1.0. Changes over time measure the rate of ageing and might be expected to be associated with the higher population growth rates of lifestyle localities.

A second driver may be the relocation of working age people seeking to take advantage of decentralised employment and lifestyle opportunities in the interests, perhaps, of enhanced “work-life balance”. This is assessed by measuring changes in share of people of working age (15 to 64 years). An increase denotes growth in labour supply relative to total population.

Finally, a binary measure of lifestyle attraction was developed; with a score of unity allocated to TLAs with annual sunshine hours above the New Zealand average and a substantial area of recognised recreational coastline (including lakes Taupo and Wakatipu). The following centres were given a score of 1 (all others were scored zero):

Far North, Whangarei; Rodney; North Shore; Waitakere; Auckland; Thames-Coromandel; Western Bay of Plenty; Tauranga; Gisborne; Napier; Kapiti Coast; Porirua; Wellington; Tasman; Nelson; Marlborough; Waimakariri; Christchurch; Queenstown-Lakes.

The first step in the analysis was to look at the relationship between each pair of these variables. The simple correlation coefficients (Table 1) indicate that the relationship between employment growth and population growth is the strongest considered.

A negative relationship between population growth and the aged:child ratio, although not particularly strong, does suggest that as the population becomes more aged, it is more likely to decline. While unsurprising at one level – youthful populations grow faster – this is inconsistent with the proposition that faster growing areas such as Queenstown-Lakes, Selwyn, and Rodney, are driven simply by the relocation of retirement or pre-retirement households. According to this result, decentralisation is not simply a function of population ageing, certainly not in all localities.

² In the interests of clarity, not all place labels are included in Figure 6.

Table 1: Relationships Among Changes at TLA Level, 2001-06 (Correlation Coefficients)

	Population % Change	Employment % Change	Shift in Aged:Child Ratio	Shift in Working Age Share
Employment % Change	0.79	1.00		
Shift in Aged:Child Ratio	-0.44	-0.37	1.00	
Shift in Working Age Share	0.23	0.39	-0.20	1.00
Lifestyle Score	0.43	0.49	-0.21	0.26

This is consistent with the weak positive relationship between an expansion of the working age categories and population growth which suggests that work opportunities play a small but positive role in population growth.

The differentiation of TLAs on lifestyle grounds, as measured here, shows some relationship to growth, although, again, the relationship is not particularly strong and the fact that there is a similar relationship between lifestyle and employment shifts raises questions about cause and effect.

The interaction among employment, age structure and lifestyle variables as drivers of population change was examined through multiple regression analysis. Trial and error suggested a two variable equation as most appropriate, taking the form:

$$\Delta\text{Popn} = -1.52 + 57.9 (\Delta\text{Emp}) - 14.72 (\Delta\text{AC})$$

$$R^2 = 0.64$$

Where,

ΔPopn is the 2001-2006 change in population (%);

ΔEmp is the 2001-2006 change in employment by place of work (%); and

ΔAC is the change in the aged:child ratio between 2001 and 2006 (%).

Apart from the intercept, the coefficients are statistically significant at the 5% probability level. However, it is not the aim of this analysis is to specify a precise form of the relationship among these variables. Rather, it is to explore whether recent shifts in population might reflect the factors emerging for the preceding review of changing drivers of residential choice.

The equation suggests that employment growth rather than lifestyle appeal is conducive to growth, although the causality is not unambiguous. The attraction of a high amenity environment may lead to employment growth by stimulating local, demand. Resolving this ambiguity falls outside the purpose of the current paper.

Once the relationship with employment is taken into account, population ageing appears to act against population growth. A national pattern of decentralisation and its sustainability is more likely to be influenced in the long term by job growth outside the metropolitan areas than simply by the appeal of decamping to green horizons by an ageing population. Put another way, the appeal of lifestyle advantages may act across the demographic spectrum when supported by work opportunities. Lifestyle and ageing alone may not be sufficient to explain the national population shifts and the pattern of decentralisation they are giving rise to.

8 Dissecting the Map – New Regional Dimensions

The following sections delve further into these patterns and conclusions by examining growth within the three metropolitan regions; Auckland, Wellington and Canterbury and two growth regions, Otago and the northern North Island. The components of population change in the TLAs falling within the three metropolitan regions have been analysed. In

the case of Auckland, all of Franklin is included, although 28% of the District's 2006 population falls within Waikato Region.

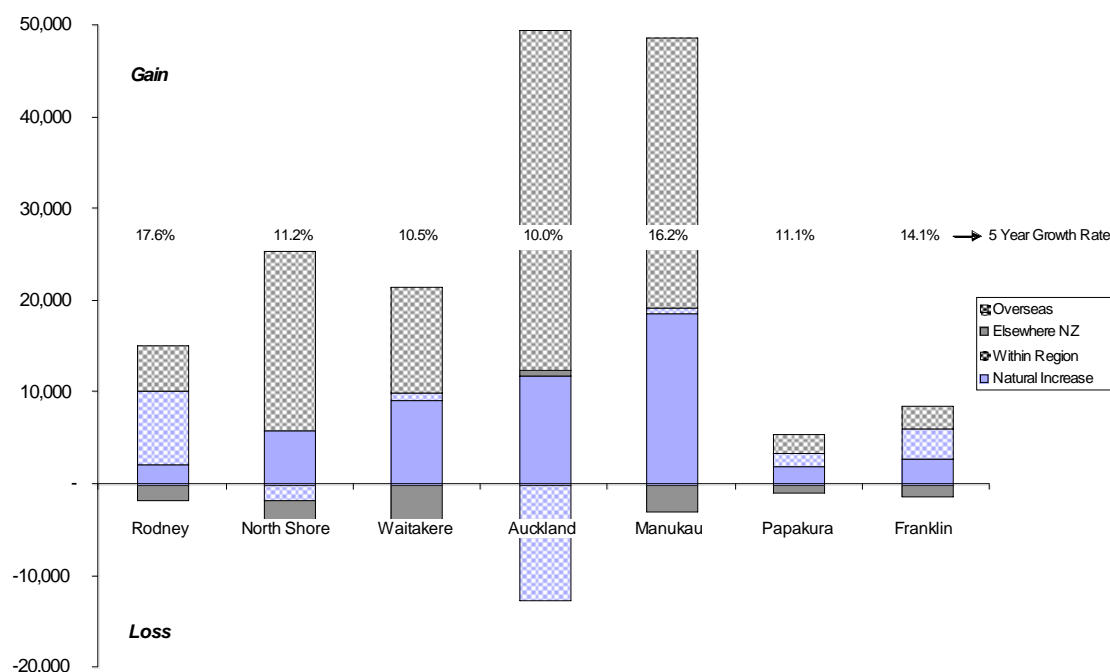
Auckland

The dominant contributor to regional growth over the 2001 to 2006 period is immigration from overseas (Figure 10). This has been an exceptional period in immigration to New Zealand generally, the, and not one that looks like being repeated in the near future. Yet, over the five years to 2006 international migration gains were particularly important to Auckland City, where the implied surplus of arrivals over departures was 37,220 compared with an estimated natural increase of less than 11,800. With the natural increase more than offset by a net loss of 12,710 people to other parts of the Region, Auckland City's entire growth was attributable to migration. It should be noted, though, that unlike the rest of the Region, Auckland did record a slight gain (of around 600) from elsewhere in New Zealand, based on 21,900 arrivals and 21,300 departures.

Overseas arrivals contributed substantially to growth in Manukau City, also. Some 39,790 people arrived and an estimated 10,270 were lost to emigration, leaving a net contribution of 29,520 people, or 65% of the City's population growth. This compares with a natural increase of 18,600 (41% of growth), and an insignificant gain (perhaps 600 people) from elsewhere in the region. These joint gains were dampened slightly by a net loss of around 3,030 from Manukau City to other parts of New Zealand.

International migration gains exceeded the contribution of natural increases throughout the Region. The exceptions were Papakura and Franklin (small districts in terms of total population numbers), although net overseas movements still contributed substantially to their total growth (38% and 28% respectively).

Figure 10: Components of Population Change, Auckland Region, 2001-06



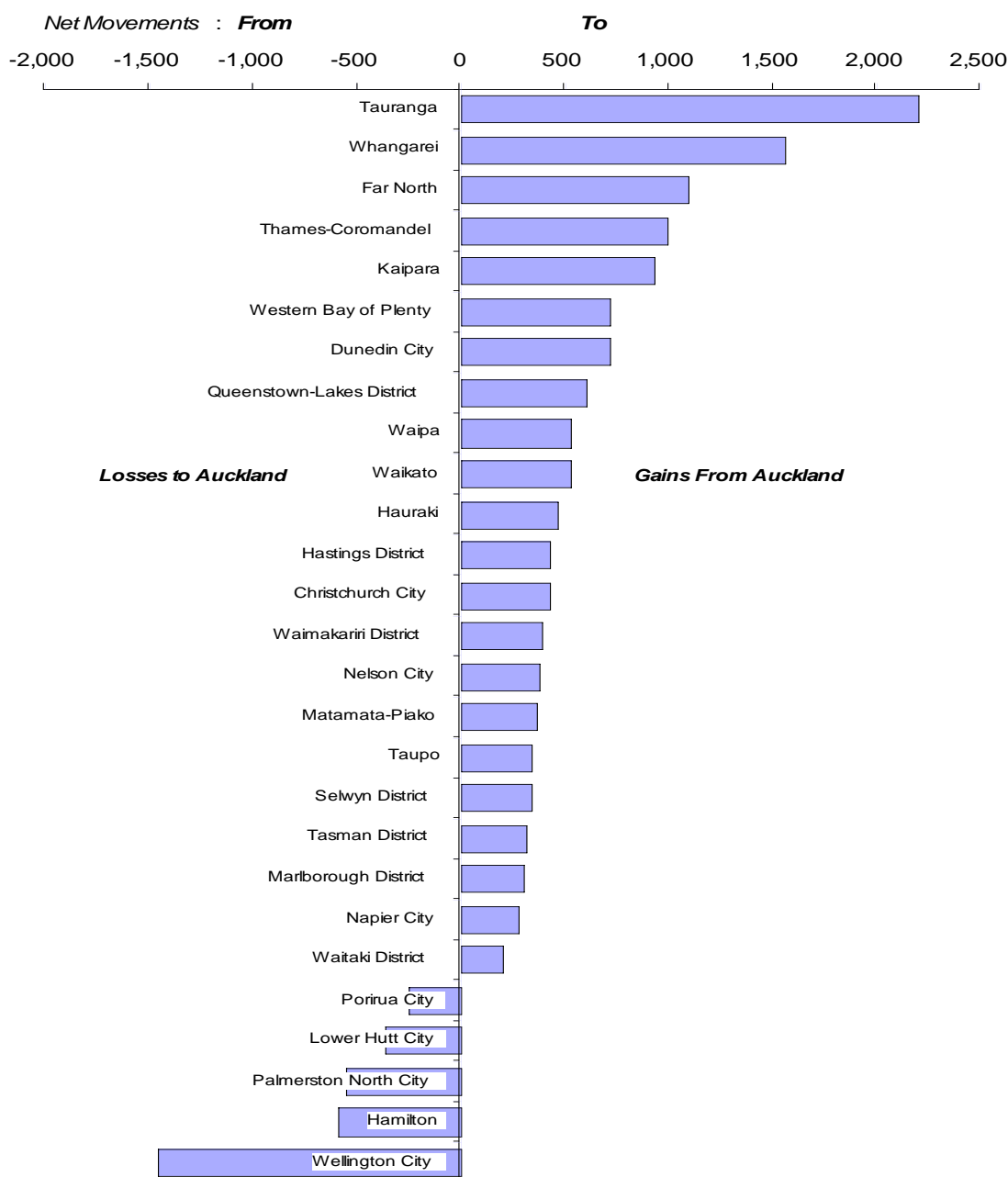
In Franklin, as in Rodney, the biggest gains arose from net migration from the rest of the region. Other parts of Auckland contributed 48% of net growth to Franklin and 59% to Rodney. Perhaps surprisingly, in light of its attraction to other Aucklanders, Rodney lost around 1,800 people through movement to and from other parts of New Zealand. Northland and Tauranga-Western Bay of Plenty stand out as destinations for Rodney

residents. Natural increase accounted for a low 17% of all growth, while international movements accounted for 35%.

The changes outlined here mean that Auckland is a significant source of population growth for a number of other localities. TLAs with net gains exceeding 200 persons or net losses of more than 200 persons from and to Auckland are identified in Figure 11.

The major flows away from Auckland are to the coastal areas in the northern North Island, led by Tauranga and Western Bay of Plenty Districts in the Bay of Plenty, Whangarei, the Far North (including the Bay of Islands) and Kaipara (based largely on the coastal settlement of Mangawhai) in Northland, and Thames-Coromandel. Beyond that, lifestyle options in the South Island feature: Nelson, Tasman and Marlborough in the northern South Island, Queenstown-Lakes, the South Island cities and, in the case of Christchurch, the exurban areas of Waimakariri and Selwyn.

Figure 11: Net Movements to and from Auckland Region 2001-2006



The most significant net contributions to Auckland's population from elsewhere in New Zealand are from Wellington Region, which could be explained by a strong labour market relationship between the two, from nearby Hamilton, and Palmerston North.

Gains in rural districts south of Auckland Region, including the northern Waikato (Waipa, Waikato, Hauraki and Matamata-Piako) indicate a significant net flow (a collective gain of 1,900 people) back into the "rural heartland", although with reasonable proximity to Auckland or Hamilton. These areas may well satisfy a preference for the rural or small town fringes of Auckland region itself.

There appear to be several forces at work in Auckland. The first is a modest but significant loss of population to other parts of New Zealand, particularly to rural, coastal and small town lifestyle destinations in the northern North Island. This is complemented by the attraction of key South Island destinations (the net loss from Auckland to the South Island was 4,220).

This is offset by the second force, a continuing net gain in international migration. While still concentrated in Auckland City, this is a major influence throughout the Region and goes a long way to explaining its continued dominance of national population growth.

The third force is population decentralisation, which strongly favours rural and coastal districts within the region. In fact, without a net gain from international movements, Auckland City's population would have been static between 2001 and 2006.

Wellington

The components of demographic change in Wellington Region are complicated by the fact that the region contains three extensive but relatively unpopulated rural areas in the north and east – the district councils located in the Wairarapa area, Masterton, Carterton, and Southern Wairarapa itself. Jointly, these TLAs housed just 38,610 residents on census night 2006, 1.1% more than five years earlier. Masterton, the largest of the three, and the furthestmost from Wellington, did not grow at all over the five years.

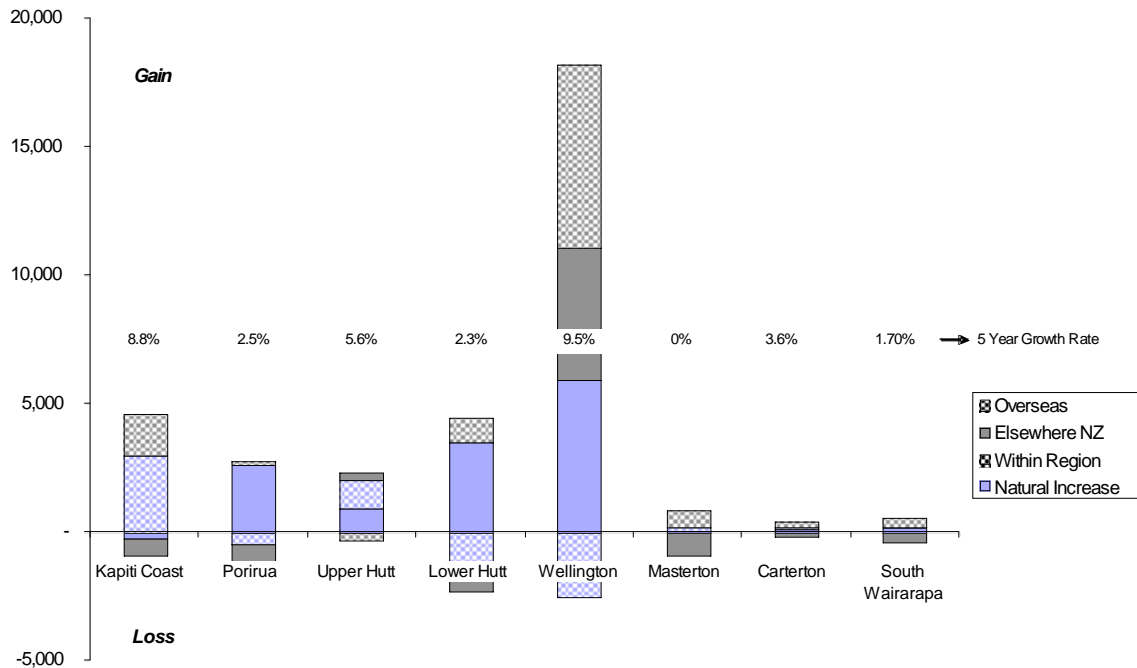
The pattern in Wellington Region differs from Auckland. The dominant Wellington City, unlike its Auckland City counterpart, enjoyed the highest growth rate (9.5% over five years), followed by Kapiti District (Figure 12). Wellington City enjoyed more balanced growth than Auckland City, although still experiencing a net loss to other parts of the Region.

Although it lost population to Auckland, Wellington City enjoyed a net gain from internal migration of around 5,100, or 33% of the City's inter-censal growth (Figure 13). On top of this the City recorded a net gain from overseas of around 7,140 (46%) and a natural increase of 5,950 (38%).

With the exception of a marginal gain by Lower Hutt, the remaining TLAs lost people to other parts of New Zealand – Kapiti (-640), Porirua (-1,110), Lower Hutt (-940), and the three Wairarapa districts (-1,430).

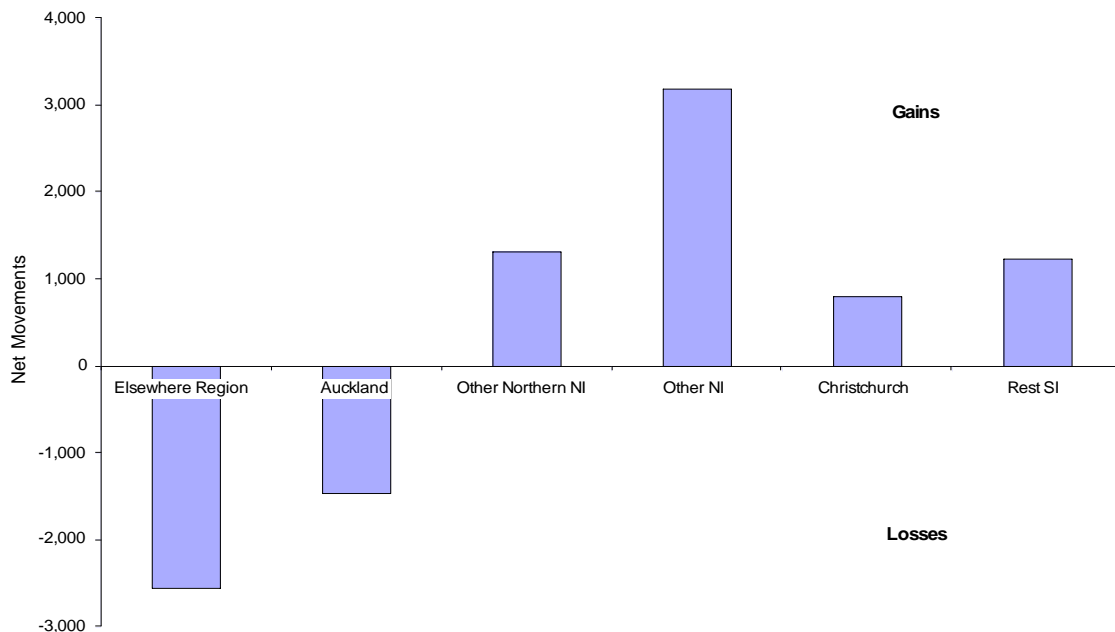
Outside of Wellington City, movements within the Region again favoured the more rural areas, particularly Kapiti and Upper Hutt. The Kapiti Coast's 8.8% growth was totally attributable to migration. The District experienced a slight natural decrease (an estimated excess of deaths over births of just 240), which is reflected in an increase in the Aged:Child ratio from 1.34 to 1.51 over the five years, the highest ratio in New Zealand.

Figure 12: Components of Population Change, Wellington Region, 2001-06



Net gains from elsewhere in the Wellington region (3,010) account for 80% of Kapiti's growth, supplemented by gains from international movements (1,620) and offset by a small loss to other parts of the country (-640 people).

Figure 13: Population Movements – Wellington City and Rest of New Zealand



In Wellington Region, then, the tendency towards decentralisation from the metropolitan area is offset by the singular attraction of Wellington City. Yet, movement within the region still tends to be away from the City, especially towards the Kapiti Coast retirement belt, and, to a lesser extent, towards the smaller communities of Upper Hutt and

southern Wairarapa. Again, international migration is a contributor everywhere, although is more concentrated in Wellington City relative to the rest of Wellington Region than in Auckland City relative to the rest of Auckland Region.

Canterbury

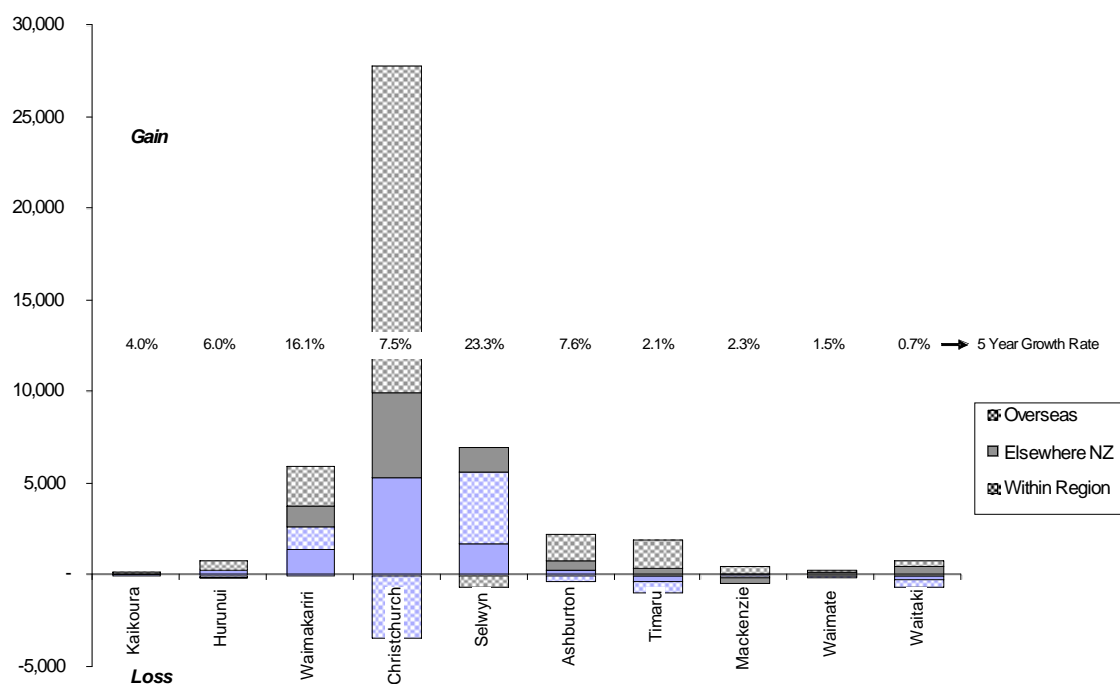
With 64% of Canterbury's population in 2006, Christchurch City dominates its region more than both Auckland (31%) and Wellington (40%) dominate theirs. Unlike Wellington, though, and like Auckland, Christchurch share of regional growth is less: the City is growing more slowly than the region as a whole.

The strongest performers in Canterbury are, in fact, the adjoining districts of Waimakariri to the north west (with population growth of 16.1% between 2001 and 2006) and Selwyn to the south west (up 23.3%). Christchurch City still recorded a healthy 7.5% growth. Apart from Hurunui (5%) and Ashburton (7.6%), the balance of Canterbury, the rural periphery, grew only slowly.

Canterbury was a more significant destination for overseas migrants than Wellington. They were the major driver of growth in Christchurch City (a net gain of 17,880, or equivalent to 73% of all gains from 2001 to 2006). At the same time, small gains from international movements also appear to have been the difference between growth and decline in the small communities of Timaru, McKenzie, Waimate and Waitaki (Figure 14).

By contrast, solid growth in Waimakariri and Selwyn was strongly influenced by gains from elsewhere in the region (1,310 and 3,910, respectively) and elsewhere in New Zealand (1,120 and 1,380).

Figure 14: Components of Population Change, Canterbury, 2001-06



Again unlike Auckland, Canterbury is a significant destination for relocating New Zealanders. Christchurch itself received a net 4,640 more arrivals than departures from other parts of the country. It did, however, reflect the other characteristics of the principal cities, the loss of population through decentralisation to other parts of its own region.

This brief analysis of Canterbury reinforces elements of population change associated with Auckland and Wellington, and adds new ones. It underscores the importance of international migration in sustaining the growth of the major cities but, like Wellington and

unlike Auckland, Christchurch City also holds attractions for New Zealanders on the move.

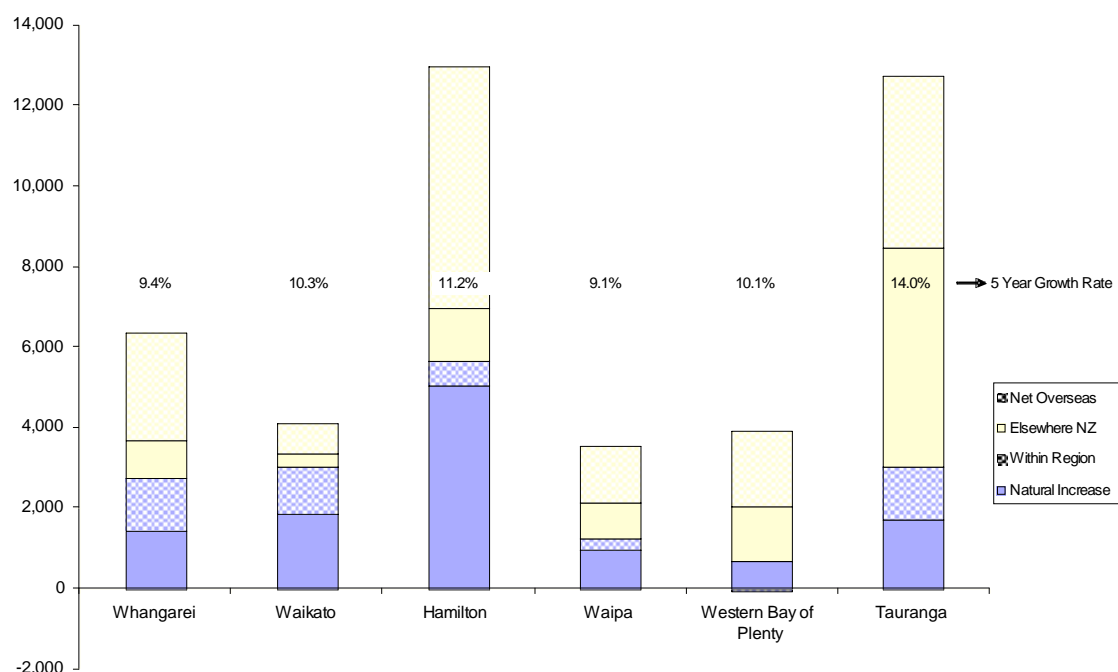
Population decentralisation emerges as a major force shaping each region's internal settlement pattern, taking on a clearly ex-urban flavour that favours the rural periphery.

The Northern North Island

Parts of the northern North Island outside Auckland are beginning to grow significantly. While growth in Tauranga eased slightly between 2001 and 2006, it still added 14% over just five years (down from a high 16.9% over the preceding five years). The growth rate increased in the surrounding and predominantly rural Western Bay of Plenty District (WBOP) to 10.1% (compared with 9.3% between 1996 and 2001).

In Northland, Whangarei's growth also accelerated, from 2% between 1996 and 2001 to 9.4% between 2001 and 2006. In Waikato District, Hamilton City (11.2%), Waikato (10.3%), and Waipa (9.1%) all experienced substantial lifts in population growth rates.

Figure 15: Components of Population Change, Northern North Island, 2001-06



One of the more interesting observations is the contribution of overseas movements to growth, with international migration apparently the main contributor in Whangarei, Hamilton, Western Bay of Plenty and Waipa. Only in Waikato District was natural increase the main contributor. Net gains from Auckland Region accounted for a significant share of growth in Whangarei and Western Bay of Plenty (Table 2).

Table 2: Components of Population Change, Growth Areas, Northern North Island 2001-06

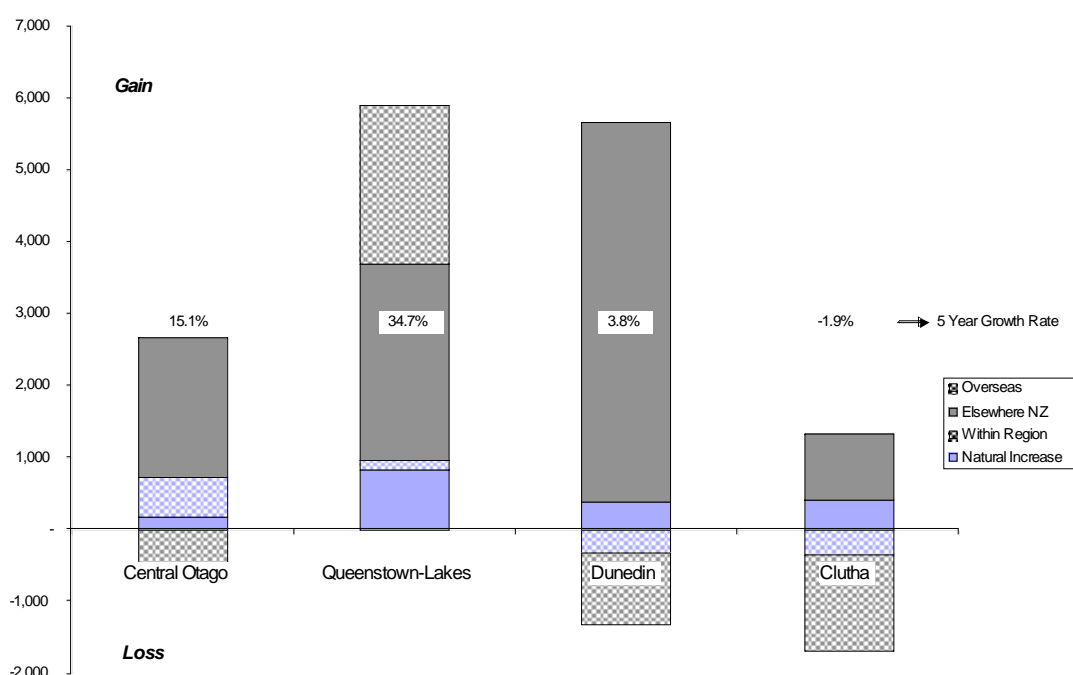
	Natural Increase	Elsewhere Region	Gains ex Auckland	Elsewhere NZ	Overseas
Whangarei	22%	21%	25%	-10%	42%
Waikato	45%	29%	13%	-5%	18%
Hamilton	39%	5%	-4%	15%	46%
Waipa	28%	7%	15%	10%	40%
Western Bay of Plenty	18%	-2%	19%	16%	49%
Tauranga	13%	10%	17%	25%	33%

Otago

Queenstown-Lakes has been the focus of rapid growth for some time, up an astonishing 35% between 2001 and 2006, on top of a 19% increase in the previous five years, or over 60% growth in just ten years (from 14,280 people in 1996 to 22,960 in 2006). However, over the last five years, the adjoining district of Central Otago jumped into the high growth stakes, up 15%, following a 3.3% fall between 1996 and 2001.

Unlike the other cities considered in this analysis, Dunedin did not benefit from international migration (with a net loss of around 990), but like Christchurch and Wellington, it did experience a net gain from the rest of New Zealand. A low rate of natural increase meant that Dunedin still lagged the other major cities in New Zealand, with growth of just 3.8%, totally dependent on internal migration gains.

Figure 16: Components of Population Change, Otago Region, 2001-06



Queenstown Lakes District stands out on all counts – international gains exceeded international losses by 2,210 (37% of growth); there was a 2,740 net gain from other parts of New Zealand (46% of growth); and natural increase contributed 840 (14%). Migration from elsewhere within the region was the smallest contributor (+130), simply reflecting the small population of Otago Region.

Central Otago did not experience the same contribution from international movements (with a net gain of 490), and had a much lower rate of natural increase. However, it experienced significant gains from elsewhere in New Zealand (1,940 or 89% of its growth) and from elsewhere in Otago (540, or 25%).

The implication is that Central Otago's proximity to Dunedin and greater housing affordability are sustaining the lifestyle growth there that in the previous ten years had focused only on Queenstown. In effect, lifestyle as a driver of settlement is expanding its ambit beyond traditional leisure, recreation and retirement centres into areas that were traditionally associated only with extractive or agricultural production and servicing.

9 The Lifestyle Factor

The definition of the lifestyle factor based on physical attributes threw only limited light on the drivers of differences in growth rates among TLAs (Section 7, above). Given the residential preferences suggested by the movement data in Section 8, however, the lifestyle factor justifies further exploration. This is done in this section on the basis not of the physical attributes of the local environment, but of satisfaction among residents.

The relative attractiveness of twelve localities (and a rest of New Zealand category) can be estimated using the results of the 2006 Quality of Life Survey. Responses to questions on six attributes likely to influence living choices have been analysed here, by deducting shares of negative from shares of positive respondents (with neutral responses omitted). The resulting score for each centre offsets the tendency for responses to converge on the neutral or “moderate positive” scores and forces a degree of separation across localities. The scores have been ranked for each attribute. The sum of the rankings on the individual attributes has then been themselves ranked to give an overall ordering of satisfaction (Table 3).

Table 3: Rank Order: Perceived Quality of Life

	Quality of Life	Look & Feel	Leisure time	Work-Life Balance	Health	Ability to Cover Costs	Overall Rank	Adjusted Rank
Rodney (153)	2	10	1	1	2	6	3	7
North Shore (383)	12	7	13	11	8	11	11	11
Waitakere (336)	13	11	12	12	13	13	13	13
Auckland (770)	6	12	8	7	7	8	9	10
Manukau (547)	10	13	11	12	12	11	12	12
Hamilton (233)	7	3	10	10	8	1	8	5
Tauranga (183)	1	5	8	8	5	6	7	4
Porirua (91)	4	9	6	3	1	4	4	8
Lower Hutt (190)	11	6	3	1	8	3	6	6
Wellington (353)	2	1	3	3	2	2	1	1
Christchurch (667)	7	3	3	6	2	10	5	3
Dunedin (242)	4	2	2	3	5	4	2	2
Rest NZ (3,388)	9	8	7	8	8	8	9	9

Note: number in brackets is number of respondents

1 is highest ranking, 13 is lowest ranking

Source: *Quality of Life 2007 Report*, Big Cities Project, www.bigcitiesproject.govt.nz

Wellington emerges as the centre with generally the highest levels of resident satisfaction: leading the way is the “look and feel” of the town. In fact, Wellington scores and ranks well on most measures. Dunedin scores strongly on most indicators to assume second ranking overall, followed by Rodney.

The second-tier cities – Dunedin, Christchurch, Porirua, Tauranga and Hamilton – score well across most measures. Auckland Region’s cities tend to have the least favourable profiles, although Auckland City ranks sixth in terms of quality of life.

Some attributes record a wider spread of scores than others. With more variable responses, these attributes have a greater capacity to discriminate among respondents and, more importantly, across centres. The most variable were: “the look and feel of the town” (with Manukau scoring a low of 19 compared with Porirua’s high of 91 and Tauranga’s 89); the “ability to cover costs” (from 23 in Waitakere to 49 in Hamilton); and the “quality of leisure time” (from 48 in North Shore to 70 in neighbouring Rodney). The least variable, suggesting the lowest capacity to discriminate among places, were “overall health” (from 83 in Waitakere to 90 in Porirua) and “work life balance” (from 56 in Waitakere and Manukau to 68 in Rodney and Lower Hutt)

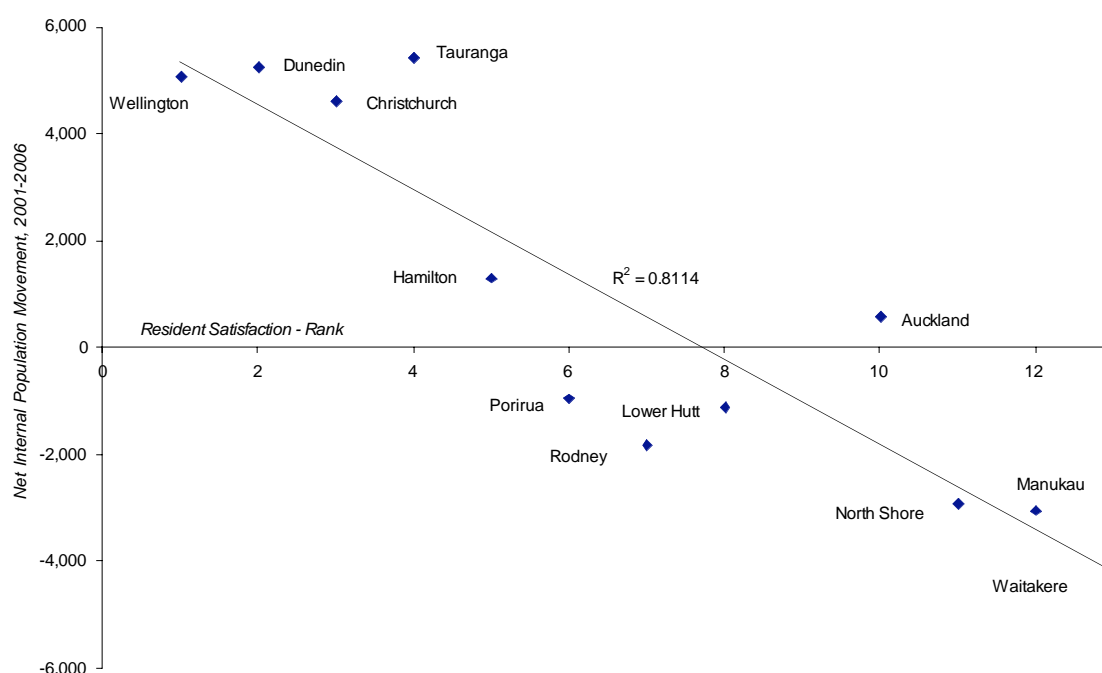
While this does not mean that the more variable attributes are any more or less important than the others, the raw scores have been summed and ranked. This gives greater weight in the overall assessment to attributes which encompass more substantive contrasts among places. The result is contained in the adjusted rank column (Table 3).

The main impact is to reduce the positioning of Rodney (to 7th) on the basis of a low score on look and feel of the town, and to elevate Christchurch to 3rd. There were minor shifts among the smaller cities, but the Auckland cities did not change their position. The overall conclusions hold.

While there is only a small number of data points and the methods of estimation are not especially analytically sophisticated, comparison of the adjusted rank of resident satisfaction with the earlier estimates of net internal migration for each of the twelve centres supports the view that lifestyle has played a significant role in recent settlement shifts.

In particular, gains to Wellington, Christchurch and Dunedin, at one end of the spectrum, and losses to the Auckland cities, at the other, are in line with the relative perceptions of quality of life (Figure 17). Auckland recorded gains despite residents' perceptions; Tauranga recorded substantial gains ahead of relative attraction; while Hamilton, Lower Hutt and Porirua fell despite reasonably positive perceptions.

Figure 17: Resident Satisfaction and Internal Population Movement



Overall, though, the relative satisfaction residents derive from living in different localities appears to be related in some systematic way to the recent movement of residents within New Zealand. The implication is that over the current decade, at least, quality of life has had a role to play in what appears to be a resurgence of second and third tier centres and in emerging questions over the continuing pace and distribution of growth in Auckland.

10 Discussion

The evidence presented here suggests that population expectations founded on “the drift north”, slow growth in the south, structural disadvantages facing Wellington, rural depopulation, and the primacy of Auckland have had their day. New settlement patterns

are shaped by a wider range of forces than the configuration of New Zealand's traditional production and trade, and its focus on Auckland as the dominant commercial centre.

While the primacy of Auckland Region carries its own momentum, particularly as first port of call for immigrants, how far it sustains strong growth beyond the vagaries of international migration is not clear. This uncertainty is amplified for Auckland City.

The resurgence of the second tier and provincial cities, the re-revitalisation of the rural periphery around the major urban areas, and the burgeoning of lifestyle settlements, both in the shadow of the metropolitan areas and beyond, are new facets of New Zealand's population geography.

More broadly, the components of change throughout New Zealand point to greater diversity and complexity of population change than current plans and policies allow for. They erode the certainty attached to demographic projections rooted in the recent past. They suggest that the dominance of Auckland will be moderated in the future, as more work options open up outside the region and as lifestyle considerations impinge increasingly on residential preferences. With an ageing and affluent population and new work and employment patterns, a growing share of the population might be expected to break with tradition, and move beyond the urban edge.

This movement is likely to boost small towns and secondary cities in different parts of New Zealand, as well as rural areas and coastal settlements. It will be sustained by increasingly dispersed employment, supporting a combination of new investment in rural areas, in consumer production and services in non-urban areas, by businesses seeking the lower costs and increased employment stability associated with smaller centres and lifestyle localities, and new investment in the primary sector.

This paper has not brought all the evidence together, and the propositions it contains may need to be tested locally. Nevertheless, they raise some interesting policy issues.

First, the recovery currently being experienced by erstwhile slow growth regions and centres raise new opportunities and issues for those areas. One of the key outcomes of the emerging pattern is the continuing transfer of "urban" lifestyles and expectations into traditionally rural areas, further undermining the differentiation between their cultural landscapes and highlighting the growing appeal of rural over urban settings. The time may have come to break down the artificial dichotomy sustained in planning between town and country, especially in regions dominated by large urban areas.

Any failure to confront new forms of land use and new patterns of living may well create new environmental conflicts. Ageing and often constrained physical and social infrastructure in traditionally slow growth rural areas, towns and cities will be required to respond to new demands and expectations. An acceptance of the increased growth potential of such areas is required to appreciate the necessary investment and to provide confidence in its implementation.

On the other hand, Auckland Region depends for its growth more than ever on the policy settings for international immigration and sustaining its appeal to existing residents. There are no guarantees that the surge in gains from overseas (both New Zealanders returning home and immigrants) in the early part of the current decade will be sustained. As income differentials close between developing Asian nations and New Zealand and widen between New Zealand and alternative destinations like Canada and Australia, the task of attracting skills becomes that more difficult. The development, alignment and even integration of Asian markets mean that the pool of candidates from Asia is likely to diminish in response to greater within-Asia opportunities and movement.

In an era of international competition for investment and skills, Auckland needs to ensure that it can provide the lifestyles that economic migrants aspire to. Indeed, New Zealand may have to recognise the importance of a broader spectrum of living opportunities to compete in the global labour market than those based simply on one large city.

If nothing else, the analysis presented here calls for a more risk sensitive approach to public infrastructure and associated investment, and a willingness to explore and if necessary embrace new patterns of population growth in planning and policy, both in Auckland and elsewhere in New Zealand.

Acknowledgements

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The views expressed remain the responsibility of the author.

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Appendix: How Accurate Are the Estimates of International Emigration?

This residual-based estimate of overseas emigration also contains people who moved to other parts of New Zealand but did not adequately answer the “Residence Five Years Ago” question. This over-estimates international loss by the inclusion of unknown movements to other parts of New Zealand. Either way, however, the residual estimated represents a loss to the area.

Statistics NZ estimates intercensal net migration nationally as the difference between population growth and natural increase, or 160,000 between 2001 and 2006.

The equivalent national net migration figures derived from summing the “Residence Five Years Ago” regional tables indicates a 181,000 gain, 21,000 above the Statistics NZ estimate (13%), i.e., losses overseas are under-estimated or gains from overseas over-estimated suggesting recall difficulties among respondents (in particular, a “telescoping” of their recall over the time horizon in question). For present purposes a common level of error is assumed across regions.

The level of uncertainty is greater for local than regional councils (-30,500 or 20%), suggesting greater difficulty in assigning past locations by New Zealand residents (see Section 6, below). At the local level, then, overseas losses are likely to be over-estimated using the residual method described here, and losses to internal migration underestimated, presumably because respondent accuracy diminishes with the smaller units of local government than regional government.