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TATAURANGA AOTEAROA

Mapping Trends in the Auckland Region

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Where consecutive figures have been compiled on different bases and are not strictly comparable, a footnote is added indicating the nature of the difference.

Source
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Contents

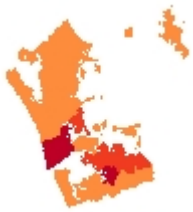
List of tables and figures

Figures by chapter

Introduction

In 2009, one in three New Zealanders lives in the Auckland region. Consequently what happens in Auckland affects all New Zealand. The future of the region is the subject of widespread debate.

Mapping Trends in the Auckland Region presents background data to help inform the debate. It looks at some fundamental social, demographic, and economic trends affecting people in the Auckland region. It focuses particularly on geographical patterns, and how these are changing over time. The data come from population censuses and projections, and cover the period 1991 to 2031. The results are presented primarily through maps and graphs.



Auckland region covered in Mapping Trends in the Auckland Region.

The report is divided into chapters, which are listed on the right.

Mapping Trends in the Auckland Region arose from discussions between Statistics New Zealand and the Auckland Regional Council.

Interpreting the maps

Commentary

Overview

The report uses thematic maps to represent geographical patterns in demographic, social, and economic variables. In the thematic maps, darker shades represent higher values. The values themselves are derived mainly from census data.

What are thematic maps?

Standard maps portray geographical features such as mountains, lakes, and roads. In contrast, the thematic maps in this report portray demographic, social, and economic variables. Figure 1.1, for instance, shows population density, the number of usual residents per square kilometre. Thematic maps are an effective tool for investigating geographical differences.

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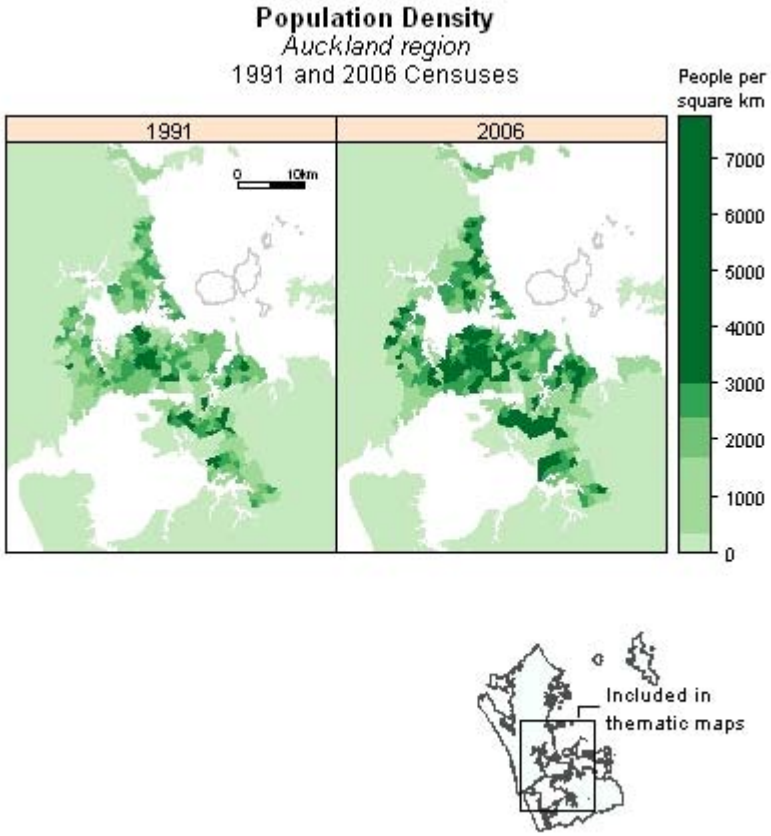
Figure 1.1



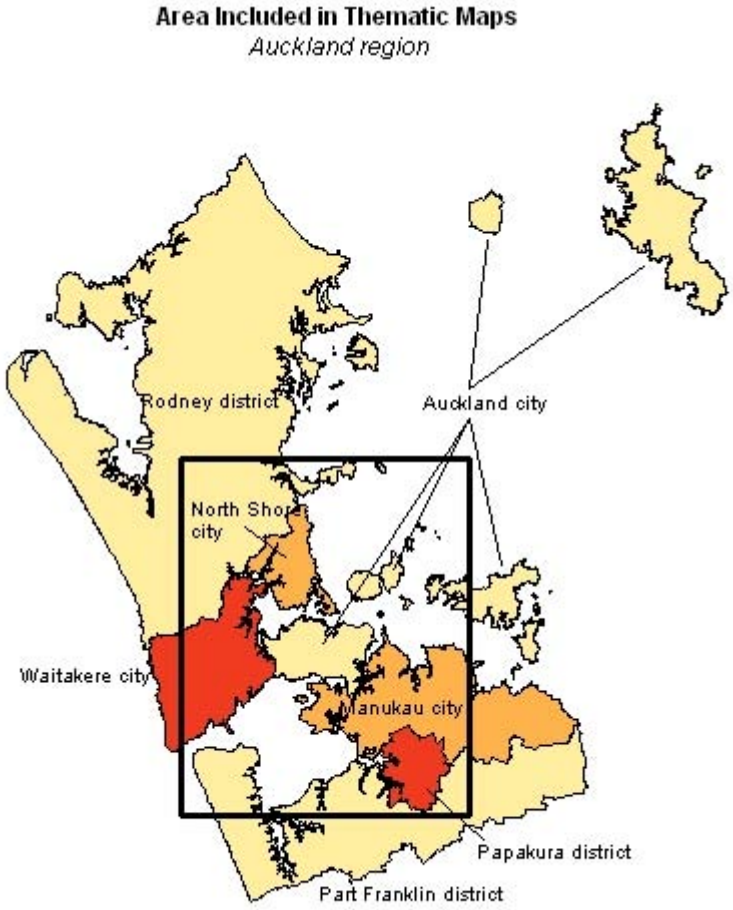
Downloadable version of figure 1.1 (PDF, 2.6MB)

If you do not have Adobe Acrobat Reader, download Adobe Reader for PDFs to view or print this file.

How the maps are constructed

The thematic maps in this report include the area within the black box in figure 1.2. This is where most Aucklanders live, and includes part of each of the region's seven territorial authorities. All maps are oriented to the north.

Figure 1.2



The maps are composed of irregular patches. Each patch corresponds to an area unit, a geographical unit typically covering one or two square kilometres. The darker the patch, the higher the value being measured. For instance, the patches with the darkest shade of green in figure 1.1 have population densities of 3,000 or more, while the patches with the lightest shade of green have densities of less than 300. Further details about the shading scheme and the scale bars on the right of the maps are given in the Notes and sources for this chapter. However, for most purposes, all that needs to be remembered is that darker shades mean higher values.

Clicking on the link underneath each figure opens up a high-resolution portable document file (PDF) version of the maps. This version can be magnified to examine small areas (for instance by selecting **Select and Zoom** in the **Tools** menu of Adobe Reader).

The data

Almost all the data presented in the maps come from the 1991, 1996, 2001, and 2006 Censuses. The main additional data source is population projections, which draw heavily on the censuses.

To protect confidentiality, all census counts have been rounded to base 3. If an area unit has five or fewer members, its data are not used. Instead, the maps show the average value for neighbouring area units.

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

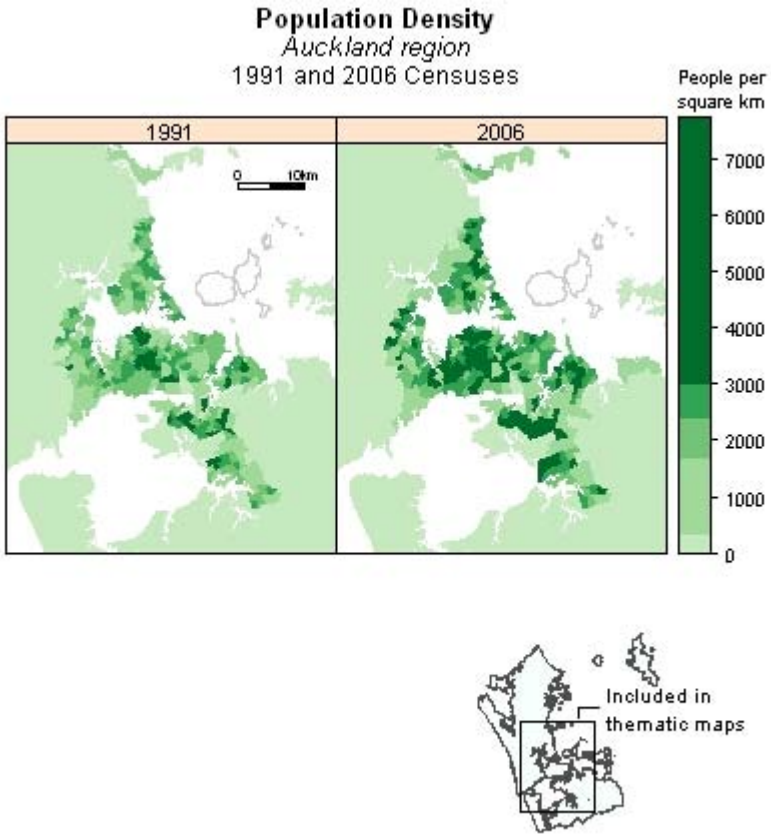
Notes and sources

Map groups and colours

Each area unit in each year is assigned a colour by:

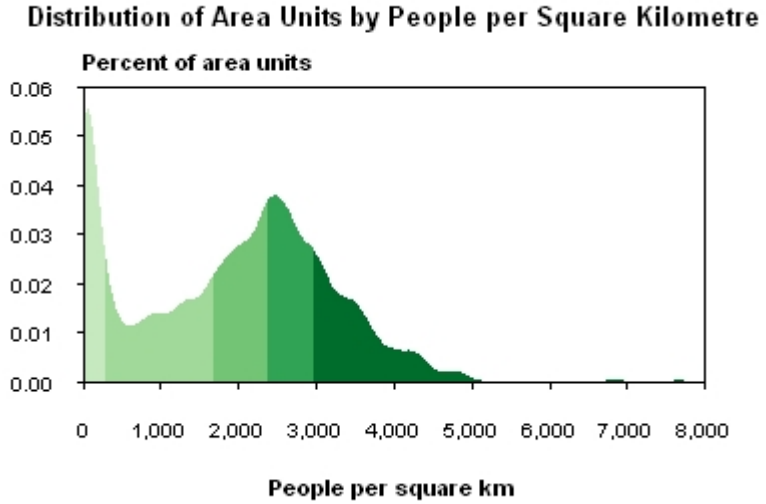
1. combining observations for all area units and all years
2. splitting the observations into quintiles – the bottom 20 percent of values, the next lowest 20 percent, and so on up to the highest 20 percent
3. choosing five shades, ordered from lightest to darkest
4. assigning the lightest shade to observations in the lowest quintile, the next lightest to the next lowest, and so on up to the highest quintile.

Figure 1.1 (reproduced)



The scale bar on the right of the maps shows the range of values represented by each colour. In figure 1.1, for instance, the lightest shade represents values from 0 to about 300, the next shade represents values from 300 to about 1,700, and so on up to the maximum of about 7,700. Whether a colour covers a narrow or wide range depends on the distribution of the values. Figure 1.3, a density plot, shows the distribution of values underlying figure 1.1. The lightest shade of green covers a narrow range because there is a large concentration of area units with small values; the darkest shade carries a wide range because high values are relatively rare.

Figure 1.3



Software

The analysis and mapping were carried out using the statistical programming language R (R Development Core Team, 2008). The thematic maps were constructed with a modified version of the function "spplot" in the package "sp" (Pebesma and Bivand, 2005). The colour palettes are from the package "RColorBrewer" (Neuwirth, 2006).

References

Neuwirth, E (2007). RColorBrewer: ColorBrewer palettes. R package version 1.0-2, www.r-project.org/.

Pebesma, E J & Bivand, R S (2005). Classes and methods for spatial data in R. *R News* 5(2), http://cran.r-project.org/doc/Rnews/

R Development Core Team (2008). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. www.r-project.org/.

Population change

Commentary

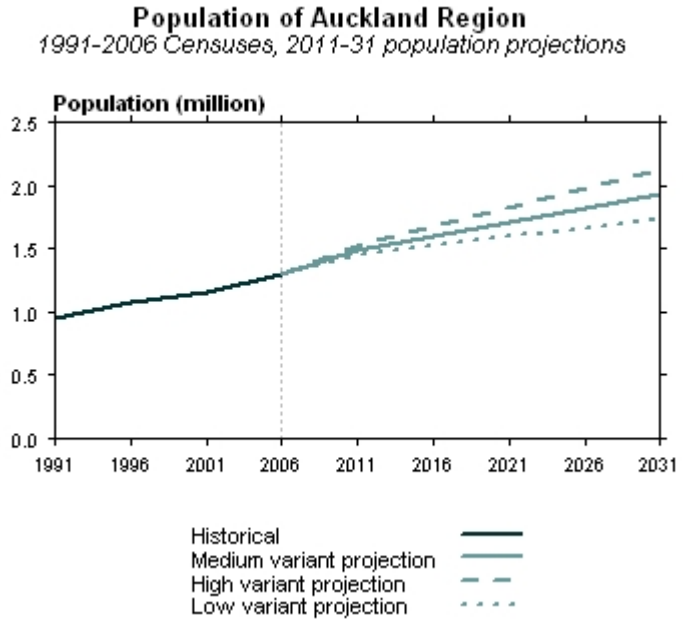
Overview

The Auckland region's population is growing and may reach two million by 2031. International migration is a bigger contributor to the region's population growth than it is for the rest of New Zealand. However, since the period 1996–2001 more people have moved from the Auckland region to other parts of New Zealand than in the other direction, but this is a new phenomenon.

Population growth of the Auckland region

The total population of the Auckland region has been increasing steadily. Figure 2.1 shows the historical census population from 1991 to 2006, and three population projection scenarios (low, medium, and high) out to 2031. The medium-variant scenario shows that the population is projected to continue growing, to reach 1.93 million by 2031. The high-variant scenario shows the region's population growing to over two million by 2031.

Figure 2.1

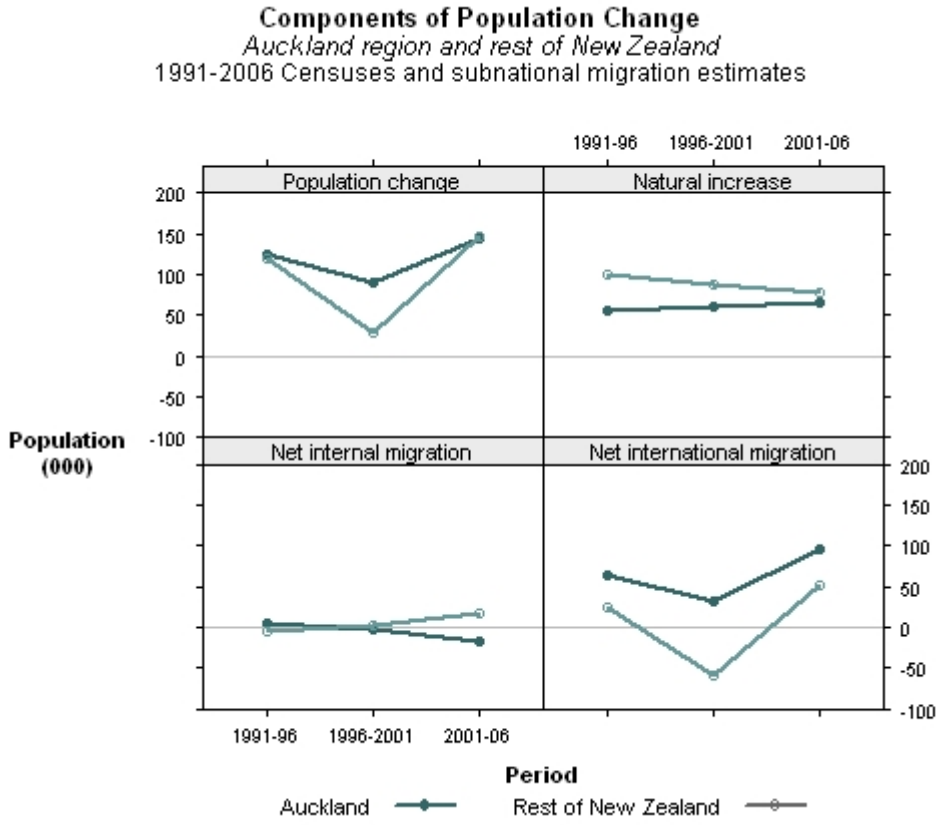


Note: The high-variant projections use high fertility, low mortality, and high net migration assumptions. More information about the assumptions used is on the Subnational Population Projections page, on www.stats.govt.nz.

Sources of growth

The components of population change are natural increase (births minus deaths), net internal migration, and net international migration. Figure 2.2 shows each of the components of population change, contrasting Auckland with the rest of New Zealand.

Figure 2.2



Note: Natural increase is defined as live births minus deaths. Net internal migration is in-migrants minus out-migrants. Each point describes the total over the five-year period.

Natural increase in the Auckland region has gradually risen, from 56,200 to 65,600 between 1991 and 2006. Over the same period, net internal migration fell, with a net loss of 18,100 people between 2001 and 2006, as seen in figure 2.2. While this is a net loss, this figure is small in comparison with the overall population growth.

Population growth in the Auckland region between 1991 and 2006 was driven by high net levels of international migration (which includes New Zealand residents returning from overseas), much more so than for the remainder of New Zealand. For the rest of New Zealand, natural increase was the main contributor to population change.

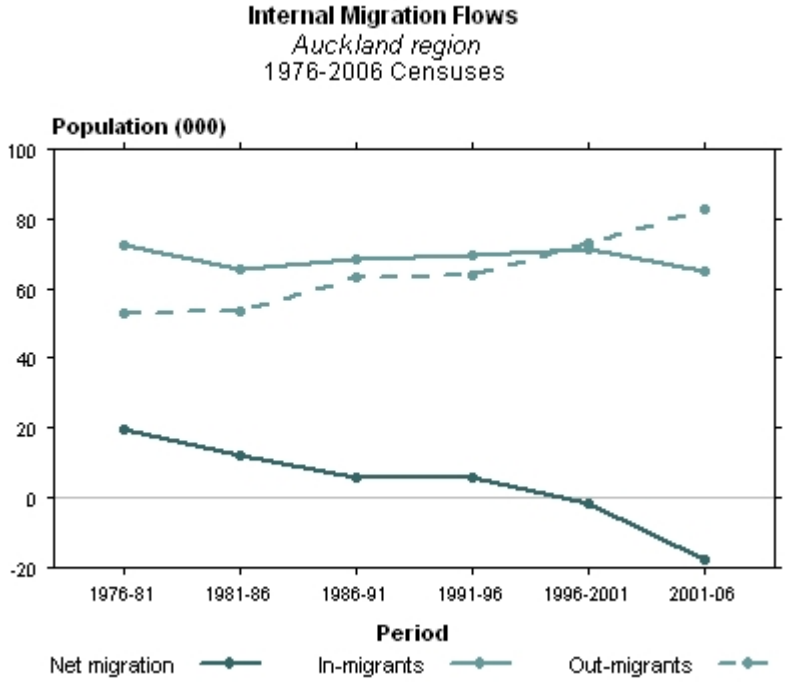
While the components of the Auckland region's population change may be different from the rest of New Zealand, the pattern of negative net internal migration from Auckland, and positive net international migration, is a feature it shares with other cities in the world. London has had a persistent net inflow of international migrants and net outflow of internal migrants over the past two decades (Hatton and Tani, 2005). Sydney has displayed similar trends since the 1970s (Parr and Culpin, 2005).

Population flow through Auckland region

Even though the Auckland region has a net outflow of people moving to the rest of New Zealand, there is a relatively high number of people from other parts of New Zealand moving in and out of the region. Gross migration refers to in-migrants (people who moved from another part of New Zealand to Auckland region), and out-migrants (people who moved from the Auckland region to another part of New Zealand).

Figure 2.3 shows the net internal migration, along with the number of in-migrants and out-migrants, between 1976 and 2006. Historically, net internal migration in the Auckland region has gradually been declining, except for a brief period between 1991 and 1996.

Figure 2.3



Note: In-migrants are people who moved from another part of New Zealand into the Auckland region. Out-migrants are people who moved from the Auckland region to another part of New Zealand. Net internal migration is in-migrants minus out-migrants. More information about regional migration patterns is in ~~Trends in migration between regions~~, on ~~www.stats.govt.nz~~.

The graph shows that gross migration flows have been large over time, with more than 50,000 people moving in or out of the Auckland region every five-year period since 1976. Between 2001 and 2006, 64,700 people moved from other parts of New Zealand into the Auckland region. Out-migrants numbered 82,700 for the same period.

Implications

There are a number of implications of population change for the Auckland region:

- The population of the Auckland region will continue to grow, bringing changes in population density and increases in demand for services.
- The large inflow of international migrants combined with a net outflow of New Zealand residents will lead to a higher proportion of people living in the region who were born overseas. In 2006, 37 percent of people living in the Auckland region were born overseas, compared with 23 percent for the New Zealand population. The proportion of overseas-born people is likely to continue rising, which also implies increasing ethnic diversity.
- International migration will impact on the size of birth cohorts and population ageing (McDermott, 2008). Differences in age structure, fertility, and mortality will affect the population structure of the areas where migrants choose to settle.
- The flows in and out of the Auckland region show a large amount of internal migration. This pattern is likely to continue, as Auckland remains an important source region and destination for people in New Zealand. Many people from other parts of New Zealand live in the Auckland region at some point, showing that the region is highly integrated with the rest of the country.

Related chapters

Ethnicity
Population density
Population growth
Population mobility

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Definitions

Population change is made up of three components: natural increase (the excess of live births over deaths), internal migration (the movement of people within the boundaries of a nation), and international migration (the movement of people to and from New Zealand). The data used in these calculations includes census data, subnational net migration estimates, and births and deaths data.

Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

The projected data comes from the 2006-base population projections released in December 2007. Projections are based on assumptions about future fertility, mortality, and migration. There are three alternative series produced (low, medium, and high) using different assumptions. The population projections have as a base the estimated resident population at 30 June 2006, and extend to 2031. More information about population projections is on the Subnational Population Projections page, available on www.stats.govt.nz.

References and further reading

References

Hatton, T J (2005). Immigration and inter-regional mobility in the UK, 1982–2000, *Economic Journal*, *115* (November), 342–358.

Parr, A & Culpin, A (2005). Sydney at the millennium, *People and Place*, *13*(1) 31–40.

McDermott, P (2008). *Auckland's Population*, briefing paper prepared for the Royal Commission on Auckland Governance, Cityscope Consultants, March 2008.

Further reading

Auckland Regional Council (2007a). Growth of Auckland region – Dynamics of Population Change 2001–2006 Auckland Regional Council, 2006 Census series.

Auckland Regional Council (2007b). Immigration and Ethnicity in the Auckland region 2006 Auckland Regional Council, 2006 Census series.

Population growth

Commentary

Overview

Most parts of the Auckland region experienced population growth between 1991 and 2006. Local growth rates varied markedly between censuses.

Mapping the population growth rates

The population growth rate is the annual percentage change in the size of a population. Darker shades indicate higher population growth rates. The maps pull together information about historical and projected populations. The maps for 2006–31 are based on current population projections (2006-base medium series) and show one possible future scenario.

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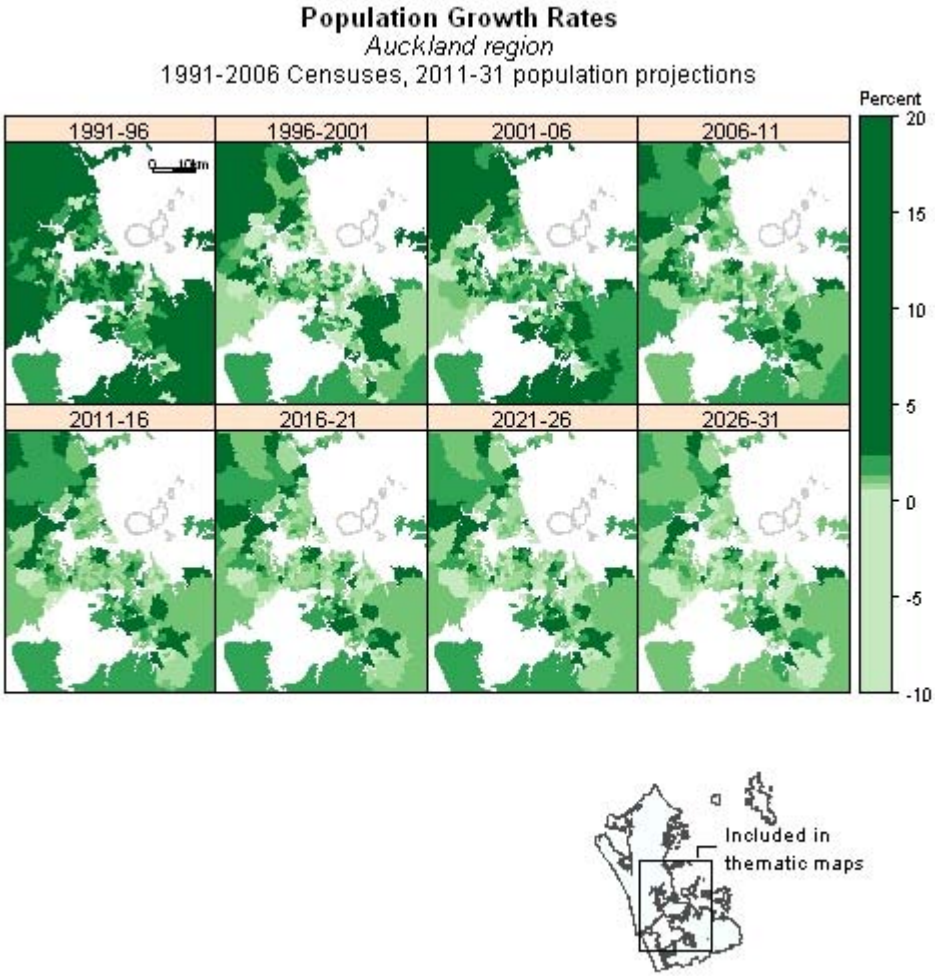
Figure 3.1



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

~~Downloadable version of figure 3.1 (PDF, 6.1MB)~~
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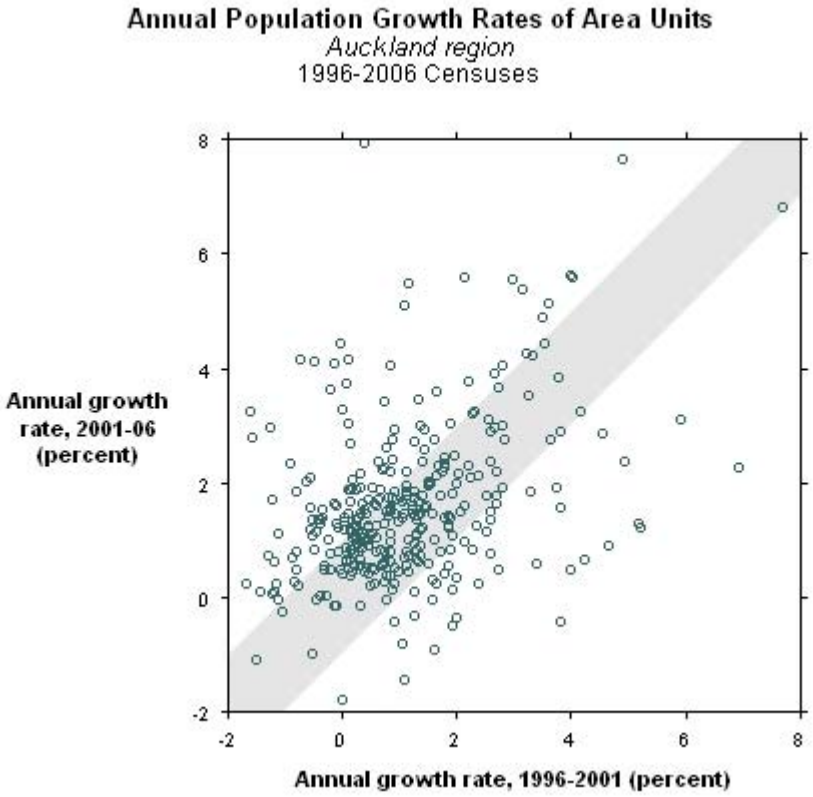
Although there is substantial variation in growth rates over time, no clear pattern emerges.

Historical population growth rates

Do some areas have consistently high or consistently low growth rates? One way to measure this is to compare growth rates in successive census intervals. Figure 3.2 does this. Each dot in the figure represents an area unit. The further to the right a dot is, the higher the area unit's population growth rate in 1996–2001; the closer to the top a dot is, the higher the growth rate in 2001–06. If each area unit's growth rate remained the same between census intervals, the points would lie on a straight line. If each area unit's growth rate was always within 1 percentage point of its previous growth rate, the points would all fall within the grey diagonal band.

Figure 3.2



Note: 9 percent of area units are excluded, due to the axes being truncated at -2 and 8. More information is in ~~Notes and sources~~ section.

There is some tendency for area units that grow fast in one period to grow fast in the next period, but there are many exceptions. Only half the points fall within the grey band.

Regional Growth Strategy

The Auckland Regional Growth Strategy was adopted by the region's councils in 1999. The main points of the strategy were for most population growth to be within existing metropolitan areas, and to be around existing town centres and major transport routes. More emphasis was to be placed on redevelopment and intensification as opposed to infill and urban sprawl. Some growth was to be allowed in greenfield areas, while the region's rural population was anticipated to double by 2050 (Regional Growth Forum, 1999).

The strategy has not been strictly adhered to in the 10 years since its implementation. There has been some, but not significant, population growth in town centres or near transport corridors. Takapuna, Newmarket, and New Lynn are areas where redevelopment has started and is likely to continue for years to come. Also, there has been considerable growth in the number of apartment buildings, particularly in the Auckland central business district (CBD). By contrast, infill and greenfield development have been the most popular methods to facilitate population growth. The greenfield areas of Manukau city saw huge population growth between 2001 and 2006, and will continue to do so. Also, living in rural and coastal areas has become more popular than was anticipated – the population living in rural areas grew 50 percent between the 1991 and 2006 Censuses.

Population projections

2006-base population projections for all area units were produced by Statistics NZ in 2008. These projections took into account the principles of the Regional Growth Strategy as well as information on population and housing capacities and the timing of known and possible future housing developments. The maps in figure 3.1 show that projected population growth to 2031 will generally be at a slightly slower rate than in the past, and that major growth areas will either be in greenfield areas or around the state highways in the Auckland region.

Natural increase (births minus deaths) is projected to decline over time for the majority of area units. Combine this with constant net migration levels and the result is declining population growth (and population growth rates) in the future for most area units. However, the major growth areas will not necessarily have stable or declining population growth rates. Growth rates for these areas will continually change as areas are redeveloped. Greenfield areas will see growth rates increase as housing developments take place but the rates will dramatically slow as areas become fully developed.

While population growth is projected to be slower, growth in the Auckland region as a whole will be higher than in other regions. The current medium-series projections show the Auckland region having the highest annual growth rate of all regions between 2006 and 2031. Annual population growth will average 1.4 percent between 2006 and 2031. This compares with annual average population growth of 0.8 percent for New Zealand as a whole.

Implications

There are a number of implications about population growth in the Auckland region:

- Population growth does not always occur where and when anticipated. Users of population projections should always consider the low- and high-variant series, as well as the medium-variant series, before making any judgement as to which projection series is/are most suitable for their purposes.
- Economic conditions will have a major impact on the timing of future housing developments. The slowdown of the economy in 2008–09 may mean that in the short term the low-variant population projections are possibly the best indicator of future population growth. Alternatively, if there is a significant decrease in the number of New Zealand residents leaving the country permanently or on a long-term trip, then the medium-variant, or even the high-variant, population projections could be the best.

Related chapters

- Commuting
- Households and families
- Population density

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Definitions

The population growth rate is the average annual growth rate of the population during a five-year period. These rates have been derived for all the area units in the Auckland region.

Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

The projected data comes from the 2006-base population projections released in December 2007. Projections are based on assumptions about future fertility, mortality, and migration. There are three alternative series produced (low, medium, and high) using different assumptions. The population projections have as a base the estimated resident population at 30 June 2006, and extend to 2031. More information about population projections is on the Subnational Population Projections page, available on www.stats.govt.nz.

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities in size. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries, available on www.stats.govt.nz.

The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

Scale bar and axis truncation

The scale bar in figure 3.1 is truncated so the range for the middle three colours can be seen – it would have been impossible to determine each colour's range if the scale bar had the true range for all areas. The actual population growth rates range between -100 percent and 98 percent. Just 1 percent of all population growth rates between 1991 and 2031 are either less than -10 percent or greater than 20 percent. The truncation of the scale bar has no effect on the maps of the area units.

The axes in figure 3.2 have been truncated at -2 percent and 8 percent. The figure would have been too large without limits being put on the range of the axes. Nine percent of the area units have population growth rates outside this range. Excluding these area units has a minimal effect on the strength of the association between growth rates in successive periods.

References and further reading

References

Regional Growth Forum (1999). Regional Growth Strategy Auckland Regional Council.

Further reading

Auckland Regional Council (2007). Growth of Auckland region – Dynamics of Population Change 2001–2006 Auckland Regional Council, 2006 Census series.

Statistics New Zealand (2007). Subnational Population Projections: 2006 (base) – 2031.

Population density

Commentary

Overview

Population density has increased rapidly in parts of central Auckland, and this is likely to continue. If the Auckland region is to accommodate almost two million people by 2031, some residential suburbs will need to have population densities similar to those central Auckland has at present.

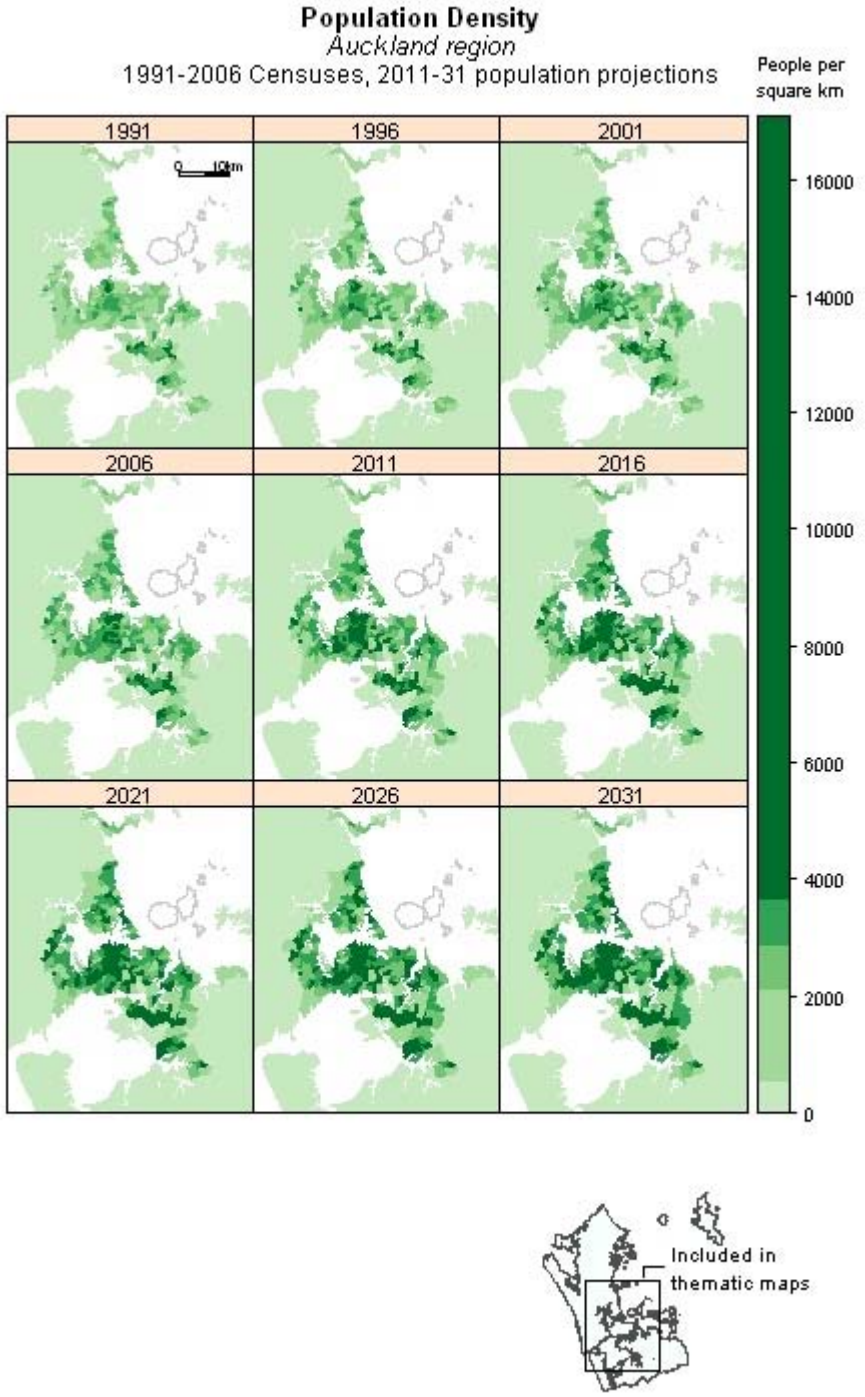
Mapping population density

Figure 4.1 shows the population density for each area unit of the Auckland region. Population density is the number of usual residents per square kilometre. Darker shades of green indicate higher population density.

These maps pull together information about the historical and projected populations. The maps for 2011–31 are based on current population projections (2006-base medium series) and show one possible future. They illustrate how the population density could change if the Auckland region attained a population of 1.93 million by 2031.

For more information contact: toll-free 0508 525 525 info@stats.govt.nz www.stats.govt.nz

Figure 4.1



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

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Population density 1991–2006

The parts of the Auckland region with the highest population density are in Manukau city and Auckland city, and in particular central Auckland. In 1991 there were four area units with a population density of more than 4,000 people per square kilometre. By 2006 there were 26 area units with a population density this high. The Auckland CBD has seen the largest increase in population density, due to the population more than doubling every five years between 1991 and 2006.

Population density 2011–31

Population projections indicate that the Auckland region's population will grow substantially through to 2031. These projections take into account the Metropolitan Urban Limit and assume that the urban area boundary in Auckland region remains unchanged during the projection period. As the population increases, especially within the urban area, so does population density.

The medium-variant projections are one possible scenario of where people will live and what the region might look like. These projections show that by 2031 there could be more than 110 area units having a population density greater than 4,000 people per square kilometre. The Auckland CBD will continue to have the highest population density – increasing from 4,600 people per square kilometre in 2006 to possibly over 13,300 people per square kilometre by 2031.

In addition, higher density would spread to other parts of Auckland and Manukau cities, as seen by the increasing number of darker areas on the map. The population density in some western parts of Manukau city in 2031 would be the same density as in parts of the Auckland CBD in 2006.

The darker areas on the map also indicate there could be parts of North Shore and Waitakere cities having major population growth, and hence significant increases in their population density in the future.

Population densities in Rodney and Franklin districts have generally been low and stable over time, and are likely to remain low in these areas.

Differences between high density areas

High density areas in Auckland city are different from those in Manukau city. The number of people living in multi-unit dwellings in the Auckland CBD more than quadrupled between 1991 and 2001 (Statistics NZ, 2005). A much higher proportion of people living in the Auckland CBD were living in one-person households (16 percent) than for the Auckland region as a whole (6 percent). In contrast, Manukau city has a higher proportion of households made up of one or more families than do other territorial authorities in the Auckland region (Statistics NZ, 2006).

Implications

A number of implications arise from increasing population density in the Auckland region:

- A compact settlement plan is part of the goals of both Auckland's Regional Growth Strategy and the Long Term Sustainability Framework, as discussed in the evaluation of the Regional Growth Strategy (Regional Growth Forum, 2007). Higher population density, in the identified growth centres, will help maintain the green zones around the region. The Regional Growth Forum's growth concept aims to protect and enhance environmental values in areas that are already urbanised (Regional Growth Forum, 1999).
- An increase in population density, especially over a short period of time, affects the character of an area. For example, detached dwellings may be replaced by apartments to accommodate the larger number of people living in an area.
- Higher density living makes the expansion of services such as public transport more feasible. However, services such as waste management may be more difficult with a denser population.
- Grimes and Liang (2007) find that there is a positive association between high population density and land value. Higher land values are good for property owners, but not for prospective buyers.

Related chapters

- Commuting
- Households and families
- Housing
- Population growth

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Definitions

Population density is the number of usual residents per square kilometre. It is calculated by dividing the number of residents by the total land area, for each area unit.

Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

The projected data comes from the 2006-base population projections released in December 2007. Projections are based on assumptions about future fertility, mortality, and migration. There are three alternative series produced (low, medium, and high) using different assumptions. The population projections have as a base the estimated resident population at 30 June 2006, and extend to 2031. More information about population projections is on the Subnational Population Projections page, available on www.stats.govt.nz.

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References

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Ethnicity

Commentary

Overview

Auckland is home to people who identify with many ethnic groups. Those identifying with a Pacific ethnicity have the highest tendency to live near people of the same ethnic group. In 1991, 76 percent of the Auckland region's population identified with the 'European or other' ethnic group (which includes New Zealand European and 'New Zealander'), but by 2006 this had decreased to 64 percent.

Mapping ethnicity

Figure 5.1 shows the percentage of the population identifying with the four broad ethnic groups, from the 1991 to 2006 Censuses. Ethnicity is defined as the ethnic group or groups that people identify with or feel they belong to. It is self-perceived, and people can belong to more than one ethnic group. Ethnicity is primarily a measure of cultural affiliation, although it is influenced by other factors such as language, ancestry, and national identity.

Ethnic group are listed on the left-hand side of the maps. Each panel of maps uses the same scale (right-hand side). The dark green colour on the maps shows where a higher percentage of people identify with the ethnic group.

The 'European or other' ethnic group includes people identifying as New Zealand European (which is included in European) and/or 'New Zealander' (which is included in 'other'). The remainder of this chapter will refer to the 'European or other' ethnic group as 'European'. More information about this group is in the Notes and sources section.

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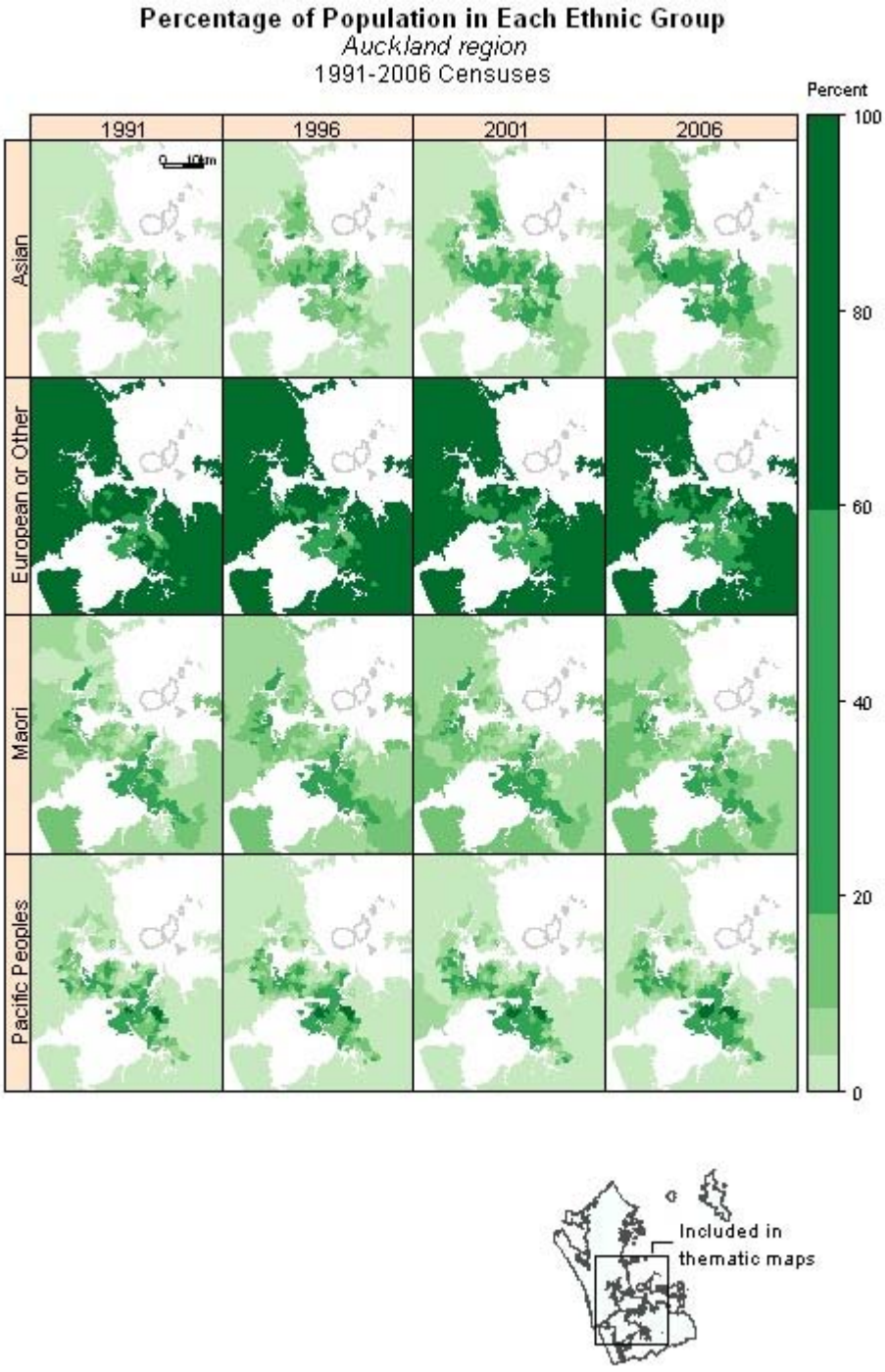
Figure 5.1



Note: More information about interpreting the maps is in the Interpreting the maps chapter.

Downloadable version of figure 5.1 (PDF, 10.4MB)

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Distribution of ethnic groups in Auckland region

People stating a European ethnicity were the largest ethnic group in most areas over the 1991–2006 period. The maps show that Rodney and Franklin districts both had higher proportions of Europeans than did other territorial authority areas (93 percent and 85 percent, respectively) in 2006.

The highest proportions of people identifying with the Māori ethnic group were in Papakura district (27 percent of the total population in 2006) and Manukau city (15 percent). See figure 5.1 for the area units where higher proportions of Māori live.

Manukau city, and southern parts of Auckland city, had higher proportions of Pacific people than other parts of the Auckland region, and these patterns have been consistent over the whole time period.

The Asian ethnic group has been growing as a percentage of the total population. For the Auckland region as a whole, the percentage of people identifying with an Asian ethnicity increased from 6 percent to 19 percent between 1991 and 2006. Growth in this ethnic group over the 1991–2006 period has mostly been in the Auckland region's four cities (North Shore, Waitakere, Auckland, and Manukau).

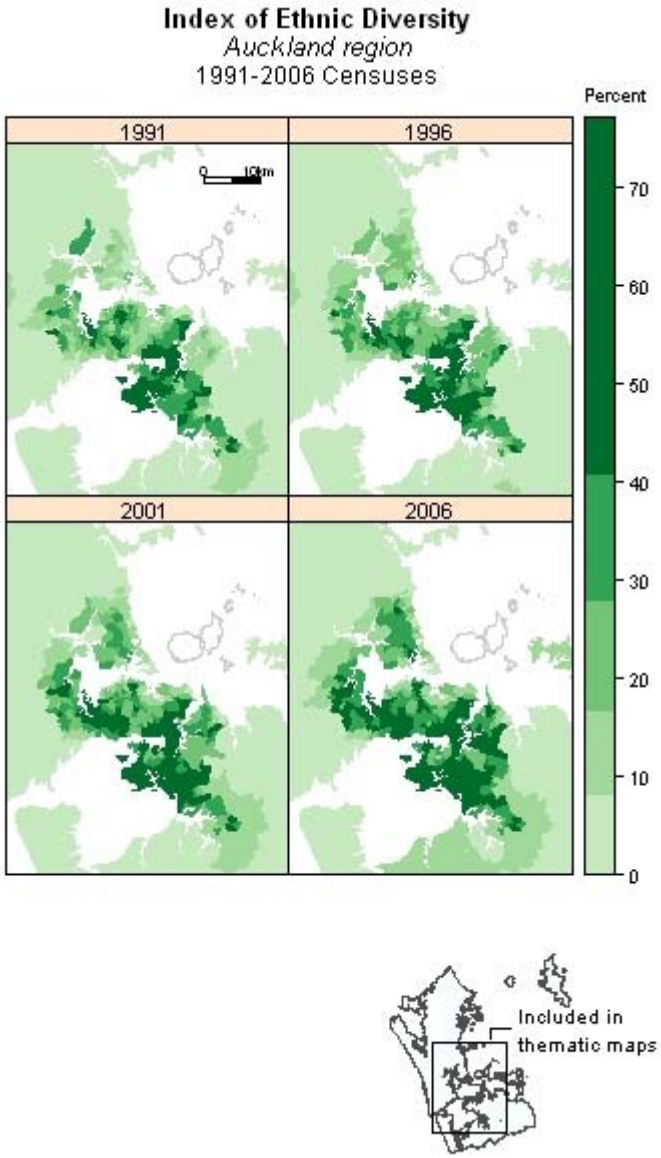
Living near people of the same ethnicity

The geographical distribution of ethnic groups can be further analysed by looking at the extent to which different ethnic groups live near people of the same ethnicity. This can be quantified for each ethnic group (see Notes and sources section for more detail). Results show that Pacific people have the greatest tendency to live near people of the same ethnicity. The European ethnic group had the second-highest level, ahead of both Māori and Asian. Over time, the Asian ethnic group has displayed an increasing trend towards living near people of the same ethnicity.

Mapping ethnic diversity

One way of measuring an area's ethnic diversity is if no single ethnic group accounts for a large proportion of the population. Figure 5.2 shows an index of ethnic diversity based on this criterion. Darker shades indicate greater diversity. The derivation of the index is described in the Notes and sources section.

Figure 5.2



The index of ethnic diversity shown in Figure 5.2 is calculated as follows. For each area unit,
(1) calculate the percent of people identifying with the broad Asian, European or other, Māori, and Pacific peoples ethnicities
(2) choose the highest percent
(3) set the index equal to 100 minus this number. More information about the index can be found in the Notes and sources section.
More information about interpreting the maps can be found in the Interpreting the maps chapter.

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Changes in diversity

European is the largest ethnic group in New Zealand society, but over time it has become less dominant. The increasing number of people identifying with ethnic groups other than European – particularly the Asian, Pacific, and Māori ethnic groups – as well as the increasing number of people who identify with more than one ethnicity, is an indication that the Auckland region is becoming more ethnically diverse. This is shown in figure 5.2, as the maps generally become darker from 1991 to 2006.

In 1991, Rodney district and North Shore city were the least diverse areas. These areas were more than 90 percent European. By 2006 both areas had become more diverse but the European ethnic group still dominated. However, migration of Asian people into parts of North Shore city has meant that in these parts the European ethnic group is now below 60 percent.

In 1991, Otahuhu and Mangere were the most diverse areas in the Auckland region. European and Pacific people were the dominant ethnicities, but there were also significant numbers of Māori and Asian people. By 2006, large parts of Auckland and Manukau cities had become very diverse, mainly due to an influx of Asian people and to a lesser extent Pacific people. The most diverse areas in 2006 have the European ethnic group making up 35 percent of the total population.

Papatoetoe has seen the biggest change in ethnic makeup between 1991 and 2006. In 1991, Papatoetoe was just under 80 percent European, but by 2006 this proportion was just over 40 percent. In 2006, Asian and Pacific people together made up just over 50 percent of Papatoetoe's population.

The European ethnic group is the largest percentage of the population in Rodney district, North Shore city, Waitakere city (except for Lynnmall which has a high proportion of Asian people), Papakura district, and Franklin district. Auckland and Manukau cities have areas where the European, Pacific, or Asian ethnic groups have the largest population. There are no areas within the Auckland region where Māori has the largest ethnic population.

The Auckland region has high concentrations of ethnic populations, but it should also be noted that there are interactions between these ethnic groups. There are areas within Auckland and Manukau cities which are highly diverse, due to having different ethnic groups living near one another. The dynamics of interactions between the ethnic groups, for example multiple ethnicity and ethnic intermarriage, will continue to contribute to the growing diversity of the Auckland region.

Diversity and language skills

The language skills of different ethnic groups are an indicator of diversity, and a benefit of immigration. In the 2006 Census, 14 percent of Asians reported they could speak three or more languages. These multilingual abilities were approximately five times greater than for the New Zealand population as a whole (Friesen, 2008). Given that two-thirds of New Zealand's Asian people live in the Auckland region, the benefits of multilingual abilities may be greater there than elsewhere.

Implications

There are a number of implications about the Auckland region's ethnic makeup:

- It will be necessary to ensure different groups have access to adequate services, and where there are specific needs, that these are catered for. For example, people of Pacific ethnicities tend to live in larger families, which has implications for housing needs and accommodation in Manukau city.
- Ethnic diversity brings benefits, such as multilingual abilities. Diversity has had other influences too, for example the growth of ethnic festivals, retail and food enterprises, and various religious institutions (Auckland Regional Council, 2007). As the region's ethnic diversity continues to increase, so will the benefits that diversity brings.
- Some areas of the Auckland region have had substantial change in their ethnic composition and therefore their age-sex structure. Ethnic groups have different age-sex structures; for example Māori and Pacific populations tend to be younger in comparison with European and Asian populations. These differences are likely to affect the composition of the future labour force.
- When Asian and Pacific people migrate to New Zealand they generally settle in the cities. This would imply that the Auckland region's four cities are likely to become even more diverse in the future. However, if migrants move to areas where there are already significant numbers of people of similar ethnicity, there is the possibility that areas may become less diverse, with one ethnic group dominating.

Related chapters

- Population change
- Population density
- Population mobility

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Definitions

The 'European or other' ethnic group includes people who belong to the ‘European’ or ‘other ethnicity’ groups defined in level 1 of the Standard Classification of Ethnicity 2005. If a person belongs to both the European and the 'other ethnicity' groups they have only been counted once in that grouping. Almost all people in the 'other ethnicity' group belong to the ‘New Zealander’ subgroup.

Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries, available on www.stats.govt.nz.

The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy and the maps is in the Interpreting the maps chapter.

An index of ethnic diversity

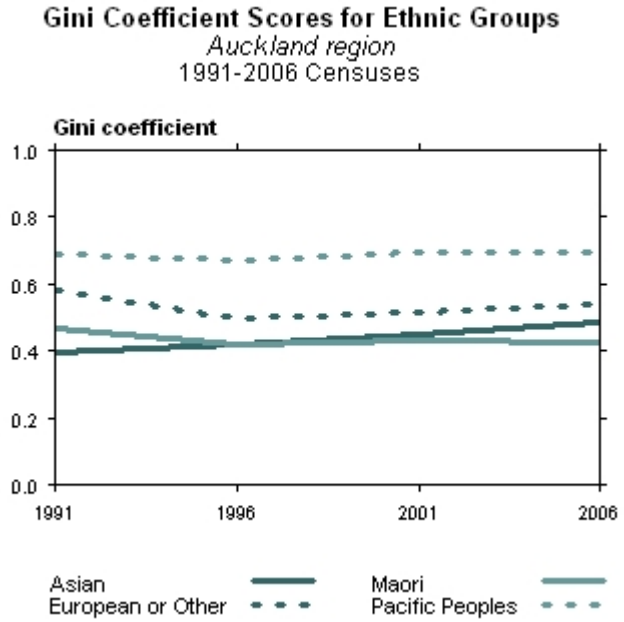
The index of ethnic diversity shown in figure 5.2 is calculated as follows. For each area unit: calculate the percentage of people identifying with the broad Asian, European or other, Māori, and Pacific ethnicities; choose the highest percentage; and set the index equal to 100 minus this percentage. The highest percentage measures the extent to which a single ethnic group dominates within the area unit, or whether instead there is a mix of ethnic groups. Subtracting from 100 is necessary so that area units with more ethnic diversity score higher on the index.

Quantifying ethnic distribution

While the maps show the overall pattern of ethnic distribution over time, quantifying the pattern is useful in order to compare the ethnic groups more directly. The Gini coefficient is one way of doing this. It measures distribution across space and shows to what extent people in each ethnic group live near people of the same ethnic group. It ranges between 0 and 1. A score of 0 indicates perfect equality (all area units have the same proportion of people), while 1 indicates perfect inequality.

Figure 5.3 shows the Gini coefficient scores for the four broad ethnic groups.

Figure 5.3



Across the Auckland region, the Pacific ethnic group had the highest coefficient scores between 1991 and 2006 (0.7 for each year), indicating that Pacific people have the greatest tendency to live near people of the same ethnic group. The European ethnic group had the second-highest score, with a coefficient of between 0.5 and 0.6 over the same period. Over time, people in the Asian ethnic group have displayed an increasing trend towards living near other Asian people.

A statistical analysis of local spatial clustering (the local index of spatial autocorrelation) reveals that the European ethnic group has significant geographic clusters in the outer territorial authorities (Rodney and Franklin districts). Area units in these territorial authorities with high percentages of European people tend to be clustered near other, similar area units. These two territorial authorities have low numbers of people with Pacific and Asian ethnicities.

References and further reading

References

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Population mobility

Commentary

Overview

The number of people who moved to the Auckland region from overseas more than doubled between 1991 and 2006. North Shore and Auckland cities have consistently experienced net outflows of people to other parts of Auckland region. The number of people moving to Auckland region from other parts of New Zealand has slowly been decreasing since 1991. The percentage of the population who do not change address between censuses is lower in Auckland region than elsewhere in the country.

Mapping population mobility

Figure 6.1 shows the percentage of the population at the 1991 to 2006 censuses who, five years earlier, were either overseas, elsewhere in Auckland region, elsewhere in New Zealand, or were at the same address. Each panel of maps has a separate scale on the right-hand side.

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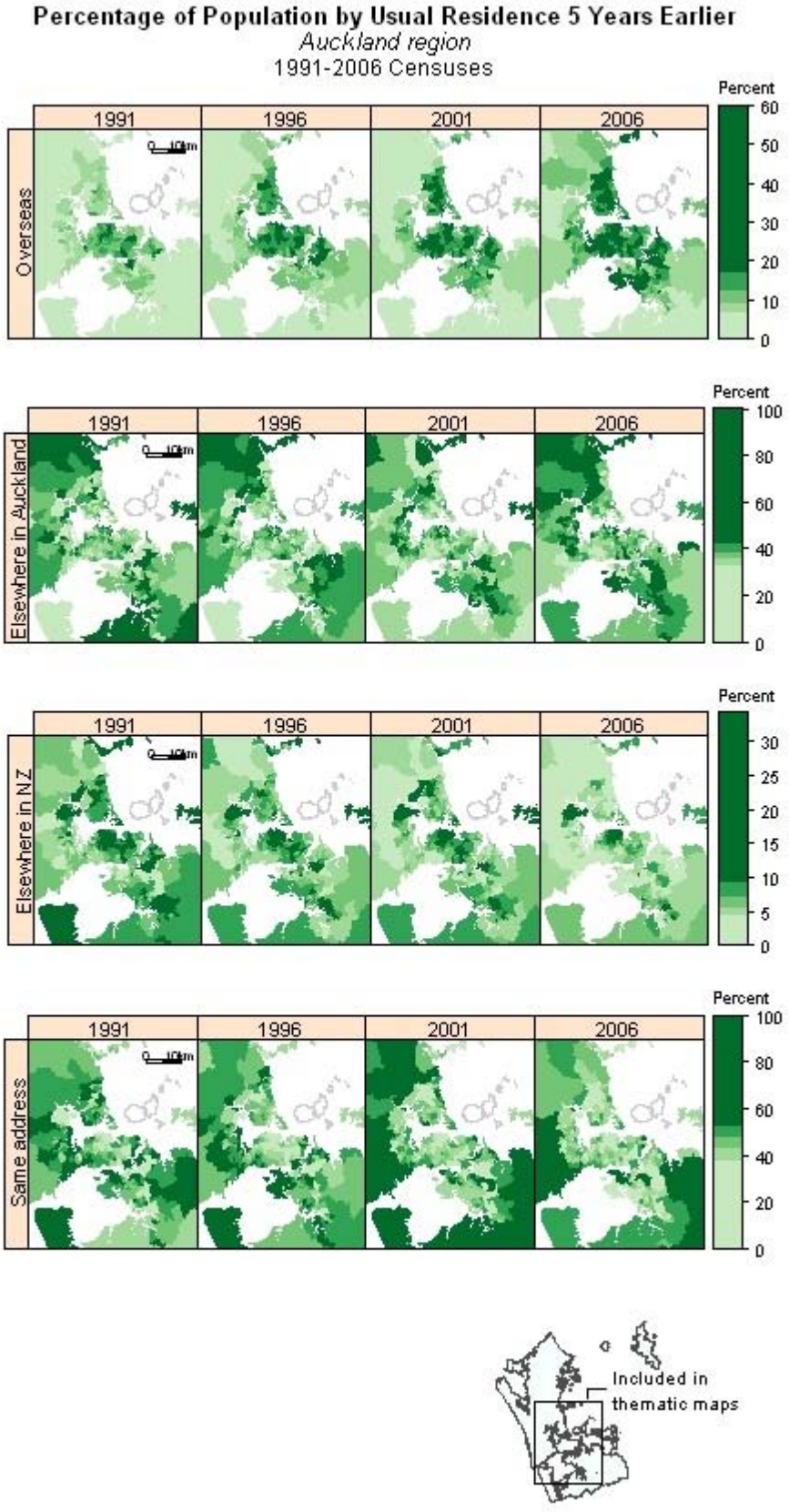
Figure 6.1



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

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Overseas migrants

The main observations to be made from the maps are that overseas migrants have a preference for living in cities (especially North Shore, Auckland, and Manukau) rather than rural areas, and that the number of new migrants in the Auckland region has been increasing over time. The most popular areas for new migrants are the Auckland CBD, Point View, Hillsborough, Mt Wellington, and around Target Road (in North Shore city).

The number of new migrants living in Auckland region more than doubled between 1991 and 2006. In 1991 there were 74,000 people who were overseas at the time of the previous census (1986). In 2006 this number was over 169,000 people.

Over 40 percent of the migrants between 2001 and 2006 were born in Asia. Migrants from the People's Republic of China were the most numerous, followed by India and the Republic of Korea. People born in Europe accounted for 15 percent of migrants, while 14 percent were returning New Zealanders.

Movements within Auckland region

Generally, the area units in darker colours on the 'Elsewhere in Auckland' maps are those that have the main component of population growth being due to the movement of people within Auckland region. For example, over half the population of East Tamaki, Point View, and Ormiston area units (all in Manukau city) in 2006 were living in other areas of Auckland region in 2001.

Movement of people within Auckland region generally contrasts with the areas of initial settlement of new overseas migrants. Table 6.1 shows net movement within Auckland region between 1991 and 2006.

Table 6.1

Net Movement within Auckland Region				
By territorial authority				
1991–2006				
Territorial authority	**1991**	**1996**	**2001**	**2006**
Rodney district	6,400	5,700	6,700	7,900
North Shore city	-1,000	-1,500	-1,500	-1,700
Waitakere city	3,300	1,800	2,500	1,000
Auckland city	-10,200	-7,900	-11,100	-12,600
Manukau city	-1,600	-400	1,500	1,300
Papakura district	700	-100	-300	1,700
Part of Franklin district(1)	2,400	2,400	2,100	2,400

(1) The part in Auckland region.

Source: Census of Population and Dwellings

North Shore city and Auckland city have consistently had a net outflow of people who move within Auckland region. That is, more people moved from these areas to other areas of the region than in the other direction. Conversely, Rodney and Franklin districts, and Waitakere city have consistently had a net inflow of people who move within Auckland region.

Movements from outside Auckland region

Central Auckland city and the Whenuapai / Hobsonville areas have consistently attracted people who previously lived outside Auckland region.

The 'Elsewhere in New Zealand' maps are getting lighter in colour over time. This reflects that the number of people moving from elsewhere in New Zealand has been slowly decreasing. In 1991 there were just over 67,000 people usually resident in the Auckland region who had lived outside the region in 1986. This number decreased to fewer than 60,000 in 2006 (those who lived outside the region in 2001).

There was a net inflow of over 5,500 people who moved to the Auckland region from elsewhere in New Zealand in the period 1986–91. This increased slightly to just over 5,800 during 1991–96 but fell dramatically after that to net outflows of almost 2,000 for 1996–2001, and over 18,000 people between 2001 and 2006.

A disaggregation of internal migration by region shows that between 2001 and 2006, the largest net losses from the Auckland region were to the adjacent regions of Northland, Waikato, and Bay of Plenty. Wellington was the only region from which Auckland gained a significant number of people (Auckland Regional Council, 2007).

Non-movers

People change residence quite often in the Auckland region. Put another way, the percentage of the population who are 'non-movers' is relatively low when compared with the rest of New Zealand.

In central Auckland, at the 2006 Census, there were areas where less than 10 percent of the population were living at the same address as five years earlier (in 2001). Given that large numbers of overseas migrants live in central Auckland within the first five years of moving to New Zealand, it would appear they use this area as a landing point in the country before moving to a more permanent residence elsewhere. The same thing may be happening in parts of North Shore and Manukau cities, where overseas migrants live initially. However, due to higher percentages of non-movers in these areas it is difficult to make hypotheses about subsequent movements within New Zealand based only on census data.

The areas with the highest percentages of non-movers are in Waitakere and Manukau cities. There were more than 20 area units where at least 55 percent of the population at the time of the 2006 Census were living at the same address as five years earlier (in 2001).

Projected net migration

The population projections produced by Statistics NZ make assumptions about the future combined effects of internal and international net migration. No attempt is made to make assumptions regarding the individual effects of arrivals, departures, external migration, or internal migration. For each subnational area, assumptions are made about net total migration, and an associated age-sex distribution, for each five-year interval of the projection period.

Projected net migration levels are generally consistent with historical trends, but also take into account information from the respective regional, city, and district councils about the timing of known and future housing developments, housing capacities, trends in building consent numbers, plus constraints at the national level. Table 6.2 gives the assumed medium-variant net migration levels for each five-year interval of the projection period for the territorial authorities in Auckland region.

Table 6.2

Assumed Net Migration in Auckland Region		
By territorial authority		
2007–31[1]		
Territorial authority	**2007–11**	**2012–16[2]**
Rodney district	6,500	6,500
North Shore city	6,500	7,500
Waitakere city	4,000	4,000
Auckland city	9,000	10,000
Manukau city	10,000	11,000
Papakura district	500	500
Part of Franklin district[3]	2,080	2,080

(1) Medium-variant assumptions.

(2) Levels remain constant through to 2027–31.

(3) The part in Auckland region.

Source: Population projections

Population growth due to high levels of net migration is assumed to continue in Albany, Auckland CBD, Point View, and Donegal Park. Areas with high net migration in the future may include Silverdale North, Long Bay, Hobsonville, Edgewater, Mangere East, and Manukau Central area units. However, given the 2008–09 economic recession, and that building consents in Auckland region for 2008 were significantly lower than for 2007, it is possible that future housing developments could be delayed from their intended timing. This may result in actual net migration levels being lower than those assumed, especially in the short term.

Implications

There are a number of implications about population mobility in the Auckland region:

- The 2008–09 economic conditions are having an impact on the number of New Zealand residents departing the country. The net permanent and long-term outflow from New Zealand to Australia peaked in the December 2008 year, and declined in the three months after that. Economic conditions may also affect the flow of people to, from, and within Auckland region, as well as the number of people who don't move.
- The large inflow of overseas migrants, combined with a net outflow of New Zealand residents, will lead to a higher proportion of people who were born overseas living in Auckland region. Increasing ethnic diversity will also occur, particularly due to the inflow of migrants with different Asian ethnicities.

Related chapters

- 0–14 population
- 65+ population
- Ethnicity
- Population change

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Data sources

The historical migration data are based on a person's usual residence at a census and their usual residence 5 years earlier. This is based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

The projected data comes from the 2006-base population projections released in December 2007. Projections are based on assumptions about future fertility, mortality, and migration. There are three alternative series produced (low, medium, and high) using different assumptions. The population projections have as a base the estimated resident population at 30 June 2006, and extend to 2031. More information about population projections is on the Subnational Population Projections page, available on http://www.stats.govt.nz/.

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries, available on http://www.stats.govt.nz/.

Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

Further information on migration in New Zealand is in the Internal Migration report, available on http://www.stats.govt.nz/.

References and further reading

References

Auckland Regional Council (2007). Growth of Auckland region – Dynamics of Population Change 2001–2006 Auckland Regional Council, 2006 Census series.

Further reading

Statistics New Zealand (2008). Internal Migration web report.

0-14 population

Commentary

Overview

An ageing population and lower fertility rates in the future will mean the percentage of the population aged 0–14 years will decrease for most areas within the Auckland region. This is not to be confused with the actual number of children in the Auckland region, which is expected to increase by almost 20 percent between 2006 and 2031. The areas with the highest percentage of their population aged 0–14 years are and will continue to be in Manukau city.

Mapping the percentage of population aged 0–14 years

Figure 7.1 shows the percentage of the population aged 0–14 years from 1991 to 2031. The darker shades of green indicate where higher percentages are aged 0–14 years.

The maps pull together information about the historical and projected population. The maps for 1991–2006 are based on census data, while those for 2011–31 are based on current population projections (2006-base medium series).

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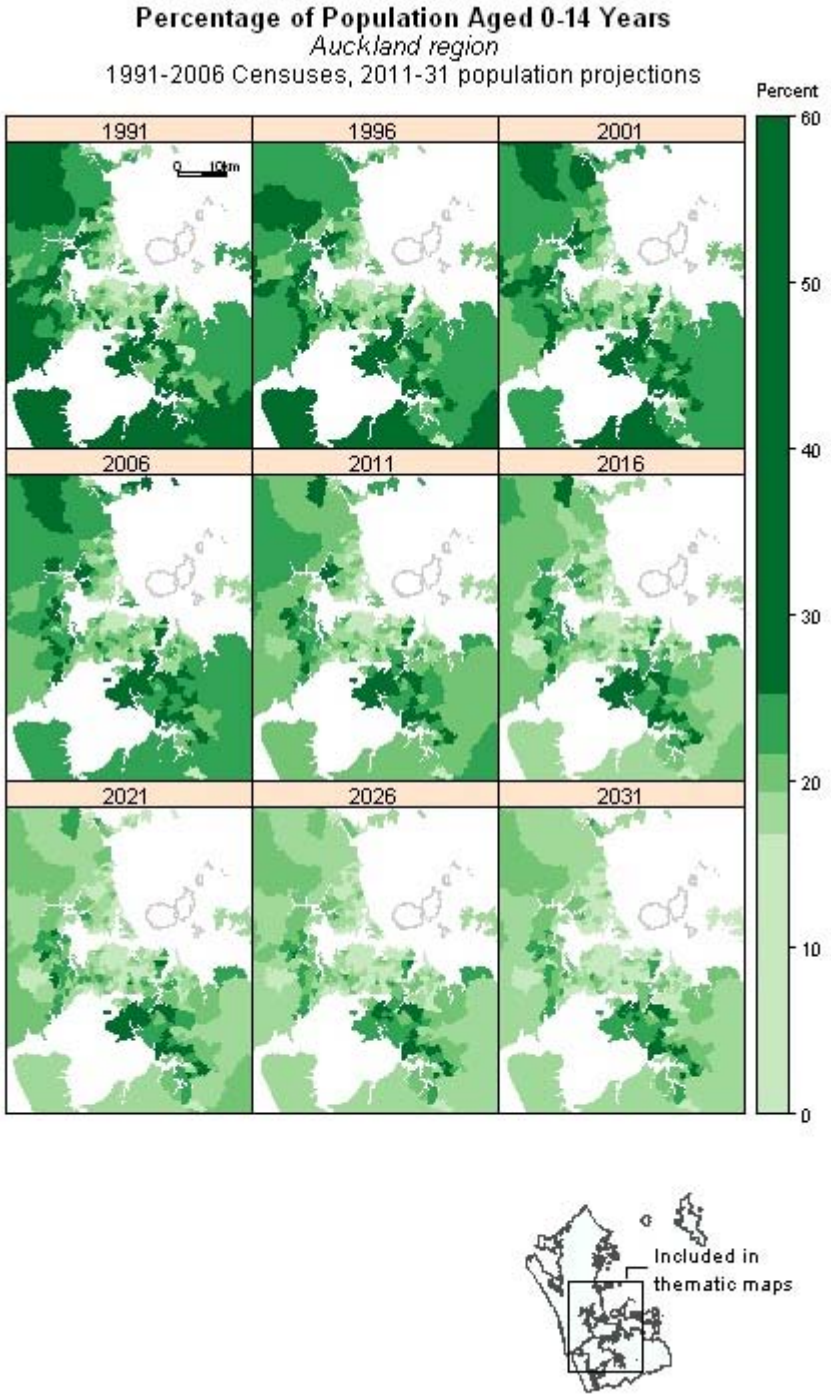
Figure 7.1



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

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Percentage of the population aged 0–14 years

Most areas are projected to have a decreasing proportion of their population being aged 0–14 years. This is reflected in figure 7.1, as the maps generally become lighter over time. Table 7.1 shows the percentage of each territorial authority's population aged 0–14 years for 1991, 2006, and 2031.

Table 7.1

Percentage of Auckland Region Population Aged 0–14 Years			
By territorial authority			
1991, 2006, and 2031			
	1991	**2006**	**2031**
Territorial authority	Percent		
Rodney district	22.7	21.6	17.9
North Shore city	19.8	19.3	16.3
Waitakere city	24.7	23.3	19.8
Auckland city	19.7	18.4	15.3
Manukau city	26.7	25.7	21.8
Papakura district	25.8	24.7	22.3
Part of Franklin district(1)	24.9	24.0	19.7

(1) The part in Auckland region
Sources: Census of Population and Dwellings; Population projections
Note: 1991 data is based on census usually resident population count. Data for 2006 and 2031 based on estimated resident population. More information is in ~~Notes and sources~~ section.

In 1991 there were areas in Manukau city where more than 40 percent of the population was aged 0–14 years. By 2031 the areas with the highest percentages are likely to have about 30 percent of their population in this age group. Areas such as Manurewa, Mangere, and Otara have large numbers of Pacific people, who generally have high fertility rates and hence larger families.

Conversely, figure 7.1 shows there are few children living in the central Auckland city area. The percentage of this area's population who are 0–14 years is expected to remain constant, at less than 10 percent, between 1991 and 2031. This area has a significant number of Asian people (who generally have smaller families) and university students, as well as being a temporary entry point for many immigrants to New Zealand.

Population aged 0–14 years

Most areas have an increasing number of children, despite a decreasing proportion of their population being aged 0–14 years. This is because the total population is growing faster than the 0–14-years population, which results in the percentage of the population aged 0–14 years decreasing.

Table 7.2 shows the number of people in each territorial authority aged 0–14 years, for 1991, 2006, and 2031.

Table 7.2

Auckland Region's Population Aged 0–14 Years			
By territorial authority			
1991, 2006, and 2031			
	1991	**2006**	**2031**
Territorial authority	(000)		
Rodney district	12.4	20.0	24.4
North Shore city	30.3	42.0	46.9
Waitakere city	33.8	45.6	53.7
Auckland city	60.2	79.0	88.9
Manukau city	60.3	89.1	114.6
Papakura district	9.6	11.6	14.0
Part of Franklin district(1)	7.4	10.5	11.9
Total	213.9	297.7	354.5

(1) The part in Auckland region.
Sources: Census of Population and Dwellings; Population projections
Note: Totals may not sum due to rounding. 1991 data based on census usually resident population count. Data for 2006 and 2031 based on estimated resident population. More information is in Notes and sources section.

Of the Auckland region's territorial authorities, Manukau city is projected to have the largest growth in the population aged 0–14 years, up from 89,100 in 2006 to 114,600 in 2031 – an increase of 25,500 over the 25-year projection period.

Implications

There are a number of implications about the 0–14 population in the Auckland region:

- The increasing number of children in the Auckland region means that new schools will have to be built. Currently, there are plans for seven new schools in just the Flat Bush and Botany areas alone (Tomorrow's Manukau, 2008). The actual number of new schools that will ultimately be needed in the Auckland region will be partly determined by future levels and patterns of fertility and migration, as well as factors such as average class size and availability of suitable sites.
- Areas such as central Auckland city, with significant numbers of new migrants, couple-only families, and university students, generally do not have large numbers of children. The demand for childcare services and new schools in areas with these characteristics will not be as great as for areas with high percentages of children.

Related chapters

- Ethnicity
- Households and families
- Housing
- Population change

Further information

This page is part of Mapping Trends in the Auckland Region, available on http://www.stats.govt.nz/.

Notes and sources

Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

The projected data comes from the 2006-base population projections released in December 2007. Projections are based on assumptions about future fertility, mortality, and migration. There are three alternative series produced (low, medium, and high) using different assumptions. The population projections have as a base the estimated resident population at 30 June 2006, and extend to 2031. More information about population projections is on the Subnational Population Projections page, available on http://www.stats.govt.nz/.

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries, available on http://www.stats.govt.nz/.

The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

Usual residence and estimated resident population

Tables 7.1 and 7.2 use the census usually resident population count for the 1991 data, while data for 2006 and 2031 are based on the estimated resident population. While the source is different to that used in the maps in figure 7.1 (2006 data is based on the census usually resident population count), the effect on the maps is insignificant.

Reference

Tomorrow's Manukau (2008). The Changing Face of Manukau 2008, Manukau City Council.

65+ population

Commentary

Overview

The population of the Auckland region aged 65 years and over (65+) will more than double between 2006 and 2031. An ageing population means the percentage of the population aged 65+ will continue to increase for most areas within the Auckland region, with Rodney district having the highest percentage of the population being 65+.

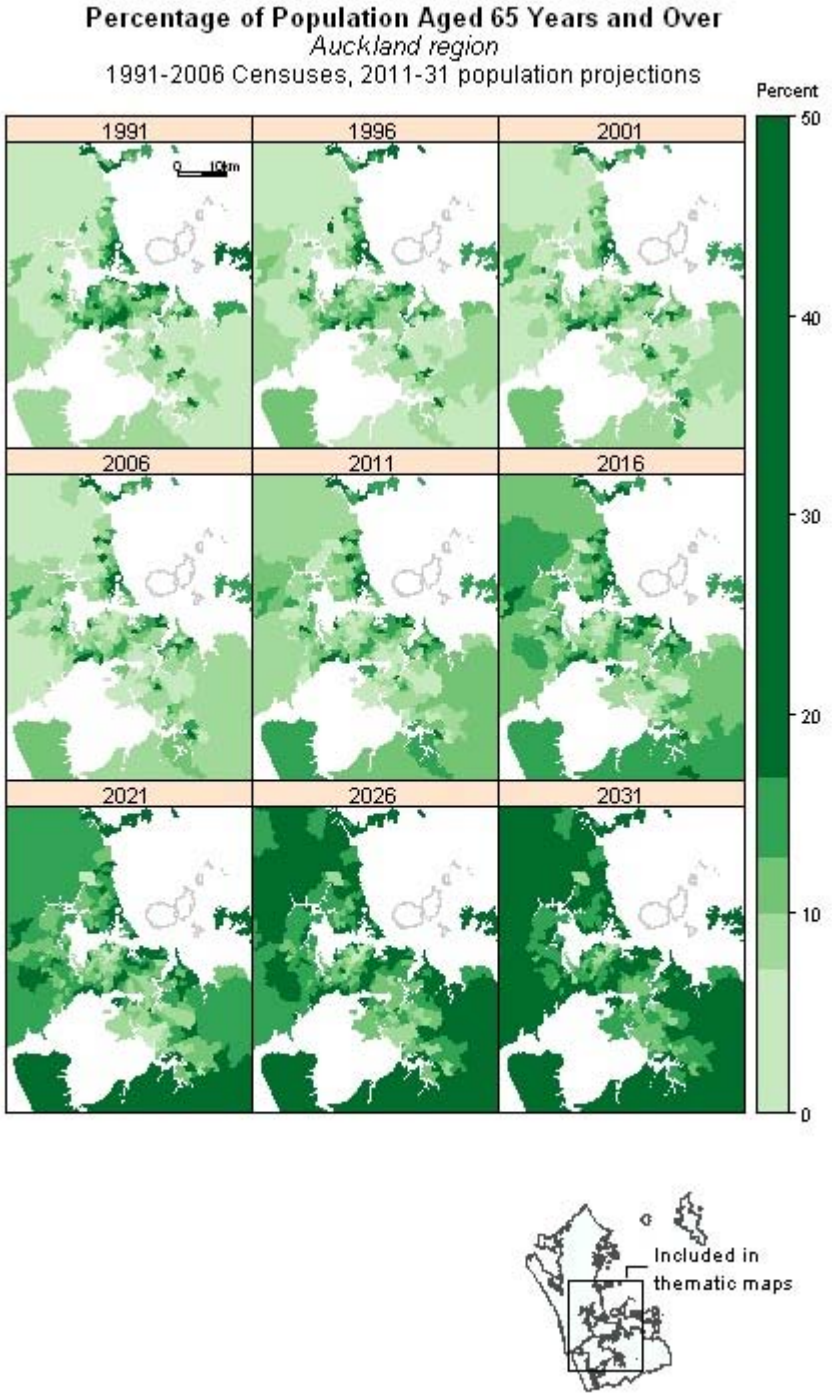
Mapping the percentage of population aged 65+

Figure 8.1 shows the percentage of the population aged 65+ from 1991 to 2031. The darker shades of green indicate higher percentages of this population.

The maps pull together information about the historical and projected population. The maps for 1991–2006 are based on census data, while those for 2011–31 are based on current population projections (2006-base medium series).

For more information contact: toll-free 0508 525 525 info@stats.govt.nz www.stats.govt.nz

Figure 8.1



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

Downloadable version of figure 8.1 (PDF, 6.7MB)
If you ~~do not have Adobe Acrobat Reader, download~~ Adobe Reader for PDFs to view or print this file.

Changes over time in population aged 65+

The projection period 2007–31 corresponds with the baby boomers reaching age 65 years. The rate of population growth for the 65+ group will be greater than for the under-65 age group, so the percentage of the population aged 65+ will increase for most areas. This can be seen in figure 8.1 as the maps generally become darker over time, especially after 2021.

Between 1991 and 2006 the percentage of the population aged 65+ declined in much of Auckland city. The decline was due to a combination of smaller population cohorts reaching age 65, net immigration at younger ages, and net emigration at older ages. The decline in Auckland city is also seen in table 8.1, which shows the percentage of the population in each of the region's territorial authorities who are aged 65+, for 1991, 2006, and 2031.

Table 8.1

Percentage of Population Aged 65+ Years in Auckland Region			
By territorial authority			
1991, 2006, and 2031			
	1991	**2006**	**2031**
Territorial authority	Percent		
Rodney district	14.0	15.0	23.8
North Shore city	11.5	10.7	19.0
Waitakere city	7.5	9.2	17.2
Auckland city	13.0	9.4	15.4
Manukau city	7.7	8.3	15.4
Papakura district	8.2	10.0	16.9
Part of Franklin district(1)	9.6	11.1	22.0

(1) The part in Auckland region.
Sources: Census of Population and Dwellings; Population projections
Note: 1991 data based on census usually resident population count. Data for 2006 and 2031 based on estimated resident population. More information is in ~~Notes and sources~~ section.

Throughout the period 1991 to 2031, Rodney district is expected to have the highest percentage of the population being aged 65+ (24 percent in 2031). Rodney is popular among retired people because, although semi-rural, it is still close to the city for access to hospitals and health care.

Table 8.2 shows the change in the number of people aged 65+ for 1991–2031. Although Auckland and Manukau cities will have the lowest percentage of the population aged 65+ in 2031, these cities will have the largest numerical increases in this population between 2006 and 2031.

Table 8.2

Auckland Region's Population Aged 65+ Years			
By territorial authority			
1991, 2006, and 2031			
	1991	**2006**	**2031**
Territorial authority	(000)		
Rodney district	7.7	13.8	32.4
North Shore city	17.5	23.3	54.8
Waitakere city	10.3	18.0	46.9
Auckland city	39.7	40.4	89.9
Manukau city	17.3	28.7	81.3
Papakura district	3.0	4.7	10.6
Part of Franklin district(1)	2.9	4.9	13.4
Total	98.4	133.8	329.3

(1) The part in Auckland region.
Sources: Census of Population and Dwellings; Population projections

Note: Figures may not sum to stated totals due to rounding. 1991 data based on census usually resident population count. Data for 2006 and 2031 based on estimated resident population. More information is in ~~Notes and sources~~ section.

Certainty and uncertainty

The population aged 65+ for each territorial authority in the Auckland region is projected to more than double between 2006 and 2031. Given that the people who will be 65+ in 2031 were already born in 2006 (the base year of the projections) it is a demographic certainty that there will be a huge increase in the size of the 65+ population. What is unknown is exactly where these people will live.

The projections for the 65+ population assume a continuation of the migration and mortality trends over the 20 years to 2006 for most areas. If the majority of people continue to retire in cities, the projections should be accurate. However, if there is an increase in older people moving from the higher-density city areas to a lower-density more rural lifestyle, the projections may understate changes to the 65+ populations in Rodney and Franklin districts, and overstate changes to the 65+ populations in the four cities of the Auckland region.

Implications

There are implications about the 65+ population in the Auckland region:

- Within the Auckland region there could be over 320,000 people aged 65+ by the year 2031. Of these people, over 40,000 will be 85+. There will be a need for more rest homes and retirement villages, and in-home care services, in the years to come as the size of Auckland's elderly population increases.
- The more stable the geographic distribution of an area is, the easier it is to plan for new services. The rapidly growing population of older people will put increasing pressure on the demand for social services in Auckland.

Related chapters

- Households and families
- Housing
- Population change
- Population mobility

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

The projected data comes from the 2006-base population projections released in December 2007. Projections are based on assumptions about future fertility, mortality, and migration. There are three alternative series produced (low, medium, and high) using different assumptions. The population projections have as a base the estimated resident population at 30 June 2006, and extend to 2031. More information about population projections is on the Subnational Population Projections page, available on www.stats.govt.nz.

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries available on www.stats.govt.nz.

The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

Definition

'Baby boomers' are defined as people born in the years 1946–1965, although the range of the baby boom period varies between sources and between countries.

Usual residence and estimated resident population

Tables 8.1 and 8.2 use the census usually resident population count for the 1991 data, while the data for 2006 and 2031 is based on the estimated resident population. While the source is slightly different to that used in the maps in figure 8.1 (2006 data is based on the census usually resident population count), the effect on the maps is insignificant.

Households and families

Commentary

Overview

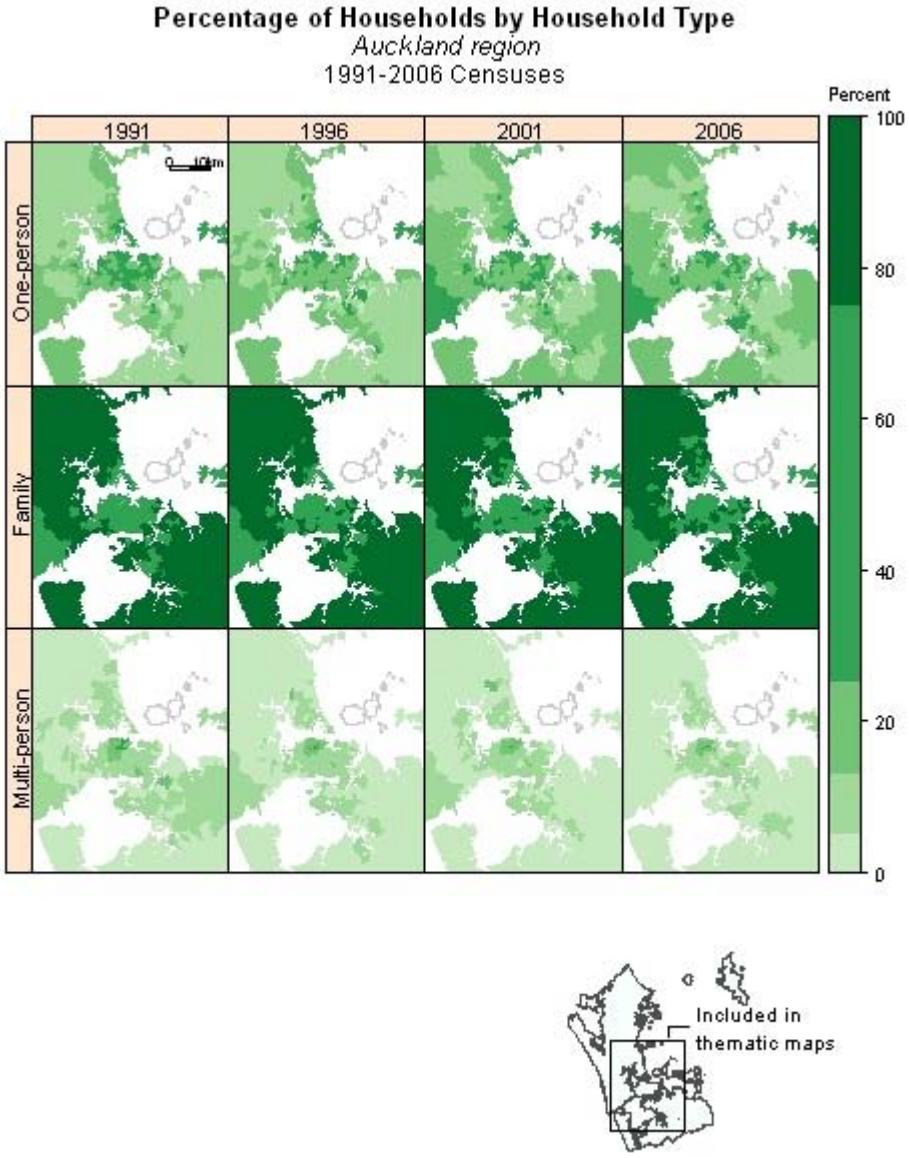
Patterns of household composition and family type in the Auckland region have been remarkably consistent over time. Auckland city and Rodney district have the highest proportion of couple-only families, and the predominant type of couple in both of these areas is an older couple whose children have left home.

Mapping household composition

Figure 9.1 shows the distribution of household composition in the Auckland region from 1991 to 2006. Household composition classifies households according to the relationships between members. There can be one-person households, multi-person households, and family households. Multi-person households are made up of non-family members. The darker green areas of the maps show the prevalence of households composed of one or more families.

For more information contact: toll-free 0508 525 525 info@stats.govt.nz www.stats.govt.nz

Figure 9.1



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

Downloadable version of figure 9.1 (PDF, 8.3MB)

If you do not have Adobe Acrobat Reader, download Adobe Reader for PDFs to view or print this file.

Household composition over time

The distribution of household composition in the Auckland region has remained consistent over time. Table 9.1 shows the historical patterns in household composition for the Auckland region. For the region as a whole, families were 74 percent to 76 percent of all households between 1991 and 2006. The patterns for one-person and multi-person households were also very stable.

Table 9.1

Household Composition in Auckland Region				
1991–2006				
	1991	**1996**	**2001**	**2006**
Household composition	Percent			
One person	19.1	18.4	20.4	19.6
Family	74.4	76.0	73.6	75.0
Multi-person	6.4	5.6	6.0	5.4
Total	100	100	100	100

Source: Census of Population and Dwellings

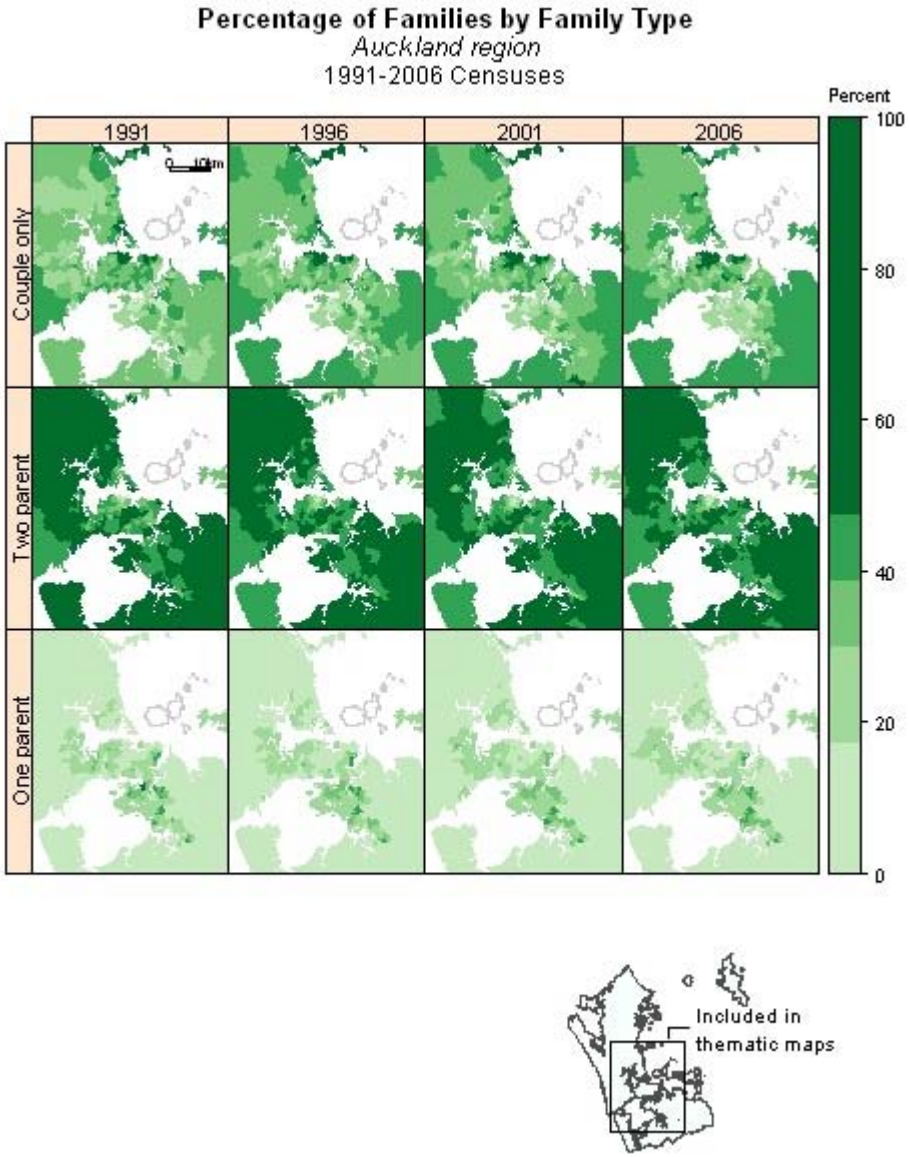
Note: Due to rounding, individual figures may not sum to totals.

The dominance of the 'family' household type is also seen in figure 9.1, which shows that between 1991 and 2006 families were the most common type in all areas of Auckland apart from in the Auckland CBD. The proportion of one-person households was highest in central Auckland from 1991 to 2006, and lowest in parts of Manukau city. Multi-person households are made up of non-family members. From 1991 to 2006 multi-person households were concentrated in Auckland city.

A closer look at families

The ‘family’ household category includes households made up of one or more families. Family type classifies according to the presence or absence of couples, parents, and children. There are three types of family – couple only, two-parent family, and one-parent family. Figure 9.2 shows the percentages of each family type throughout the Auckland region, from 1991 to 2006.

Figure 9.2



More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

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Family type over time

Table 9.2 shows that for the Auckland region as a whole, two-parent families are the most common family type, followed by couples without children. The trend over time has been stable for all three family types.

Table 9.2

Family Type in Auckland Region				
1991–2006				
	1991	1996	2001	2006
Family type	Percent			
Couple only	33.3	34.2	34.8	34.8
Two-parent	48.3	47.5	45.7	46.3
One-parent	18.4	18.3	19.5	18.9
Total	100	100	100	100

Source: Census of Population and Dwellings

Two-parent families were the most common family type in many areas of Auckland, as seen by the darker panels in the middle of figure 9.2. High percentages of two-parent families were scattered throughout North Shore, Waitakere, Auckland, and Manukau cities, and Franklin district.

Auckland city had a high proportion of couple-only families in 1991; in particular, in central Auckland where there were many young, working couples. High proportions of couple-only families were also present in some parts of Rodney district. Further analysis has shown that the predominant type of couple in both areas is an older couple whose children have left home. The pattern of two distinct couple-only family groupings was also seen in the data for other years.

One-parent families were less common than the other two family types. From 1991 to 2006, the highest proportion of one-parent families was in Manukau city and parts of Papakura district. There were slight increases in one-parent families in Waitakere city and Papakura district.

The patterns for both household composition and family type have been stable. Where people live at different stages of their life cycle has remained largely unchanged over time.

Implications

There are a number of implications of household composition and family type in the Auckland region.

- The geographical distribution of households and families remained much more stable between 1991 and 2006 than other social and economic variables considered in this report. This geographical stability is a sociological puzzle, which warrants further investigation.
- People's demand for social services and consumer goods varies according to the types of households and families they live in. For instance, demand for childcare services falls when the number of couple-only families in an area is low. The more stable the geographical distribution of households and families is, the easier it is to plan for new services.

Related chapters

- 0–14 population
- 65+ population
- Housing
- Labour force

Further information

This page is part of Mapping Trends in the Auckland Region, available on http://www.stats.govt.nz/.

Notes and sources

Definitions

The denominator for the household composition calculation is the households in private occupied dwellings, and the denominator for the family type calculation is the families in private occupied dwellings.

More information about how families are classified is in Family type, available on http://www.stats.govt.nz/. More information about how households are classified is in Household composition, available on http://www.stats.govt.nz/.

Data sources

The data are based on the census night population count from the 1991, 1996, 2001, and 2006 population censuses.

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries, available on http://www.stats.govt.nz/.

The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

Further reading

Auckland Regional Council (2007). Housing and Households in the Auckland Region 2006 Auckland Regional Council, 2006 Census series.

Education

Commentary

Overview

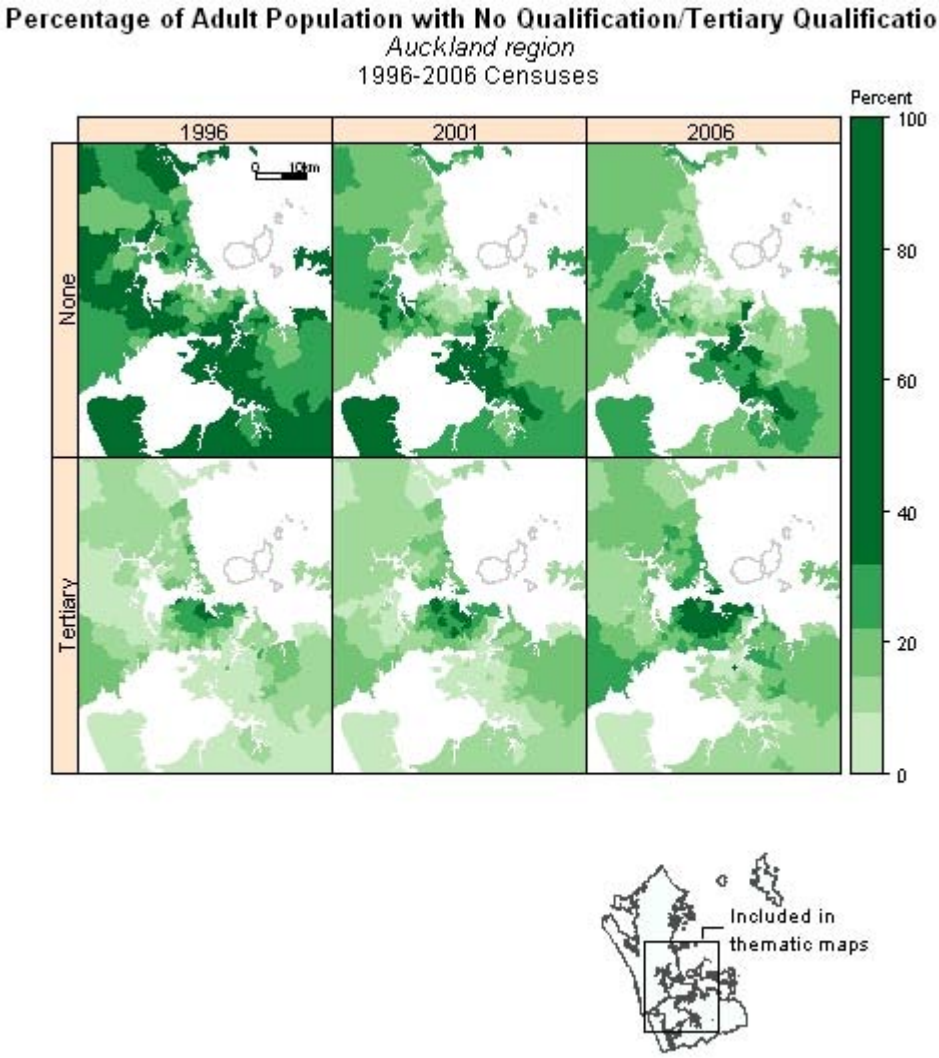
The adult population of the Auckland region has become more qualified over time, and is more qualified than New Zealand as a whole. Improvements in educational attainment have been seen across the whole region.

Mapping educational attainment

Examining how the distribution of the two ends of the educational attainment scale change over time will indicate where areas of the Auckland region have shown higher or lower levels of educational attainment. The top three maps of figure 10.1 show the proportion of the Auckland region's residents with no qualification, and the bottom three show the proportion with a tertiary qualification (bachelor's degree or higher) at the time of the 1996, 2001, and 2006 Censuses. The darker areas indicate higher percentages.

For more information contact: toll-free 0508 525 525 info@stats.govt.nz www.stats.govt.nz

Figure 10.1



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

~~Downloadable version of figure 10.1 (PDF, 4.9MB)~~

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Educational attainment over time

In general, people living in the Auckland region have become more qualified. Across the region, the proportion of adults with no qualification decreased from 34 percent to 20 percent between 1996 and 2006. The top maps in figure 10.1 show this decline was evident in virtually all areas of the Auckland region.

In 1996 there were over 25 area units that had more than 60 percent of adults with no qualification. Most of these areas were in Manukau city, with three in eastern parts of Auckland city and two in Papakura district. In 2006, no areas had more than 60 percent without a qualification.

At the other end of the scale, the proportion of adults with a tertiary qualification increased for the region as a whole, from 12 percent to 20 percent between 1996 and 2006. The bottom maps in figure 10.1 highlight that, while this increase was seen in the majority of area units, the proportion of adults with a tertiary qualification has intensified particularly in Auckland city.

Comparison with New Zealand

Educational attainment also improved across New Zealand from 1996 to 2006. Table 10.1 shows that in both the Auckland region and across New Zealand, the proportion of adults with no qualification fell between 1996 and 2006, while the proportion of adults with a tertiary qualification rose.

Table 10.1

Highest Qualification for Adults		
Auckland region and New Zealand		
1996 and 2006		
	1996	**2006**
	Percent	
No qualification		
Auckland region	34.3	20.3
New Zealand	38.1	25.0
Tertiary qualification		
Auckland region	11.8	19.9
New Zealand	9.5	15.8

Source: Census of Population and Dwellings

In 1996 and 2006, adults in the Auckland region had a higher level of educational attainment than adults across New Zealand as a whole. In addition, the improvement in educational attainment between 1996 and 2006 was slightly more pronounced in the Auckland region than across New Zealand.

In part, higher educational levels in the Auckland region reflect the larger number of international migrants settling in Auckland. They tend to be highly qualified as a result of the migration selection process.

Educational attainment by birthplace

Overseas-born residents in the Auckland region are more highly qualified than New Zealand-born residents. Comparing the highest qualifications of these two groups in 2006 shows that a much higher proportion of overseas-born than New Zealand-born adults had a postgraduate qualification (8 percent and 4 percent, respectively). Postgraduate qualifications include postgraduate diploma or certificate, bachelor's degree with honours, master's degree, and doctorate.

Implications

There are implications of increasing educational attainment in the Auckland region:

- It is important to make sure that the Auckland region remains an attractive place to work and live for skilled overseas migrants. This is particularly relevant in the future, as countries compete for skilled labour. Auckland will need to provide a full range of incentives, including employment opportunities, competitive salaries, and favourable work environments (Auckland Regional Council, 2008).
- These incentives also apply to New Zealand-born residents in the Auckland region. Retaining these people will also be key, in order to take advantage of the increase in educational attainment across the region.

Related chapters

- Income
- Labour force
- Population mobility

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Definitions

The educational attainment data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

More information about this variable can be found on the Qualification – highest, secondary school and post-school page, available on http://www.stats.govt.nz/.

Data sources

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries, available on http://www.stats.govt.nz/.

The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

References

Auckland Regional Council (2008). Employment in the Auckland region 2006 Auckland Regional Council, 2006 Census series.

Income

Commentary

Overview

In 1991, high income areas were concentrated mainly in Auckland city, with a few areas in North Shore city and northern parts of Manukau city. By 2006, high income areas had spread further along the coastal parts of North Shore city, as well as to more rural areas of the Auckland region.

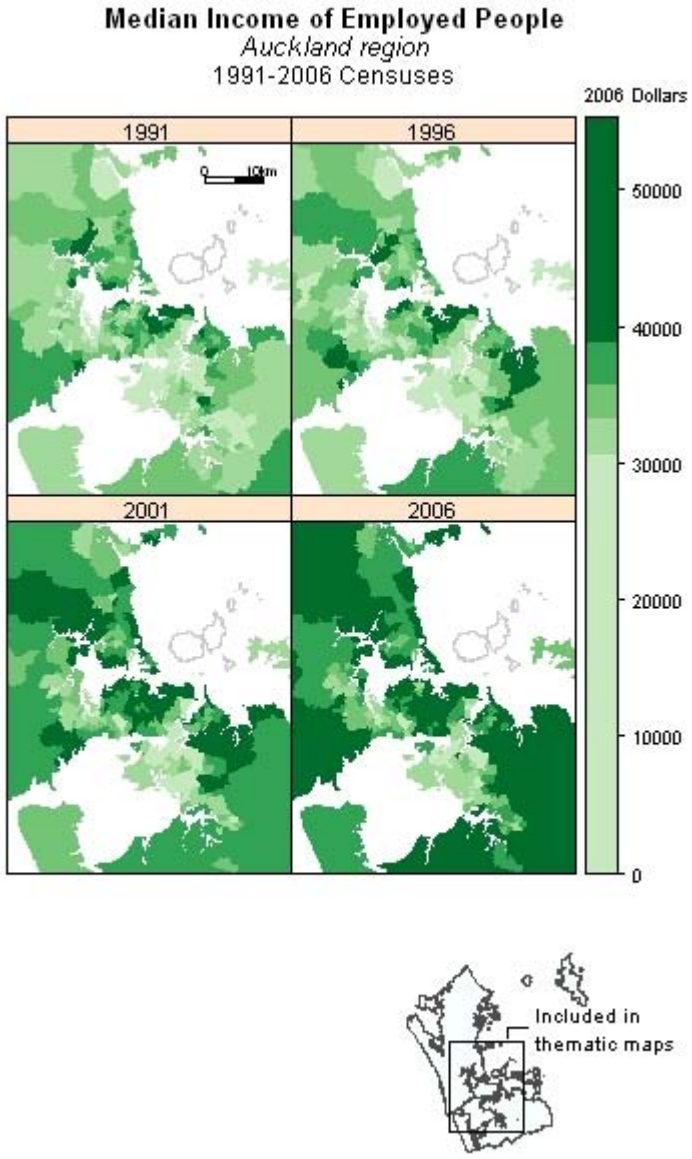
Mapping high income and low income areas

Figure 11.1 shows the real median incomes of area units across the Auckland region, indicating areas of high and low income. The median income (half earn more than this, and half earn less) for each area unit is the midpoint of income values. Median income is an approximate indicator of high and low income areas.

The data used is for people aged 15 years and over who stated that they were employed, either full time or part time, and were wage or salary earners. Darker areas of the maps indicate higher income values.

For more information contact: toll-free 0508 525 525 info@stats.govt.nz www.stats.govt.nz

Figure 11.1



Notes: Income is in 2006 dollars. More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

~~Downloadable version of figure 11.1 (PDF, 3.4MB)~~

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High and low income areas over time

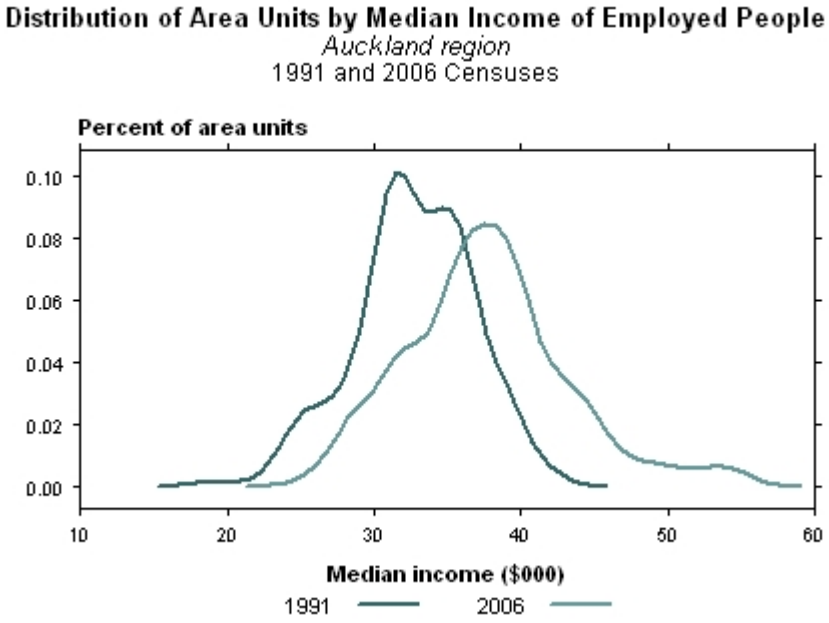
In 1991, high income areas were found in Auckland city, with a few in North Shore and Manukau cities. The income in the majority of areas increased between 1991 and 2006. In 2006, the highest income areas were still in Auckland city, but also extended to more areas of North Shore city. The spread of high income areas has not had a constant gradient from the centre outwards; there have also been more rural areas with high incomes, particularly in 2006.

In both 1991 and 2006, the lowest income areas were in Manukau city, and parts of Papakura district.

Changes in the geographical distribution of income

Has the gap between high income and low income areas changed over time? Figure 11.2 compares the distribution of area units by median income of employed people between 1991 and 2006.

Figure 11.2



Note: Income is in 2006 dollars.

On average, the income of employed people in the Auckland region has increased, as shown by the shift to the right. The distribution has also become wider, showing that the gap between high income and low income areas has grown over time.

In 1991, the income of the wealthiest areas was just above 30 percent more than at the centre of the distribution. In 2006, this gap had risen to almost 50 percent. This is reflected in the longer right-hand tail of the 2006 line, which shows there were a small number of area units with very high incomes.

More information about interpreting this graph is in the Notes and sources section.

Implications

There are a number of implications of rising median income:

- The real median income for employed people has been increasing over time, and is likely to continue rising.
- More investigation is needed into the median incomes of different subgroups (eg breakdown by age, ethnicity, sex). In particular, how has the increase in median income been distributed among these different groups?
- The Auckland Regional Growth Forum identified 'addressing disadvantage' as one of the five sustainability challenges for the Auckland region (Regional Growth Forum, 2007). One of the strategic responses planned is to 'address inequality through targeted interventions in low income neighbourhoods and communities'.

Related chapters

- Commuting
- Education
- Housing
- Labour force

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Definitions

Median income measures the centre of the income distribution. It is calculated by taking the midpoint of income values (half earn more than this, and half earn less). The data used is total personal income for adults (people aged 15 years and over) who stated that they were employed, either full time or part time, and were wage or salary earners. The data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses.

Using the subset of people who were employed accounts for the disparities in areas where there may be a large difference between income and wealth, for example areas with a high proportion of retirees.

Data sources

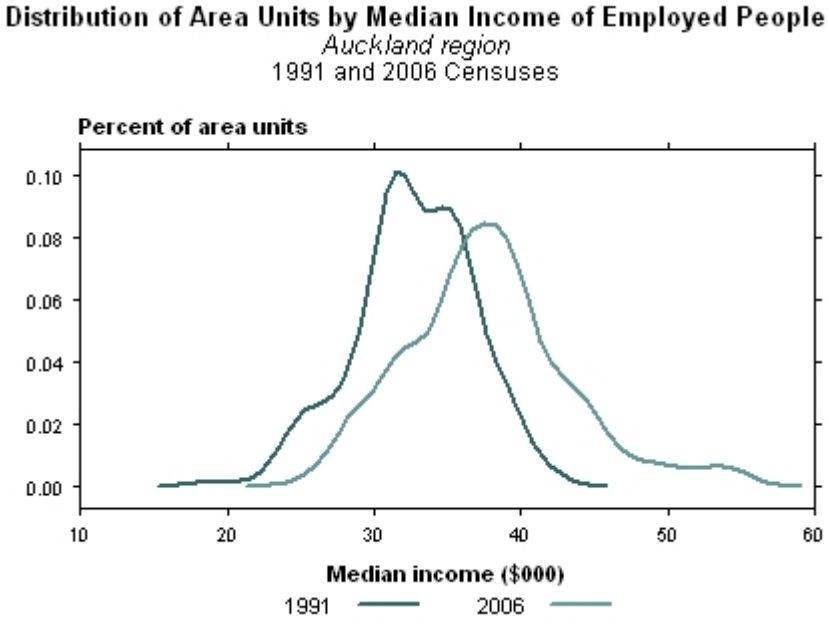
The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities in size. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files used for constructing the maps can be downloaded from Digital Boundaries, available on www.stats.govt.nz.

The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

The Consumers Price Index (June 2006 base) was used to adjust the median income data for 1991, 1996, and 2001, in order to make meaningful comparisons with the 2006 data. More information about the consumers price index can be found on the Consumers price index page, available on www.stats.govt.nz.

Figure 11.2 (reproduced below) is a density plot, and shows the distribution of area units by median income of employed people. The area under each curve adds up to 100 percent.

Figure 11.2 (reproduced)



Note: Income is in 2006 dollars.

References

Regional Growth Forum (2007). Auckland Sustainability Framework, Auckland Regional Council.

Commuting

Commentary

Overview

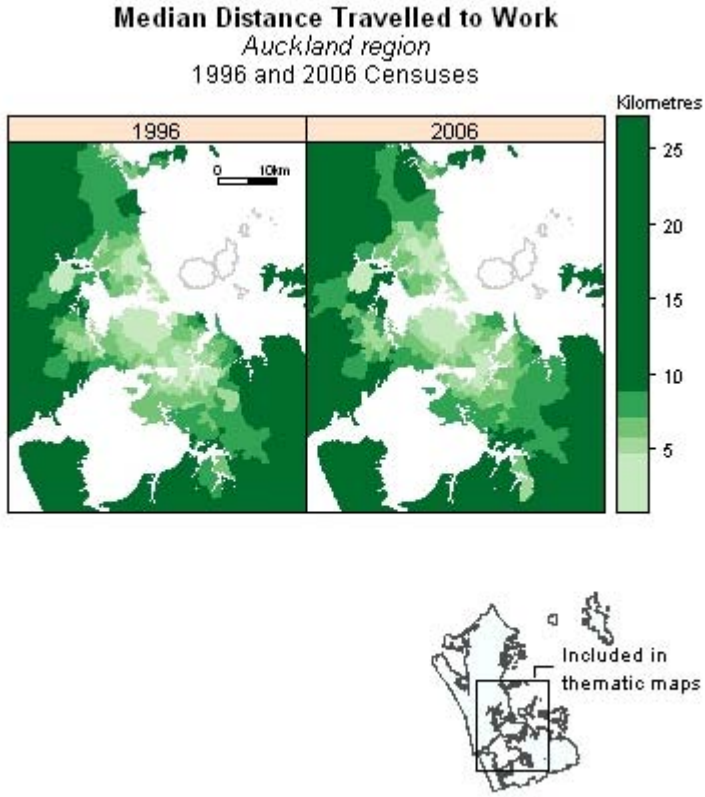
Travel to work by public transport, or by walking, jogging, or biking, has been increasing in central Auckland and North Shore city. However, it has been decreasing in other parts of the Auckland region.

Mapping commuting

Figure 12.1 shows how far people travel to work, with lighter shades indicating shorter distances. In areas coloured with the lightest shade, median distances travelled are less than five kilometres; in areas coloured with the darkest shade, median distances range from nine to 27 kilometres. (A median distance of, for instance, five kilometres means that half of all commuters travel less than five kilometres and half travel more.)

For more information contact: toll-free 0508 525 525 info@stats.govt.nz www.stats.govt.nz

Figure 12.1



Note: More information about interpreting the maps can be found in the ~~Interpreting the maps~~ chapter.

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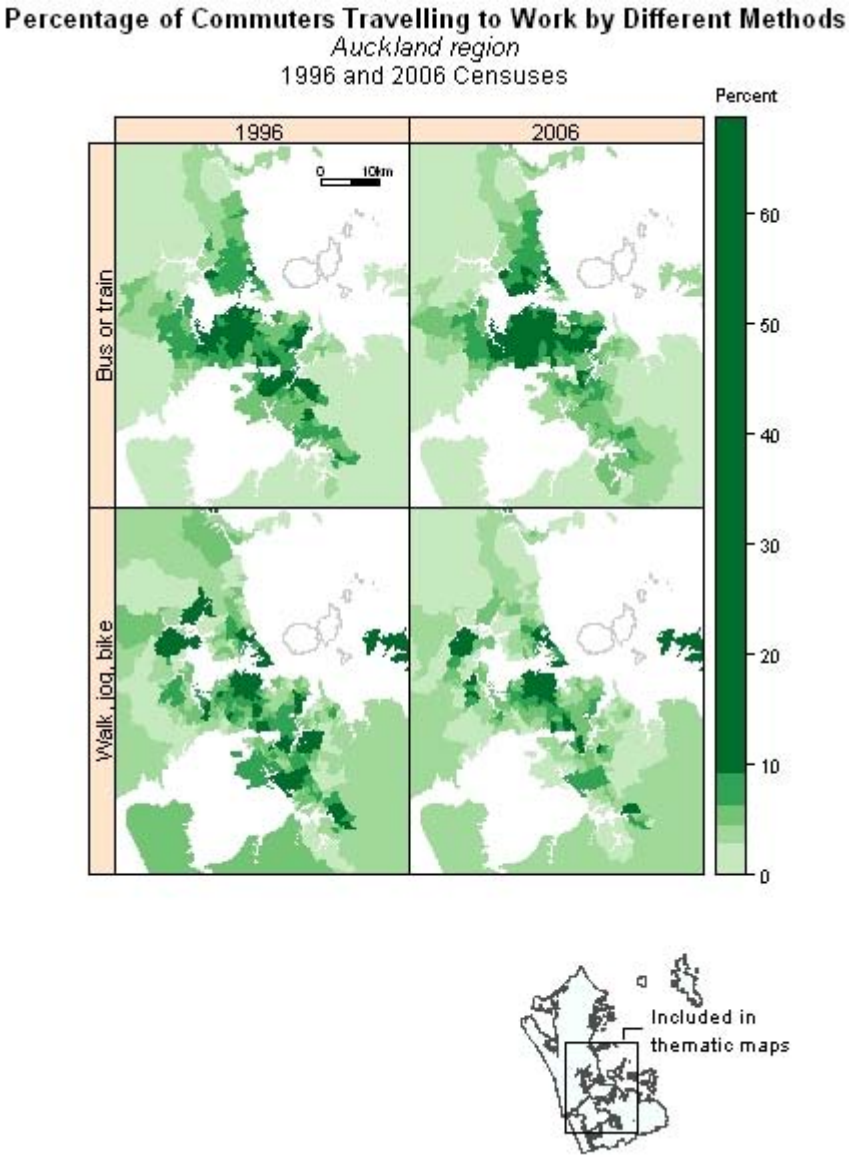
Figure 12.2 shows the modes of transport for people who commuted to work on census day. The upper maps show the percentage of people who took a bus or train; the lower maps show the percentage who walked, jogged, or biked.

Figure 12.2



Note: More information about interpreting the maps can be found in the ~~Interpreting the maps~~ chapter.

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Trends in commuting

In 1996, short commutes were common in central Auckland, North Shore city, and northern Manukau. Ten years later, short commutes were still common in central Auckland and North Shore city, but less so in Manukau city.

Use of public transport, and walking, jogging, or biking, has been increasing in Auckland and North Shore cities. It has, however, been falling in Manukau city. Over the Auckland region as a whole, use of buses and trains increased slightly between 1996 and 2006, up from 6.7 percent of commuters to 6.9 percent. Walking, jogging, and biking decreased slightly, down from 6.1 percent to 5.9 percent.

The Auckland Regional Growth Strategy aims to promote housing along transport routes, and consolidate growth within the existing metropolitan area (Regional Growth Forum, 2007).

Implications

There are implications for transport in the Auckland region:

- Although a long-term decline in public transport use has recently been reversed, overall usage remains low. Increases in parts of central Auckland and North Shore city have been offset by decreases elsewhere.
- Commutes are shorter in areas of high population density, and more people walk, bike, and use public transport.

Related topics

- Graphical summary
- Labour force
- Population density

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Definitions

Commuting distances were estimating by calculating the distance between the centre of the area unit where respondents live and the centre of the area unit where they work. This is an approximation, but it should be a good one for urban dwellers, since urban area units are small.

In the calculations of bus and train use, and walking, jogging, and biking, commuters are defined as employed people aged 15 and over who do not work at home.

Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 population censuses.

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries on the Statistics NZ website.

The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

References and further reading

References

Regional Growth Forum (2007). Growing Smarter: The Auckland Region in the 21st Century. An Evaluation of the Regional Growth Strategy Auckland Regional Council.

Further reading

Goodyear, R K (in press). "Has commuting to the cities of Auckland increased since 1996?" Draft report, Statistics New Zealand.

Housing

Commentary

Overview

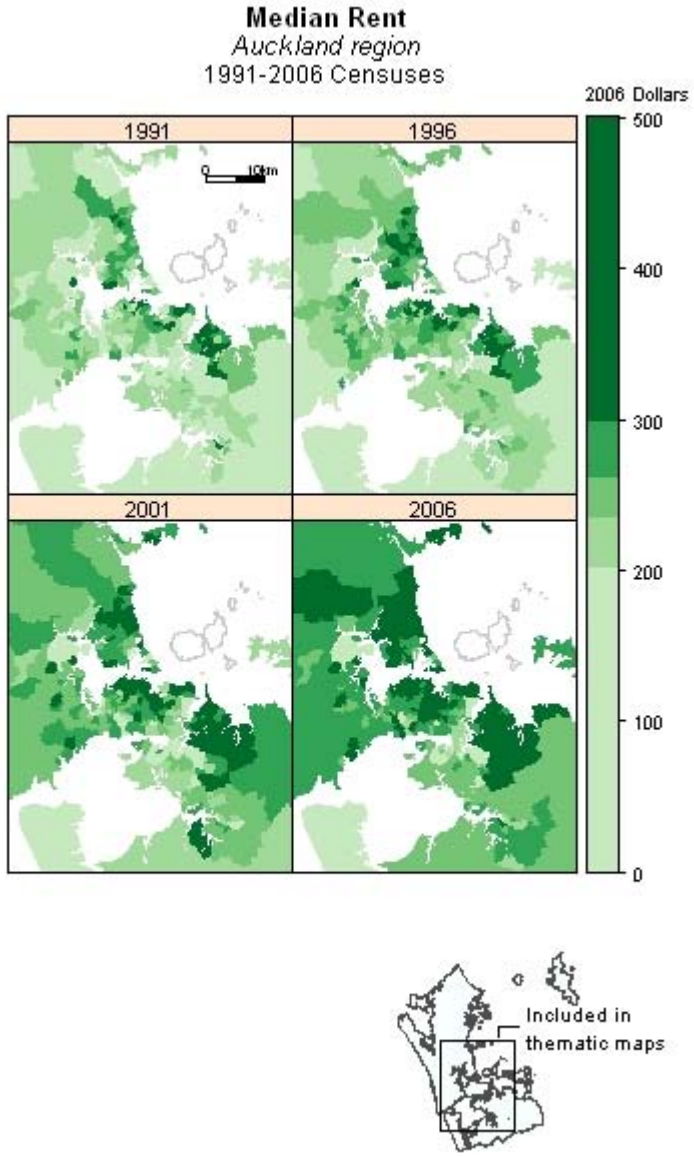
In 2006, areas of high rent were concentrated mainly in Auckland and North Shore cities, and in parts of Manukau city, particularly near the northern coast. Levels of home ownership have been highest in the outer districts and lowest in Auckland city; however, a lower proportion of people own their home now than in the past. Multi-unit dwellings are mainly found in the Auckland region's cities, and in particular within central Auckland.

Mapping high and low rent areas

Figure 13.1 shows the median rent for area units in the Auckland region. Median rent is one aspect of housing affordability. The median rent for each area unit is the midpoint of weekly rent values (half pay more than this, and half pay less) for all households that did not own their dwelling. Median rent is an approximate indicator and the data should be used with caution. Darker patches on the maps indicate higher rents. Note that this data has not controlled for the number of people living in each dwelling.

For more information contact: toll-free 0508 525 525 info@stats.govt.nz www.stats.govt.nz

Figure 13.1



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

~~Downloadable version of figure 13.1 (PDF, 3.8MB)~~

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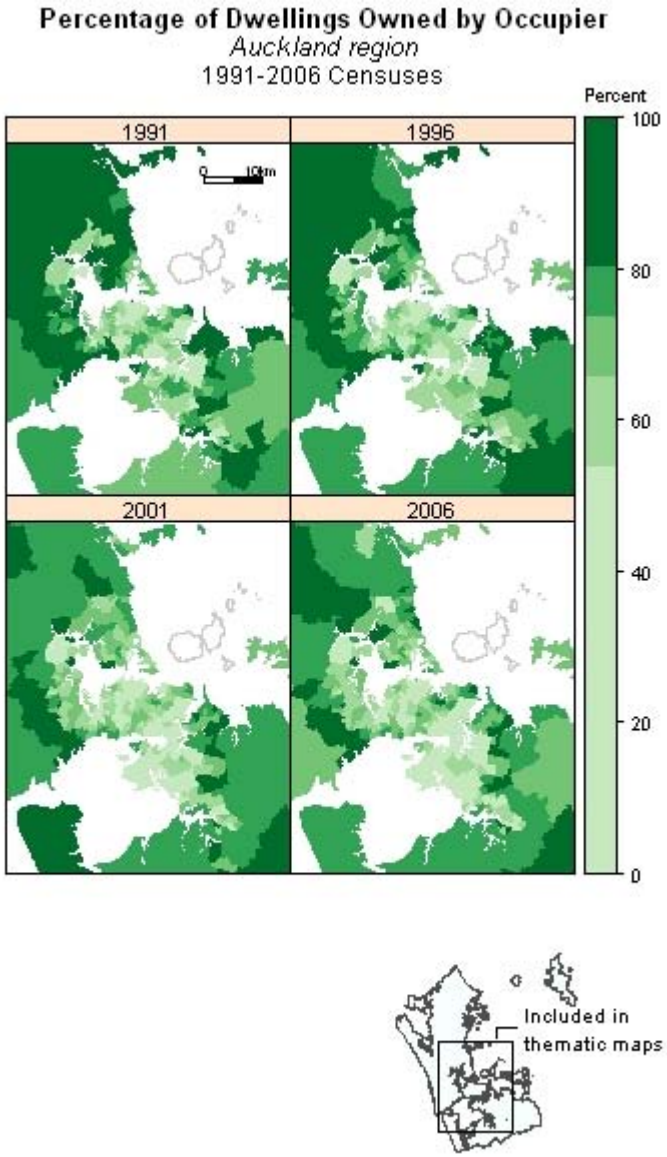
High and low rent areas over time

In 1991, areas of high rent were found in northern parts of Manukau city, with some areas in Auckland and North Shore cities also having high rents. From 1991 to 2006, the median rent in the vast majority of area units increased. In 2006, areas of high rent were more concentrated in Auckland city, the northern parts of Manukau city, and much of North Shore city. The largest increases in median rent between 1991 and 2006 were in areas of Auckland city, and in a few area units in southern Manukau city.

Home ownership

Figure 13.2 shows the percentage of occupied private dwellings that are owned by their occupier, for 1991 to 2006. Darker patches show higher proportions of owner-occupier dwellings.

Figure 13.2



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

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Between 1996 and 2006, Rodney district had the highest levels of home ownership. In 1991 Waitakere city was the highest. Over time there has been a decrease in home ownership; this is evident in the maps, which show that most area units in the Auckland region become lighter in colour over time. In 1991 there were 20 area units with more than 90 percent of dwellings owned by their occupier. By 2006 no area units had more than 90 percent of dwellings owned by their occupier.

Home ownership in the Auckland region as a whole has declined; the percentage of owner-occupier dwellings decreased from 73 percent to 64 percent between 1991 and 2006. This decrease is similar to the figures for New Zealand, which fell from 74 percent to 67 percent over the same period.

The percentage of occupied private dwellings owned by their occupier fell in all territorial authorities of the Auckland region between 1991 and 2006. Table 13.1 shows the change in home ownership for each territorial authority.

Table 13.1

Percentage of Owner-occupied Dwellings in Auckland Region				
By territorial authority				
1991–2006				
	1991	**1996**	**2001**	**2006**
Territorial authority	Percent			
Rodney district	81.0	78.0	74.5	73.6
North Shore city	79.8	75.3	69.1	70.3
Waitakere city	81.1	75.4	69.3	67.6
Auckland city	62.2	60.0	56.1	56.1
Manukau city	75.7	71.1	65.3	63.0
Papakura district	74.9	69.3	65.9	63.2
Part of Franklin district(1)	75.3	74.1	73.6	72.4

(1) Part in the Auckland region.

Source: Census of Population and Dwellings

Auckland city had the lowest levels of home ownership between 1991 and 2006, with 56 percent of dwellings owned by their occupier in 2006. In Auckland city, especially central Auckland, factors such as the high number of students and young professionals, and increases in house prices, are likely to have contributed to the low levels of home ownership over the period.

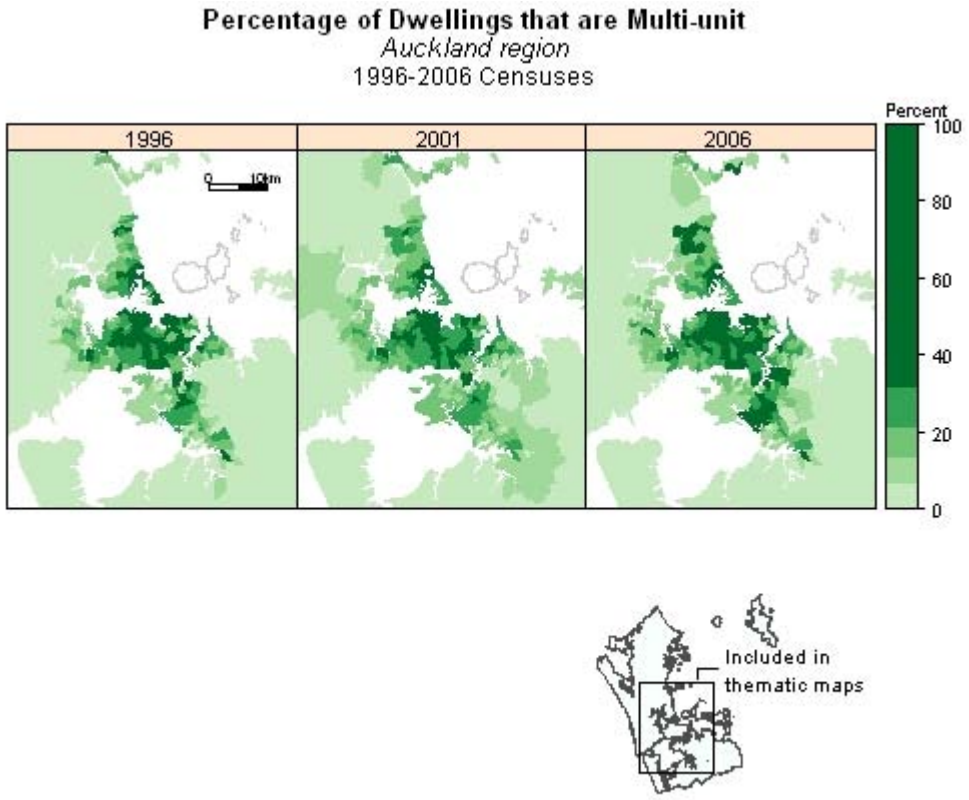
Research by the Auckland Regional Council shows that there are also differences in levels of home ownership by ethnicity. For example, with the exception of the Fijian ethnic group, less than one-quarter of all Pacific groups owned or partly owned their dwelling (Auckland Regional Council, 2007a). This may be partly due to the younger age structure of the Pacific ethnic group.

Multi-unit dwellings

Occupied dwellings can be classified according to their structure and function. Multi-unit dwellings are occupied private dwellings that are physically attached to at least one other residential dwelling. This includes flats, units, townhouses, apartments, or houses joined together. Multi-unit dwellings are a rough indicator of medium-high density housing.

Figure 13.3 shows the percentage of dwellings in each area unit that are multi-unit dwellings.

Figure 13.3



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

~~Downloadable version of figure 13.3 (PDF, 3.2MB)~~

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The maps show that area units with high proportions of multi-unit dwellings are mainly in the four cities of Auckland region. In particular, area units in central parts of Auckland city have had consistently higher percentages of dwellings being multi-unit than anywhere else in the region. The largest increases between 1996 and 2006 were in northern parts of North Shore city and some area units in Manukau city, Auckland city, Waitakere city, and Rodney district.

Areas with higher proportions of multi-unit dwellings have a lower proportion of people aged 0–14 years living in the area. Conversely, people aged 65 years and over are more evenly distributed throughout areas with high and low proportions of multi-unit dwellings. More information is in the Notes and sources section.

Implications

There are implications for housing in the Auckland region:

- Median rent is likely to continue rising in the future. The Auckland Regional Council estimates that for renting households with a household income of $20,000 or less, about two-thirds were paying above an 'affordable' level of rent (estimated at 30 percent of gross income) in 2006. (Auckland Regional Council, 2007b).
- There is a move away from owner-occupied detached dwellings, and this is likely to continue in the future.

Related chapters

- Commuting
- Income
- Population density

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Definitions

Median rent measures the centre of the rent distribution. It is calculated by taking the midpoint of rent values (half pay more than this, and half pay less). The data used is weekly rent paid by households who did not own their dwelling.

Housing tenure refers to the nature of a household's occupancy in a private dwelling. The data used is the percentage of occupied private dwellings that are owned by their occupier. In the 1991 data, the categories 'provided free' and 'rented or leased' were treated as equivalent to 'not owned' in other years.

Due to changes in the treatment of dwellings held in a family trust, care should be taken when looking at housing tenure over time. In the 2006 Census, home ownership through family trusts was explicitly identified. In the data used for this chapter, dwellings in a family trust were aggregated with the owner-occupier category.

More information about the housing tenure variable is on the Tenure of household page on www.stats.govt.nz.

Data sources

The data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses. The Consumers Price Index (June 2006 base) was used to adjust the median rent data for 1991, 1996, and 2001, to enable meaningful comparisons with the 2006 data. More information about the consumers price index can be found on the Consumers price index page on www.stats.govt.nz.

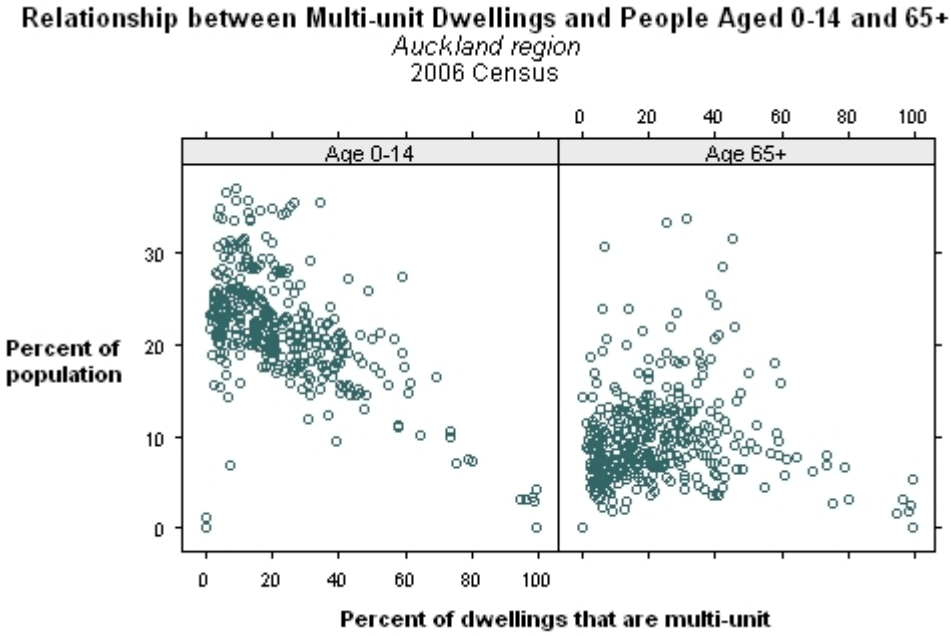
The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries on www.stats.govt.nz.

The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the maps chapter.

Multi-unit dwellings

Figure 13.4 shows the relationship between the percentage of multi-unit dwellings in an area unit, and the percentage of people aged 0–14 years, and 65 years and over.

Figure 13.4



The left-hand scatter plot shows a negative relationship between the percentage of dwellings in an area unit that are multi-unit, and the percentage of the population that are aged 0–14 years. That is, areas with a high percentage of multi-unit dwellings have a low proportion of children living there. At the other end of the age scale, there is no relationship between the percentage of multi-unit dwellings in an area unit and the percentage of the population aged 65 and over living there.

References and further reading

References

Auckland Regional Council (2007a). Pacific Peoples in the Auckland Region 2006 Auckland Regional Council, 2006 Census series.

Auckland Regional Council (2007b). Housing and Households in the Auckland Region 2006 Auckland Regional Council, 2006 Census series.

Further reading

Statistics New Zealand (2005). Downtown Dwellers 2005: New Zealand's CBD Residents.

Statistics New Zealand. Statistics on Housing Affordability.

Labour force

Commentary

Overview

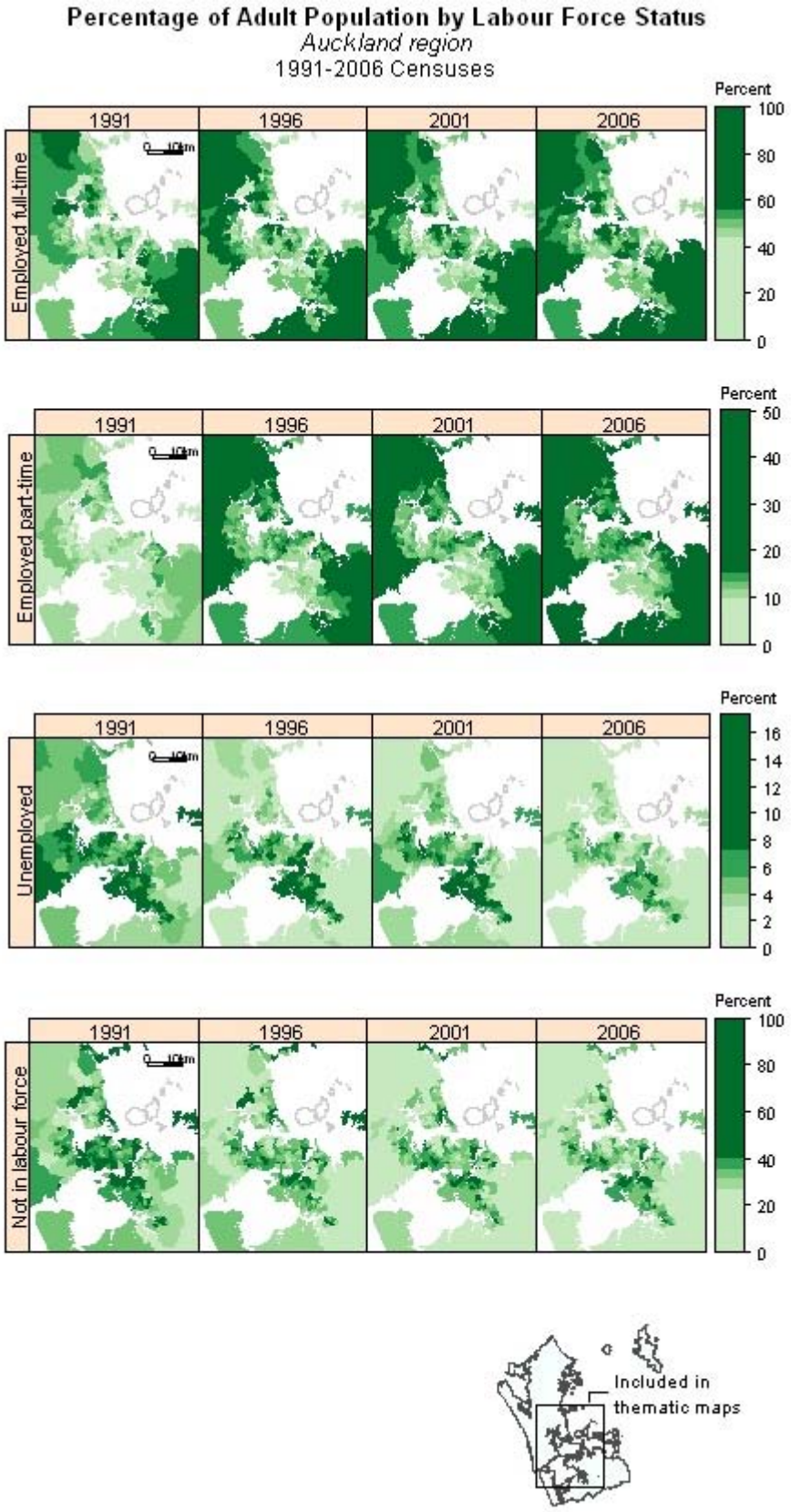
The period from 1991 to 2006 saw increasing percentages of the adult population (people aged 15 years and over) in the full-time and part-time labour force for most areas in the Auckland region. Areas with the highest percentage of full-time workers were in Auckland city, while areas with the highest percentage of people working part time were more rural. Over the same period, the percentages either unemployed or not in the labour force decreased in most areas.

Mapping labour force status

Adults can be classified as being employed full time or part time, being unemployed, or not in the labour force. Figure 14.1 shows the percentages of the adult population in each labour force status from 1991 to 2006.

For more information contact: toll-free 0508 525 525 info@stats.govt.nz www.stats.govt.nz

Figure 14.1



Note: More information about interpreting the maps is in the ~~Interpreting the maps~~ chapter.

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Changes in labour force status over time

Table 14.1 shows changes in the number and the percentage of adults in each labour force status from 1991 to 2006 for the Auckland region. The number of people working full time or part time increased, both numerically and as a percentage of the total population, in most areas of the region from 1991. The 'employed full time' and 'employed part time' maps in figure 14.1 illustrate this by showing most areas gradually becoming darker from 1991 to 2006.

Table 14.1

Adult Population in Auckland Region by Labour Force Status				
1991–2006				
	1991	**1996**	**2001**	**2006**
Labour force status	(000)			
Employed full time	338.0	385.7	422.9	495.1
Employed part time	66.5	102.3	110.8	132.6
Unemployed	47.2	39.7	45.4	37.3
Not in the labour force	277.9	262.0	276.8	305.0
Total	729.6	789.7	856.0	970.0
	Percent			
Employed full time	46.3	48.8	49.4	51.0
Employed part time	9.1	12.9	12.9	13.7
Unemployed	6.5	5.0	5.3	3.8
Not in the labour force	38.1	33.2	32.3	31.4

Source: Census of Population and Dwellings

In 2006, areas with the highest percentage of full-time workers were in Auckland city, while areas with the highest percentage of people working part time were generally more rural.

South-east Auckland city and a large part of Manukau city had the lowest percentage of part-time workers, a continuation of the trend from 1991. These areas had the highest percentage of unemployed in 2006.

The percentage of people who were unemployed fell for the vast majority of areas in the Auckland region between 1991 and 2006. Unemployment in areas such as Otara fell from almost 14 percent in 1991 to below 8 percent in 2006.

The percentage who were not in the labour force decreased in a large number of areas in the Auckland region between 1991 and 2006. The retirement areas of Algies Bay, Orewa, and Pigeon Mountain had the highest proportion of their population not in the labour force in 2006. Areas in and around Otara and Mangere have consistently had high proportions of their population not in the labour force.

Labour force projections

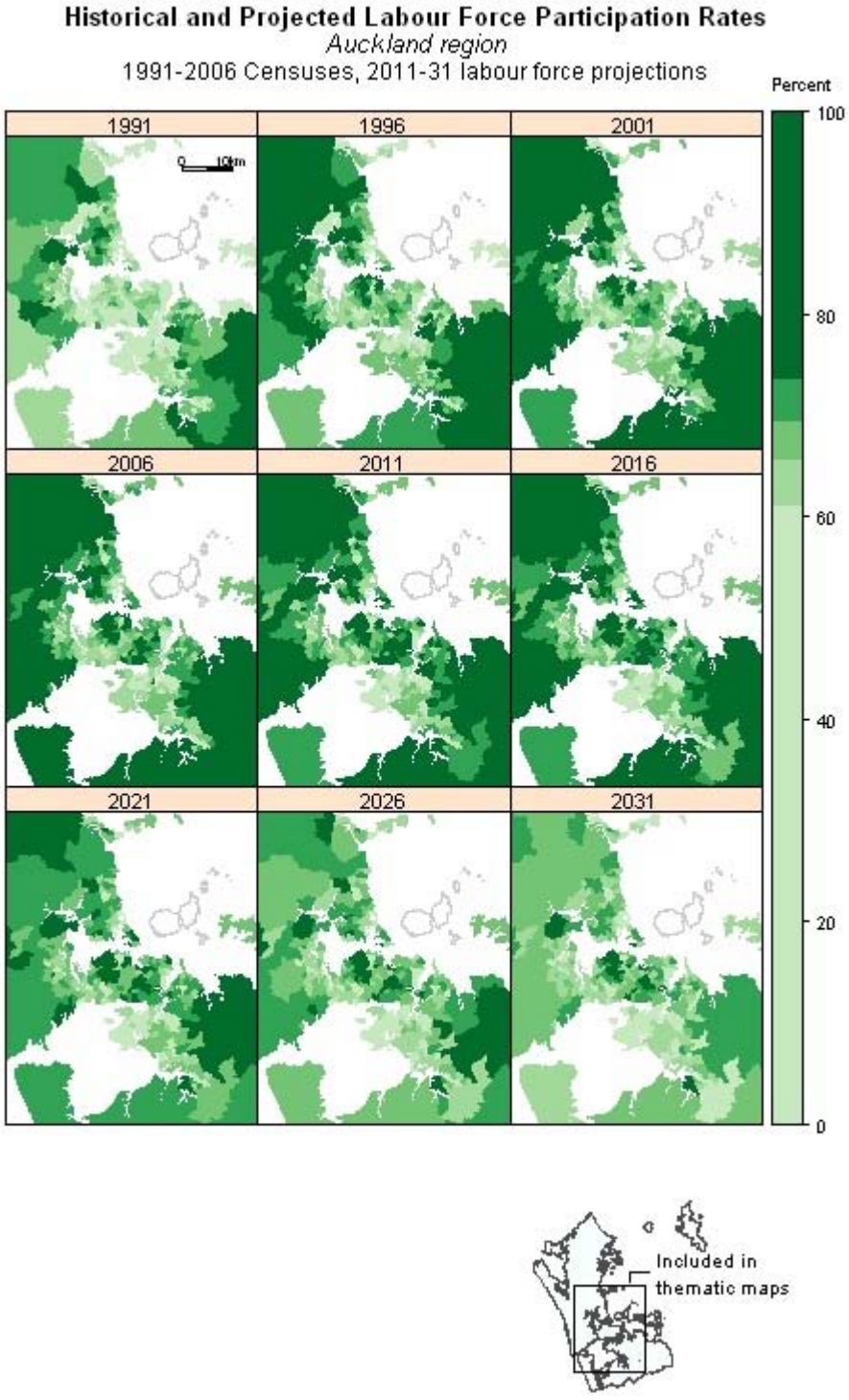
Official labour force projections produced by Statistics NZ are only derived for the country as a whole. Subnational labour force projections are derived in response to requests from individual clients. The subnational labour force projections used in this report were produced specifically for this project and are not part of the official projection series produced by Statistics NZ.

The Auckland region's labour force could increase from 732,000 in 2006 to over one million people in 2031, based on the medium-variant projections. This is an increase of 294,000 or 40 percent. The labour force includes people who work either full time or part time, or are unemployed and looking for work.

The projected percentage increase in the labour force is similar to the projected percentage increase of the total population for the Auckland region between 2006 and 2031. The same relationship also applies with the region's territorial authorities. This is not too surprising, because for most of the projection period over 60 percent of the population is in the main working-age group (15–64 years).

Figure 14.2 shows the historical labour force participation rates (for those aged 15 years and over), as well as the projected rates to 2031. Darker areas on the maps identify higher labour force participation rates. More detail about the construction of the labour force projections is in the Notes and sources section.

Figure 14.2



Note: More information about interpreting the maps is in the Interpreting the maps chapter.

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Figure 14.2 shows that in the decade from 1996 to 2006 labour force participation was high in the outer areas of the Auckland region. However, from 2011 to 2031 these areas become lighter in colour, meaning a lower percentage of the adult population will be in the labour force in the future. Dark patches are evident in central Auckland from 1996 onwards. This area has a relatively young population with a high percentage in the labour force. Areas in western parts of Manukau city also have a youthful age structure, but significantly lower percentages of the population in the labour force. Their ongoing lower labour force participation rates mean that these area units remain among the lightest coloured in the maps over time.

Implications

There are a number of implications about the Auckland region's labour force:

- Changes in age-specific labour force participation rates, as well as changes to the age structure of the population, will affect the age structure of the labour force. The labour force participation rate for those aged 65+ increased from 9.2 percent in 1996 to 17.1 percent in 2006 (Statistics New Zealand, 2007). Further increases for this age group are assumed. Combine this with an ageing population and the future will see a far greater number of people aged 65+ in the labour force.
- The labour force participation rate for the 65+ population is significantly lower than for those aged 15–64 years. Areas with a higher percentage of the population reaching age 65 in the future are likely to have a smaller proportion of the adult population in the labour force.
- Central Auckland has undergone large changes in its labour force participation, from having the lowest participation rates in 1991 to among the highest in 2006. Changes in the characteristics of this area seem likely to continue, as the projections of labour force participation show.

Related chapters

- 65+ population
- Education
- Households and families
- Income
- Population change

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Definitions

Full-time employed: Anyone in the working-age population (people aged 15 years and over) who usually works 30 or more hours per week.

Part-time employed: Anyone in the working-age population who usually works fewer than 30 hours per week.

Unemployed: Anyone in the working-age population who during their reference week were without a paid job, were available for work and:
(a) had actively sought work in the past four weeks ending with the reference week, or
(b) had a new job to start within four weeks.

Not in the labour force: Any person in the working-age population who is neither employed nor unemployed. For example, this category includes:

- retired people
- people with personal or family responsibilities, such as unpaid housework and childcare
- people attending educational institutions
- people permanently unable to work due to physical or mental disabilities
- people who were temporarily unavailable for work in the survey reference week
- people who are not actively seeking work.

Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 population censuses.

The labour force projections used in this report were produced specifically for this project and are not part of the official projection series produced by Statistics NZ. The labour force projections are derived by applying assumed labour force participation rates to a projected population by age and sex. (See 'Construction of labour force projections' below.)

The projected data comes from the 2006-base population projections released in December 2007. Projections are based on assumptions about future fertility, mortality, and migration. There are three alternative series produced (low, medium, and high) using different assumptions. The population projections have as a base the estimated resident population at 30 June 2006, and extend to 2031. More information about population projections is on the Subnational Population Projections page on the Statistics NZ website.

The maps display data at area unit level. Area units are non-administrative areas that are in between meshblocks and territorial authorities. They generally coincide with suburbs (in urban areas) and rural neighbourhoods. The Auckland region is made up of 399 area units, while there are 1,927 area units throughout New Zealand. Digital boundary files, used for constructing the maps, can be downloaded from Digital Boundaries on the Statistics NZ website.

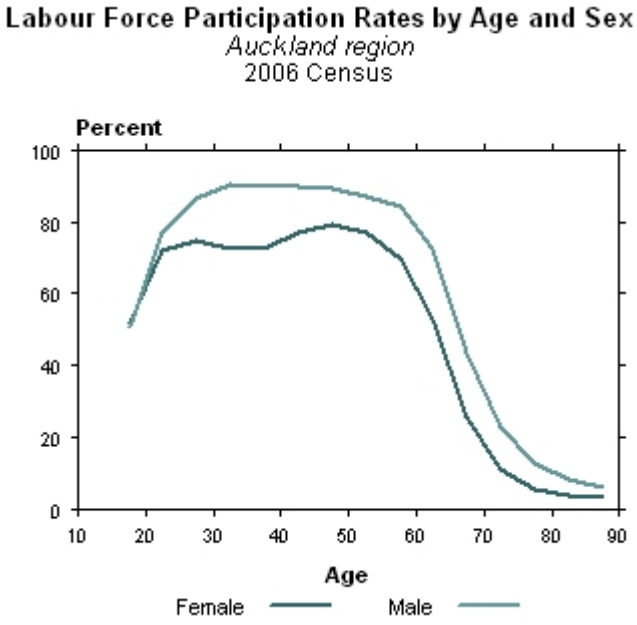
The Auckland region is one of 16 regions, which are aggregations of area units governed by regional councils. More information about the geographical hierarchy of areas and the maps is in the Interpreting the mapschapter.

Construction of labour force projections

1. Calculate labour force participation rates in 2006, by age, sex, and area unit

The labour force participation rate is the proportion of working-age people who are in the labour force. Some small area units had age-sex groups with no members in 2006, and hence no labour force participation rate. These age-sex groups were assigned the Auckland-wide average participation rates for that age and sex.

Figure 14.3



2. Assume that, over the period 2006–31, each area unit keeps the same age-sex-specific labour force participation rates that it had in 2006

It is difficult to construct realistic scenarios with changing rates for the 388 highly diverse area units in the territorial authorities of the Auckland region.

3. Multiply the projected number of people in each age-sex group by the labour force participation rate for that age-sex group to obtain the number of people in the labour force

This is done separately for each area unit, for each year. The area unit population projections are described in the chapter on population growth. The projected labour force in each age-sex group for each area unit is then prorated to be consistent with the medium-variant labour force projections for the respective territorial authorities in the Auckland region.

4. Calculate an overall labour force participation rate for the area unit

Divide the total number of people in the labour force by the total number of working-age people, to obtain an overall labour force participation rate. This is done separately for each area unit, for each year.

References and further reading

References

Statistics New Zealand (2007). New Zealand's 65+ Population: A statistical volume (2007) Statistics New Zealand.

Further reading

Auckland Regional Council (2008). Employment in the Auckland region 2006 Auckland Regional Council, 2006 Census series.

Graphical summary

Commentary

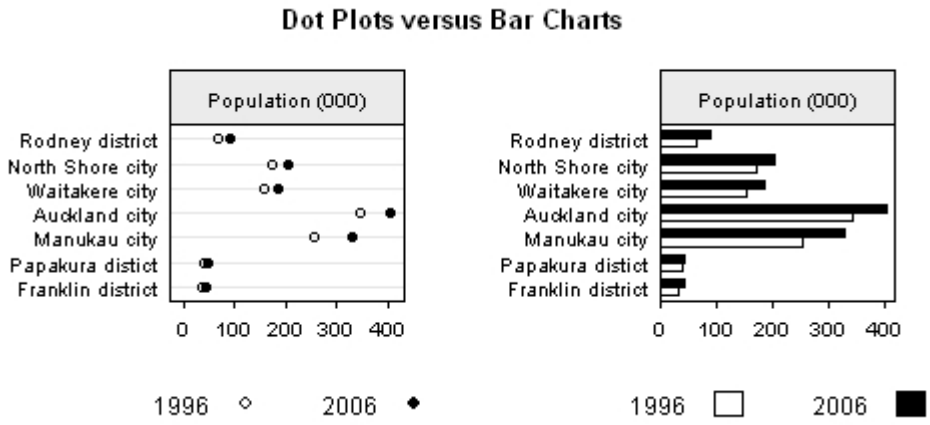
Overview

Other chapters in this report have each considered a single topic. This chapter draws together data for multiple topics in a single graphic. The graphic compares the seven territorial authorities making up the Auckland region, using 15 demographic, social, and economic indicators.

Interpreting dot plots

The data are presented below using dot plots (Cleveland, 1994). Dot plots convey the same information as bar charts, but more efficiently. Figure 15.1 shows a dot plot and the bar chart equivalent.

Figure 15.1



Graphical comparison of Auckland's territorial authorities

The Auckland Regional Council area contains seven territorial authorities. The Interpreting the maps chapter has a map of the territorial authority boundaries. Franklin district falls partly within the area of the Waikato Regional Council, and partly within the area of the Auckland Regional Council. This chapter, like the rest of the report, only shows data for the parts of Franklin district that fall within the Auckland Regional Council area.

Figure 15.2 brings together 15 demographic, social, and economic indicators. The hollow dots show data from the 1996 Census and the solid dots show data from the 2006 Census. Definitions for the indicators are in table 15.1.

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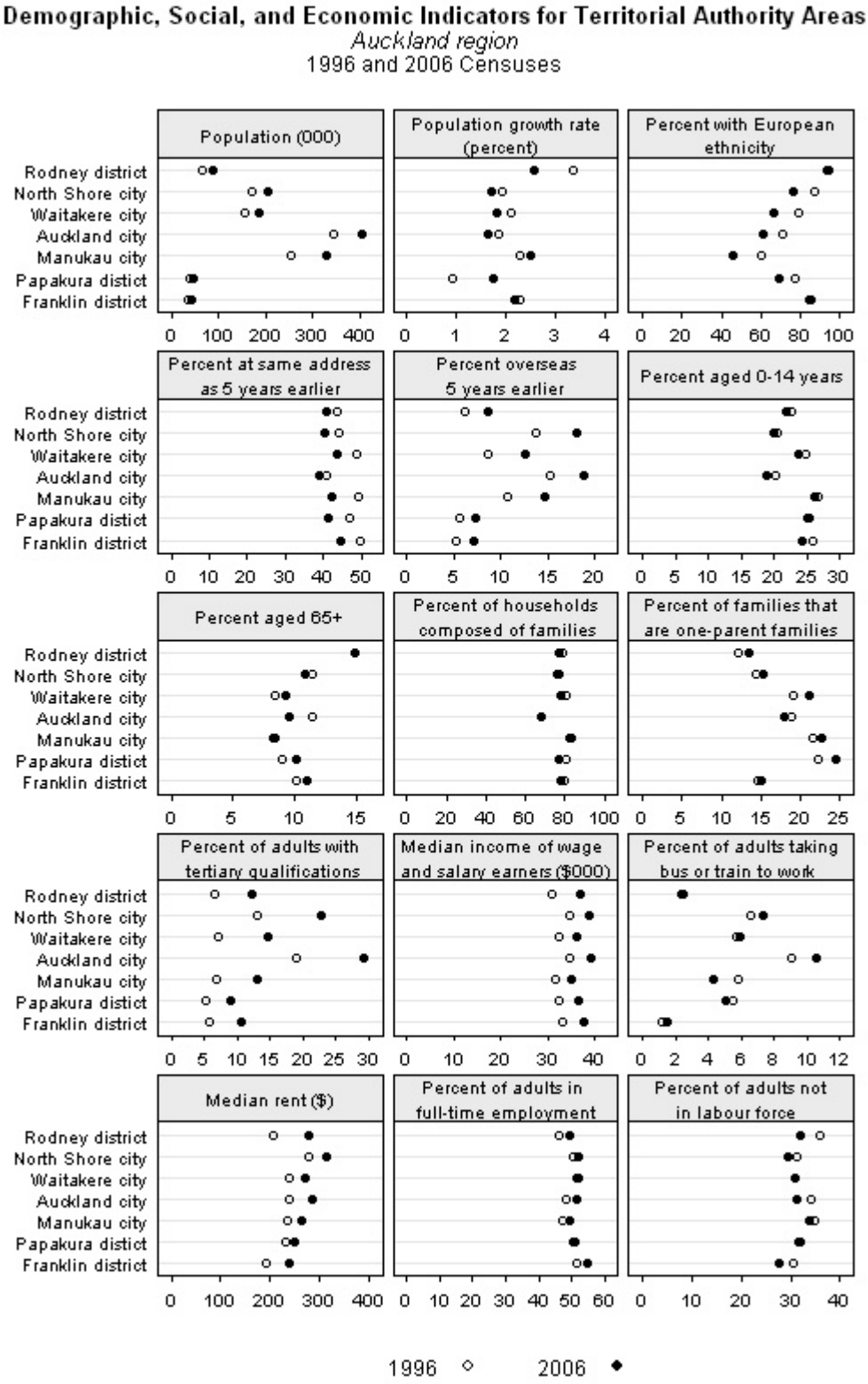
Figure 15.2



Source: Census of Population and Dwellings

Note: 'Franklin district' only includes parts within the Auckland Regional Council area.

Table 15.1

Definitions of Indicators Used in Figure 15.2	
Indicator	**Definition**
Population	Census usually resident population count
Population growth rate	Annual percentage growth rate of the usually resident population
Percent with European ethnicity	Percentage of population who reported having a 'European' ethnicity (which includes 'New Zealand European') in the census
Percent at same address as 5 years earlier	Percentage of population who did not change usual residence in the past five years
Percent aged 0–14	Percentage of population aged less than 15 years
Percent aged 65+	Percentage of population aged 65 years or more
Percent of households composed of families	Percentage of households that included at least one family, where a family is a couple, a couple with children, or a single parent and children
Percent of families that are one-parent families	Percentage of families (see above) consisting of a single parent and children
Percent of adults with tertiary qualifications	Percentage of people aged 15 and over with bachelor's degree or higher
Median income of wage and salary earners	The median (half earn more, half earn less) total personal income of wage and salary earners aged 15 and over, in 2006 dollars
Percent of adults taking bus or train to work	Percentage of employed people aged 15 and over who reported taking the bus or train to work on census day
Median rent	The median (half pay more, half pay less) weekly rent paid by households that rent their dwellings, in 2006 dollars
Percent of adults in full-time employment	Percent of population aged 15 and over who worked at least 30 hours in the week before the census
Percent of adults not in labour force	Percent of population aged 15 and over who were not employed and not looking for work

Highlights

- Auckland city and North Shore city have experienced declines in the percentage of the population aged 0–14 years **and** the percentage aged 65 and over.
- All territorial authority areas have seen falls in the percentage of people who were at the same address as five years earlier, and rises in the percent who were overseas five years earlier.
- Manukau city has the smallest proportion of people with a European ethnicity, but does not have the biggest concentration of recent migrants. The biggest concentrations are in Auckland city and North Shore city, both of which have proportionally more people who were overseas five years ago than Manukau city does.
- Median incomes increased for all territorial authority areas between 1996 and 2006, but so did median rents.
- Residents of Auckland city are more likely to have a university degree than residents of North Shore city, but median incomes are higher among North Shore city residents.

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

Notes and sources

Data sources

The historical data are based on the census usually resident population count from the 1991, 1996, 2001, and 2006 Censuses of Population and Dwellings.

Calculation of growth rates

Population growth rates for 1996 were calculated by averaging rates for 1991–96 and 1996–01. Similarly, growth rates for 2006 were calculated by averaging rates for 2001–06 and 2006–11.

Reference

Cleveland, W (1994). *The elements of graphing data*. Summit: Hobart Press.

Summary

Commentary

An increasingly mobile population

- The population of the Auckland region is becoming increasingly mobile. The proportion of people living in the same place as five years earlier is falling. Home ownership is declining. There are large flows into and out of the Auckland region from the rest of New Zealand.
- The Auckland region is the main destination for overseas migrants to New Zealand. The number of Aucklanders who had been living overseas five years earlier doubled between 1991 and 2006, and is likely to keep increasing in the future.
- People moving to the Auckland region from elsewhere in New Zealand are concentrated in central Auckland.

A more ethnically diverse population

- The percentage of people identifying with a Pacific or Asian ethnicity is growing.
- The percentage of people identifying with a European or New Zealand European ethnicity decreased from 75 percent in 1991 to 60 percent in 2006.
- Ethnic diversity has increased rapidly in the region's cities.

Higher population density

- The population of the Auckland region is projected to rise to about two million by 2031. To accommodate these numbers without extending beyond the current urban boundaries, some suburbs will need to reach the population densities found in central Auckland in 2006.
- The proportion of multi-unit dwellings is increasing.
- Commuting to work by public transport or walking is more common in high density areas.

A growing, more educated labour force

- The Auckland region's labour force is projected to grow by 40 percent, to over one million people by 2031.
- Central Auckland changed from having among the lowest full-time employment rates in 1991 to relatively high full-time employment rates in 2006.
- The Auckland region's labour force is increasingly well-educated, particularly in central Auckland.

Further information

This page is part of Mapping Trends in the Auckland Region, available on www.stats.govt.nz.

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