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FERTILITY AND AGEING IN URBAN AND RURAL AREAS IS LOCATION IMPORTANT FOR SUCCESSFUL AGEING IN NEW ZEALAND?

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ENHANCING WELLBEING IN AN AGEING SOCIETY (EWAS)

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ABSTRACT

This paper demonstrates that locality is an important factor in the relationship between fertility, ageing and survival rates. A distinction between rural and urban ageing is reinforced by factors such as migration, family structures, ethnic differentials, education, income, home ownership and the spatial dimension of service provision. The findings are discussed in the context of the New Zealand Positive Ageing Strategy.

Keywords: Ageing, Fertility, Regions

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1. The Relationship between Low Fertility and Ageing Populations

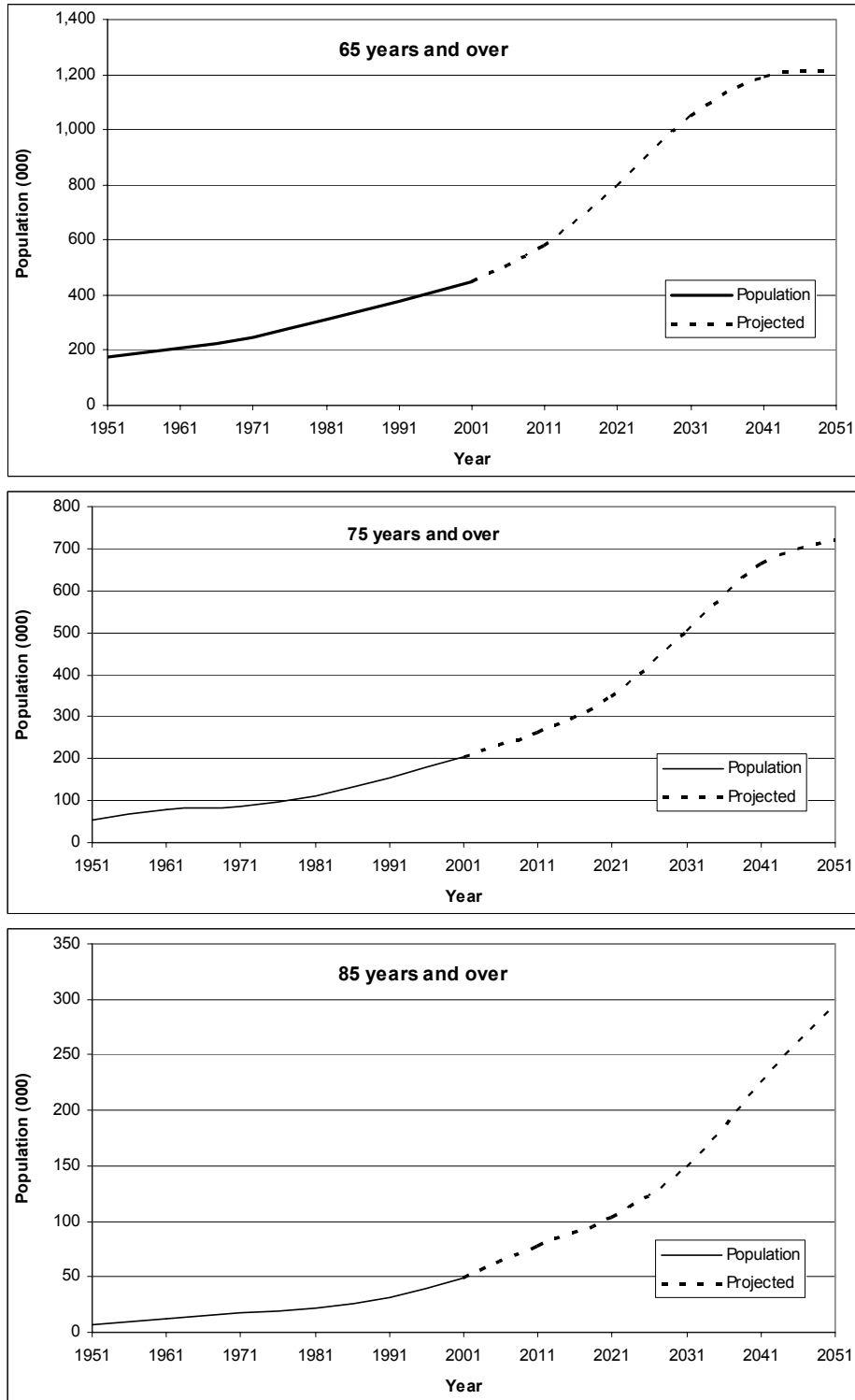
A large number of countries in the Western world and in Asia are experiencing a long-term downward trend in fertility, with the consequence of structural ageing of their population (Grant et al. 2004). Fertility rates are below the replacement level of 2.1 children per woman, while at the same time older people are continuing to live longer and form an increasing proportion of the overall population. At the macro level, the association between low fertility and high rates of ageing is well known.

New Zealand is no different. Like many similar Western nations, New Zealand has an increasingly ageing population (see Figure 1). It has 12.1% of its population over 65 years (450,438), 1.3% over 85 years (48,636), and in the next 10-30 years, with the ageing of the large cohort of the so-called “baby-boomers” born between 1943 and 1973, there will be a huge increase in the numbers of the population aged 65 and over to 17.6% in 2021, and 25.3% in 2051, based on current projections.

However, in the international literature, when these figures are disaggregated, it is found that *within* countries, highly urbanised regions may have low fertility associated with relatively low rates of ageing, due e.g. to inward migration of relatively young labour force participants (e.g. in the United States, see Glasgow (2000)). Thus, while there is a large absolute number of older people living in the big cities, a disproportionate number (compared with the total population) live in smaller urban areas.

Thus, the distribution of older people is spatially diverse. Rural areas remain disproportionately older in a majority of countries (Kinsella and Velkoff 2001), with older people being more likely to move away from the cities and live in less populated areas.

Figure 1: New Zealand's Ageing Population - 1951-2051



Sources: Statistics New Zealand, Censuses of Population and Dwellings
 Statistics New Zealand, 2001 (base) Medium National Projections

This raises the question of the availability of services for these older people in rural, or non-metropolitan, areas. It also raises questions about how a national policy for caring for older people can ensure equity in provision in the best possible way¹. Hence, policies are required which are not only sustainable at the national level, but also at the local level, where local private or public intergenerational support systems may need to be encouraged to ensure sustainability of the community.

This paper is concerned with the relationship between location and the level of population ageing (i.e., specifically differences in ageing between big cities and rural areas), and the extent to which location interacts with service provision to older people and their well-being. The New Zealand Human Rights Amendment Act (2001) made age discrimination illegal, so it is also important to establish whether older people have fair access to publicly provided services, and to consider the strategies in place for the sustainable development of these services. In New Zealand, these have become known as “Positive Ageing Strategies.”

2. The Relationship between Fertility and Ageing with Survival Rates and Location

In considering the fertility rates in New Zealand, there is a difference between the rates in the areas of greater population density, the “big cities”, and the rates in the rural areas – areas of greater population density have lower fertility rates, rural areas have higher fertility rates (see Table 1; see also Pool et al. forthcoming-e).

Looking at the Total Fertility Rate, the highest rates are found in the rural regions of Gisborne and Northland; while the lowest fertility rates are seen in the regions with bigger cities, such as Auckland City, Wellington, Canterbury and Otago. However there are some exceptions, with several rural regions having fertility rates that are considerably lower than the overall New Zealand Total Fertility Rate – such as Nelson-Tasman and Marlborough. Notably, the fertility rate are much lower for the age groups 20-24 years and 25-29 years in these regions, but not that different for those aged 30-34 years.

¹ New Zealand has a comparatively good record of public provision of services for older people, the most notable being the provision of an Old Age Pension from as early as 1898 for those over 60 years. At the time, New Zealand was only the third country in the world to provide such a benefit. Currently the provision of New Zealand Superannuation is NZ\$301.33 for a single person per week (about US\$200 in May 2006) for everyone over the age of 65 years, and NZ\$457.04 for a married couple (about US\$300 in May 2006), regardless of income, with the benefit being taxed. There is also means tested accommodation provision for older people, and various age related subsidies for health services (Reserve Bank of New Zealand 2004).

Table 1: Regional and National Fertility Rates¹ 2000-02

Regional Councils	20-24 years	25-29 years	30-34 years	Total Fertility Rate ²
Northland	129.8	141.2	108.1	2.40
Auckland	71.5	107.5	116.8	1.99
<i>Auckland City</i>	<i>45.9</i>	<i>77.6</i>	<i>108.6</i>	<i>1.70</i>
Waikato	89.9	128.3	111.8	2.10
Bay of Plenty	121.2	131.6	112.3	2.31
Gisborne	148.6	139.8	117.2	2.61
Hawke's Bay	120.9	134.7	109.2	2.30
Taranaki	105.3	130.9	104.8	2.09
Manawatu-Wanganui	87.6	123.9	103.0	2.00
Wellington	58.4	92.6	110.3	1.79
West Coast	99.8	119.2	93.8	1.96
Canterbury	51.6	98.2	111.9	1.70
Otago	37.2	102.4	105.8	1.56
Southland	97.2	130.7	107.6	2.07
Nelson-Tasman	75.9	121.7	107.9	1.90
Marlborough	87.4	117.0	96.2	1.88
New Zealand	75.5	112.1	112.0	1.96

¹ The average number of births registered during the three-year period 2000–2002, per 1,000 female estimated resident population in each age group at 30 June 2001.

² The total fertility rate in a particular year is the average number of births a woman would have during her reproductive life if she were exposed to the fertility rates characteristic of various childbearing age groups in that year.

Sources: Table 2.14, Demographic Trends 2003, Statistics New Zealand.

Auckland City: Statistics New Zealand, unpublished vital statistics.

Secondly, there is a difference in the population ageing rates in big cities and rural areas (as measured by the number of those aged 65-74 years and those 75+ years). Thus, while over two-thirds of older people live in the major urban centres (areas with 30,000 or more residents), significantly more older people live in secondary and minor urban areas (1,000+ population) than the general population - 22% compared with 16% (Khawaja 2000) (in the United States, 26% of those 65 years and older live in “non-metropolitan areas” compared with 22% of the total (Glasgow 2000)).

The results discussed above are shown for New Zealand region in Table 2 (Pool et al. forthcoming-f) with Auckland and Wellington having the lowest proportion in the 65 years and over age group. The only two other regions which are below the New Zealand proportion of 12% are Gisborne and Waikato. Marlborough had the highest proportion 65 years and over at 16 percent, with all the other regions having 65 plus shares of 13% or more.

When the fertility rates and population ageing rates are brought together there is not necessarily an inverse correlation between them, i.e. a simple correlation between low fertility and high population ageing – instead, areas with a low fertility rate (big cities) tend to have low population ageing, while areas with a

higher fertility rate (rural areas) tend to have high population ageing (see Figure 2). Auckland and Wellington are cities with low fertility and smaller shares of older persons. They are therefore in the Southwest corner of Figure 2. Among certain groups of more homogeneous regions, there may be an inverse relationship between fertility and structural ageing.

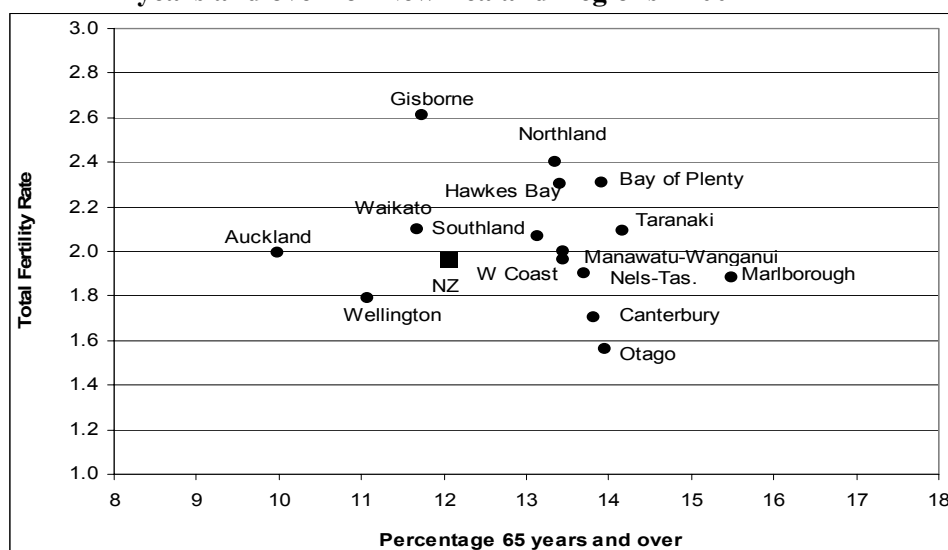
Table 2: The Older Population by Regions and New Zealand, 2001

Regional Councils	Population		Percentage of the Population			Elderly Ratio*
	65+	Total	65-74	75+	65+	
Northland	18,702	140,130	7.8	5.5	13.3	0.71
Auckland	115,764	1,158,891	5.4	4.6	10.0	0.86
<i>Auckland Central zone</i>	<i>36,840</i>	<i>359,466</i>	<i>5.1</i>	<i>5.2</i>	<i>10.2</i>	<i>1.02</i>
Waikato	41,787	357,726	6.7	5.0	11.7	0.75
Bay of Plenty	33,324	239,415	7.8	6.1	13.9	0.79
Gisborne	5,160	43,974	6.6	5.2	11.7	0.78
Hawke's Bay	19,164	142,947	7.2	6.2	13.4	0.85
Taranaki	14,574	102,858	7.6	6.5	14.2	0.86
Manawatu-Wanganui	29,610	220,089	7.3	6.2	13.5	0.85
Wellington	46,926	423,768	6.1	5.0	11.1	0.81
West Coast	4,077	30,300	7.6	5.8	13.5	0.76
Canterbury	66,513	481,431	7.3	6.5	13.8	0.88
Otago	25,341	181,542	7.5	6.4	14.0	0.85
Southland	11,949	91,002	7.3	5.9	13.1	0.80
Nelson-Tasman	11,358	82,917	7.2	6.5	13.7	0.91
Marlborough	6,129	39,558	8.6	6.9	15.5	0.80
New Zealand	450,426	3,737,280	6.6	5.5	12.1	0.83

* Elderly Ratio = Population 75+/Population 65-74

Source: Statistics New Zealand, 2001 Census of Population and Dwellings.

Figure 2: Scatterplot of Total Fertility Rates by Percentage of Population 65 years and over for New Zealand Regions - 2001



Sources: See Tables 1 and 2.

In New Zealand, there are also large differences in survival rates between locations. Those living in a big city can expect to live longer than those living in rural areas, with this being the case for both males and females (see Table 3, see also Pool et al. forthcoming-e). It can be observed that the longest life expectancy is experienced in the region with the highest population density – Auckland. However the next longest life expectancy is seen in the non-metropolitan region of Nelson. The shortest life expectancy for males can be found in peripheral regions such as Gisborne, the West Coast and Southland (although the differences for females are less pronounced).

Aligned with this differential in survival rates is a similar differential in the change in life expectancy: a noticeable improvement in life expectancy is being experienced in the regions that already have a high life expectancy (such as Auckland), while the least change in life expectancy is occurring in the rural areas, where the life expectancy is among the lowest (such as Northland and Gisborne).

Table 3: Life Expectancy¹ at 65 years by Regions and New Zealand, 1990-2002

Regional Councils	1990-92		2000-02		Change ²	
	Males	Females	Males	Females	Males	Females
Northland	14.8	18.6	15.7	19.8	0.9	1.2
Auckland	15.2	19.0	17.4	20.8	2.2	1.8
<i>Auckland City</i>	<i>na</i>	<i>na</i>	<i>17.3</i>	<i>20.8</i>	<i>na</i>	<i>na</i>
Waikato	14.9	18.8	16.7	20.1	1.8	1.3
Bay of Plenty	15.2	18.6	16.4	20.2	1.2	1.6
Gisborne	14.2	18.1	14.6	18.7	0.4	0.6
Hawke's Bay	14.2	18.6	16.6	19.3	2.4	0.7
Taranaki	14.7	18.6	16.9	19.8	2.2	1.2
Manawatu-Wanganui	14.2	18.1	16.2	19.5	2.0	1.4
Wellington	14.8	18.4	16.8	20.1	2.0	1.7
West Coast	13.5	17.0	15.2	20.0	1.7	3.0
Canterbury	14.7	18.4	17.1	20.6	2.4	2.2
Otago	14.4	18.1	16.7	20.0	2.3	1.9
Southland	13.7	17.6	15.5	19.0	1.8	1.4
Tasman	na	na	17.1	20.9	na	na
Nelson	na	na	17.1	20.7	na	na
Marlborough	na	na	16.8	19.5	na	na
New Zealand	14.8	18.6	16.8	20.2	2.0	1.6

na - not available

¹ Data from abridged life tables.

² 1990-92 and 2000-02 is not directly comparable due to differences in methodology.

Source: Statistics New Zealand, 2001 Census of Population and Dwellings.

3. How is Location a Determinant of Fertility, Ageing and Survival Rates?

The combination of low fertility and low population ageing in big cities, and the higher life expectancies in big cities, obviously raise questions regarding the underlying causal factors. These include the outward migration of older people and the inward migration of the working age group in the cities; the disproportionate share of professionals who are more likely to have fewer children or no children; the presence of proportionately fewer Maori and Pacific Island Polynesians in the older age groups; socio-economic factors (especially education and income), and service provision.

3.1 Migration

Table 4: Address 5 years ago: Migration inward and outward, by Specified Age Groups, by Regions and New Zealand, 2001

Age Group	Regional Councils	To Elsewhere in NZ	Same Region	In Migration from		Not Specified
				Rest of NZ	Overseas	
65+	Northland	5.9	82.1	7.9	1.3	8.6
	Auckland	5.2	85.6	2.2	4.6	7.6
	Waikato	6.6	85.8	7.8	1.4	5.1
	Bay of Plenty	5.3	82.5	10.8	1.3	5.3
	Gisborne	5.9	89.3	4.7	0.3	5.7
	Hawke's Bay	4.2	88.6	5.4	1.2	4.8
	Taranaki	3.7	90.7	4.2	1.0	4.1
	Manawatu-Wanganui	4.9	88.2	6.3	1.0	4.5
	Wellington	4.9	89.9	3.5	2.0	4.6
	Nelson-Tasman	4.2	87.5	6.9	1.5	4.1
	Marlborough	6.6	85.4	9.9	1.0	3.6
	West Coast	7.2	88.2	6.2	0.9	4.8
	Canterbury	2.2	92.5	2.8	1.3	3.4
	Otago	3.4	92.0	3.5	0.9	3.6
	Southland	4.4	93.6	3.0	0.5	2.9
15-64	Northland	15.8	70.8	14.3	4.2	10.7
	Auckland	6.4	72.7	6.8	13.3	7.1
	Waikato	14.1	73.6	14.2	5.3	6.8
	Bay of Plenty	13.4	70.3	16.7	5.1	7.9
	Gisborne	20.9	76.8	12.9	3.1	7.2
	Hawke's Bay	14.7	77.2	11.9	4.6	6.4
	Taranaki	15.2	80.7	9.7	3.5	6.2
	Manawatu-Wanganui	18.0	75.6	13.9	4.2	6.3
	Wellington	10.0	76.0	11.4	7.6	5.0
	Nelson-Tasman	13.4	72.3	16.1	5.3	6.3
	Marlborough	18.7	70.8	19.8	4.0	5.4
	West Coast	23.4	76.4	14.4	3.0	6.2
	Canterbury	7.7	79.0	9.7	6.5	4.7
	Otago	14.0	74.5	14.9	5.9	4.7
	Southland	16.6	84.6	8.5	2.6	4.2

Source: Statistics New Zealand, 2001 Census of Population and Dwellings.

The existence of longer survival rates in big cities raises the possibility that long-living older people migrate to the big cities in their very old age, thereby increasing the overall survival age. A sizeable outflow of older people from the main urban centres to medium sized centres occurred between 1991-1996 (Khawaja 1999), but this has since slowed. Older people tend to move far less than younger people, and are also more likely to shift only within the same region, a phenomenon noted by Joseph and Chalmers (1996), who commented on the large number of those 80 and over who were “staying on” in rural communities.

This latter phenomenon includes moving into more appropriate housing, be it stand-alone housing or institutional-type housing, or to a better climate within the region. It is notable that those older people who do move outside their region are most likely to move to a warmer climate - the rates of inward migration in the five years between 1996 and 2001 to the Bay of Plenty and Marlborough are by far the highest rates for 65 years and over, with the relatively smallest inflows occurring in regions with big cities: Auckland, Wellington and Canterbury. However, those older people moving to New Zealand from overseas are more likely to migrate to Auckland, as are the 15-64 year-olds. It is also worth noting that a much higher percentage of people stay in the same region among those 65 years and over than among those aged 15-64 years.

3.2 Professionals having fewer children, or no children.

One of the major correlates with low fertility in big cities is the large number of working professional women, who delay childbearing while acquiring qualifications and building up their career (Dharmalingam et al. 2003; Pool et al. forthcoming-e; Pool and Sceats 2003, Poot and Siegers, 1992). In New Zealand, the regions with the largest populations have the largest percentage of women aged 30-34 years with no children – Wellington, Auckland and Canterbury (see Table 5). This phenomenon is correlated with the percentage of 30-34 year-olds who are professional women and work full-time (the highest being Wellington, Auckland and Otago). Also notable is the huge range in the incidence of childlessness, ranging from only 16% among 30-34 year-old women in Northland to 35% in the Wellington region. The city region of Central Auckland is higher again at 45 per cent because of the number of professional full-time workers in the area.

3.3 Fewer Maori and Pacific Island Polynesians in older age groups.

A further reason for the high fertility in some of the rural regions (e.g. Gisborne and Northland regions) is the high proportion of resident Maori, who tend to have a higher level of fertility. Conversely, the presence of a high proportion of Maori or Pacific Island Polynesians in a population, is likely to lower the percentage of older people, as both ethnic groups have a shorter life expectancy than Pakeha and other ethnic groups. As shown in Table 6, Maori had lower life expectancy than Non-Maori both at birth and 65 years.

Table 5: Female Population 30-34 Years by a Number of Indicators, by Regions and New Zealand, 1996

Regional Councils	No births ¹	Professional ²	Full-time employed	Professional ² and full-time
Northland	16.4	13.5	30.9	8.6
Auckland	32.9	18.3	40.3	13.7
<i>Auckland Central zone</i>	44.8	34.2	52.2	28.9
Waikato	20.8	14.6	35.2	9.7
Bay Of Plenty	20.5	14.0	32.7	9.2
Gisborne	17.7	15.0	35.8	9.4
Hawke's Bay	18.8	15.1	38.1	9.5
Taranaki	19.7	16.1	39.4	9.9
Manawatu-Wanganui	21.5	18.7	39.2	12.2
Wellington	35.4	25.1	46.2	19.2
West Coast	20.5	18.7	41.2	11.5
Canterbury	30.7	17.2	36.6	11.5
Otago	28.9	19.1	42.7	13.2
Southland	18.8	16.6	43.5	10.5
Nelson-Tasman	27.0	14.9	36.5	8.4
Marlborough	19.0	10.9	38.1	6.0
New Zealand	27.9	17.9	39.2	12.7

¹ Calculated from those who specified number of children ever born.

² Administrative and Managerial Workers, Professional, Technical and Related Workers.

Source; Statistics New Zealand, 1996 Census of Population and Dwellings.

Table 6: Life Expectancy at Birth and Age 65 Years, by Maori/Non-Maori, 2000-02

	Maori		Non-Maori	
	Males	Females	Males	Females
Life Expectancy at birth	69.0	73.2	77.2	81.9
Life Expectancy at 65 years	12.7	15.1	16.9	20.2

Source: Statistics New Zealand (2004) New Zealand Life Tables, 2000-02, Wellington: Statistics New Zealand. Table 2.01, pg 13.

3.4 Socio-economic class factors - Education and Income

The literature shows a correlation between socio-economic factors and fertility, as well as with life expectancy. In general, those with the highest educational qualifications tend to have the lowest fertility, and also the longest life expectancy. Similarly, those with high incomes tend to have smaller families and also to have the longest life expectancy (Dharmalingam et al. 2003).

Using the two indicators Highest Qualification (as an indicator of educational attainment) and Income, as indicators of socio-economic status in New Zealand, these correlations are again borne out. The two regions which are mainly metropolitan, Auckland and Wellington, have the highest levels of Highest Qualification among the regions, for both the Total Population and 65+ Populations as shown in Table 7 (Pool et al. forthcoming-b). As well, both Auckland and Wellington have the highest Income among both their Total

Population and the 65+ Population as shown in Table 8 (Pool et al. forthcoming-d).

Table 7: Highest Qualification (%), 65 Years and over and Total, by Regions and New Zealand, 2001

Regional Councils	No	Secondary	Other Tertiary	Bachelor/ Post Graduate	Not Specified/ unidentifiable	Total
65 years and over						
Northland	33.5	22.2	10.3	2.7	31.3	100.0
Auckland	29.8	27.5	10.1	4.9	27.7	100.0
<i>Auckland City</i>	<i>27.1</i>	<i>27.7</i>	<i>9.7</i>	<i>6.6</i>	<i>28.9</i>	<i>100.0</i>
Waikato	35.4	23.4	10.1	3.2	27.9	100.0
Bay of Plenty	32.4	25.3	11.5	3.1	27.7	100.0
Gisborne	35.8	20.4	9.6	2.2	31.8	100.0
Hawke's Bay	34.6	22.8	10.4	2.8	29.3	100.0
Taranaki	39.1	18.5	9.3	2.2	30.9	100.0
Manawatu-Wanganui	36.2	21.7	9.7	3.1	29.4	100.0
Wellington	30.1	27.0	11.6	7.1	24.2	100.0
West Coast	40.1	17.1	8.2	1.6	33.1	100.0
Canterbury	35.7	23.1	10.2	3.9	27.2	100.0
Otago	36.0	20.9	10.7	4.2	28.3	100.0
Southland	42.1	17.1	7.7	1.4	31.7	100.0
Nelson-Tasman	33.3	23.7	12.6	4.1	26.4	100.0
Marlborough	34.0	23.0	12.0	2.8	28.0	100.0
New Zealand	33.5	24.2	10.4	4.1	27.9	100.0
Standardised rates for total population 20 years and over¹						
Northland	26.6	29.9	18.4	5.7	19.4	100.0
Auckland	19.3	34.9	17.6	13.6	14.6	100.0
<i>Auckland City</i>	<i>15.0</i>	<i>32.9</i>	<i>16.5</i>	<i>20.6</i>	<i>14.9</i>	<i>100.0</i>
Waikato	26.4	31.4	19.1	8.8	14.3	100.0
Bay of Plenty	25.7	31.2	20.5	6.9	15.7	100.0
Gisborne	29.0	29.0	18.3	5.9	17.8	100.0
Hawke's Bay	27.6	30.8	19.3	6.7	15.5	100.0
Taranaki	29.2	29.0	20.6	6.3	14.9	100.0
Manawatu-Wanganui	27.0	30.8	18.9	8.9	14.4	100.0
Wellington	18.9	32.2	19.2	17.8	11.8	100.0
West Coast	31.3	29.5	17.5	4.9	16.7	100.0
Canterbury	23.7	34.1	19.6	10.8	11.8	100.0
Otago	23.2	32.1	19.7	12.4	12.6	100.0
Southland	31.4	30.2	18.5	6.0	13.9	100.0
Nelson-Tasman	23.7	32.2	22.4	8.1	13.6	100.0
Marlborough	25.3	33.5	21.2	6.3	13.6	100.0
New Zealand	23.0	32.7	18.9	11.3	14.1	100.0

¹ Standardised rate assumes the same age and gender structure in each region as the 1996 total New Zealand population.

Source: Statistics New Zealand, 2001 Census of Population and Dwellings.

Table 8: Personal Income (NZ\$) for Total Population and 65 Years and over, by Regions and New Zealand, 2001

Regional Councils	Total Population ¹			65 years and over		
	25th Percentile ²	Median ³	75 th Percentile ⁴	25th Percentile ²	Median ³	75 th Percentile ⁴
Northland	8,129	15,258	28,866	9,717	12,839	17,472
Auckland	8,746	20,468	37,743	9,772	13,161	19,108
Waikato	8,858	18,070	33,565	10,161	13,287	18,969
Bay of Plenty	8,772	17,046	31,465	10,140	13,173	18,524
Gisborne	8,011	15,232	28,192	9,944	13,056	18,250
Hawke's Bay	8,671	16,835	30,131	10,142	13,123	18,120
Taranaki	8,969	17,650	32,727	10,098	13,013	17,823
Manawatu-Wanganui	8,599	16,734	30,312	10,134	13,047	17,820
Wellington	9,955	21,766	39,176	10,522	13,825	20,686
West Coast	8,006	14,501	27,711	8,932	11,939	14,483
Canterbury	8,664	17,701	32,308	9,972	12,908	17,573
Otago	8,127	16,491	30,419	9,931	12,791	16,962
Southland	9,121	17,740	32,059	10,022	12,823	16,993
Nelson-Tasman	8,733	16,489	29,430	10,230	13,061	17,632
Marlborough	9,280	17,258	29,492	10,176	13,011	17,463
New Zealand	8,795	18,470	34,487	10,058	13,118	18,426

¹ Standardised rate assumes the same age and gender structure in each region as the 1996 total New Zealand population.

² One quarter of the population has an income below this level.

³ Half the population has an income below this level.

⁴ Three-quarters of the population has an income below this level.

Source: Statistics New Zealand, 2001 Census of Population and Dwellings.

3.5 Service provision

The observed differential in the survival rates in older ages according to location could be determined, at least partially, by the provision of various services, the thesis being that the poorer survival rates in the rural areas are a result of the lesser availability of services. With respect to an older population, such services are likely to include the provision of health care and institutional care, along with accommodation. Indicators of these are considered below, in line with the previous data on regional density.

(a) Distribution of General Practitioners and Medical Specialists

Access to health care practitioners is vital to the continued quality of health of older people, but accessibility in New Zealand varies markedly with location and specialisation (see Table 9).

Table 9: General Practitioners and Specialists per 100,000 Population by District Health Boards and New Zealand, 2002

District Health Boards	General Practitioners	Specialists
Northland	78.5	44.2
Waitemata	71.0	42.6
Auckland	96.5	174.6
Counties-Manakau	67.9	53.3
Waikato	74.6	66.4
Bay of Plenty	75.8	47.7
Lakes	80.2	61.5
Tairāwhiti	70.5	36.4
Hawke's Bay	70.4	48.8
Taranaki	66.0	48.5
Wanganui	67.6	58.2
MidCentral	60.7	65.8
Capital and Coast	86.6	109.0
Hutt	70.5	54.6
Wairarapa	62.8	49.7
Nelson-Marlborough	91.4	51.4
West Coast	52.8	33.0
Canterbury	89.4	80.1
South Canterbury	92.8	62.5
Otago	83.2	94.3
Southland	72.6	36.8
NEW ZEALAND	78.1	72.9

Source: New Zealand Medical Council, <http://www.nzhis.govt.nz/stats/genpracstats.html>, June 2004.

With respect to accessibility to a General Practitioner or a Medical Specialist, it is obvious that living in Auckland provides the greatest access, where the ratio per 100,000 population is 96.5 for General Practitioners and 174.6 for Specialists. Of course, specialist treatment is centred in big cities where people from surrounding areas use these services (i.e., in Auckland the people living in the neighbouring District Health Board areas use the Auckland District Health Board services). This situation can be compared with the lowest New Zealand ratios in the West Coast of 52.8 for General Practitioners and 33.0 for Specialists. It is suggested that greater life expectancy is related to access to the maintenance of good health through access to medical care (Pool et al. forthcoming-a).

(b) Public Hospital Provision

In considering the provision of public hospital beds and the take-up of hospital care, there is also a strong correlation with location (see Table 10).

Table 10: Public Hospital¹ Bed Day Rate per Person, by Older Age Groups and Overall, by Regions and New Zealand, 1990-2001

Regional Councils	Standardised Rate ²				65-74 years				75+ years			
	Males		Females		Males		Females		Males		Females	
	1990-92	1999-01	1990-92	1999-01	1990-92	1999-01	1990-92	1999-01	1990-92	1999-01	1990-92	1999-01
Northland	0.73	0.54	0.61	0.44	1.88	1.31	1.44	1.06	3.66	2.47	3.23	2.01
Auckland	0.54	0.52	0.44	0.43	1.56	1.43	1.14	1.13	2.71	3.01	2.32	2.58
Waikato	0.67	0.52	0.57	0.44	1.88	1.43	1.48	1.13	3.53	2.71	2.94	2.30
Bay of Plenty	0.82	0.61	0.70	0.52	2.17	1.62	1.80	1.24	3.95	3.05	3.29	2.69
Gisborne	0.99	0.67	0.86	0.56	2.76	2.14	2.27	1.40	4.56	3.01	4.37	2.41
Hawkes Bay	0.84	0.56	0.69	0.47	2.30	1.59	1.59	1.26	4.24	3.01	3.92	2.48
Taranaki	0.81	0.53	0.67	0.42	2.20	1.47	1.76	1.17	4.28	2.66	3.31	1.99
Manawatu												
Wanganui	0.76	0.55	0.66	0.47	2.16	1.49	1.64	1.34	4.21	3.19	3.58	2.53
Wellington	0.68	0.44	0.57	0.38	1.92	1.28	1.53	1.03	4.18	2.53	3.69	2.13
West Coast	0.96	0.65	0.83	0.55	2.82	1.88	2.34	1.47	6.35	3.95	5.56	3.20
Canterbury	0.67	0.54	0.57	0.47	2.08	1.60	1.57	1.25	4.30	3.46	3.80	3.06
Otago	0.75	0.50	0.66	0.43	2.19	1.52	1.81	1.33	4.29	2.83	3.74	2.37
Southland	0.85	0.54	0.72	0.42	2.67	1.67	2.00	1.30	5.09	3.10	4.45	2.14
Nelson-Marlborough	0.54	0.39	0.44	0.35	1.52	1.12	1.14	0.90	2.56	1.97	2.29	1.82
New Zealand	0.68	0.52	0.57	0.44	1.95	1.47	1.50	1.18	3.73	2.94	3.23	2.50

¹ Filtered Hospital Discharges which are inpatient medical and surgical see: Katzenellenbogen J, Baxendine S, Cheung J Pool I, Jackson G. (2001) Getting New Zealand hospital discharge data in shape for a time series - filtering the data. NZ Health Manager, 8(4): 13-18.

² Standardised rate assumes the same age structure in each region as the 1996 total New Zealand population (both genders).

Sources: New Zealand Health Information Service, National Minimum Data Set - Public Hospital Discharges. Statistics New Zealand, 1986-2001 Census of Population and Dwellings.

It can be noted that where there is a low density of population, and with it poor access to health care practitioners (as seen above), older people spend longer in hospital beds (Pool et al. forthcoming-a). For those 65-74 years, the Bed Day Rate is the highest in the rural regions of the West Coast and Gisborne. In the higher density populations the Bed Day Rate is likely to be the lowest, e.g. Nelson-Marlborough, and Wellington. The Bed Day Rates for those 75+ show a similar differentiation according to location.

(c) Accommodation for Older People

Many older people do not need the institutional medical care of a public hospital, but may however need at some stage some form of long term care in a rest home, where nursing or medical care is not provided as a major service (see Table 11).

Table 11: Accommodation for the Aged, Number of Institutions and Full-time Equivalent Staff (FTE) by Regions and New Zealand, 2003

Regional Councils	Number of Institutions	FTEs Staff	Avg size	FTE/POP*100	
				65+	75+
Northland	29	680	23.4	3.6	8.8
Auckland	194	3,910	20.2	3.4	7.3
Waikato	62	1,210	19.5	2.9	6.8
Bay of Plenty	47	1,170	24.9	3.5	8.0
Gisborne	4	110	27.5	2.1	4.9
Hawke's Bay	29	610	21.0	3.2	6.9
Taranaki	33	710	21.5	4.9	10.6
Manawatu-Wanganui	61	1,310	21.5	4.4	9.6
Wellington	68	1,800	26.5	3.8	8.6
West Coast	6	140	23.3	3.4	7.9
Canterbury	128	2,760	21.6	4.1	8.8
Otago	58	1,110	19.1	4.4	9.5
Southland	24	560	23.3	4.7	10.5
Nelson-Tasman	14	330	23.6	2.9	6.1
Marlborough	9	260	28.9	4.2	9.6
New Zealand	766	16,680	21.8	3.7	8.2

Accommodation for the Aged: Consists of units mainly engaged in providing long term care accommodation or homes for senior citizens where nursing or medical care is not provided as a major service.

Sources: Statistics New Zealand, Business Demography, 1997 and 2003.

Statistics New Zealand, 2001 Census of Population and Dwellings.

In considering the ratios working in such institutions of Full-time Equivalent Staff per 100 population, it appears that the greatest provision of such care for those 75+ occurs in the “middle-density” cities and towns (e.g. in the regions of Taranaki, Southland, Manawatu-Wanganui, and Marlborough). These are areas where the older population has more traditionally “aged-in-place” and where they have only entered such accommodation at a more dependent stage, requiring a higher level of

care. It could also be explained by the more frequent presence of the extended family. The lowest FTE provision occurs in the Gisborne region.

(d) Home ownership

A further indicator of the relationship of location and survival rates might be the home ownership patterns of older people, on the assumption that home ownership allows for greater security in accommodation socially and financially, and as a result greater independence (see Table 12). The difference in levels of home ownership according to location is again readily observable (Pool et al. forthcoming-c).

Table 12: Home Ownership (%) of Occupiers 65 Years and over, by Ethnicity, Region and New Zealand, 2001

Regional Councils	Ethnicity		Total
	Pakeha	Maori	
Northland	80.4	63.6	75.0
Auckland	77.5	51.3	72.5
<i>Central Auckland Zone</i>	71.6	42.2	66.0
Waikato	79.7	58.1	76.5
Bay of Plenty	79.6	65.8	76.6
Gisborne	75.8	58.1	70.7
Hawke's Bay	76.3	54.6	73.6
Taranaki	78.0	64.9	76.4
Manawatu-Wanganui	76.7	57.0	74.4
Wellington	78.6	54.5	75.9
West Coast	73.1	55.0	71.1
Canterbury	78.5	57.0	77.1
Otago	76.3	62.7	75.0
Southland	77.8	69.6	76.3
Nelson-Tasman	80.1	60.0	78.7
Marlborough	79.9	70.8	78.7
New Zealand	78.2	58.8	75.1

Source: Statistics New Zealand, 2001 Census of Population and Dwellings.

The highest levels of home ownership among those 65 years and over in New Zealand occur in the Nelson-Tasman and Marlborough regions and Canterbury, while the lowest levels of home ownership occur in Auckland (especially Central Auckland Zone), West Coast and Gisborne.

In the latter cases of low levels, which remarkably include both the highest (Auckland) and lowest (West Coast and Gisborne) population density, the explanation is very different. The Auckland regions include a larger number of people who no longer own their own home, because the cost of buying accommodation. The West Coast and Gisborne regions have a tradition of low

home ownership, given the lower socio-economic standing of the region (Pool et al. forthcoming-c).

4. Sustainability of Service Provision to an Ageing Population

From the provided New Zealand data it would appear that there are critical differences in the level of fertility, ageing and survival rates according to location: lower fertility exists alongside a lower proportion of older people in higher density populations – the big cities, but with higher survival rates; while higher fertility and a higher proportion of older people exist in the lower density populations living in rural areas, but with lower survival rates.

The fact that survival rates are low in areas where there is a relatively high proportion of older people would indicate that the provision of services is an important intervening factor, and that maintaining access to these services is a key element of public policy. There may be positive economic and social outcomes for these smaller centres with the residence of a higher proportion of older people, but such numbers may also lead to an increasing demand for recreational and health services. Furthermore, policy solutions developed for larger urban centres may not be suitable for smaller centres or rural areas – for example, there are fewer public transport options available in smaller areas compared to the larger urban areas, and in some rural areas there may be none. Thus, there is a need for a sustainable development strategy for the well-being of older people and their continued increase in survival rates.

5. The New Zealand Positive Ageing Strategy

With the sustainable development of the well-being of older people in mind, one of the most influential and far reaching outcomes of the research on ageing and older people in New Zealand over the last ten years (including the Royal Commission on Positive Ageing) has been the introduction of the Positive Ageing Strategy, and the accompanying Action Plans and Annual Reports begun in 2001 (Dalziel 2001; Office for Senior Citizens 2003a; Office for Senior Citizens 2003b). Now in their third round, the Annual Plans include initiatives carried out by 36 government agencies at central, local and regional level for achieving the 10 Positive Ageing goals, identified through nationwide consultation by the Positive Ageing Commission (see Table 13).

Table 13: Goals of the Positive Ageing Strategy

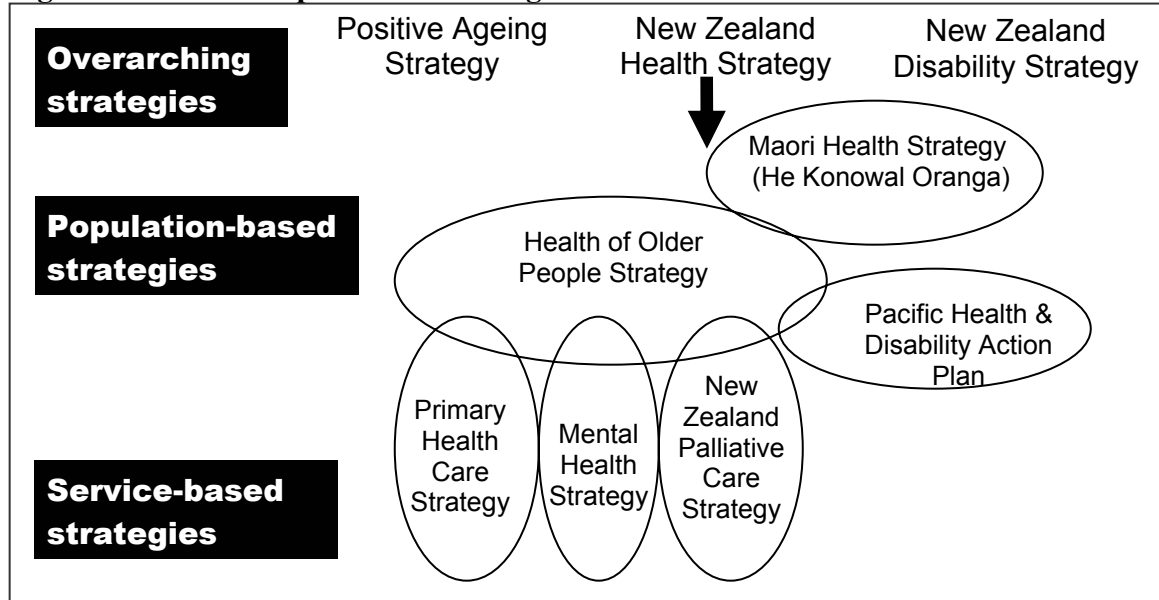
-
1. Secure and adequate income for older people
 2. Equitable, timely affordable and accessible health services for older people
 3. Affordable and appropriate housing options for older people
 4. Affordable and accessible transport options for older people
 5. Older people feel safe and secure and can “age in place”
 6. A range of culturally appropriate services allows choices for older people
 7. Older people living in rural communities are not disadvantaged when accessing services
 8. People of all ages have positive attitudes to ageing and older people
 9. Elimination of ageism and the promotion of flexible work options
 10. Increasing opportunities for personal growth and community participation
-

Source: Dalziel, L. (2001). *The New Zealand Positive Ageing Strategy*. Wellington: Senior Citizen Unit, Ministry of Social Policy.

The strategy is strong on the principle of “equitable, timely, affordable and accessible services for older people”, with respect to services in the areas of health, housing, transport, or community. Furthermore, the 7th Goal states that “Older people living in rural communities are not disadvantaged when accessing services”. As a way of ensuring this, the 2003-2004 Action Plan includes, for the first time, the plans of a local government authority, the New Plymouth District Council, which covers a large rural region.

In response to the desire of older people to have more holistic care, the Positive Ageing Strategy is part of an overarching, and integrated set of strategies which have guided the development of the Health of Older People Strategy. Alongside the Positive Ageing Strategy, the New Zealand Health Strategy and the New Zealand Disability Strategy have informed the population-based strategies of the Health of Older People, Maori Health and Pacific Health and Disability. In turn these inform the service-based strategies of Primary Health Care, Mental Health and Palliative Care and are interrelated as depicted in Figure 3.

Figure 3: Relationship between Strategies



Source: Ministry of Health (2002) *Health of Older People Strategy, Health Sector Action to 2010 to Support Positive Ageing*. Wellington: Ministry of Health, pg5.

Examples of the proposed strategies

Examples of the Strategy include the continuous improvement of Health services through the regional level District Health Boards, the wider focus of the Department of Social Development and its services to rural areas, and services based on local research undertaken by a District Council. These are detailed below:

- (a) Within Goal 2 “Equitable, timely, affordable and accessible health services for older people”, the Ministry of Health is continuing to encourage the delivery of an integrated continuum of care by resourcing the District Health Boards to do this, sharing best practice among providers, establishing and maintaining an older people web page.
- (b) Also within Goal 2, The Accident Compensation Corporation is reviewing its home-based rehabilitation packages of care for older people.
- (c) Within Goal 7 “Older people living in rural communities are not disadvantaged when accessing services”, the Ministry of Agriculture and Forestry, in the pilot rural areas of Tokoroa and Southland, are training older people (within a wider group) in the use of Information and Communication Technologies.
- (d) Also within Goal 7, The Department of Work and Income are providing services to older people in some remote and rural communities in the Auckland region, including Great Barrier Island, Waiheke Island, Wellsford and Pukekohe.

- (e) Within both Goals 2 and 7, the New Plymouth District Council, has developed a Positive Ageing Plan to cover its 9,906 people aged 65+ (New Plymouth District Council 2003). The plan includes establishing a Positive Ageing Centre of Excellence in partnership with the Western Institute of Technology in Taranaki to conduct research into issues identified as important by older people – housing, health, transport, access to services and activities, support for ageing positively in the community.
- (f) Perhaps one of the most innovative strategies established at a national level has been in relation to Goal 8 “People of all ages having positive attitudes to ageing and older people”, with the promotion of “Great and Grands Month” in October, especially to school children to encourage the development of intergenerational initiatives and understanding (Office for Senior Citizens 2003b:78). This strategy has been in response to research showing the desire of older people to age-in-place yet feel secure, and to encourage intergenerational initiatives.

6. Conclusion

This paper has indicated that locality is a fundamental factor in the relationship between fertility, ageing and survival rates, although the relative contribution of location compared with SES, education, status and ethnicity needs further analysis. While concern is voiced at the national level regarding the relationship between New Zealand’s low fertility and the increasingly ageing population, this relationship is heavily influenced by factors of locality: big cities are more likely to have low fertility and a relatively lower proportion of older people than rural areas; rural areas are more likely to have higher fertility and a higher proportion of older people. Older people are tending to “age-in-place” with “the place” being more rural, or they are opting to migrate to smaller townships with a better climate. Nevertheless, it should be made clear that the largest number of older people live in the big cities.

Despite their high proportion of older people, the rural areas (or non-metropolitan areas) are relatively sparsely settled (and many such areas will remain so), and as a result are likely to be “sparsely serviced”. To sustain the quality of life of older people in such areas will require appropriate services. Location based poverty of older people will also have to be taken into account. Alternatively, to sustain relatively small communities will require an on-going inward migration of older people (e.g. Nelson and Bay of Plenty regions). In both cases, New Zealand has

yet to consider whether there is a difference between rural and urban older residents and their access to informal care.²

In the last few years, this inequity between rural and urban areas has been recognised with respect to services to older people, and a major commitment to the sustainable development of publicly provided services for older people has been made, through the establishment of the Positive Ageing Strategy.

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² This is one of the research topics currently being investigated in the Enhancing Wellbeing in an Ageing Society programme.

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