Technology options for aged care in Japan

Noriko Dethlefs
University of Wollongong


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Chapter 2

Demography and aged care

2.1 Introduction

In this chapter, historical and international comparative data relating to the demographic changes in Japan are introduced. This chapter describes the demographic changes in Japan from 1920, when the first official national census was published, to the end of the twentieth century as well as future projections. It is widely accepted that in the next few decades the population of Japan will become the oldest in the world. Reasons for this phenomenon are examined in order to illustrate the framework in which the issues of aged care in Japan are placed. The most remarkable aspect of Japan's demographic transition is the speed in which the population has aged (Figure 2.1) causing the need for urgent measures to address the subsequent consequences such as increasing need for aged care.

According to United Nations figures, the number of years required for the proportion of the aged (over 65 years of age) in an industrialised country to shift from 7 per cent to 14 per cent range from 130 years in France, 60 years in the USA, 50 years in the UK and only 25 years in Japan (cited in JARC:()}
1996, 16). As illustrated in Figure 2.1, Japan's exceptionally high speed of population ageing is comparable to no other country.


When the speed of population ageing is as rapid as in Japan, swift responses to the socioeconomic consequences of the demographic changes are required. Although, this thesis focuses on technology options for aged care in Japan, it is useful to examine the reasons why there is an increasing demand for aged care in order to understand the significance and urgency for aged care options. Demographic changes in Japan highlight the urgency of addressing the problems of Japan's ultra ageing society. Chapters 2, 3, 4 examine the interface between technology and society in relation to aged care in Japan. Thus the possible roles of technology in addressing the issues created by population ageing can be better appreciated. Not incidentally, this illustrates one main assumption of this thesis—that a multi-disciplinary
approach is valuable for dealing with the issues involved.

Data used in this chapter are from the United Nations demographic projections for developed countries, including Japan, and also from Japanese government data. This sets the Japanese case in an international and historical perspective. There are two reasons this kind of perspective is important. First, all developed economies have been subject to similar patterns of economic growth—specifically, a long term increase in gross domestic product per head of population, which has had similar impacts on demographic trends. Secondly, historical trends are needed as a background to understanding changing sociological patterns of family formation and family interaction. It is only in an historical context that we can adequately understand the sociology of the family. Detailed analysis of the changing family structure in Japan follows in Chapter 3.

In the same way that historical trends provide valuable tools to understand sociological transformations, the significance of demographic projection data is that they quantify the dimensions of the emerging problem of an ageing society. This chapter also clarifies how changing demographic patterns may interact with possible discerned trends in family formation and family ties, so that the ‘shape’ of the emerging problem can be adequately understood. The economic implications of an ageing society are in themselves complex and multi-faceted:

The change in demographics affects pension expenditures and pension contributions, capital formation and savings rates, health costs, service systems, tax bases, labor pools, career counseling, training, advertising, and marketing. Virtually every facet of the modern economy is affected by a radical change in age distribution (Bass: 1996, 7).
Section 2.2 broadly outlines the historical worldwide trends that have shaped the present world demography. The following section discusses the overall demographic trends in the advanced countries of the world, focusing on the changes in the Japanese population. Section 2.4 then examines more specifically the demographic evolution in Japan and factors that have contributed to the population ageing quickly. Section 2.5 considers the significance of the ageing population on the Japanese society. An overview is given in Section 2.6 of future demographic projections and their implications in Japan. The concluding section provides the link between demographic issues in this chapter and the issues of family structure in the following chapter. Moreover, this section demonstrates again the significance of analysing demographic trends. These trends form a basis for the research into possible technology options in aged care in Japan.

2.2 Historical overview of general population trends

World population is said to have grown almost continuously since history was recorded. At some stages, this continuing growth led to anxiety about a population explosion. However, this fear has recently been replaced by the apprehension of population declining in some advanced countries, such as Japan. It is commonly argued that the major cause for this phenomenon is the decline in birthrate, becoming a trend in the more developed countries.

Technically the terms ‘birthrate’ and ‘crude birthrate’ express the annual number of births per 1,000 population. ‘Crude’ refers to the birthrate
including both sexes of all ages in the denominator (births in a year divided by population at mid-year x 1000) (Newell: 1988, 37-42). The term 'total fertility rate' used in this chapter expresses the average total number of children a woman gives birth to during her life at the time of assessment. As an example, in order to maintain its population in a steady state, Japan’s total fertility rate would need to be 2.1 but in 1997 it fell to 1.39 (Funabashi: 1999, *Asahi Shinbun Japan Almanac 1999*, 61), and to 1.34 in 1999 (*Asahi Shinbun Japan Almanac 2001*, 61) the lowest ever recorded. This factor is highly relevant in determining the social consequences regarding aged care in Japan (see Sections 2.4.2, 2.4.3 and 2.4.4).

Lester Brown, Director of the Worldwatch Institute in Washington DC, states that, 'Demographers have been surprised again and again by the rapid decline in the number of children couples choose to bear throughout the world' (cited in Pearce: 1999, 21). According to the head of population research at the International Institute for Applied Systems Analysis in Laxenburg, Austria, the decline in overall birthrate will change the 'upward path of population growth, which has been accelerating since the Black Death, to stall and go into reverse in about 70 years' (cited in Pearce: 1999, 21). The speed and the actual numbers or percentage of the population ageing may differ between countries. United Nation’s worldwide figures reveal that:

... in 1950, there were 200 million persons aged 60 and over in the world, constituting 8.0 per cent of the total global population. By 2025, there will be a sixfold increase in this number: the world elderly population is projected to be 1.2 billion people, about 14.0 per cent of the total. The median age of the world population will jump from 23.4 years in 1950 to 31.1 years in 2025 (United Nations: *The World Ageing Situation 1991*, 11).
2.3 Ageing population in Japan and other advanced countries

For advanced countries, Japan in particular, the major factor causing the decrease in their population growth is deemed to be the declining birthrate. Moreover, the age structure with an increasing proportion of the elderly group does not provide an environment to enhance fertility. In modern times, Japan and other advanced nations have experienced transformation from high birth and high death rates to low birth and low death rates. The result is 'an ageing population', a term increasingly accepted to describe a global phenomenon but especially noticeable in developed economies. This phenomenon occurs either when there is a decreasing number of younger people while the number of older people remains the same or when the number of older people increases while the number of younger people remains the same. For most countries it is the combination of both phenomena that is accelerating the process of population ageing.

In Japan, the first official population statistics were published in 1920 but mandatory census registration began in 1871. These figures indicate that the national population in 1872 was 34.81 million. In 1920 it was 55.96 million, in 1945, 72.15 million and in 1995, 125.57 million. The average annual rate of increase was about 1.0 per cent until 1975. Then in the 1980s, this fell to 0.8 per cent and now it is about 0.2 per cent. This is considerably below the world average population annual growth rate of 1.6 per cent between 1990 and 1995 (Miura: 1998, 35). Figure 2.2 below illustrates the Japanese historical demographic trend from 1920 to 1990 and projected figures to 2050.
In Japan in 2001, the population was estimated to be approximately 126.7 million (Miura: 1998, 20). According to government official figures, the 0.2 per cent annual increase in its population between 1995 and 1997 is the lowest average annual percentage increase recorded in Japan (Miura: 1998, 34). This same study predicts that the total population will peak around 2007 at 127.78 million and then begin to decline (pg.34). Although Japan has not been seriously affected by the spread of HIV or any other major disease, its declining birthrate is such that the United Nations World Population Prospects: The 1998 Review suggests that Japan will lose 15 per cent of its population by 2050 (pg..21). This prediction is similar to those made by the Japanese government, projecting their population by 2050 will fall below 100 million from 125.5 million in 1995 (Miura: 1998, 20). Both predictions assume no changes in net international migration. Because the net international migration in Japan is a negligible factor in its population.
change, the changes in the age structure are almost entirely determined by the rates of birth and death.

As discussed in Section 2.1, statistics show that the Japanese population has been ageing at a rate faster than in any other country (Figure 2.1). The following graph illustrates the dramatic decline in the Japanese birthrate—after the post-War ‘baby boom’ in the late 1940s, there has been a continual decline in the birthrate except for a slight increase in 1963 and 1964 (Figure 2.3). Issues surrounding the declining birthrate in Japan are discussed in the next section and further in Chapter 3.

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Figure 2.3 Trend in total fertility rate in Japan

Whilst the fertility rate has been declining, life expectancy has increased to the point where Japan now boasts the highest longevity for both males and females (Figures 2.4a and 2.4b). ‘In 1948 the average life expectancy at
birth was 55.6 years for males and 59.4 for females; in 1994 the average lifespan had risen to 76.6 for males and 83.0 for females' (Ogawa: 1996, 17). Life expectancy (at birth) figures are expected to continue to rise for both sexes in the twenty-first century—the following data summarises estimated figures for life expectancy at birth: 2025—78.8 years (male), 85.8 years (female); 2050—79.4 years (male), 86.4 years (female); so that 87 per cent of males and 95 per cent of females in Japan will be expected to live over 65 years (Miura: 1998, 41). The following graphs illustrate the dramatic increases in the Japanese life expectancy for both males and females.

**Figure 2.4a Life expectancy of males**

(United Nations: *World Population Prospects 1996*)
Dramatic improvement in life expectancy and declining birthrate have changed the composition of the total population in Japan between 1920 and 1995 as illustrated by the population pyramids in Figure 2.5. A population pyramid, which presents the age/sex distribution of a community and illustrates the age profile of that community at a certain time, visually clarifies the transformation in the population profile of Japan. The population profile for Japan resembled a pyramid shape in 1920 (JARC: 1996, 8). The high birth and death rates generated the pyramid shape. However, the shape noticeably changed over the years due to a constant low birthrate and low mortality rate (JARC: 1996, 8). Japan's population pyramid in 1995 (Figure 2.5b) clearly mirrors the effect of decreasing rates of both birth and mortality and represents a shape very unlike a pyramid shape.
The shape of the age pyramid in Japan is not expected to return to a pyramid shape in the foreseeable future as 'the aged population of 65 or over, which stood at 15 million as of 1990, is expected to more than double to 32 million...
by 2020 [in Japan]' (Atoh: 1996, 14). Without a major increase in birthrates, this translates to one quarter of Japan's population being over the age of 65 by the year 2020 (White Paper on Aged Population: 1998, 20). A similar phenomenon is predicted for other advanced nations as well. 'Already in Europe around one in five of the population is over 60 ... by the end of the [twenty first] century, half of Europe's population could be over 60' (Pearce: 1999, 21). However, by around 2010 Japan is expected to surpass Germany and Sweden to become the nation with the largest share of seniors in its population (Atoh: 1996, 14).

The analysis of the Japanese population structure explains the above prediction. The declining birthrate has resulted in a falling number of children between 0-14 years since the 1980s. In 1995, there were 20.01 million in this group but the number is expected to fall to 15.82 million by 2025 and 13.14 million by 2050. At the same time, the oldest group, those over 65, is estimated to increase from 18.26 million in 2000 to 33.34 million in 2025, which is an increase of about 1.8 times (pg.36). Before the Second World War, the 0-14 age group represented 35 per cent of the total population whilst the 15-64 age group was 60 per cent and the group over 65 years of age, a mere 5 per cent. By 1995, the 0-14 age group had reduced to 16 per cent and the 65 plus age group had increased to 15 per cent. For the first time in history, the 0-14 age group was smaller than the 65 plus age group in 1997. By 2025 it is estimated that this trend will have lowered the 0-14 age group to 13 per cent and increased the 65 plus age group to more than 25 per cent (pg. 36).
The following graph (Figure 2.6) clearly illustrates how dramatically Japan moved from being the country with the lowest proportion of aged people in 1950 to the country expected to have the highest proportion of aged people by 2050 amongst the leading industrial nations.

2.4 Causes and effects of ageing population in Japan

This chapter now turns to a discussion on the causes and effects of ageing population in Japan. Sections 2.4.1 and 2.4.2 examine the reasons for the falling mortality rate and the declining birthrate in Japan. These factors assist in identifying the reasons behind Japan’s demographic changes that are affecting subsequent socioeconomic concerns regarding aged care provision. Whilst lowering mortality is seen as a positive direction for a society and not to be reversed, some of the aged care concerns may be solved by addressing the causes for lower birthrate in Japan (Section 2.4.3)
and therefore, some suggestions to increase birthrate are provided in Section 2.4.4.

2.4.1 Lower mortality

Whatever concerns have developed from Japan’s ageing society, lower mortality, especially in infancy and childhood, is to be commended. Mortality in childhood naturally declines as nations develop better hygiene and nutrition as well as increased accessibility to modern medical technology. In Japan, there has been a rapid fall of infancy and childhood mortality, significantly contributing to the remarkable lengthening of life expectancy, especially since the Second World War. The statistics in Table 2.1 illustrate the dramatic improvement in the Japanese infant mortality rate.

Table 2.1 Infant mortality rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Rate</th>
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<tbody>
<tr>
<td>1950</td>
<td>150</td>
</tr>
<tr>
<td>1970</td>
<td>100</td>
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As well as reductions in infant and childhood mortality, there have been improvements in areas of adult health which have also significantly contributed to Japanese longevity. Atoh argues that:

The biggest factor contributing to Japan’s becoming the world’s most long-lived nation in the 1970s was the sharp decline in mortality due to
cerebrovascular disease. Until then, Japan had much higher mortality in this category than the advanced industrial nations of the West. But changes in lifestyles accompanied by efforts to reduce salt intake caused the incidence of fatal strokes to fall to close to the West European level. Meanwhile, the incidence of heart disease, which is a major cause of death in Europe, remained extremely low in comparative terms. The combination of these factors produced Japan's world-leading longevity. But future gains are likely to be slower, since Japan has already improved its cerebrovascular mortality almost to the West European level (Atoh: 1996, 14).

Not only have there been improving survival rate for the younger and middle aged people, there has been an increasing number of centenarians in Japan, highlighted in articles on September 7, 1999, (a week before the national holiday, Respect for the Aged Day) in the national newspaper, Asahi Shinbun. According to the articles, the figures published by the Ministry of Health and Welfare indicate that the cohort aged 100 years or over in Japan doubled in 5 years from 5,600 (1994) to 11,346 (1999). This represents a steady annual increase from 1970 when 310 people were recorded as being 100 or more. The oldest female in Japan is 112 years old and the oldest male, 110 years. Women account for over 80 per cent of the 100 plus cohort and Okinawa has the highest number of centenarians, 28.06 per 100,000 people. Figure 2.7 below illustrates how the number of centenarians in Japan has significantly increased in the last thirty years.
2.4.2 Lower birthrate

More significantly than the increasing longevity, the declining birthrate has been perceived as the main cause for the speed of ageing in Japan. This phenomenon has evoked much concern among policy makers and has been debated by academics and lay people alike. Heightened concern is partly due to the extensive and frequent media coverage given in recent years to some of the issues of increasing aged population partly due to the falling birthrate.

After the baby boom following the end of the Second World War, having fewer children was seen as being in the national interest as this lightened the burden of supporting an additional dependant cohort whilst re-building the economy. Under the Eugenic and Maternal Protection Law (1948, revised 1952) women no longer needed the permission of a government committee in order to seek abortion (Muramatsu: 1996, 31-3). Although abortion is not
seen as a good form of contraception, it has been obtainable relatively easily (Jolivet: 1997, 127-9). With additional aid of other forms of contraception except for the pill, the Japanese birthrate has continued to fall to a level below the net replacement rate whilst the average life expectancy has consistently risen. The decreasing labour force caused by declining birthrate figures can dampen the achievement of increasing longevity. The harsh reality, according to calculations made by Lee, a demographer at the University of California, Berkeley, is that:

... for every one year increase in average life expectancy, everyone’s yearly consumption must shrink by 0.9 per cent—or labour effort must increase 0.9 per cent—to pay for the increased benefits to retirees (Roush: 1996, 42).

Therefore, the issues of adequate aged care provision with as little burden as possible to society becomes increasingly relevant in countries like Japan with a growing proportion of aged population.

Figure 2.3 illustrating trends in total fertility rate in Japan highlighted the incredible speed at which birthrate level dropped. That the total fertility rate has consistently been below the net replacement rate since 1974 makes Japan a nation of ultra-low fertility. Moreover, figures in the previous section showing the length of time advanced nations took for the transition from the traditional high-birthrate pattern to the modern low-birthrate pattern, indicated that Japan made this transition significantly faster than other advanced nations.

2.4.3 Reasons for declining birthrate

The main factors causing the Japanese birthrate to decline include the delay
in the average age of marriage and child bearing as well as the decline in the number of marriages. There seems to be an increasing social acceptance of remaining single and being divorced. Even in marriage, there are more couples who do not have children, or if they do, the number of children per couple is decreasing. The high cost of educating children, the difficulties of procuring family-sized accommodation, the decreasing threat of infant mortality, are some reasons for limiting the number of children couples have and the number of children born outside the marriage is negligible. Furthermore, children are becoming less reliable to act as care providers when their parents are old. Increasingly, women continue to work outside the home after marriage and the availability of contraception makes the choices about family size possible (Atoh: 1996, 10-13, JARC: 1996, 27-34). Further discussion relating to these reasons for the decline in the Japanese birthrate is provided below.

An increasing number of people are delaying the age of marriage and hence having children later in life. As the age at first marriage rises, the period available for reproduction diminishes assuming no increase in births out of marriage. Figures clearly indicate that the average age for marriage for both men and women is later than it was previously. The average age of marriage was 25.9 (males) and 23.0 (females) in 1950 but gradually rose to 26.9 (males) and 24.2 (females) in 1970 and to 28.5 (males) and 26.2 (females) by 1994 (MHW: White Paper on Social Welfare 1996, 30).

Particularly for younger women in Japan, delaying marriage may represent protest against the moral and ethical climate of Japan. The historical moral
values are based on Confucianism, which provides no status for women except as a childbearing instrument and as a servant for men. Women are now as highly educated as men and therefore are participating more actively in the workforce, not just as ‘OL’ (office ladies positions until marriage). Whilst the Equal Employment Opportunity Law for Men and Women was enacted in 1986, the law lacks binding force and has done little to eliminate discrimination. With relatively poor maternity leave provisions and childcare facilities, child-rearing with work commitments is very difficult. In 1990, the ex-Prime Minister, Hashimoto, as Minister of Finance, remarked in a Cabinet meeting that the decreasing fertility rate was directly related to women being so highly educated that they were distracted from their domestic duties including raising children (Dickensheets: 1996, 77-8). Section 3.5 discusses further the issue of the changing role of women in Japan.

Not only has the average age of marriage risen in Japan, an increasing number of people are opting not to marry. Traditionally, the percentage of people who had not married by the age of 50 in Japan remained below 5 per cent. As of 1990, however, the unmarried-for-life rate among men had reached 7 per cent and is expected to rise above 5 per cent for women in the future (MHW: White Paper on Health and Welfare 1996, 37). Economically and socially, there has been a gradual acceptance of individualism in choosing not to marry. Corporate managers are more tolerant of employees who remain unmarried without labeling them as ‘unstable’ or ‘unacceptable’ employees based on their marital status. There is also a rising divorce rate in Japan (Moffett: 1997). Moreover, there is a temptation for women to remain
single in the workforce and live with parents (80 per cent of unmarried women in their twenties and 70 per cent of those in their early thirties) ('Baby Bust' *Echo* 1996). This group represents people with the largest disposable income and relatively few domestic responsibilities. Similar sentiments are now being heard from unmarried men who live with parents, particularly when their mothers continue to carry out domestic chores for them. Parents are also no longer as pressured by society to have their children married off.

If and when people marry, there is less incentive to produce many children. Firstly, the probability has risen for infants to survive to become adults and so there is less urgency to produce large families in case some children do not survive. Secondly, the traditional significance and importance of the eldest son carrying the family name has weakened so those couples tend to be more content with a female child. Thirdly, the cost of educating children is high both in terms of monetary outlay and psychological burden in preparing children for university examinations (*JARC*: 1996, 31). Fourthly, raising children requires not only commitment in time and money but also in providing living space which is often difficult. Lastly, receiving aged care from children is becoming less certain and no longer hinges on the sex of the child.

The relatively high costs of educating children, both financially and time wise, have enticed a growing number of married couples to opt to remain as ‘DINK’ couples (double income, no kids). According to *Nihon Tookei Geppoo 2000* [Monthly Statistics of Japan-January, 2000] (*cited in* Foreign
Press Center: 2000, 3), the proportion of married couples without children has risen from 10.7 per cent in 1970 to 13.1 per cent in 1980 to 19.7 per cent in 1998. The opportunity cost of having and raising children is high enough to deter many couples from becoming parents. Educating children is often viewed as being particularly costly. Moreover, whilst being educated, children usually do not contribute to the family income. It is also less common for children to continue carrying out family businesses. Thus, where once they were treasured productive assets, children are now sometimes even viewed as ‘expensive durable consumer goods’ (Atoh: 1996, 13).

Procuring adequate-sized living space to accommodate children, particularly in the cities, is often problematic for younger couples. Housing in Japan is relatively expensive, especially in the cities, and this factor can also discourage couples from having children. Although larger firms offer subsidised accommodation, they are normally apartments with little living space for children. In the past, young couples, particularly the eldest son and his family, co-resided with the husband’s parents. However, increasingly younger couples prefer to live separately from their parents. Moreover, the location of the work place, which may change during the course of a man’s career, often does not make living with the husband’s parents a viable option.

Traditionally, one of the main reasons married couples had children was to ensure that there would be at least one child from whom to receive care in old age. However, for reasons such as living space and place of work
described above, it is often not feasible for married couples to co-reside with aged parents. It may even be difficult to live in close proximity to their aged parents. Should it be possible to live with or close to adult children, the traditional care-giver, the wife of the eldest son, may have employment away from the home and may not be in a position to provide aged care. Children, therefore, are growing less reliable as care-givers to aged parents in Japan.

The post-War generation increasingly advocates the desire to be independent in old age rather than depend on their children for care (MHW: White Paper on Health and Welfare 1996, 63-74). Changes in social values (see Chapter 3.4) over the years, particularly after the Second World War, have meant there are now many people who value individuality more than their parents and grandparents. Particularly for those who have been care-givers themselves, there is a growing reluctance to become a burden to children. Since the advent and the improvement of the social security system through pensions, welfare assistance and health care insurance, professional care is viewed by many people to be more reliable than children in providing aged care.

Over the years, it has also become easier to limit the number of children using contraception. Although the contraceptive pill was banned in Japan until 1999, other safe and effective contraception methods and awareness of the ability to make reproductive choices have also played a role in lowering the number of children born. Abortion also became more widely available under the Eugenic and Maternal Protection Law (1948). Although abortion
is no longer considered a good family planning method—as intrauterine
devices and other types of contraception (but not the pill) were approved in
the 1970s—it is still available to terminate unwanted pregnancies.
According to a study reported by Yamaguchi (1967), the number of cases of
induced abortions peaked in 1955 (1,170,143 cases) and has been declining
since then with 808,378 cases reported in 1966.

There is an additional social factor that may affect the birthrate in Japan.
The Japanese social dictum continues to be that children should only
eventuate from marriage. Despite the fact that the mean age at marriage has
risen considerably over the years there is still a very low frequency of pre-
marital cohabitation in Japan compared to other advanced countries.
Therefore, the number of children born out of wedlock in Japan is also
extremely small for a developed country. After the Second World War,
children born out of wedlock in Japan has remained approximately 1.0 per
cent of all births compared to 50.4 per cent in Denmark, 34.9 per cent in
France and 31.8 per cent in Canada (figures for 1994) (MHW: White Paper

In essence, ‘stressed by overcrowding and high costs, Japanese are having
fewer children’ (Bartholet: 1996, 65). It is true that children may no longer
be productive assets in economic terms and viewed even as a financial
burden by some people. However, there are other positive reasons for
having children. The emotional and other values of having children should
not be ignored, but they are not central to the argument in this chapter.
2.4.4 Suggestions to increase birthrate

The discussion in the above section suggests that there are numerous factors contributing to the decline of the birthrate in Japan. In the long term, increasing the birthrate may serve to lighten some socioeconomic burdens caused by an ageing population in Japan. Suggestions to increase the birthrate in Japan are discussed here to present a non-technological solution which contrasts to more immediate solutions that technology might offer in addressing certain social and economic concerns of Japan’s ageing society.

There have been distinct suggestions on ways to increase the number of children in Japan. For instance, Makino, chairman of the Mitsubishi Research Institute, argues that merely increasing public child allowances or building more child-care centres will not produce visible results. Makino, therefore, offers the following three controversial approaches as a means of increasing childbirth numbers in Japan:

1. 'the Scandinavian method' providing equal treatment for children born out of wedlock. Makino argues that countries using this approach have successfully raised their fertility rates to almost 2.0 (Japan’s is currently 1.34);

2. 'the Irish method' of prohibiting abortion. Makino argues that currently almost half of all pregnancies in Japan are terminated and this method would definitely curb the population decline;

3. 'the American method' of allowing immigrants into the country and promoting racial mixing to increase the number of children (Makino: 1999, 13).
Additionally, another possible approach may be ‘the Singapore method’ of providing financial incentives for intelligent professional females to give birth to children. According to Lyons-Lee:

In a National Day Rally Speech in 1983, then Prime Minister Lee Kuan Yew called attention to a trend in which graduate women were delaying or forgoing marriage and children for their careers. Lee feared that in a country whose only resource was its people, a decline in birthrates amongst the well-educated would result in a ‘thinning of the gene pool’, and thus national economic disaster (Lyons-Lee: 1998, 310).

There is little to suggest that any of the above propositions would be accepted into the present Japanese society. For instance, the Japan Association of Corporate Executives (one of the four biggest business lobbies) introduced a proposal for dealing with the declining numbers of children using the ‘Scandinavian method’ and drew public attention when it was publicised in May 1998 (Yagi: 1999). This proposal, influenced by a group of working women, sought social acceptance of cohabitation and common-law marriages. It also called for legal changes so that couples could use different names and so that children born out of wedlock would not be in any way discriminated against (Yagi: 1999). However, like Makino, Yagi (1999) does not see the likelihood of this method succeeding and questions the wisdom of liberalising family values in Japan. By family values, the social reluctance to accept children out of wedlock is also included, making the ‘Irish method’ unlikely to succeed.

As for the ‘American method’ of accepting immigrants, the proportion of legal immigrants residing in Japan has steadily increased over the years but only stands slightly over 1.0 per cent of the total population. In fact, the total number of legal foreign residents in Japan decreased from 1,556,000 in
1998 to 1,512,000 in 1999 (Ministry of Justice figures in *Annual Report of Statistics on Legal Migrants 2000 edition*). There is no indication that the Singapore method has ever been publicly suggested in Japan. Makino himself conceded that none of his three suggested methods is likely to be acceptable in Japan today and pessimistically predicts that, ‘if Japan’s population continues to decline at its present rate, in 800 years there will be just 50,000 Japanese left’ (Makino: 1999, 13).

There is no denying that value changes towards individualism and equality of opportunity as well as socioeconomic changes have affected fertility in Japan after the Second World War (Retherford, Ogawa & Sakamoto: 1996). For this reason and as a more conservative approach than those described above, there have been public suggestions that the Japanese government ought to provide additional child-care facilities and more flexible working conditions to allow women to rear children without compromising their careers. Sugimoto (1997), a Japanese sociologist, attributes the dwindling birthrate to the changing attitudes of women to marriage and family life. He suggests that the two main factors underlying this transformation to low birthrate in Japan are the high cost of educating children and women opting to experience paid work and delay marriage (1997, 75). Both these points have been discussed in the above section and it has already been suggested that if society wants women to have more children, it needs to implement measures to ease the burden of child-bearing and child-rearing instead of pressuring women to conform to traditional family values.

Changing social values also call for men to participate more in domestic
activities. If men were able and willing to actively carry out child-rearing duties and relieve women of more domestic responsibilities, it would lighten the child-care burden for women. The total blame for the decline in birthrate can not be entirely placed on women.

Numerous options have been suggested in this section for policy makers to consider in order to increase the birthrate, one aim of which is to help solve socioeconomic problems arising from Japan’s ageing population. Funabashi even argues that children constitute a public commodity, namely that they are treasures belonging to the whole society (Funabashi: 1999, 35).

Although the actual financial burden of rearing children is particularly high in Japan, there are obvious personal and individual reasons that favour having children, too. Rewards may be more concrete for society and intangible and immeasurable for parents and families but the rewards of having children are real both for individuals and society at large. Children grow up and normally earn a living and simultaneously contribute to the public pensions and health insurance systems. Moreover, having children and nurturing their growth is socially a powerful tool in learning to appreciate the significance of care provisions and family values. Such background knowledge and experience often guide policy makers in structuring aged care provisions.
2.5 The significance of Japan’s demographic trend and aged care

The previous section described the two main reasons for demographic changes in Japan and also provided suggestions for addressing the declining birthrate as the nation faces growing concerns of an ultra aged country. In this section, the significance of these growing concerns is discussed.

The notion of ‘aged’ appeared at the end of nineteenth century when the aged pension was first introduced in Germany. On the basis of the average life expectancy of the day, the German government granted the aged pension to all men from the age of 65 (Shirasawa: 1995, 6). The United Nations has since adopted this as the base for their classification of countries as follows:

Table 2.2 The UN classification of countries according to the proportion of the population over the age of 65

<table>
<thead>
<tr>
<th>Classification</th>
<th>Proportion of Population Over 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime Life</td>
<td>Below 14%</td>
</tr>
<tr>
<td>Early Ageing</td>
<td>14% - 20%</td>
</tr>
<tr>
<td>Late Ageing</td>
<td>20% - 25%</td>
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<tr>
<td>Old Ageing</td>
<td>25% - 35%</td>
</tr>
<tr>
<td>Pre-Old Ageing</td>
<td>35% - 40%</td>
</tr>
<tr>
<td>Old</td>
<td>Above 40%</td>
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(Shirasawa: 1995, 7)

According to the above classifications, Japan was a ‘prime life’ country in
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1950 but an 'ageing' country by 1970. Furthermore, by 1990 Japan had become an 'aged' country and by 2000, an 'ultra aged' country. Japan's extraordinary fast speed of transition from a prime life country to an ultra aged country was discussed in a previous section. Whilst longevity is to be commended, it is understandable that government is anxious about losing economic dynamism and financing the social security system whilst businesses fear labour shortage and fall in customer numbers. In the meantime, adults worry about who will care for them in old age (Ogawa & Retherford: 1993, 704). Society on the whole will be adversely affected by a rise in the dependency ratio due to ageing population.

An indication of the weight of dependency of aged people in a society is often portrayed by the ratio of aged people to working age people (15 to 64). This actual dependency of aged population cannot accurately be determined merely from the summary of the age distribution. Nevertheless, the formula, (elderly) / (working age population) as a fraction is often utilised as an indicator for this purpose (see for example JARC: 1996, 35). According to this formula, it is predicted that by 2020, there will only be 2.2 people of working age for every pensioner in Japan compared to 4.6 people in 1996 (MHW: Roojin Fukushi Tebiki 1997 [Handbook of aged welfare 1997], 6). This figure is a conservative estimate of the burden on working population as it does not take into account the number of dependent children or non-working spouses also requiring to be financially supported by the working population.

Relief from an increasing dependency ratio can only occur if there is a
decline in the number of dependent people or an increase in the size of the working population. For Japan, the number of dependent children is declining but the number of elderly people is increasing. Moreover, in the long run, fewer children now will mean fewer working people in the future unless youthful migration increases or the age of the working population is raised. Alston argues that it was the sharp decline in the birthrate that enabled Japanese to redirect resources to economic growth rather than for child-rearing costs and suggests four ways to increase labour supply and reduce dependency ratio including youthful migration and increasing retirement age. His other suggestions are to increase the status of female employment and to increase the productivity of workers using automation, robots and by developing knowledge-intensive industries (Alston: 1983, 345-354).

The idea of decreasing the overall dependency ratio in Japan by increasing female participation in the workforce not only increases the working population but also decreases the dependant population. Some advanced nations have adopted policies to encourage women with children to join the workforce by increasing child-care facilities and promoting flexible working arrangements. Additionally, in some communities, generous maternity or paternity leave persuades women to remain in the workforce after childbirth. However, tax regulations discourage married women from earning in excess of a million yen (approximately US$ 8,500) per annum in Japan (Ehara & Inoue: 1995, 114).

The suggestion to raise the age of mandatory retirement and encourage
people to remain in the working population for a longer period of time (Sasaki: 1996, 1013) has been discussed in Chapter 1. For this suggestion to succeed flexibility in working conditions that will benefit both employers and older employees are necessary. It is well known that older Japanese people, men in particular, are keener to continue working after retirement age compared to those in other advanced countries. For those retiring from big companies at or before the age of sixty, the common practice has been to transfer to a smaller firm associated with their original employment and continue working at a reduced income.

If aged people were able and willing to continue working for a longer time, changing pension systems may also be an option to lower the dependency ratio. Already the eligibility age to receive the Japanese old age pension has been raised from 55 to 60 and then to 65 in 1994 (Foreign Press Center: 2000, 79). Although a rising dependency ratio is a burden to society, transferring increasing financial demands for aged care onto the aged themselves shows little regard for the cohort, many of whom dedicated their lives to working for the society. Moreover, without a system of adequately providing for disadvantaged aged people, their plight may be worsened.

Theoretically, the dependency ratio can also be improved by increasing youthful migration numbers. However, importing brides for farmers in Japan and policies directing the country in 'internationalisation' have, to date, done little to make an impression in migration and there seems to be 'no hope of an influx of youthful immigrants to mitigate the problem in Japan' (Ezrati: 1997, 96). Over the coming years, there are possibilities that
this situation may alter.

Japan has, for so long, been acknowledged as an island country valuing its homogeneity and controlling foreign intake with strict immigration controls. Japan has been described as being insular and homogeneous, ‘never putting out the welcome mat to foreign workers’ (Wehrfritz & Takayama: 2000, 90-91). However, the number of Japanese travelling abroad per year has increased from 2,852,584 in 1976 to 16,694,769 in 1996 whilst the number of non-Japanese entering Japan has risen from 881,203 in 1976 to 4,244,529 in 1996 (figures published by Ministry of Justice cited in Pacific Friend August 1997, 24). Although these are predominantly tourists and business travelers, ‘as of 1985 Japan had around 700,000 resident aliens, but now the number has risen to 1,000,000 legal foreign residents and around 200,000 illegal ones. The level is approaching 1.0 % of the population’ (Atoh: 1996, 14). Government statistics also testify that there were more foreign people entering Japan in 1999 than ever before (Judicial System and Research Department, Minister’s Secretariat, Ministry of Justice: Annual Report of Statistics on Legal Migrants 2000, II-IV). For self-preservation, Japan may be forced to accept immigrant workers in the future—a recent United Nations study warned Japan that it needs to bring in 600,000 foreign workers a year to maintain the current levels of economic output (Wehrfritz & Takayama: 2000, 91).

Increasing the size of the younger population may gradually improve the economy. However, whilst Japan’s rate of ageing continues at this historically unprecedented rate, some increase in dependency ratio is
difficult to avoid.

2.6 Projection of future demographic changes in Japan

To project demographic changes accurately is easier than creating reliable forecasts in other areas, such as financial conditions, because by nature, there is an inevitable progression of age. The projected results for the variables indicate that the population of Japan will continue to age at an accelerated speed until at least 2020 (see Section 2.3). This suggests that the demand for aged care and social security costs will continue to accelerate in the foreseeable future. An outstanding characteristic of the Japanese ageing population at present is the relatively high portion of people over the age of 75 amongst the elderly and this cohort is more likely to need constant care than younger elderly people.

According to Ogawa, a population economist, ‘the percentage of senior citizens living alone will increase to 18 percent in 2025 from 11 percent in 1990’. Furthermore, ‘the number of bedridden people will triple by 2025 from 810,000 in 1990 to 2.29 million’ (cited in Aita: 1994).

A couple of years later, the same Japanese population economist argued that:

The mentally infirm, meanwhile, will grow in number from 1.0 million in 1990 to 1.5 million in 2000 and 3.2 million in 2025, increasing even faster than the bedridden. The reason for this is the fact that the 85-plus age group, for which the chances of suffering senile dementia are much higher than those of becoming bedridden will continue to be the fastest-growing
In terms of aged care, it is argued in this thesis that as a result of the Japanese demographic transition, a decreasing number of young people will be supporting increasing numbers of elderly people. Policy makers and others, alarmed by the current low birthrate, fear that the economy will suffer under the heavy burden of caring for the aged. A number of possible ways of addressing this issue were suggested in Chapter 1 and in the previous section.

Social issues concerning the low birthrate in Japan are discussed further in the following chapter but it is not easy to convince people living in a crowded environment to have more children. Over 126 million Japanese people (about half of USA) are currently residing in an area smaller than California, showing that space is scarce. The results of the 1993 Annual National Survey on Family Planning suggests that the Japanese are concerned about the declining birthrate and believe that the ‘ideal’ number of children for families is either two or three. Nevertheless, the majority of respondents themselves were unwilling to have more children (1993 Mainichi Newspaper’s National Survey on Family Planning). The main constraints listed included the high cost of education and the lack of adequate housing, particularly in high population density communities.

Another social issue regarding the declining birthrate in Japan evolves from the changing perception of the role of women as child bearers. Opinions vary even amongst the pro-natalists and the issue begs for an overall social perspective. Women’s role in the Japanese society, particularly as family
care-givers, is discussed in the next chapter in Section 3.5.

There are also futurists who believe that new healthcare technology and creative approaches to leisure will solve many of the problems of the increasing aged population (Pearce: 1999, 21). On the other hand, there are pessimistic predictions that such ‘rampant ageing, combined with a decline in the overall population, will sap the nation’s energy as well as social services, starving businesses of innovative ideas and dynamism, and creating a grey, conformist society’ (Pearce: 1999, 21).

Most social and economic problems arising from population ageing are common to other advanced nations. Until now, Japan has been able to learn from the experiences of other advanced nations in addressing similar social, economic and political issues. However, Japan is now one of the forerunners in preparing the way to manage aged care issues.

Having pronounced Japan as a leader in dealing with an ageing society, it is also true that other advanced nations are predicted to be closely following in Japan’s footsteps. For instance, in China a dramatically ageing population is looming, exacerbated by its policy of one-child families adopted in 1979. Therefore, potentially, Japan can be assisted by mutual support with China and other advanced nations if they all contribute in solving the problems of an ultra aged society.
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2.7 Conclusion

This chapter described the process by which the Japanese population structure has radically changed over the years. Factors influencing the change and some consequences of the change were discussed. The chapter discussed, too, the prominent view amongst researchers that the main cause of population ageing in Japan is the declining birthrate. Varying suggestions, both from within and from outside Japan, have been considered by policy makers to encourage women to have more children. To date, there is little indication that the birthrate in Japan is rising. On the other hand, there is a strong indication that life expectancy is continuing to increase. These factors are predicted to place Japan as the nation with the highest proportion of elderly population in the near future. This, in turn, has caused numerous concerns regarding the provision of adequate aged care and the economic burden to Japanese society. The changes in family structures and societal values are analysed in the next chapter to strengthen the argument that care of the aged is a crucial issue for Japan. Moreover, the next chapter will also argue that some of the demographic changes discussed in this chapter stem from changes in the family structure and overall social values.

Ageing need not necessarily cause a heavy economic burden to the society. Old age is a relative concept and ageing does not automatically imply social problems. Factors that contribute to the 'crisis' of Japan's ageing population are family relationships, government responses that arise from biological ageing of the population and not necessarily totally due to demographic changes. However, in the post-industrialised nations, old age is often
regarded negatively and even stigmatised at times (Strom: 1995, 209, Levy: 1999). The burden on the society only occurs when a relatively increasing number of people consume without producing. In Japan, there are increasingly more people remaining in the workforce beyond the normal retirement age. Moreover, ‘retirement’ from active participation in the workforce may not change income if one has assets earning income. As can be seen in the next chapter, there is a relatively high proportion of well-off aged people at present with substantial investments and financial backing to stimulate the economy. Furthermore, ‘retirement’ for those who owned and worked on the land may simply mean that there has been a transfer of land ownership from father to son and the family unit contribution to society may not alter.

As for aged care demands increasing when a population ages, no matter what measures can be taken to promote healthy and active living for the aged, inevitably physical and/or mental decline occurs in many people. It is often difficult to avoid the need for ‘care’ in the last stages of life. Therefore, it stands to reason that as the aged population increases, the demand for aged care will also naturally rise. However, there are different options of care provision and they do not all demand the same sort of support or depletion in resources. It may not be possible to return to the era of families providing total aged care, but mutual caring amongst the elderly population may, for instance, be a viable option to families being the sole source of care-giving. This thesis tackles the technology options that may assist in diminishing the burden of aged care and enhancing the lives of aged people in Japan.